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2022 Hydraulic Control and Containment System Annual Report

Prepared for NW Natural

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ABBREVIATIONS

2022 Annual Report	*2022 Hydraulic Control and Containment System Annual Report*
B(a)P	benzo(a)pyrene
CDR	*Revised Groundwater Source Control Construction Design Report*
COP	City of Portland datum
DEQ	Oregon Department of Environmental Quality
DNAPL	dense nonaqueous phase liquid
EPA	U.S. Environmental Protection Agency
GSA	geographic subarea
GTS	groundwater treatment system
GTS O&M Manual	*NW Natural Groundwater Treatment System Operations and Maintenance Manual*
HC&C	hydraulic control and containment
HC&C PMP	*Hydraulic Control and Containment System Performance and Monitoring Plan*
HMI	human-machine interface
MG	million gallons
NWTPH-Dx	diesel-range total petroleum hydrocarbons
NWTPH-Gx	gasoline-range total petroleum hydrocarbons
O&M	operations and maintenance
O&M Manual	*Hydraulic Control and Containment System Operations and Maintenance Manual*
Operational Figures	Hydraulic Control and Containment System Operational Figures
OU	Operational Unit
PAH	polycyclic aromatic hydrocarbon
PLC	programmable logic controller
RAO	removal action objective
SCADA	supervisory control and data acquisition
SES	Sevenson Environmental Services, Inc.
Siltronic	Siltronic Corporation
SVOC	semivolatile organic compound
TarGOST	Tar-Specific Green Optical Screening Tool
TPH	total petroleum hydrocarbons
VOC	volatile organic compound
WA EPH	extractable petroleum hydrocarbons
WA VPH	volatile petroleum hydrocarbons
WBZ	water-bearing zone

1 Introduction

This Gasco Operational Unit (OU) *2022 Hydraulic Control and Containment System Annual Report* (2022 Annual Report) summarizes the hydraulic control and containment (HC&C) system operation, maintenance, and performance for the Gasco OU in 2022. Data collected during system operation demonstrate that the system is working as designed to control contaminated groundwater migration from the Upper and Lower Alluvium Water-Bearing Zones (WBZs) to the Willamette River by interrupting the contaminant transport pathway in the alluvium and reversing the hydraulic gradients such that groundwater flows from the river toward the uplands.

The Gasco OU covers the NW Natural Gasco property and the northern part of the Siltronic Corporation (Siltronic) property (Figure 1-1). Ongoing site-wide groundwater quality monitoring is also summarized in this report.

This groundwater source control work is being completed consistent with the requirements of the following:

- The Joint Order (Oregon Department of Environmental Quality [DEQ] Order No. ECVC NWR 00-27 to NW Natural and Siltronic, dated October 4, 2000; DEQ 2000)
- The Voluntary Agreement (DEQ No. WMCVM-NWR-94-13, dated August 8, 1994, as amended July 19, 2006; DEQ 1994, 2006)

Groundwater at the Gasco OU occurs in several hydrogeologic units, which are described in detail in the *Revised Groundwater Source Control Construction Design Report* (CDR; Anchor QEA 2012). The hydrogeologic units from shallowest to deepest are as follows: Fill WBZ, Upper Alluvium WBZ, Lower Alluvium WBZ, Deep Lower Alluvium WBZ, and Columbia River Basalt. The HC&C system, which is the subject of this 2022 Annual Report, is a source control measure that was designed and implemented to control contaminated groundwater migration pathways from the Alluvium WBZs to the Willamette River by reversing the hydraulic gradients such that groundwater flows from the river toward the uplands (DEQ 2011). DEQ has determined that full capture of groundwater and demonstration of gradient reversal within the Deep Lower Alluvium WBZ are not necessary to achieve source control removal action objectives (RAOs; DEQ 2022).

In 2021, a removal action consisting of groundwater extraction from two upland area Fill WBZ interceptor trenches on the Gasco property was performed to control groundwater migration pathways within the Fill WBZ downgradient of the Liquified Natural Gas Basin. This Fill WBZ removal action was initiated in 2020 as described in the DEQ-approved *Fill Water-Bearing Zone Trench Design* (Anchor QEA 2020). The Liquified Natural Gas Basin area Fill WBZ interceptor trench system is not related to the operation or performance of the HC&C system. Performance of the Fill WBZ trenches is evaluated and reported separately to the DEQ semiannually but is not discussed further in this report.

1.1 HC&C System Description

The HC&C system is a groundwater extraction and treatment system that reverses the hydraulic gradient in the Upper and Lower Alluvium WBZs, controlling contaminant migration pathways between the uplands and the Willamette River within the Alluvium WBZs. The portions of the shoreline identified by DEQ as priorities for source control are shown as Segments 1 and 2 in Figure 1-2; of these, Segment 1 is considered the highest priority for source control (DEQ 2008). The CDR outlined the HC&C system design (Anchor QEA 2012). Operations and maintenance (O&M) of the HC&C system are described in the *Hydraulic Control and Containment System Operations and Maintenance Manual* (O&M Manual; Anchor QEA 2019a).

The HC&C system comprises the following components:

- A series of groundwater well and piezometer installations consisting of extraction wells, control wells, monitoring wells, observation wells,[1] and piezometers
- Well pumps and a force main conveyance system
- A dense nonaqueous phase liquid (DNAPL) recovery and collection system[2]
- An HC&C system field office and satellite programmable logic controller (PLC) control structures
- Monitoring instrumentation, communication utilities, PLC, and a supervisory control and data acquisition (SCADA) system for on-site and remote system access
- A human-machine interface (HMI) that allows users to visually interact with and control the HC&C system

Construction details for the HC&C system groundwater wells and piezometers are provided in Table 1-1. Each extraction well and corresponding control well are identified in Table 1-2.

Groundwater extracted by the HC&C system is conveyed to the groundwater treatment system (GTS) consisting of two pretreatment plants (to account for differences in groundwater contamination at the Gasco and Siltronic properties) and a main treatment plant that discharges to the Willamette River. A separate *NW Natural Groundwater Treatment System Operations and Maintenance Manual* (GTS O&M Manual) has been prepared for the GTS (SES 2016). Performance and discharge monitoring and reporting for the GTS is performed in accordance with National Pollutant Discharge Elimination System Permit No. 103061. The GTS includes the Siltronic and NW Natural pretreatment plants, which receive groundwater extracted by associated extraction wells from the HC&C system and the main treatment plant, to which pretreated water is conveyed. Therefore, the HC&C system components covered by this 2022 Annual Report end where the system

[1] Observation wells refer to fill monitoring wells installed next to extraction wells installed for the purpose of observing water levels in the Fill WBZ to evaluate if there are changes due to pumping at an Upper Alluvium WBZ extraction well.
[2] DNAPL extracted from wells is managed in accordance with the *Contaminated Materials Management Plan* (Anchor QEA 2021a).

components covered by the GTS O&M Manual begin: at the Siltronic and NW Natural pretreatment plants. Figure 1-2 shows the location of the HC&C system and GTS components.

The HC&C system and GTS were in interim operation and testing from September 23, 2013, to May 14, 2015, when full-time, full-scale operation of the HC&C system and GTS began and continues to date.

1.2 Removal Action Objectives

The RAOs for groundwater source control are to prevent migration of contaminated groundwater from the uplands to the Willamette River along shoreline Segments 1 and 2 and minimize DNAPL mobilization resulting from groundwater source control measures wherever DNAPL occurs. These RAOs apply to groundwater in the Fill and Alluvium WBZs. The information reported in this 2022 Annual Report is intended to demonstrate that the HC&C system is meeting the design objectives and RAOs for Alluvium WBZ source control by interrupting contaminated groundwater migration pathways from the Alluvium WBZs to the Willamette River. The source control RAOs for the Alluvium WBZs are achieved by reversing the hydraulic gradients in the Alluvium WBZs such that groundwater flows from the river toward the uplands (DEQ 2011). Following design, construction, and full-scale operation of the HC&C system since 2015, DEQ determined in 2022 that full capture of groundwater and demonstration of gradient reversal within the Deep Lower Alluvium WBZ are not necessary to achieve source control RAOs (DEQ 2022).

Potential DNAPL mobilization along the shoreline associated with HC&C system operation is being assessed by monitoring DNAPL accumulation and removal in extraction and monitoring wells over time and using a Tar-Specific Green Optical Screening Tool (TarGOST). A recently completed TarGOST monitoring event was conducted concurrently with an upland feasibility study DNAPL data gaps investigation (Anchor QEA 2021b). Ongoing DNAPL monitoring is reported to DEQ semiannually (Section 4).

Data collected in 2022 and summarized in this report confirm that the design objectives for the HC&C system are being met and source control RAOs are being achieved for the Alluvium WBZs. NW Natural has committed to implementing comprehensive source control measures that will achieve groundwater source control RAOs for the Fill WBZ in advance of or concurrent with the in-water remedial action.

1.3 Related Documents

Detailed information regarding the design, construction, testing, operations, maintenance, and performance monitoring for the HC&C system is provided in previous documents. The following documents and associated DEQ comments serve as the foundation for this 2022 Annual Report;

detailed information and analyses described in these documents are referenced but not repeated in this 2022 Annual Report:

- CDR, January 2012 (Anchor QEA 2012)
- *Final Groundwater Source Control Extraction System Test Plan*, November 2013 (Anchor QEA 2013a)
- *Data Report: Groundwater Source Control Extraction System Test*, December 23, 2013 (Anchor QEA 2013b)
- *Data Report: Groundwater Source Control Extraction System Test – Phase 1 Step 4*, April 10, 2014 (Anchor QEA 2014a)
- *Data Report: Groundwater Source Control Extraction System Test – Phase 1 Step 5*, September 8, 2014 (Anchor QEA 2014b)
- *Groundwater Source Control Phase 1 Testing Data Summary and Analysis Report*, January 30, 2015 (Anchor QEA 2015)
- O&M Manual, May 2015, revised December 2019 (Anchor QEA 2019a)
- *Gasco Groundwater Modeling Report*, February 17, 2017 (Anchor QEA 2017)
- *Hydraulic Control and Containment System Performance and Monitoring Plan* (HC&C PMP), May 2015, revised June 2019 (Anchor QEA 2019b)
- *2020 Hydraulic Control and Containment System Annual Report,* August 31, 2021, revised March 14, 2022 (Anchor QEA 2022a)
- *2021 Hydraulic Control and Containment System Annual Report,* August 19, 2022 (Anchor QEA 2022b)

1.4 Report Organization

This 2022 Annual Report summarizes HC&C system operations in 2022. HC&C system operations, including maintenance activities conducted to ensure that the system continues to operate as designed, are discussed in Section 2.1 and Appendix A. The volume of groundwater and the mass of benzene, benzo(a)pyrene (B(a)P), naphthalene, and cyanide removed from the subsurface by the system are presented in Section 2.2. Hydraulic containment achieved by the HC&C system in 2022 was evaluated using continuous hydraulic head monitoring data, as discussed in Section 3.1 and Appendix B. DNAPL collection and monitoring are addressed in Section 4. Groundwater quality monitoring data are summarized in Section 5 and Appendix C. A summary of system operations is presented in Section 6.

This is the third annual report for the HC&C system and includes data collected during 2022. The first and second annual reports included data collected in 2020 and 2021, respectively. Prior to the first annual report, HC&C system data and associated analyses or recommendations were submitted to DEQ as separate routine deliverables, and these deliverables continue to be delivered separately

throughout the year. The following routine deliverables are included in this 2022 Annual Report for convenience and without modification:

Deliverable	Schedule	Integration with 2022 Annual Report
HC&C System Operational Figures	January through June figures are due to DEQ on August 31; July through December figures are due to DEQ on February 28	Included as Appendix B of this report; specific figure series are discussed in Section 3
Groundwater Chemistry Flat-File Data Export	Due to DEQ 120 days following completion of the monitoring event	Included as Appendix C of this report; discussed in Section 5

2 HC&C System Operations

A brief description of ongoing maintenance activities, including type and frequency, and any significant repairs, replacements, or modifications to the HC&C system during the reporting period is provided in Section 2.1. The volume of groundwater extracted from the Upper and Lower Alluvium WBZs by the HC&C system and the mass of benzene, B(a)P, naphthalene, and cyanide removed by the HC&C system are discussed in Sections 2.2 and 2.3, respectively. DNAPL removed from the subsurface by the HC&C system is discussed in Section 4.

2.1 Maintenance Activities

HC&C system components are inspected on a weekly, monthly, quarterly, and annual basis to confirm that the system is operating as designed and to identify any necessary maintenance. Inspections are conducted according to the schedule in Section 7 of the O&M Manual (Anchor QEA 2019a). In 2022, maintenance work (e.g., well treatment and replacing components) was performed for the Upper and Lower Alluvium WBZ extraction wells. These activities are summarized in Table 2-1. A summary of maintenance work performed at each extraction well is provided in Appendix A.

Continuous pumping rates for individual extraction wells are provided in Appendices B1 and B2, Figures 8.1 through 8.26, with the total pumping rate for the Upper Alluvium WBZ shown in Figure 8.27, the total pumping rate for the Lower Alluvium WBZ shown in Figure 8.28, and the total for all extraction wells shown in Figure 8.29.[3] These data confirm proper operation and performance of the extraction wells between January and December 2022, with exceptions noted in the following paragraph.

Extraction well PW-1Uc was installed in December 2021 and brought online on February 4, 2022, and PW-11Ub was installed in February 2022 and brought online on March 24, 2022. In July 2022, extraction well PW-10Lb filled with sand and became inoperable. The sand was cleaned out and a video inspection of the well casing revealed similar corrosion issues as experienced in PW-10L in August 2018, which was determined to be galvanic corrosion where mild steel transitions to stainless steel. An approximately 3-inch by 5-inch opening was observed in the mild steel just above the junction of the stainless-steel screen and the mild-steel casing. A stainless-steel packer was installed over the opening on August 17, 2022, to isolate the damaged section of well casing. PW-10Lb was put back into service on August 25, 2022, and is fully operational, but this is considered a temporary fix, so extraction well PW-10Lc was proposed to be installed in 2023. Extraction well PW-10U filled with sand and became inoperable in November 2022. The cause of this is believed to be corrosion similar to that observed in two other wells at this location (PW-10L and PW-10Lb), and a replacement

[3] Due to the continuous nature of these data, artifacts are shown during extraction well chemical treatments, manual redevelopments, transducer O&M and replacements, extraction well O&M, and HMI system upgrades.

extraction well is proposed to be installed in 2023. Following the discovery of corrosion in the area of the PW-10 extraction wells, mild steel was no longer used in the design of extraction wells. Beginning in November 2020, all stainless-steel construction was used instead, which is expected to be more resistant to corrosion.

2.2 Groundwater Volume Extracted

The annual volume of groundwater removed by each HC&C system extraction well was calculated from the continuous (15-minute interval) pumping rates. Since full-time, full-scale operation of the HC&C system started on May 14, 2015, total extracted volumes were calculated for the Upper and Lower Alluvium WBZs on an annual basis from 2015 to 2022. Cumulative volumes were subsequently calculated from annual volumes, starting January 1, 2015, and ending December 31, 2022. In 2022, the total volume of groundwater extracted by the system was 101 million gallons (MG), which is an average of approximately 192 gallons per minute. Twenty-three MG were extracted from the Upper Alluvium WBZ, and 78 MG were extracted from the Lower Alluvium WBZ. Although the volume of groundwater extracted in the Upper Alluvium WBZ decreased from 34 MG in 2015 to 23 MG in 2022, the volume of groundwater extracted in the Lower Alluvium WBZ increased from 68 to 78 MG, resulting in a total annual extracted volume of at least 100 MG from the system each year since 2015 with a range of 101 to 124 MG. From 2015 to 2022, the HC&C system extracted 858 MG of groundwater (207 MG from the Upper Alluvium WBZ and 651 MG from the Lower Alluvium WBZ). The annual and cumulative volumes of groundwater extracted by the HC&C system are shown by WBZ in Table 2-2 and Figure 2-1 and by extraction well in Table 2-2 and Figures 2-2 (Upper Alluvium WBZ) and 2-3 (Lower Alluvium WBZ).

2.3 Contaminant Mass Removed

Contaminant mass removal is not a source control RAO for the HC&C system (see discussion of RAOs in Section 1.2). However, it does provide a useful metric for assessing the effectiveness of the system. Each month, untreated groundwater samples are collected by Sevenson Environmental Services, Inc. (SES), from the influent to the NW Natural Pretreatment Plant and the Siltronic Pretreatment Plant.[4] Samples are analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total cyanide, total suspended solids, oil and grease, copper, and iron. Influent concentrations of selected contaminants collected monthly by SES were compiled and are shown in Tables 2-3 and 2-4 for the NW Natural Pretreatment Plant and the Siltronic Pretreatment Plant, respectively. An annual mass removal rate was calculated for benzene, B(a)P, naphthalene, and cyanide as well as total VOCs, total SVOCs, copper, and iron by multiplying the average influent

[4] These data are provided to DEQ by SES on a semiannual basis. January through June 2022 data were submitted on August 31, 2022, and July through December 2022 data were submitted on February 28, 2023.

concentration for each contaminant by the groundwater volume pumped to each pretreatment plant each year (Equation 1; Tables 2-3 and 2-4).

Equation 1

$$\mathrm{M}\left(\frac{\mathrm{lb}}{\mathrm{yr}}\right) = \mathrm{C}\left(\frac{\mu\mathrm{g}}{\mathrm{L}}\right) * V\left(\frac{\mathrm{MG}}{\mathrm{yr}}\right) * 8.3454\left(\frac{\mathrm{lb}-\mathrm{L}}{\mathrm{MG}-\mathrm{mg}}\right) * 10^{-3}\left(\frac{\mathrm{mg}}{\mu\mathrm{g}}\right)$$

where:

M	=	mass removal rate for a given contaminant in a given year
lb	=	pound
yr	=	year
C	=	average annual untreated influent concentration of a given contaminant in groundwater pumped to each pretreatment plant
µg	=	microgram
L	=	liter
V	=	total annual volume of groundwater pumped to a given pretreatment plant
mg	=	milligram

The annual contaminant masses removed by the groundwater extraction system based on the groundwater pumped to each pretreatment plant is summarized in Table 2-5. From the beginning of full-time, full-scale operation of the HC&C system on May 14, 2015, to the end of 2022, the HC&C system has removed approximately 2,900 pounds of benzene, 368 pounds of B(a)P, 15,746 pounds of naphthalene, 1,411 pounds of cyanide, 4,483 pounds of total VOCs, 31,638 pounds of total SVOCs, 5.2 pounds of copper, and 459,870 pounds of iron (Table 2-5, Figures 2-4 through 2-11).

3 Hydraulic Containment Monitoring

Hydraulic containment of alluvium groundwater by the HC&C system in 2022 was evaluated using two types of data assessment: hydraulic gradient reversal between the river and upland Alluvium WBZ groundwater (with groundwater flow toward the upland) and upward vertical hydraulic gradient along the portion of Segment 1 downgradient of the Former Tar Pond Area. For each of these evaluations, the continuous groundwater elevation data measured at the monitoring wells, piezometers, and extraction wells were applied in multiple analyses to assess containment at varying temporal and spatial scales. Data collected at individual wells and piezometers were used to evaluate local hydraulic gradients. Evaluations that temporally or spatially interpolate between data points, such as Serfes averaging and potentiometric contour mapping, demonstrate hydraulic gradients and groundwater flow along the shoreline throughout the year. Continuous data collection and real time monitoring are discussed in Section 3.1.

3.1 Continuous Data Collection

Groundwater elevations in monitoring wells and piezometers, river elevations,[5] and pumping rates are recorded every 15 minutes. These data are used to inform the operation of the HC&C system (see discussion of system controls in Section 3 of the HC&C PMP [Anchor QEA 2019b]). These data are plotted and submitted to DEQ semiannually as a series of figures that are referred to as HC&C System Operational Figures (Operational Figures). Operational Figures were first prepared during the initial HC&C system start-up and testing phases (Anchor QEA 2015). Table 3-1 describes the 2022 Operational Figures. Operational Figures for the period of January through June 2022 (submitted to DEQ on August 31, 2022) are included in Appendix B1. Figures for the period of July through December 2022 (submitted to DEQ on February 28, 2023) are included in Appendix B2. It should be noted that some of the information included in the series of Operational Figures is not used to evaluate hydraulic control of Alluvium WBZ groundwater but is provided for completeness and consistency with past data submittals. For example, figures illustrating conditions in the Fill WBZ are included, although the HC&C system was not designed to control groundwater within the Fill WBZ. Also, wells beyond the alignment of the HC&C system (such as shoreline and offshore piezometers) are included to provide a complete dataset.

The 2022 Operational Figures confirm that the HC&C system maintained upland groundwater elevations in the alluvium in the nearshore area consistently below the river level and therefore controlled and contained alluvium groundwater throughout the year. It should be noted that continuous data are presented in an unabridged form in the Operational Figures. As a result, certain brief periods shown in the figures do not reflect typical conditions—for example, during routine

[5] Surface water elevations in the river are measured using transducers installed in two stilling wells.

groundwater monitoring events and well maintenance activities. Operational Figures have been annotated to point out these types of data artifacts.

Evaluations based on the 2022 Operational Figures were conducted consistent with their intended uses (established in the CDR [Anchor QEA 2012] and detailed in Table 3-1) and are summarized in the following subsections.

3.1.1 Hydraulic Head Difference Between Upland Alluvium WBZs and River

Continuous groundwater elevation data were measured in 2022 at monitoring wells and piezometers instrumented with pressure transducers, and those data were compared to the continuous river elevation (Appendices B1 and B2, Figures 4.1 through 4.85). With continued maintenance and optimization of the HC&C system, including periodic replacement of degraded extraction wells (Section 2.1), the groundwater elevations at the wells and piezometers screened in the Upper and Lower Alluvium WBZs were maintained at levels that were lower than the river elevation, indicating that the hydraulic gradients between these upland Alluvium WBZs and the river were reversed due to HC&C system operation.

The continuous groundwater and surface water elevation data were also used to create potentiometric surface maps (Appendices B1 and B2, Figures 3.1a through 3.1d and 3.2a through 3.2d) and maps showing contours of the elevation differences between groundwater and the river (Appendices B1 and B2, Figures 3.3a through 3.3d and 3.4a through 3.4d). These maps were created using the 3-day rolling Serfes averages[6] for the Upper Alluvium, Lower Alluvium, and Deep Lower Alluvium WBZs for two 3-day periods (the 11th through the 13th and the 24th through the 26th) of each month. These maps provide snapshots of average conditions for the nearshore area during both 3-day periods. These figures confirm that the hydraulic gradient was reversed between the Upper and Lower Alluvium WBZs and the river; therefore, groundwater flow in the Upper and Lower Alluvium WBZs was from the river toward the extraction wells in 2022. The monitoring program has proven to be a very effective method for ensuring that wells are performing as required through maintenance and replacement to ensure hydraulic containment is continuously achieved.

3.1.2 Vertical Hydraulic Gradients

Segment 1 downgradient of the Former Tar Pond Area is the highest priority for source control, and in this portion of Segment 1, vertical hydraulic gradients within the Alluvium WBZs are being evaluated in addition to the comparison between upland groundwater and river elevations to verify that upward vertical gradients are maintained along this portion of Segment 1. Upward vertical

[6] Serfes averages are a 3-day rolling average method described in "Determining the Mean Hydraulic Gradient of Ground Water Affected by Tidal Fluctuations" (Serfes 1991). The Serfes average is a well-established and appropriate method to use when evaluating groundwater elevations influenced by tides (i.e., hydraulically connected to surface water bodies that experience tidal fluctuations [Serfes 1991]).

gradients in Segment 1 are required to avoid exacerbating potential downward movement of DNAPL (Anchor QEA 2012). To confirm that an upward vertical hydraulic gradient was maintained in the Alluvium WBZs in this portion of Segment 1 (Figure 1-2, Table 3-1), water elevation differences between paired wells screened in adjacent hydrogeological units (i.e., Lower Alluvium and Upper Alluvium WBZs, or Deep Lower Alluvium and Lower Alluvium WBZs) are being evaluated (Appendices B1 and B2, Figures 5.5 through 5.31). Appendices B1 and B2 also include Figures 5.1 through 5.4 summarizing vertical hydraulic gradients between the Fill WBZ and the Upper Alluvium WBZ; these figures are not used in assessing vertical gradients within the Alluvium WBZs but are included for completeness. Segment 1 wells are included in Appendices B1 and B2, Figures 5.11 through 5.21 and 5.24 through 5.31. These figures indicate that in 2022, the HC&C system generally maintained an upward vertical hydraulic gradient (and therefore upward groundwater flow) within the Alluvium WBZs in the area between the Former Tar Pond Area and the river.

On the Siltronic Geographic Subarea (GSA) in the remaining portion of Segment 1, upward vertical gradients are not maintained upriver (southeast) of the PW-2 extraction wells (at monitoring well pairs WS-21-112/MW-36U [Figure 5.20] and WS-12-125/WS-8-59 [Figure 5.21]). Maintaining upward vertical gradients in the Siltronic GSA is not necessary because DNAPL is present only in the Lower Alluvium WBZ at this section of shoreline (within the screened interval of PW-2L). DNAPL is not significantly present anywhere in the Upper Alluvium WBZ along the Siltronic shoreline, nor is it present in either the Upper or Lower Alluvium WBZs in the area of the PW-1 extraction wells. To further support the conclusion that maintaining upward vertical gradients is not necessary within the Siltronic GSA shoreline area, groundwater concentrations were reviewed along the Siltronic GSA shoreline using data from monitoring wells screened in the Upper Alluvium WBZ and Lower Alluvium WBZ. Average groundwater concentrations of benzene and naphthalene for the last two sampling events at each well in this area were plotted on the Siltronic GSA portion of geologic cross section FSA-FSA' from the Gasco OU *Interim Feasibility Study* (Anchor QEA 2018), included in Appendix D. Along the Siltronic GSA shoreline, concentrations of benzene and naphthalene are relatively low in the Upper Alluvium WBZ groundwater and generally increase with depth from the Upper Alluvium WBZ to the Lower Alluvium WBZ. These data further confirm that little or no DNAPL is present in the Upper Alluvium WBZ, negating any need to maintain upward vertical gradients along the Siltronic GSA shoreline. However, system adjustments will be made in 2023 in an effort to improve upward vertical gradients in the area upstream of the PW-2 extraction wells.

Groundwater elevations at selected well clusters were compared to each other and the river to show the temporal continuity of vertical gradients between the Deep Lower Alluvium WBZ and the Lower Alluvium WBZ and between the Lower Alluvium WBZ and the Upper Alluvium WBZ downgradient of the Former Tar Pond Area where DNAPL is present in the Upper Alluvium WBZ (Appendices B1 and B2, Figures 7.1 through 7.16). Hydraulic heads were also compared to the river elevation. In 2022, gradients at the selected well clusters indicated upward vertical gradients from the

Deep Lower Alluvium WBZ to the Lower Alluvium WBZ and from the Lower Alluvium WBZ to the Upper Alluvium WBZ downgradient of the Former Tar Pond Area where DNAPL is present in the Upper Alluvium WBZ.

Vertical gradients calculated at individual well pairs reflect localized conditions. To illustrate the areal distribution of upward hydraulic gradients, contour maps of groundwater elevation differences between the Upper Alluvium and Lower Alluvium WBZs were created using Serfes averages for two 3-day periods (the 11th through the 13th and the 24th through the 26th) of each month (Appendices B1 and B2, Figures 6.1 through 6.2). These figures also confirm that along the portion of Segment 1 downgradient of the Former Tar Pond Area, upward vertical gradients were maintained between the Upper and Lower Alluvium WBZs in 2022. In the area southeast (upriver) of the PW-2U/PW-2L extraction well cluster, upward vertical gradients are intermittently not maintained.

4 DNAPL Collection and Monitoring

A DNAPL monitoring program was implemented at the Gasco OU to monitor DNAPL during the interim operation and testing phases and current full-time HC&C system operation. As outlined in the CDR (Anchor QEA 2012), the DNAPL monitoring program was implemented at DEQ's request to evaluate whether operating the HC&C system at the Gasco site could potentially mobilize DNAPL at the former effluent management areas on the NW Natural and Siltronic properties. To address DEQ's request, Anchor QEA implemented a DNAPL monitoring program consisting of well monitoring, oil-water separator monitoring, and TarGOST borings. Results of the DNAPL monitoring program are presented in detail in semiannual reports, which are submitted in March and September of each year. The 2022 DNAPL monitoring summary reports were submitted on October 14, 2022, and March 31, 2023, respectively (Anchor QEA 2022c, 2023). A total of 4,154 gallons of DNAPL have been collected by the system since it was placed into operation in 2013, including 548 gallons in 2022.

5 Groundwater Quality Monitoring

In addition to the hydraulic containment achieved by the HC&C system, groundwater quality trends are monitored at an extensive network of selected wells. Monitoring groundwater chemistry is not part of the source control RAOs, and groundwater quality data will not be used to assess whether the source control actions are successful at achieving the RAOs. Therefore, the data presented in this section are not intended to be used to evaluate the success of the source control actions but rather to measure groundwater quality changes that occur during HC&C system operation for general site monitoring purposes. The groundwater quality monitoring program, described in the following subsections, will also be evaluated as part of the site-wide upland feasibility study and overall upland site remedy.

5.1 Well Network and Schedule

At the request of DEQ, groundwater monitoring programs conducted by NW Natural and Siltronic have been combined as summarized in a single spreadsheet referred to as the Comprehensive Groundwater Framework. This spreadsheet, showing the monitoring program in effect as of the end of 2022, is included as Appendix C1 and includes details of the groundwater monitoring programs conducted within the Gasco OU by Anchor QEA on behalf of NW Natural and Siltronic. The Comprehensive Groundwater Framework includes a semiannual sampling event in March and an annual sampling event in September of each year. The annual and semiannual sampling events include collection and analysis of groundwater samples from monitoring wells and DNAPL monitoring and removal at observation wells, groundwater extraction wells, and piezometers installed as part of the monitoring network. Monitoring well locations are shown in Figure 5-1 (Fill WBZ), Figure 5-2 (Upper Alluvium WBZ), Figure 5-3 (Lower Alluvium WBZ), and Figure 5-4 (Deep Lower Alluvium WBZ).

5.2 Target Analyses

The Comprehensive Groundwater Framework includes the following analyses:

- VOCs (U.S. Environmental Protection Agency [EPA] Method 8260)
- Polycyclic aromatic hydrocarbons (PAHs) and 1-methylnaphthalene, 2-methylnaphthalene, dibenzofuran, and carbazole (EPA Method 8270 SIM)
- Total cyanide (EPA Method 335.4)
- Available cyanide (EPA Method OIA-1677)
- Free cyanide (EPA Method D-4282)
- Total metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc) (EPA Method 6000)

Groundwater samples collected from the extraction wells were analyzed by the following methods for major ions:

- Total metals (calcium, potassium, sodium, and magnesium) (EPA Method 6000)
- Dissolved metals (iron and magnesium) (EPA Method 6000)
- Anions (sulfate, chloride, and nitrate) (EPA Method 300.0)
- Alkalinity (carbonate and bicarbonate) (Standard Method 2320B)

The following analytes were also tested for at extraction well PW-1Lb[7]:

- Pesticides (EPA Method 8081B)
- Herbicides (EPA Method 8151A)

A subset of well samples indicated in the comprehensive framework were analyzed for the following total petroleum hydrocarbons (TPH) analyses:

- Gasoline-range total petroleum hydrocarbons (NWTPH-Gx)
- Diesel-range total petroleum hydrocarbons (NWTPH-Dx)
- Volatile petroleum hydrocarbons (WA VPH)
- Extractable petroleum hydrocarbons (WA EPH)

In addition, field parameters were measured at each sampled well, including dissolved oxygen, pH, specific conductance, turbidity, temperature, and oxidation reduction potential.

Also, as requested by DEQ, a subset of 12 piezometers (PZ2-5, PZ2-20, PZ2-43, PZ2-77, PZ7-5, PZ7-50, PZ7-100, PZ8-5, PZ8-50, PZ9-5, PZ9-50, and PZ9-75) installed along the shoreline and in the Willamette River are equipped with sensors and dataloggers that record specific conductance and temperature. These data were collected at the same frequency as water level data (15-minute intervals).

The field sampling procedures, sample handling protocols, analyte testing, and quality assurance and quality control procedures are described in detail in the *Sampling and Analysis Plan*, which is available in Appendix A of the HC&C PMP (Anchor QEA 2019b).

5.3 Data Reporting

Water quality data are presented in an Excel database file that includes historical groundwater monitoring data and has been updated with data from the 2022 sampling events. Flat-file exports with validated monitoring data for the semiannual monitoring event (March monitoring event) and annual monitoring event (September monitoring event) were submitted on August 8, 2022, and

[7] On May 26, 2016, DEQ requested that NW Natural further evaluate groundwater entering the HC&C system by collecting and analyzing samples from PW-1L (replaced by PW-1Lb) for Rhône-Poulenc constituents.

March 2, 2023, respectively. Summary tables of validated 2022 data are provided in Appendix C2 of this report. Data validation reports are available upon request.

Concentration trend plots were created for total cyanide, available cyanide, free cyanide, B(a)P, naphthalene, and benzene for the last 5 years and are included in Appendices C3 and C4. Sample results for a single contaminant are displayed in one figure to facilitate comparison of general trends between the various wells and piezometers in each layer. Data for each chemical (i.e., benzene, B(a)P, naphthalene, and cyanide) are organized in eight plots as follows:

- C.3.x.1: Fill WBZ Monitoring Wells and Piezometers (1 of 2)
- C.3.x.2: Fill WBZ Monitoring Wells and Piezometers (2 of 2)
- C.3.x.3: Upper Alluvium WBZ Monitoring Wells and Piezometers (1 of 2)
- C.3.x.4: Upper Alluvium WBZ Monitoring Wells and Piezometers (2 of 2)
- C.3.x.5: Upper Alluvium WBZ Extraction Wells
- C.3.x.6: Lower Alluvium WBZ Monitoring Wells and Piezometers
- C.3.x.7: Lower Alluvium WBZ Extraction Wells
- C.3.x.8: Deep Lower Alluvium WBZ Monitoring Wells and Piezometers

Figures from Appendix C4 show water quality trends of cyanide (total, available, and free), B(a)P, naphthalene, and benzene at a given monitoring well, piezometer, or extraction well during the past 5 years. Sample results are displayed in quadrants for easy comparison between contaminants. Chemistry data from monitoring wells and piezometers are displayed in Figures C.4.a.1 through C.4.a.98 and from extraction wells in Figures C.4.b.99 through C.4.b.124.

Plots from Appendix C3 and C4 are reviewed to evaluate changes in concentrations, if any, detected at any well. As shown in these figures, groundwater chemistry conditions have continued to be relatively stable across the site during the past 5 years. The majority of groundwater constituents tend to remain within an order of magnitude, as reported in micrograms per liter, during the 5-year period.

6 Summary

The information reported in this 2022 Annual Report demonstrates that the HC&C system is meeting design objectives, which are to control the contaminated groundwater migration pathway from the Alluvium WBZs to the Willamette River by reversing the hydraulic gradients such that the hydraulic gradient is from the river to the uplands (DEQ 2011). RAOs for groundwater source control are to prevent migration of contaminated groundwater from the uplands to the Willamette River along shoreline Segments 1 and 2 in a manner that minimizes DNAPL mobilization resulting from groundwater source control measures wherever DNAPL occurs. This report confirms that the design objectives for the HC&C system were met and that source control RAOs for the Alluvium WBZs were achieved during the reporting period.

In 2022, the HC&C system operated successfully as designed, and empirical data continue to demonstrate that the system is meeting RAOs for source control within the Alluvium WBZs by reversing hydraulic gradients and associated Upper and Lower Alluvium WBZ contaminant migration pathways to the Willamette River. DEQ has determined that full capture of groundwater and demonstration of gradient reversal within the Deep Lower Alluvium WBZ are not necessary to achieve source control RAOs (DEQ 2022). Routine inspections were performed on a weekly, monthly, and quarterly basis. The inspection procedures were effective, and preventative and corrective maintenance of HC&C system components were completed to ensure continuous and proper system function (Table 2-1). More than 151 MG of contaminated groundwater containing approximately 269 pounds of benzene, 7 pounds of B(a)P, 3,045 pounds of naphthalene, 197 pounds of cyanide, 552 pounds of total VOCs, 4,040 pounds of total SVOCs, 2.54 pounds of copper, and 64,840 pounds of iron were extracted by the HC&C system in 2022. From the beginning of full-time, full-scale operation of the HC&C system on May 14, 2015, through the end of 2022, approximately 2,900 pounds of benzene, 368 pounds of B(a)P, 15,746 pounds of naphthalene, 1,411 pounds of cyanide, 4,483 pounds of total VOCs, 31,638 pounds of total SVOCs, 5.2 pounds of copper, and 459,870 pounds of iron have been removed from the subsurface at the Gasco and Siltronic properties by the HC&C system.

Continuous pumping rate data confirm proper operation and performance. Sporadic small scale data artifacts due to operation issues have been noted and resolved. These include readings during extraction well chemical treatments, manual redevelopment, transducer O&M and replacements, extraction well O&M, and HMI system upgrades.

Continuous (15-minute interval) groundwater elevation data (Table 3-1, Appendix B) confirm that in 2022, groundwater flow in the Upper and Lower Alluvium WBZs along the HC&C alignment was from the river toward the extraction wells and that an upward vertical gradient was maintained between

the Upper and Lower Alluvium WBZs and the Lower and Deep Lower Alluvium WBZs in the portion of Segment 1 downgradient of the Former Tar Pond Area.

Semiannual DNAPL collection and monitoring events were conducted in 2022. The outcomes of these events and recommendations are detailed in the DNAPL monitoring reports. A total of 4,154 gallons of DNAPL have been collected by the system since it was placed into operation, and 548 gallons of DNAPL were removed in 2022.

Quarterly, semiannual, and annual water quality monitoring events were conducted in 2022 and show that groundwater chemistry conditions have continued to be relatively stable across the site during the past 5 years. These data are provided in Appendix C. The groundwater quality data are not used for evaluating success in achieving the RAOs for the HC&C system; however, they will be useful for documenting current conditions and temporal trends in groundwater quality over time in the upland feasibility study.

7 References

Anchor QEA (Anchor QEA, LLC), 2012. *Revised Groundwater Source Control Construction Design Report.* NW Natural Gasco Site. Prepared for NW Natural. In Association with Sevenson Environmental Services, Inc., and Advanced Remediation Technologies, Inc. January 2012.

Anchor QEA, 2013a. *Final Groundwater Source Control Extraction System Test Plan*. NW Natural Gasco Site. Prepared for NW Natural. November 2013.

Anchor QEA, 2013b. *Data Report: Groundwater Source Control Extraction System Test*. NW Natural Gasco Site. Prepared for Oregon Department of Environmental Quality. December 23, 2013.

Anchor QEA, 2014a. *Data Report: Groundwater Source Control Extraction System Test – Phase 1 Step 4*. NW Natural Gasco Site. Prepared for Oregon Department of Environmental Quality. April 10, 2014.

Anchor QEA, 2014b. *Data Report: Groundwater Source Control Extraction System Test – Phase 1 Step 5*. NW Natural Gasco Site. Prepared for Oregon Department of Environmental Quality. September 8, 2014.

Anchor QEA, 2015. *Groundwater Source Control Phase 1 Testing Data Summary and Analysis Report*. NW Natural Gasco Site. Prepared for NW Natural. January 30, 2015.

Anchor QEA, 2017. *Gasco Groundwater Modeling Report.* NW Natural Gasco Site. Prepared for NW Natural. February 17, 2017.

Anchor QEA, 2018. *Interim Feasibility Study.* Gasco OU. Prepared for NW Natural. November 21, 2018.

Anchor QEA, 2019a. *Hydraulic Control and Containment System Operations and Maintenance Manual.* NW Natural Gasco Site. Prepared for NW Natural. December 18, 2019.

Anchor QEA, 2019b. *Hydraulic Control and Containment System Performance and Monitoring Plan.* NW Natural Gasco Site. Prepared for NW Natural. June 7, 2019.

Anchor QEA, 2020. *Fill Water-Bearing Zone Trench Design.* NW Natural Gasco Site. Prepared for NW Natural. September 28, 2020.

Anchor QEA, 2021a. *Contaminated Materials Management Plan*. NW Natural Gasco Site. Prepared for NW Natural. November 19, 2021.

Anchor QEA, 2021b. *Upland Feasibility Study DNAPL Data Gaps Investigation Work Plan*. NW Natural Gasco Site. Prepared for NW Natural. May 7, 2021.

Anchor QEA, 2022a. *2020 Hydraulic Control and Containment System Annual Report.* NW Natural Gasco Site. Prepared for NW Natural. August 31, 2021; revised March 14, 2022.

Anchor QEA, 2022b. *2021 Hydraulic Control and Containment System Annual Report.* NW Natural Gasco Site. Prepared for NW Natural. August 19, 2022.

Anchor QEA, 2022c. *DNAPL Monitoring Semiannual Summary Report (January 1 through June 30, 2022).* NW Natural Gasco Site. Prepared for NW Natural. October 14, 2022.

Anchor QEA, 2023. *DNAPL Monitoring Semiannual Summary Report (July 1 through December 31, 2022).* NW Natural Gasco Site. Prepared for NW Natural. March 31, 2023.

DEQ (Oregon Department of Environmental Quality), 1994. Voluntary Agreement No. WMCVM-NWR-94-13. August 8, 1994.

DEQ, 2000. Joint Order No. ECVC-NWR-00-27 to NW Natural and Siltronic. In the matter of Wacker Property, Wacker Siltronic Corporation and Northwest Natural Gas Company. Order Requiring Remedial Investigation and Source Control Measures. October 4, 2000.

DEQ, 2006. Amended Voluntary Agreement No. WMCVM-NWR-94-13. First Addendum to Voluntary Agreement for Remedial Investigation/Feasibility Study. July 19, 2006.

DEQ, 2008. Correspondence to: Bob Wyatt, NW Natural. Correspondence from: Dana Bayuk, Oregon Department of Environmental Quality. Regarding: Groundwater/DNAPL Focused Feasibility Study. March 21, 2008.

DEQ, 2011. Letter to: Robert J. Wyatt, NW Natural. Letter from: Dana Bayuk, Oregon Department of Environmental Quality. Regarding: Draft Groundwater Source Control Measures Final Design Report Shoreline Segments 1 and 2, NW Natural Property and the Northern Portion of the Siltronic Corporation Property. Portland, Oregon. ECSI Nos. 84 and 183. September 22, 2011.

DEQ, 2022. Letter to: Bob Wyatt, NW Natural. Letter from: Wesley A. Thomas, Oregon Department of Environmental Quality. Regarding: 2020 Hydraulic Control and Containment System Annual Report. Former Gasco Manufactured Gas Plant Operable Unit. Portland, Oregon. ECSI No. 84. January 19, 2022.

Serfes, M.E., 1991. "Determining the Mean Hydraulic Gradient of Groundwater Affected by Tidal Fluctuations." *Ground Water* 29(4):549–555.

SES (Sevenson Environmental Services, Inc.), 2016. *NW Natural Groundwater Treatment System Operations and Maintenance Manual.* Prepared for NW Natural. March 2016.

Tables

Table 1-1
Groundwater Well and Piezometer Construction Details

Well ID	Well Type	Water-Bearing Zone	Date Well Installed (mm/dd/yy)	Well Installation Method	Monument Type	Screen Type	Screen Slot Size (inches)	Sand Pack (Colorado)	Well Diameter (inches)	Elevations, feet COP or Below Ground Surface											
										Ground Surface	Top of Casing		Pump Inlet		Top Screen		Base Screen		Well Depth[1]	
										(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)
PW-01U	Extraction Well	Upper Alluvium	01/09/13	Sonic	Above-grade	CWSS	0.020	16-30	6	35.00	(2.50)	37.50	54.00	(19.00)	55.10	(20.10)	70.10	(35.10)	75.10	(40.10)
PW-01Uc	Extraction Well	Upper Alluvium	12/22/21	Cable Tool	Above-grade	CWSS	0.010	20-40	8	NS	NS	NS	64.00	NS	65.00	NS	80.00	NS	85.00	NS
PW-01Lb	Extraction Well	Lower Alluvium	05/07/19	Cable Tool	Above-grade	CWSS	0.035	10-20	8	34.50	(2.60)	37.07	99.00	(64.50)	101.90	(67.40)	131.90	(97.40)	136.90	(102.40)
PW-02U	Extraction Well	Upper Alluvium	04/25/12	Sonic	Above-grade	CWSS	0.020	16-30	6	34.47	(2.23)	36.70	57.80	(23.33)	57.80	(23.33)	72.80	(38.33)	77.80	(43.33)
PW-02L	Extraction Well	Lower Alluvium	02/06/13	Sonic	Above-grade	CWSS	0.035	10-20	6	34.50	(2.64)	37.14	116.40	(81.90)	120.10	(85.60)	140.10	(105.60)	145.10	(110.60)
PW-03U	Extraction Well	Upper Alluvium	04/11/12	Sonic	Above-grade	CWSS	0.020	16-30	6	25.57	(1.95)	27.52	43.80	(18.23)	42.80	(17.23)	57.80	(32.23)	62.80	(37.23)
PW-03-118	Extraction Well	Lower Alluvium	06/13/07	Cable Tool	Above-grade	CWSS	0.035	10-20	8	25.50	(1.51)	27.01	106.50	(81.00)	108.00	(82.50)	118.00	(92.50)	128.00	(102.50)
PW-04U	Extraction Well	Upper Alluvium	01/16/13	Sonic	Above-grade	CWSS	0.020	16-30	6	28.32	(2.69)	31.01	45.80	(17.48)	47.20	(18.88)	62.20	(33.88)	67.20	(38.88)
PW-04L	Extraction Well	Lower Alluvium	01/10/13	Sonic	Above-grade	CWSS	0.035	10-20	6	28.22	(2.05)	30.27	99.40	(71.18)	105.40	(77.18)	125.40	(97.18)	130.40	(102.18)
PW-05U	Extraction Well	Upper Alluvium	04/20/12	Sonic	Above-grade	CWSS	0.020	16-30	6	32.49	(2.33)	34.82	49.70	(17.21)	49.90	(17.41)	64.90	(32.41)	69.90	(37.41)
PW-05L	Extraction Well	Lower Alluvium	01/23/13	Sonic	Above-grade	CWSS	0.035	10-20	6	32.27	(1.92)	34.19	102.60	(70.33)	105.70	(73.43)	125.70	(93.43)	130.70	(98.43)
PW-06U	Extraction Well	Upper Alluvium	04/17/12	Sonic	Above-grade	CWSS	0.020	16-30	6	31.54	(2.39)	33.93	50.60	(19.06)	49.40	(17.86)	64.40	(32.86)	69.40	(37.86)
PW-06L	Extraction Well	Lower Alluvium	11/06/12	Sonic	Above-grade	CWSS	0.035	10-20	6	30.97	(2.35)	33.32	99.70	(68.73)	103.70	(72.73)	123.70	(92.73)	128.70	(97.73)
PW-07-93	Extraction Well	Lower Alluvium	02/22/10	Sonic	Above-grade	CWSS	0.035	10-20	8	24.19	(2.62)	26.81	69.40	(45.21)	73.50	(49.31)	93.50	(69.31)	95.50	(71.31)
PW-08Ub	Extraction Well	Upper Alluvium	11/04/20	Cable Tool	Above-grade	CWSS	0.010	20-40	8	20.10	(3.40)	23.45	23.60	(3.50)	20.00	0.10	35.00	(15.00)	40.90	(20.90)
PW-08-68	Extraction Well	Lower Alluvium	02/11/10	Sonic	Above-grade	CWSS	0.035	10-20	8	24.64	(2.54)	27.18	45.00	(20.36)	48.00	(23.36)	68.00	(43.36)	70.00	(45.36)
PW-09-92	Extraction Well	Lower Alluvium	03/01/10	Sonic	Above-grade	CWSS	0.035	10-20	8	33.02	(2.82)	35.84	69.70	(36.68)	72.60	(39.58)	92.60	(59.58)	94.60	(61.58)
PW-10U	Extraction Well	Upper Alluvium	04/06/17	Cable Tool	Above-grade	CWSS	0.020	16-30	6	32.90	(2.50)	35.40	38.20	(5.30)	40.00	(7.10)	55.40	(22.50)	60.00	(27.10)
PW-10L[3]	Extraction Well	Lower Alluvium	11/12/12	Sonic	Above-grade	CWSS	0.035	10-20	6	31.54	(1.86)	33.40	NA	NA	59.80	(28.26)	79.80	(48.26)	84.80	(53.26)
PW-10Lb	Extraction Well	Lower Alluvium	10/23/18	Cable Tool	Above-grade	CWSS	0.035	12-20	6	32.20	(2.60)	34.80	73.00	(40.80)	76.00	(43.80)	96.00	(63.80)	101.00	(68.80)
PW-11U	Extraction Well	Upper Alluvium	01/26/13	Sonic	Above-grade	CWSS	0.020	16-30	6	24.05	(2.73)	26.78	48.30	(24.25)	49.80	(25.75)	64.80	(40.75)	69.80	(45.75)
PW-11Ub	Extraction Well	Upper Alluvium	02/01/22	Cable Tool	Above-grade	CWSS	0.010	20-40	8	NS	NS	NS	49.20	NS	50.20	NS	65.20	NS	70.20	NS
PW-12U	Extraction Well	Upper Alluvium	12/21/12	Sonic	Above-grade	CWSS	0.020	16-30	6	26.23	(2.35)	28.58	46.60	(20.37)	47.80	(21.57)	62.80	(36.57)	67.80	(41.57)
PW-13U	Extraction Well	Upper Alluvium	12/28/12	Sonic	Above-grade	CWSS	0.020	16-30	6	32.20	(2.40)	34.60	58.90	(26.70)	57.60	(25.40)	72.60	(40.40)	77.60	(45.40)
PW-14U	Extraction Well	Upper Alluvium	01/14/13	Sonic	Above-grade	CWSS	0.020	16-30	6	31.93	(2.74)	34.68	55.80	(23.87)	57.80	(25.87)	67.80	(35.87)	72.80	(40.87)
PW-15U	Extraction Well	Upper Alluvium	09/03/14	Sonic	Above-grade	CWSS	0.020	16-30	6	24.48	(2.53)	27.01	49.50	(25.02)	35.10	(10.62)	55.10	(30.62)	60.10	(35.62)
PW-16U	Extraction Well	Upper Alluvium	08/28/14	Sonic	Above-grade	CWSS	0.020	16-30	6	26.11	(2.02)	28.13	42.50	(16.39)	30.40	(4.29)	50.40	(24.29)	55.40	(29.29)
MW-1-22	Monitoring Well	Fill	10/24/95	HSA	Above-grade	Slotted PVC	0.020	10-20	2	32.00	(2.75)	34.75	NA	NA	11.00	21.00	21.00	11.00	22.00	10.00
MW-1-55	Monitoring Well	Upper Alluvium	07/10/07	Sonic	Above-grade	CWSS	0.020	10-20	2	33.10	(2.54)	35.64	NA	NA	45.00	(11.90)	55.00	(21.90)	57.00	(23.90)
MW-1-82	Monitoring Well	Lower Alluvium	07/09/07	Sonic	Above-grade	CWSS	0.020	10-20	2	33.50	(2.45)	35.95	NA	NA	72.00	(38.50)	82.00	(48.50)	84.00	(50.50)
MW-2-32	Monitoring Well	Fill	11/06/95	HSA	Flush	Slotted PVC	0.020	10-20	2	34.83	0.42	34.41	NA	NA	21.50	13.33	31.50	3.33	32.50	2.33
MW-2-61	Monitoring Well	Upper Alluvium	10/08/98	HSA	Flush	Slotted PVC	0.020	10-20	2	34.70	0.37	34.33	NA	NA	50.00	(15.30)	60.00	(25.30)	61.50	(26.80)
MW-2-104	Monitoring Well	Lower Alluvium	06/25/07	Sonic	Flush	CWSS	0.020	10-20	2	34.86	0.06	34.80	NA	NA	94.00	(59.14)	104.00	(69.14)	106.00	(71.14)
MW-3-26	Monitoring Well	Fill	11/02/95	HSA	Above-grade	CWSS	0.020	10-20	2	31.20	(2.84)	34.04	NA	NA	15.00	16.20	25.00	6.20	26.00	5.20
MW-3-56	Monitoring Well	Upper Alluvium	11/01/95	HSA	Above-grade	CWSS	0.020	10-20	2	31.20	(2.82)	34.02	NA	NA	45.00	(13.80)	55.00	(23.80)	56.00	(24.80)
MW-4-35	Monitoring Well	Fill/Upper Alluvium	10/31/95	HSA	Above-grade	CWSS	0.020	10-20	2	31.70	(2.74)	34.44	NA	NA	24.00	7.70	34.00	(2.30)	35.00	(3.30)
MW-4-57	Monitoring Well	Upper Alluvium	10/30/95	HSA	Above-grade	CWSS	0.020	10-20		31.70	(2.78)	34.48	NA	NA	46.00	(14.30)	56.00	(24.30)	57.00	(25.30)
MW-4-101	Monitoring Well	Lower Alluvium	10/16/98	DWRA	Above-grade	Slotted PVC (PP)	0.010	20-40	2	31.80	(2.46)	34.26	NA	NA	89.50	(57.70)	99.50	(67.70)	101.00	(69.20)
MW-5-32	Monitoring Well	Fill/Upper Alluvium	10/27/95	HSA	Above-grade	Slotted PVC	0.020	10-20	2	25.10	(2.62)	27.72	NA	NA	21.00	4.10	31.00	(5.90)	32.00	(6.90)
MW-5-100	Monitoring Well	Upper Alluvium	10/23/98	DWRA	Above-grade	CWSS	0.020	10-20	2	25.40	(1.87)	27.27	NA	NA	88.00	(62.60)	98.00	(72.60)	100.00	(74.60)
MW-5-175	Monitoring Well	Deep Lower Alluvium	10/22/98	DWRA	Above-grade	Slotted PVC (PP)	0.010	20-40	2	25.20	(1.92)	27.12	NA	NA	163.00	(137.80)	173.00	(147.80)	175.00	(149.80)
MW-16-45	Monitoring Well	Upper Alluvium	07/20/04	Sonic	Above-grade	Slotted SS	0.010	10-20	2	30.81	(2.29)	33.10	NA	NA	30.00	0.81	45.00	(14.19)	47.50	(16.69)

Table 1-1
Groundwater Well and Piezometer Construction Details

Well ID	Well Type	Water-Bearing Zone	Date Well Installed (mm/dd/yy)	Well Installation Method	Monument Type	Screen Type	Screen Slot Size (inches)	Sand Pack (Colorado)	Well Diameter (inches)	Elevations, feet COP or Below Ground Surface											
										Ground Surface	Top of Casing		Pump Inlet		Top Screen		Base Screen		Well Depth[1]	
										(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)
MW-16-65	Monitoring Well	Upper Alluvium	07/19/04	Sonic	Above-grade	Slotted SS	0.010	10-20	2	30.60	(2.53)	33.13	NA	NA	55.00	(24.40)	65.00	(34.40)	67.50	(36.90)
MW-18-30	Monitoring Well	Fill	02/27/07	Sonic	Above-grade	CWSS	0.020	10-20	2	31.66	(2.52)	34.18	NA	NA	19.00	12.66	29.00	2.66	30.00	1.66
MW-18-125	Monitoring Well	Lower Alluvium	04/22/10	Sonic	Above-grade	CWSS	0.020	10-20	2	31.93	(2.64)	34.57	NA	NA	115.00	(83.07)	125.00	(93.07)	126.00	(94.07)
MW-18-180	Monitoring Well	Deep Lower Alluvium	02/26/07	Sonic	Above-grade	CWSS	0.020	10-20	2	31.70	(2.11)	33.81	NA	NA	170.00	(138.30)	180.00	(148.30)	181.00	(149.30)
MW-19-22	Monitoring Well	Fill	03/06/07	Sonic	Above-grade	CWSS	0.020	10-20	2	27.40	(2.32)	29.72	NA	NA	12.00	15.40	22.00	5.40	23.00	4.40
MW-19-125	Monitoring Well	Lower Alluvium	03/12/07	Sonic	Above-grade	CWSS	0.020	10-20	2	27.20	(2.13)	29.33	NA	NA	115.00	(87.80)	125.00	(97.80)	126.00	(98.80)
MW-19-180	Monitoring Well	Deep Lower Alluvium	03/02/07	Sonic	Above-grade	CWSS	0.020	10-20	2	27.28	(2.45)	29.73	NA	NA	170.00	(142.72)	180.00	(152.72)	181.00	(153.72)
MW-20-120	Monitoring Well	Lower Alluvium	03/08/07	Sonic	Above-grade	CWSS	0.020	10-20	2	25.63	(2.06)	27.69	NA	NA	110.00	(84.37)	120.00	(94.37)	121.00	(95.37)
MW-21-12	Monitoring Well	Fill	07/06/07	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	20.34	(2.82)	23.16	NA	NA	7.00	13.34	12.00	8.34	14.00	6.34
MW-21U	Monitoring Well	Upper Alluvium	09/24/12	Sonic	Above-grade	CWSS	0.020	10-20	2	20.50	(1.88)	22.38	NA	NA	25.00	(4.50)	35.00	(14.50)	38.00	(17.50)
MW-21-75	Monitoring Well	Lower Alluvium	07/05/07	Sonic	Above-grade	CWSS	0.020	10-20	2	20.40	(2.63)	23.03	NA	NA	65.00	(44.60)	75.00	(54.60)	77.00	(56.60)
MW-21-115	Monitoring Well	Lower Alluvium	07/02/07	Sonic	Above-grade	CWSS	0.020	10-20	2	20.50	(2.85)	23.35	NA	NA	105.00	(84.50)	115.00	(94.50)	117.00	(96.50)
MW-21-165	Monitoring Well	Deep Lower Alluvium	06/28/07	Sonic	Above-grade	CWSS	0.020	10-20	2	20.50	(2.56)	23.06	NA	NA	156.00	(135.50)	166.00	(145.50)	168.00	(147.50)
MW-22U	Monitoring Well	Upper Alluvium	09/20/12	Sonic	Above-grade	CWSS	0.020	10-20	2	33.50	(2.87)	36.37	NA	NA	45.00	(11.50)	55.00	(21.50)	58.00	(24.50)
MW-22-80	Monitoring Well	Lower Alluvium	01/28/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	33.59	(2.30)	35.89	NA	NA	69.90	(36.31)	79.90	(46.31)	80.90	(47.31)
MW-23-27	Monitoring Well	Fill	02/16/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	32.77	(1.86)	34.63	NA	NA	17.70	15.07	27.70	5.07	28.00	4.77
MW-23U	Monitoring Well	Upper Alluvium	09/24/12	Sonic	Above-grade	CWSS	0.020	10-20	2	32.90	(2.61)	35.51	NA	NA	40.00	(7.10)	50.00	(17.10)	53.00	(20.10)
MW-23-75	Monitoring Well	Lower Alluvium	02/16/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	32.91	(1.87)	34.78	NA	NA	64.70	(31.79)	74.70	(41.79)	75.70	(42.79)
MW-23-123	Monitoring Well	Lower Alluvium	02/05/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	32.88	(2.08)	34.96	NA	NA	113.30	(80.42)	123.30	(90.42)	124.30	(91.42)
MW-24-70	Monitoring Well	Upper Alluvium	02/03/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	31.42	(2.32)	33.74	NA	NA	60.10	(28.68)	70.10	(38.68)	71.10	(39.68)
MW-24-130	Monitoring Well	Lower Alluvium	02/02/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	31.34	(2.32)	33.66	NA	NA	120.10	(88.76)	130.10	(98.76)	131.10	(99.76)
MW-25L	Monitoring Well	Lower Alluvium	09/19/12	Sonic	Above-grade	CWSS	0.020	10-20	2	31.30	(2.82)	34.12	NA	NA	54.00	(22.70)	64.00	(32.70)	67.00	(35.70)
MW-26U	Monitoring Well	Upper Alluvium	09/25/12	Sonic	Above-grade	CWSS	0.020	10-20	2	31.40	(2.53)	33.93	NA	NA	38.50	(7.10)	48.50	(17.10)	51.70	(20.30)
MW-27U	Monitoring Well	Upper Alluvium	11/20/12	Sonic	Above-grade	CWSS	0.020	10-20	2	31.90	(2.28)	34.18	NA	NA	66.10	(34.20)	76.10	(44.20)	79.10	(47.20)
MW-27L	Monitoring Well	Lower Alluvium	11/16/12	Sonic	Above-grade	CWSS	0.020	10-20	2	31.90	(2.26)	34.16	NA	NA	106.00	(74.10)	116.00	(84.10)	119.00	(87.10)
MW-28U	Monitoring Well	Upper Alluvium	10/05/12	Sonic	Above-grade	CWSS	0.020	10-20	2	32.00	(2.73)	34.73	NA	NA	75.00	(43.00)	85.00	(53.00)	88.00	(56.00)
MW-28L	Monitoring Well	Lower Alluvium	10/04/12	Sonic	Above-grade	CWSS	0.020	10-20	2	32.40	(2.47)	34.87	NA	NA	109.80	(77.40)	119.80	(87.40)	122.80	(90.40)
MW-29U	Monitoring Well	Upper Alluvium	11/27/12	Sonic	Above-grade	CWSS	0.020	10-20	2	32.00	(2.84)	34.84	NA	NA	46.00	(14.00)	56.00	(24.00)	59.00	(27.00)
MW-30U	Monitoring Well	Upper Alluvium	11/14/12	Sonic	Above-grade	CWSS	0.020	10-20	2	27.40	(3.06)	30.46	NA	NA	40.10	(12.70)	50.10	(22.70)	53.10	(25.70)
MW-31U	Monitoring Well	Upper Alluvium	09/28/12	Sonic	Above-grade	CWSS	0.020	10-20	2	25.80	(2.57)	28.37	NA	NA	84.90	(59.10)	94.90	(69.10)	97.90	(72.10)
MW-31L	Monitoring Well	Lower Alluvium	09/27/12	Sonic	Above-grade	CWSS	0.020	10-20	2	26.00	(2.53)	28.53	NA	NA	105.00	(79.00)	115.00	(89.00)	118.00	(92.00)
MW-32U	Monitoring Well	Upper Alluvium	11/06/12	Sonic	Above-grade	CWSS	0.020	10-20	2	25.80	(2.68)	28.48	NA	NA	39.90	(14.10)	49.90	(24.10)	52.90	(27.10)
MW-33U	Monitoring Well	Upper Alluvium	11/05/12	Sonic	Above-grade	CWSS	0.020	10-20	2	24.80	(2.86)	27.66	NA	NA	38.00	(13.20)	48.00	(23.20)	51.00	(26.20)
MW-34U	Monitoring Well	Upper Alluvium	11/12/12	Sonic	Above-grade	CWSS	0.020	10-20	2	24.20	(2.61)	26.81	NA	NA	63.30	(39.10)	73.30	(49.10)	76.30	(52.10)
MW-34L	Monitoring Well	Lower Alluvium	11/08/12	Sonic	Above-grade	CWSS	0.020	10-20	2	24.10	(2.81)	26.91	NA	NA	99.00	(74.90)	109.00	(84.90)	112.00	(87.90)
MW-35U	Monitoring Well	Upper Alluvium	09/28/12	Sonic	Above-grade	CWSS	0.020	10-20	2	33.90	(2.55)	36.45	NA	NA	54.00	(20.10)	64.00	(30.10)	67.00	(33.10)
MW-36U	Monitoring Well	Upper Alluvium	09/27/12	Sonic	Above-grade	CWSS	0.020	10-20	2	35.10	(2.83)	37.93	NA	NA	44.00	(8.90)	54.00	(18.90)	57.00	(21.90)
MW-37U	Monitoring Well	Upper Alluvium	11/21/12	Sonic	Above-grade	CWSS	0.020	10-20	2	32.30	(2.60)	34.90	NA	NA	40.10	(7.80)	50.10	(17.80)	53.10	(20.80)
MW-38U	Monitoring Well	Upper Alluvium	11/28/12	Sonic	Above-grade	CWSS	0.020	10-20	2	31.80	(2.94)	34.74	NA	NA	50.10	(18.30)	60.10	(28.30)	63.10	(31.30)
MW-39F	Monitoring Well	Fill	11/17/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	31.09	(3.16)	34.25	NA	NA	11.80	19.29	16.80	14.29	17.10	13.99
MW-40F	Monitoring Well	Fill	11/18/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	35.98	(3.27)	39.25	NA	NA	21.60	14.38	26.60	9.38	27.10	8.88
MW-41U	Monitoring Well	Upper Alluvium	01/16/15	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	37.55	(3.14)	40.69	NA	NA	17.60	19.95	27.60	9.95	28.00	9.55

Table 1-1
Groundwater Well and Piezometer Construction Details

Well ID	Well Type	Water-Bearing Zone	Date Well Installed (mm/dd/yy)	Well Installation Method	Monument Type	Screen Type	Screen Slot Size (inches)	Sand Pack (Colorado)	Well Diameter (inches)	Elevations, feet COP or Below Ground Surface									
										Ground Surface	Top of Casing		Pump Inlet		Top Screen		Base Screen		Well Depth[1]	
										(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)
MW-42F	Monitoring Well	Fill	11/21/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	33.48	(3.36)	36.84	NA	NA	26.00	7.48	31.00	2.48	31.40	2.08
MW-43F	Monitoring Well	Fill	08/08/17	Sonic	Flush	CWSS	0.010	10-20	2	37.50	0.45	37.05	NA	NA	7.00	30.50	17.00	20.50	18.00	19.50
MW-44F	Monitoring Well	Fill	08/09/17	Sonic	Above-grade	CWSS	0.010	10-20	2	35.80	(3.06)	38.86	NA	NA	6.00	29.80	16.00	19.80	17.00	18.80
MW-45F	Monitoring Well	Fill	08/08/17	Sonic	Flush	CWSS	0.010	10-20	2	34.90	0.06	34.84	NA	NA	7.00	27.90	17.00	17.90	18.00	16.90
MW-46F	Monitoring Well	Fill	05/01/18	Sonic	Above-grade	CWSS	0.020	10-20	2	35.52	(2.42)	37.94	NA	NA	6.10	29.42	16.10	19.42	17.10	18.42
MW-47F	Monitoring Well	Fill	04/30/18	Sonic	Above-grade	CWSS	0.020	10-20	2	34.62	(2.92)	37.54	NA	NA	22.00	12.62	32.00	2.62	33.00	1.62
MW-48F	Monitoring Well	Fill	05/01/18	Sonic	Above-grade	CWSS	0.020	10-20	2	35.22	(2.83)	38.05	NA	NA	15.60	19.62	25.60	9.62	26.60	8.62
MW-49F	Monitoring Well	Fill	05/01/18	Sonic	Above-grade	CWSS	0.020	10-20	2	35.80	(2.77)	38.57	NA	NA	15.60	19.62	25.60	9.62	26.60	8.62
MW-50F	Monitoring Well	Fill	12/31/20	Sonic	Above-grade	CWSS	0.020	12-20	2	35.50	(2.64)	38.14	NA	NA	14.10	21.40	23.80	11.70	24.90	10.60
MW-51F	Monitoring Well	Fill	12/02/20	Sonic	Above-grade	CWSS	0.020	12-20	2	35.00	(2.87)	37.87	NA	NA	15.50	19.50	25.20	9.80	26.30	8.70
MW-52F	Monitoring Well	Fill	11/30/20	Sonic	Above-grade	CWSS	0.020	12-20	2	20.15	(2.59)	22.74	NA	NA	5.80	14.35	10.50	9.65	11.60	8.55
MW-53F	Monitoring Well	Fill	11/30/20	Sonic	Above-grade	CWSS	0.020	12-20	2	19.32	(2.96)	22.28	NA	NA	3.80	15.52	8.60	10.72	9.80	9.52
MW-PW2L[4]	Monitoring Well	Lower Alluvium	01/17/14	Sonic	Above-grade	CWSS	0.010	10-20	2	34.00	(1.92)	35.92	NA	NA	119.80	(85.80)	139.80	(105.80)	145.40	(111.40)
MW-PW10L[4]	Monitoring Well	Lower Alluvium	09/30/13	Sonic	Above-grade	CWSS	0.010	10-20	2	31.60	(2.44)	34.04	NA	NA	60.20	(28.60)	80.20	(48.60)	85.20	(53.60)
PW-1-80	Monitoring Well	Upper Alluvium	08/09/05	Sonic	Above-grade	CWSS	0.020	10-20	6	32.00	(2.07)	34.07	NA	NA	39.50	(7.50)	79.50	(47.50)	82.00	(50.00)
PW-3-85	Monitoring Well	Upper Alluvium	06/20/07	Cable Tool	Above-grade	CWSS	0.035	10-20	8	25.20	(1.52)	26.72	NA	NA	75.00	(49.80)	85.00	(59.80)	95.00	(69.80)
WS-12-125	Monitoring Well	Lower Alluvium	09/21/03	Sonic	Flush	CWSS	0.010	10-20	2	34.50	0.46	34.04	NA	NA	109.00	(74.50)	124.00	(89.50)	125.00	(90.50)
WS-12-161	Monitoring Well	Deep Lower Alluvium	09/21/03	Sonic	Flush	CWSS	0.010	10-20	2	34.50	0.37	34.13	NA	NA	145.00	(110.50)	160.00	(125.50)	161.00	(126.50)
WS-21-112	Monitoring Well	Lower Alluvium	06/13/06	Sonic	Flush	Slotted PVC	0.010	10-20	2	35.40	0.71	34.69	NA	NA	101.00	(65.60)	111.00	(75.60)	112.00	(76.60)
WS-26-86	Monitoring Well	Upper Alluvium	10/29/08	Sonic	Flush	NA	0.010	10-20	2	34.90	0.47	34.43	NA	NA	75.00	(40.10)	85.00	(50.10)	86.00	(51.10)
WS-47-183	Monitoring Well	Deep Lower Alluvium	04/16/15	Sonic	Flush	CWSS	0.010	10-20	2	34.00	0.25	33.75	NA	NA	172.00	(138.00)	182.00	(148.00)	183.00	(149.00)
OW-1F	Observation Well	Fill	03/23/12	Sonic	Above-grade	Slotted PVC	0.010	10-20	2	35.32	(2.28)	37.60	NA	NA	30.00	5.32	35.00	0.32	35.30	0.02
OW-2F	Observation Well	Fill	03/22/12	Sonic	Above-grade	Slotted PVC	0.010	10-20	2	34.46	(2.40)	36.86	NA	NA	25.60	8.86	30.60	3.86	30.90	3.56
OW-5F	Observation Well	Fill	11/29/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	32.20	(2.50)	34.70	NA	NA	28.50	3.70	33.50	(1.30)	33.80	(1.60)
OW-7-17	Observation Well	Fill	02/23/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	24.20	(2.22)	26.42	NA	NA	12.50	11.70	17.50	6.70	17.70	6.50
OW-8-15	Observation Well	Fill	02/12/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	24.56	(1.75)	26.31	NA	NA	10.10	14.46	15.10	9.46	15.30	9.26
OW-8-28	Observation Well	Upper Alluvium	08/13/10	HSA	Above-grade	Slotted PVC	0.020	10-20	2	23.79	(2.48)	26.27	NA	NA	23.10	0.69	28.10	(4.31)	28.70	(4.91)
OW-9-25	Observation Well	Fill	03/08/10	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	33.11	(2.18)	35.29	NA	NA	20.00	13.11	25.00	8.11	25.30	7.81
OW-10F	Observation Well	Fill	09/20/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	30.80	(2.95)	33.75	NA	NA	20.70	10.10	25.70	5.10	26.00	4.80
DW-6U	DNAPL Well	Upper Alluvium	12/27/13	Sonic	Above-grade	CWSS	0.020	16-30	6	31.40	(2.82)	34.22	NA	NA	36.30	(4.90)	48.30	(16.90)	53.30	(21.90)
DW-11U	DNAPL Well	Upper Alluvium	12/18/13	Sonic	Above-grade	CWSS	0.020	16-30	6	24.60	(3.09)	27.69	NA	NA	21.70	2.90	33.70	(9.10)	38.70	(14.10)
DW-14U	DNAPL Well	Upper Alluvium	12/20/13	Sonic	Above-grade	CWSS	0.020	16-30	6	31.80	(2.95)	34.75	NA	NA	34.80	(3.00)	46.80	(15.00)	51.80	(20.00)
PZ-KB1	Piezometer	Fill	05/17/18	Manual	Above-grade	SPP	NA	NA	1	36.20	(0.96)	37.16	NA	NA	20.31	15.89	21.09	15.11	21.39	14.81
PZ1-5	Piezometer	Fill	03/18/09	Manual	Above-grade	SPP	NA	NA	1	9.96	(25.86)	35.82	NA	NA	4.48	5.48	5.38	4.58	5.63	4.33
PZ1-20	Piezometer	Upper Alluvium	03/18/09	Manual	Above-grade	SPP	NA	NA	1	10.15	(26.19)	36.34	NA	NA	19.31	(9.16)	20.21	(10.06)	20.46	(10.31)
PZ1-50	Piezometer	Lower Alluvium	11/23/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.17	(27.41)	37.58	NA	NA	45.10	(34.93)	50.10	(39.93)	50.40	(40.23)
PZ2-5	Piezometer	Fill	03/19/05	Manual	Above-grade	SPP	NA	NA	1	2.89	(34.94)	37.83	NA	NA	5.52	(2.63)	6.42	(3.53)	6.67	(3.78)
PZ2-20	Piezometer	Upper Alluvium	03/18/09	Manual	Above-grade	SPP	NA	NA	1	3.38	(34.43)	37.81	NA	NA	20.59	(17.21)	21.49	(18.11)	21.74	(18.36)
PZ2-43	Piezometer	Lower Alluvium	12/03/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	3.76	(34.11)	37.87	NA	NA	38.30	(34.54)	43.30	(39.54)	43.60	(39.84)
PZ2-77	Piezometer	Lower Alluvium	12/02/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	3.05	(35.50)	38.55	NA	NA	71.90	(68.85)	76.90	(73.85)	77.20	(74.15)
PZ4-12	Piezometer	Upper Alluvium	12/04/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	(8.63)	(43.22)	34.59	NA	NA	6.70	(15.33)	11.70	(20.33)	12.00	(20.63)
PZ4-41	Piezometer	Lower Alluvium	11/24/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	(8.33)	(42.81)	34.48	NA	NA	36.10	(44.43)	41.10	(49.43)	41.40	(49.73)
PZ5-5	Piezometer	Fill	11/20/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.74	(5.72)	16.46	NA	NA	3.80	6.94	4.80	5.94	5.00	5.74

Table 1-1
Groundwater Well and Piezometer Construction Details

Well ID	Well Type	Water-Bearing Zone	Date Well Installed (mm/dd/yy)	Well Installation Method	Monument Type	Screen Type	Screen Slot Size (inches)	Sand Pack (Colorado)	Well Diameter (inches)	Elevations, feet COP or Below Ground Surface										
										Ground Surface	Top of Casing		Pump Inlet		Top Screen		Base Screen		Well Depth[1]	
										(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)	(feet bgs)	(feet COP)
PZ5-20	Piezometer	Upper Alluvium	11/20/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.81	(5.39)	16.20	NA	NA	15.00	(4.19)	20.00	(9.19)	20.30	(9.49)
PZ5-55	Piezometer	Lower Alluvium	11/20/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.87	(5.38)	16.25	NA	NA	50.00	(39.13)	55.00	(44.13)	55.30	(44.43)
PZ5-85	Piezometer	Lower Alluvium	11/19/09	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.87	(5.51)	16.38	NA	NA	79.90	(69.03)	84.90	(74.03)	85.20	(74.33)
PZ6-5	Piezometer	Fill	10/17/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	7.77	(6.94)	14.72	NA	NA	3.90	3.87	4.90	2.87	5.00	2.77
PZ6-50	Piezometer	Upper Alluvium	10/17/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	8.10	(6.78)	14.88	NA	NA	45.20	(37.10)	50.20	(42.10)	50.50	(42.40)
PZ6-115	Piezometer	Lower Alluvium	10/18/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	7.44	(6.35)	13.79	NA	NA	110.10	(102.66)	115.10	(107.66)	115.40	(107.96)
PZ6-150	Piezometer	Deep Lower Alluvium	10/26/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	7.70	(6.45)	14.15	NA	NA	145.40	(137.70)	150.40	(142.70)	150.70	(143.00)
PZ7-5	Piezometer	Fill	10/22/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.56	(5.80)	16.36	NA	NA	4.10	6.46	5.20	5.36	5.30	5.26
PZ7-50	Piezometer	Upper Alluvium	10/19/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.69	(5.71)	16.40	NA	NA	43.20	(32.51)	48.20	(37.51)	48.50	(37.81)
PZ7-100	Piezometer	Lower Alluvium	10/23/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	9.95	(6.18)	16.13	NA	NA	94.30	(84.35)	99.30	(89.35)	99.60	(89.65)
PZ7-150	Piezometer	Deep Lower Alluvium	10/31/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	10.03	(5.48)	15.50	NA	NA	145.30	(135.28)	150.30	(140.28)	150.60	(140.58)
PZ8-5	Piezometer	Fill	10/09/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	6.78	(5.42)	12.21	NA	NA	4.50	2.28	5.40	1.38	5.50	1.28
PZ8-50	Piezometer	Upper Alluvium	10/09/12	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	6.95	(5.50)	12.45	NA	NA	44.70	(37.75)	49.70	(42.75)	50.00	(43.05)
PZ9-5	Piezometer	Fill	04/04/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	6.10	(5.99)	12.09	NA	NA	4.50	1.60	5.50	0.60	5.70	0.40
PZ9-50	Piezometer	Upper Alluvium	04/07/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	4.70	(6.92)	11.62	NA	NA	45.40	(40.70)	50.40	(45.70)	50.70	(46.00)
PZ9-75	Piezometer	Upper Alluvium	04/10/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	5.00	(6.57)	11.57	NA	NA	67.50	(62.50)	72.50	(67.50)	72.80	(67.80)
PZ9-110	Piezometer	Lower Alluvium	04/09/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	5.10	(7.09)	12.19	NA	NA	105.60	(100.50)	110.60	(105.50)	110.80	(105.70)
PZ9-150	Piezometer	Deep Lower Alluvium	04/03/14	Sonic	Above-grade	Slotted PVC	0.020	10-20	2	6.00	(5.73)	11.73	NA	NA	146.10	(140.10)	151.10	(145.10)	151.40	(145.40)
River 1 (US)	Piezometer	Willamette River	05/23/13	Manual	NA	NA	NA	NA	2	(8.60)	(43.01)	34.41	NA	NA	NA	NA	NA	NA	NA	NA
River 2 (DS)	Piezometer	Willamette River	05/23/13	Manual	NA	NA	NA	NA	2	(8.60)	(42.99)	34.39	NA	NA	NA	NA	NA	NA	NA	NA
LNG Trench T-50	Trench	Fill		Manual	Below Grade	NA	NA	NA	-	35.06	31.72	3.34	26.77	4.95	NA	NA	NA	NA	32.67	2.39
LNG Trench T-100	Trench	Fill		Manual	Below Grade	NA	NA	NA	-	22.52	20.23	2.29	14.00	6.23	NA	NA	NA	NA	17.25	5.27

Notes:
1. Actual completion depths may differ depending on actual lithology encountered during drilling.
2. Well PW-8-39 decommissioned on December 14, 2020
3. Well PW-10L decommissioned on February 6, 2019
4. 2-inch PVC monitoring well installed inside a pre-existing 6-inch well

bgs: below ground surface
COP: City of Portland datum
CWSS: continuous wrap stainless steel
DNAPL: dense nonaqueous phase liquid
DS: downstream
DWRA: dual wall reverse air
HC&C: hydraulic control and containment
HSA: hollow-stem auger
NA: not applicable
NS: not surveyed
PP: pre-pack
PVC: polyvinyl chloride
SPP: Solinst push point
SS: stainless steel
US: upstream

Table 1-2
Extraction Well/Control Well Summary

Siltronic/MGP-TCE	
Extraction Well Identification	**Control Well**
PW-1Lb	WS-12-125
PW-1U	WS-26-86
PW-1Uc	WS-26-86
PW-2L	WS-21-112
PW-2U	MW-36U
PW-3L	MW-34L
PW-3U	MW-33U
PW-11U	MW-35U
PW-11Ub	MW-35U

NW Natural/MGP-Only	
Extraction Well Identification	**Control Well**
PW-4L	MW-31L
PW-4U	MW-30U
PW-5L	MW-28L
PW-5U	MW-38U
PW-6L	MW-27L
PW-6U	MW-26U
PW-7-93	MW-24-130
PW-8Ub	MW-21U
PW-8-68	MW-21-75
PW-9-92	MW-23U and MW-23-75
PW-10Lb	MW-22U and MW-22-80
PW-10U	MW-22U and MW-22-80
PW-12U	MW-32U
PW-13U	MW-29U
PW-14U	MW-37U
PW-15U	MW-21U
PW-16U	MW-21U

Notes:
MGP: manufactured gas plant
TCE: trichloroethylene

Table 2-1
Summary of 2022 Maintenance Activities

Well ID	Date	Component	Activity
PW-1Uc	1/12/2022	Pump/mtr/pipe	Initial install.
		Start-up	Installation complete, initial start-up. Old runtime total for PW-1Ub, reset on 2/11/22.
PW-11Ub	2/1/2022	Well	Initial well install/development.
PW-1U	2/3/2022	Pump and motor	Replaced all: pump, motor and motor lead. Unknown runtime hours, reset on 2/11/22.
		Downhole piping	Replaced SS piping with clean, replaced PVC piping with new.
PW-6L	2/4/2022	Pump and motor	Replaced all: pump, motor and motor lead. 12,786 runtime hours, reset on 2/11/22.
		Downhole piping	Replaced SS piping with clean, replaced PVC piping with new.
PW-11Ub	2/11/2022	Pump/piping	Initial pump and piping installation.
PW-7L	2/15/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-7L	2/17/2022	Pump and motor	Replaced all new: pump, motor and motor lead. 10,144 runtime hours, 63,834 starts, reset.
		Downhole piping	Replaced SS piping with clean, replaced PVC piping with new.
PW-11Ub	3/24/2022	Well	Initial start up.
PW-4U	4/13/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-5L	4/18/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-6L	4/20/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-4L	4/26/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-6U	5/11/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-5U	5/16/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.

Table 2-1
Summary of 2022 Maintenance Activities

Well ID	Date	Component	Activity
PW-12U	5/19/2022	Screen	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
PW-3U	5/24/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-16U	6/23/2022	Screen	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
PW-2L	6/27/2022	Pump and motor	New pump, motor, motor lead, SS piping, and CPVC drop tubes.
		Downhole piping	All new, note CPVC for DNAPL and water level ports.
PW-3L	7/21/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-8L	7/25/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight. Pump fault on start up, schedule for replacement.
PW-13U	7/27/2022	Screen	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
PW-10Lb	8/25/2022	Screen	Surge/brush/bail with video week before. Install 10-foot packer to seal casing breach above top of screen.
		Pump and motor	Installed new pump, motor, and motor lead above packer.
		Downhole piping	Replaced SS piping with clean, replaced PVC piping with new.
PW-14U	8/25/2022	Screen	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air pressure surge, and soak well overnight.
PW-9L	8/30/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-4U	11/8/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.

Table 2-1
Summary of 2022 Maintenance Activities

Well ID	Date	Component	Activity
PW-10U	11/10/2022	Screen	Well screen maintenance: Boresaver, recirculate, and soak well overnight. Transducer stuck in well, no air surging performed.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, and soak well overnight. Transducer stuck in well, no air surging performed.
PW-15U	11/21/2022	Screen	Well screen maintenance: Boresaver, recirculate, and soak well overnight. No air surge, excess silt.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, and soak well overnight.
PW-10U	11/25/2022	Screen/casing	Casing failure causing sand/silt to enter well to pump inlet. Pump off until repaired/decommissioned.
PW-8Ub	11/28/2022	Screen	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
		Downhole piping	Well screen maintenance: Boresaver, recirculate, air surge, and soak well overnight.
PW-6U	12/28/2022	Pump and motor	Replaced all: pump, motor and motor lead. 13,740.5 runtime hours, 138,915 restarts, reset on 12/28/22.
		Downhole piping	Replaced SS piping with clean, replaced PVC piping with new.

Notes:

CPVC: chlorinated polyvinyl chloride

DNAPL: dense nonaqueous phase liquid

NA: not applicable

PVC: polyvinyl chloride

SS: stainless steel

VFD: variable frequency drive

Table 2-2
Annual Groundwater Volume Extracted

WBZ	Station ID	Volume/Year (MG)								Cumulative Volume (MG)
		2015	2016	2017	2018	2019	2020	2021	2022	
Upper Alluvium	PW-10U			1.10	2.21	1.74	1.32	1.14	1.08	8.60
	PW-16U	4.79	2.06	1.05	0.66	0.59	0.68	0.52	0.50	10.87
	PW-8-39	0.26	0.35	0.39	0.39	0.25	0.25			1.89
	PW-8Ub							1.11	1.11	2.22
	PW-15U	6.39	7.76	3.98	2.84	1.53	1.42	0.97	1.12	26.01
	PW-6U	2.21	2.54	2.39	2.40	1.67	1.10	1.25	0.90	14.46
	PW-14U	2.23	2.52	2.50	2.53	2.67	2.70	2.50	2.47	20.12
	PW-5U	2.23	2.53	2.04	1.30	1.52	0.95	0.84	0.98	12.39
	PW-13U	2.21	2.54	2.50	2.52	2.10	1.90	1.86	1.26	16.89
	PW-4U	1.87	1.06	0.48	0.32	0.56	0.67	0.81	1.00	6.76
	PW-12U	2.22	1.64	0.76	0.29	0.47	0.42	0.40	0.41	6.61
	PW-3U	2.00	2.43	1.43	0.76	0.60	0.93	0.90	1.10	10.16
	PW-11U	2.22	2.52	2.01	1.12	0.46	0.33	0.37	0.06	9.08
	PW-11UB								2.75	2.75
	PW-2U	2.65	3.32	2.97	2.63	2.66	2.77	2.80	3.22	23.04
	PW-1U	3.08	0.32	1.33	1.63	0.71	0.72	0.46	0.10	8.34
	PW-1Ub		10.4	7.75	1.38	0.71	0.96	0.20	0.78	22.18
	PW-1Uc								4.56	4.56
Lower Alluvium	PW-10L	22.6	33.5	17.4	5.13					78.63
	PW-10Lb				1.60	29.4	29.6	27.8	19.9	108.32
	PW-9-92	9.07	9.57	20.1	24.3	13.3	8.10	10.2	12.7	107.25
	PW-8-68	5.53	6.01	6.27	3.69	2.58	2.53	2.55	2.94	32.10
	PW-7-93	6.11	7.31	4.01	4.28	4.83	5.26	3.81	3.34	38.95
	PW-6L	0.72	0.09	2.78	5.06	5.15	5.27	5.50	4.07	28.64
	PW-5L	0.07	0.05	2.88	5.25	3.84	5.03	4.98	4.60	26.70
	PW-4L	1.16	1.14	3.61	5.58	5.45	5.15	5.24	5.62	32.95
	PW-3-118	0.70	0.49	2.21	5.15	5.11	5.11	5.22	5.51	29.51
	PW-2L	0.13	0.18	8.67	13.3	11.2	10.7	7.8	7.2	59.16
	PW-1L	21.9	23.7	11.6	4.85	0.84				62.89
	PW-1Lb					6.22	13.02	15.32	11.63	46.19
Total Upper Alluvium		34.3	42.0	32.7	23.0	18.3	17.1	16.1	23.4	207
Total Lower Alluvium		67.9	82.1	79.5	78.2	87.9	89.8	88.4	77.5	651
Total		102	124	112	101	106	107	105	101	858

Table 2-2
Annual Groundwater Volume Extracted

Notes:
Blank cells indicate that data are not available.
HC&C: hydraulic control and containment
MG: million gallons
NA: not applicable
WBZ: water-bearing zone

Table 2-3
Concentration and Mass of Contaminants in NW Natural Pretreatment Plant Influent

Contaminant	Year	Contaminant Concentration (µg/L)													Annual Extracted Volume (MG/yr)[2,3]	Mass Removed (lb/yr)[3]
		January	February	March	April	May	June	July	August	September	October	November	December	Annual Average[3]		
Benzene	2015	--	--	--	--	--	621	586	581	614	346	460	517	532	69.6	309
	2016	655	433	474	752	464	564	447	789	387	536	468	555	544	80.7	366
	2017	961	424	297	339	592	571	430	429	376	711	374	821	527	74.2	327
	2018	325	701	150	488	510	447	423	354	256	424	462	481	418	70.3	246
	2019	612	387	454	575	472	813	456	566	330	405	274	245	466	77.6	302
	2020	268	266	380	329	352	449	352	336	322	291	259	361	330	72.4	200
	2021	375	538	591	457	606	299	262	191	706	153	338	324	403	71.5	241
	2022	303	205	202	168	223	119	377	376	213	192	200	236	235	63.9	125
Benzo(a)pyrene	2015	--	--	--	--	--	0	0	0	39.6	0	0	0	5.66	69.6	3.29
	2016	0	0	0	0	0	0	0	0	0	0	6.59	0	0.55	80.7	0.37
	2017	0	0	0	0	0	4.01	0.499	0	0	0	0	0	0.38	74.2	0.23
	2018	0	0	0	0	0	10.7	0	0	0	1.53	199	0	17.6	70.3	10.3
	2019	1700	0	0	0	9.47	1920	1770	48.8	0	0	0	0	454	77.6	294
	2020	19.5	0	27.2	9.35	0	0	1.2	10.8	0	0	0	0	5.67	72.4	3.43
	2021	0	0	0	0	0	0	0	0	0	0	8.29	0	0.69	71.5	0.41
	2022	0	0	0	0	1.64	3.43	0	0	0	0	0	0	0.42	63.9	0.23
Naphthalene	2015	--	--	--	--	--	472	430	423	331	307	420	496	411	69.6	239
	2016	745	307	443	600	360	547	365	863	295	844	319	304	499	80.7	336
	2017	827	365	330	301	705	561	938	663	283	329	197	227	477	74.2	296
	2018	317	494	275	566	720	607	643	260	244	349	5960	474	909	70.3	534
	2019	13100	162	388	514	354	10300	6930	686	180	479	301	227	2800	77.6	1810
	2020	676	453	232	390	211	101	380	358	187	346	248	278	322	72.4	194
	2021	212	369	366	225	324	274	224	157	303	149	179	185	247	71.5	148
	2022	205	133	67.4	72.3	194	0	157	238	29.0	83.8	10.2	57.5	104	63.9	55
Cyanide	2015	--	--	--	--	--	110	259	300	273	239	275	255	244	69.6	142
	2016	248	311	281	184	269	216	265	165	252	192	266	244	241	80.7	162
	2017	148	242	220	266	226	194	239	220	1.25	199	159	175	191	74.2	118
	2018	206	60.5	174	226	159	211	166	199	143	141	198	182	172	70.3	101
	2019	175	216	189	197	180	38.6	204	167	146	166	156	178	168	77.6	109
	2020	151	157	203	231	182	157	177	141	162	213	156	169	175	72.4	106
	2021	171	143	181	141	146	152	124	141	130	135	128	120	143	71.5	85
	2022	133	127	140	148	148	74.2	126	130	125	126	120	96.5	124	63.9	66
Total VOCs[1]	2015	--	--	--	--	--	726.4	651.86	656.15	719.6	401.95	532.9	596.85	612	69.6	356
	2016	799.906	502.3	563.8	877.4	533.6	651.9	524.7	940.6	459.1	636.9	533.38	632.23	638	80.7	430
	2017	1,192.08	501.28	355.95	373.75	729.46	667.3	497.35	494.8	423.01	864.35	455.3	932.5	624	74.2	387
	2018	379.9	825.03	176.06	560.48	616.78	585.82	513.66	428.5	306.85	488.81	533.54	576.55	499	70.3	293
	2019	706.11	484.5	538.52	668.1	560.58	881.94	519.4	661.79	373.89	463.93	310.26	309.68	540	77.6	350
	2020	300.34	316.5	467.5	369.54	409.8	507.8	391.94	386.56	365.65	326.63	290.05	406.64	378	72.4	228
	2021	414.79	613.25	681.71	512.65	673.94	336.40	293.75	223.18	765.03	181.00	372.75	355.36	452	71.5	270
	2022	343.83	232.20	226.36	192.50	254.52	161.13	428.84	422.62	226.30	213.82	215.12	367.52	274	63.9	146
Total SVOCs[1]	2015	--	--	--	--	--	613.11	527.21	489.01	1,185.24	363.01	488.79	559.14	604	69.6	351
	2016	863.14	363.6	510.1	677.1	423.01	638.42	421.7	1051.04	335.96	961.44	499.15	346.95	591	80.7	398
	2017	946.52	420.96	406.18	360.98	835.61	798.31	1,072.09	789.22	329.7	384.79	232.65	267.87	570	74.2	353
	2018	373.74	623.08	335.66	712.98	1013.93	1100.02	739.29	299.62	292.39	457.72	15872.4	649.00	1870	70.3	1100
	2019	83,536	222.8	450.59	613.79	664.8	73433	62690	2021.4	243.3	600.88	352.38	273.76	18,800	77.6	12,200
	2020	1,740.03	553.47	1,170.58	751.31	264.84	118.84	480.96	823.62	244.47	487.08	292.87	428.3	613	72.4	370
	2021	273.22	463.89	428.65	277.98	427.01	350.58	266.26	204.84	352.70	194.00	672.55	221.11	344	71.5	206
	2022	254.24	158.15	106.86	111.02	323.15	127.97	271.53	333.74	59.79	124.26	64.03	99.59	170	63.9	90

Table 2-3

Concentration and Mass of Contaminants in NW Natural Pretreatment Plant Influent

Contaminant	Year	Contaminant Concentration (µg/L)													Annual Extracted Volume (MG/yr)[2,3]	Mass Removed (lb/yr)[3]
		January	February	March	April	May	June	July	August	September	October	November	December	Annual Average[3]		
Copper	2015	--	--	--	--	--	0.811	1.73	0	1.09	1.74	0.711	0.722	0.97	69.6	0.56
	2016	0.711	0	0.7	0	1.12	0.5	0	1.31	0.578	0.744	1.34	1.15	0.68	80.7	0.46
	2017	0	0.8	0	0	0.522	0.822	0.767	1.01	2.08	1.21	1.01	0	0.69	74.2	0.42
	2018	0.622	1.09	1.58	0.944	1.21	0.547	0	0	0	0	0	1.07	0.59	70.3	0.35
	2019	0	0	0	0.946	0	0	0	0	0	0	0	0	0.08	77.6	0.05
	2020	0	0	0	0	0	0	0	0	0	0	0	0	0.00	72.4	0.00
	2021	0	0	0	0	0	0	0	0	0	0	0	0	0.00	71.5	0.00
	2022	0	5.29	0	0	0	0	0	0	1.59	0	0	50.2	4.76	63.9	2.54
Iron	2015	--	--	--	--	--	48,100	74,400	76,200	76,200	67,700	81,000	80,600	72,000	69.6	41800
	2016	62,800	85,400	65,100	60,300	85,400	86,100	87,600	81,100	94,100	68,900	92,200	101,000	80,800	80.7	54400
	2017	69,000	100,000	96,900	90,900	77,700	73,900	53,600	77,200	90,300	68,600	64,800	74,600	78,100	74.2	48400
	2018	65,200	68,000	60,700	75,900	75,000	72,000	67,200	64,800	63,100	61,400	61,300	77,200	67,700	70.3	39700
	2019	68,000	69,300	85,000	73,000	64,000	89,900	82,500	72,500	90,600	80,400	85,700	79,900	78,400	77.6	50800
	2020	76,700	76,900	87,300	69,000	81,600	71,900	74,800	68,500	85,600	68,400	79,700	88,100	77,400	72.4	46800
	2021	74,100	81,500	81,300	86,100	74,600	71,700	75,500	76,000	72,700	73,500	71,400	70,700	75,800	71.5	45200
	2022	98,900	83,600	78,600	74,800	76,400	40,200	56,600	52,600	87,500	68,900	66,200	84,300	72,400	63.9	38600

Notes:

Values below detection limit are shown as zero in this table (ND=0).

Monthly chemistry data for selected contaminants in Siltronic influent are provided by SES.

Blank cells indicate that data is not available.

1. Total VOCs and Total SVOCs were calculated by adding all contaminants within each category and setting non-detect and estimated values due to matrix interference equal to zero. Estimated results detected above the specified MDL or MRL were included in the total.

2. Extracted volume from the following wells are directed to the Gasco Pretreatment Plant and are included in the annual sum: PW-10U, PW-16U, PW-8-39, PW-15U, PW-6U, PW-14U, PW-5U, PW-13U, PW-4U, PW-12U, PW-10L, PW-10LB, PW-9-92, PW-8-68, PW-7-93, PW-6L- PW-5L, and PW-4L.

3. Calculated values were rounded to 3 significant figures.

µg/L: microgram per liter

lb/yr: pound per year

MDL: method detection limit

MG/yr: million gallons per year

MRL: method reporting limit

ND: non-detect

SES: Sevenson Environmental Services, Inc.

SVOC: semivolatile organic compound

VOC: volatile organic compound

Table 2-4
Concentration and Mass of Contaminants in Siltronic Pretreatment Plant Influent

Contaminant	Year	Contaminant Concentration (µg/L)													Annual Extracted Volume (MG/yr)[2,3]	Mass Removed (lb/yr)[3]
		January	February	March	April	May	June	July	August	September	October	November	December	Annual Average[3]		
Benzene	2015	--	--	--	--	--	890	410	375	864	158	413	349	494	32.7	135
	2016	475	397	350	1190	326	219	188	338	168	444	418	484	416	43.4	151
	2017	157	265	366	328	406	218	296	309	855	397	507	433	378	37.9	120
	2018	286	348	324	372	125	586	497	449	350	393	260	240	353	30.9	90.8
	2019	369	399	396	236	395	238	238	127	203	130	412	27.9	264	28.5	62.9
	2020	154	84.8	291	117	212	163	120	92.2	205	113	112	176	153	34.5	44.2
	2021	177	148	132	206	68.2	120	89.6	97.5	149	221	102	125	136	33.0	37.6
	2022	70.5	113	174	277	206	261	216	235	251	142	192	242	198	36.9	61.1
Benzo(a)pyrene	2015	--	--	--	--	--	0	0	0	0	0	0	0	0.00	32.7	0.00
	2016	0	0	0	0	0	0	0	10.4	0	0	0	0	0.87	43.4	0.31
	2017	0	0	0	0	0	0	0	4.69	85.6	49.2	73.3	0	17.7	37.9	5.61
	2018	0	0	0	72.6	0	145	0	243	111	102	106	0	65.0	30.9	16.7
	2019	87.1	64.4	126	0	107	0	512	0	130	0	0	0	85.5	28.5	20.4
	2020	0	55.8	33.3	0	15.4	0	12.6	0	0	0	0	0	9.76	34.5	2.81
	2021	65	0	0	0	0	0	0	0	0	32.1	0	0	8.09	33.0	2.23
	2022	0	36.3	82.7	0	0	0	0	0	0	0	0	0	9.92	36.9	3.06
Naphthalene	2015	--	--	--	--	--	1,050	856	919	696	676	846	827	839	32.7	229
	2016	2,510	1,280	1,360	5,040	1,320	1,390	1,030	1,770	449	1,530	1,750	1,910	1,780	43.4	645
	2017	700	851	1,110	1,350	1,050	1,480	1,120	1,390	20,600	5,220	10,100	7,790	4,400	37.9	1,390
	2018	6,850	5,770	8,470	6,620	7,800	9,280	16,600	25,400	14,500	13,700	7,510	7,120	10,800	30.9	2,780
	2019	12,700	12,400	17,500	10,500	13,300	6,850	17,100	4,760	9,550	2,710	4,250	5,160	9,730	28.5	2,320
	2020	2,150	6,520	4,330	2,190	3,460	2,170	2,930	1,710	5,640	6,470	2,140	4,340	3,670	34.5	1,060
	2021	2,280	2,750	2,580	4,300	2,230	2,520	2,530	1,250	2,560	4,230	1,360	2,700	2,610	33.0	720
	2022	1,330	6,280	7,040	4,560	3,270	2,060	2,610	2,980	5,240	6,170	5,170	2,670	4,120	36.9	1,270
Total Cyanide	2015	--	--	--	--	--	318	207	192	313	156	201	187	225	32.7	61.3
	2016	281	217	191	341	176	336	235	296	218	285	250	278	259	43.4	93.7
	2017	253	198	254	188	260	208	166	208	--	176	132	198	204	37.9	64.5
	2018	137	84	138	165	128	127	99.5	112	151	117	207	166	136	30.9	35.0
	2019	127	126	97.2	166	94.3	21	126	179	151	204	190	184	139	28.5	33.0
	2020	207	182	255	187	127	224	207	223	163	141	180	168	189	34.5	54.4
	2021	178	175	171	221	207	170	178	196	142	165	193	177	181	33.0	49.9
	2022	170	193	172	180	189	206	193	196	171	158	143	180	179	36.9	55.2
Total VOCs[1]	2015	--	--	--	--	--	1,308.1	1,028	906.4	1,493.55	679.45	842.6	878.93	1,020	32.7	278
	2016	1,000.41	895.95	788.7	1597.1	721.65	615.35	474.3	558.1	453.2	681.24	604.96	674.53	755	43.4	274
	2017	271.89	535.75	573.58	559.37	618.56	483.99	557.85	681.145	2,056.4	1,056.8	1,459.4	1,057.55	826	37.9	261
	2018	855.75	1,006.15	1,136.28	1,362.22	445.24	1,863.13	1,475.47	1,618.98	1,303.05	1,351.45	892.64	806.86	1,180	30.9	304
	2019	1385.7	1551.8	1,489.37	732.56	1,616.25	659.25	807.25	463.92	840.30	470.62	836.26	92.55	912	28.5	217
	2020	304.96	350.80	954.30	366.46	803.00	434.32	362.41	347.58	841.38	410.8	382.00	629.99	516	34.5	149
	2021	711.07	358.66	500.18	835.90	147.16	407.30	281.14	296.78	545.15	900.00	337.51	505.81	486	33.0	134
	2022	257.41	461.10	723.80	832.50	549.60	587.55	508.95	538.00	920.90	333.27	415.70	571.70	558	36.9	172
Total SVOCs[1]	2015	--	--	--	--	--	1139.7	905.33	970.61	739.18	715.08	897.43	876.71	892	32.7	243
	2016	2665	1,365.4	1,451.6	5,405.3	1,407.8	1,489.5	1,088.1	2,051.2	479.37	1,638.9	1,908.2	2,052.1	1,920	43.4	696
	2017	760.92	925.73	1,206.13	1,465.18	1,138.4	1,610.52	1,236.55	1,724.7	25,330.85	7,630.16	14,658.22	9,365.6	5,590	37.9	1,770
	2018	10,755	6,606.5	10,839.3	10,709	8,927.6	16,197.8	22,114	39,582.1	21,571.3	19,664	14,353.1	8,189.8	15,800	30.9	4,070
	2019	18,230.2	17,788.4	24,801.2	12,121.5	19,464.3	7,991.6	40,137	5,672	16,176.9	3,122.9	5,001.9	6,199.9	14,700	28.5	3,500
	2020	2,514.4	9,781.5	6,303.5	2,544.2	4,638.5	2,725.2	3,683.8	2,018.3	6,829.9	8,232.8	2,582.3	5,535.8	4,780	34.5	1,380
	2021	5,321.20	3,401.18	3,142.60	5,511.80	2,600.10	3,041.70	2,992.10	1,474.80	3,229.69	6,262.00	1,584.20	3,137.80	3,470	33.0	960
	2022	1,642.91	8,826.90	11,525.90	5,587.30	4,122.80	2,447.59	3,160.40	3,683.30	6,545.40	7,977.80	6,482.00	3,119.10	5,430	36.9	1,670

Table 2-4
Concentration and Mass of Contaminants in Siltronic Pretreatment Plant Influent

Contaminant	Year	Contaminant Concentration (µg/L)													Annual Extracted Volume (MG/yr)[2,3]	Mass Removed (lb/yr)[3]
		January	February	March	April	May	June	July	August	September	October	November	December	Annual Average[3]		
Copper	2015	--	--	--	--	--	0	0.533	0.667	0	0	0	0.733	0.28	32.7	0.08
	2016	0.633	0	0	0	0	0	0	1.43	0.6	0	0	0	0.22	43.4	0.08
	2017	0	0	0	0	0	0	0	0	0.733	0	0	0.802	0.13	37.9	0.04
	2018	0	1.14	0.611	0	0	17.3	0	0	0	0	0	0	1.59	30.9	0.41
	2019	0	0	0	0	0	0	0	0	0	0	0	0	0.00	28.5	0.00
	2020	0	0	0	0	0	0	0	0	0	0	0	0	0.00	34.5	0.00
	2021	0	8.46	0	0	0	0	0	0	0	0	0	0	0.71	33.0	0.19
	2022	0	0	0	0	0	0	0	0	0	0	0	0	0.00	36.9	0.00
Iron	2015	--	--	--	--	--	23,900	26,800	26,200	24,900	25,400	29,100	30,800	26,700	32.7	7280
	2016	29,500	27,500	29,500	31,300	28,800	34,400	31,200	42,600	32,900	36,300	33,800	36,400	32,900	43.4	11900
	2017	32,100	30,800	30,700	32,200	32,400	27,300	29,300	31,200	30,800	30,400	32,600	64,800	33,700	37.9	10700
	2018	32,800	30,800	32,500	31,500	31,200	129,000	32,300	42,700	31,700	35,000	33,800	33,500	41,400	30.9	10700
	2019	34,200	31,800	36,000	34,000	34,400	39,000	37,200	35,500	36,000	34,000	36,000	32,000	35,000	28.5	8330
	2020	33,900	33,900	33,500	32,100	34,500	30,300	33,700	32,400	32,900	33,800	34,300	37,400	33,600	34.5	9680
	2021	34,300	34,600	35,600	36,500	30,800	32,300	33,100	34,600	32,900	35,400	33,300	33,200	33,900	33.0	9340
	2022	35,300	34,200	32,700	36,000	33,200	58,000	32,400	32,800	33,100	34,700	34,900	35,900	36,100	36.9	11120

Notes:
Values below detection limit are shown as zero in this table (ND=0).
Monthly chemistry data for selected contaminants in Siltronic influent are provided by SES.
Blank cells indicate that data is not available.
1. Total VOCs and Total SVOCs were calculated by adding all contaminants within each category and setting non-detect and estimated values due to matrix interference equal to zero. Estimated results detected above the specified MDL or MRL were included in the total.
2. Extracted volume from the following wells are directed to the Siltronic Pretreatment Plant and are included in the annual sum: PW-3-118, PW-2L, PW-1L, PW-1LB, PW-3U, PW-11U, PW-2U, PW-1U, and PW-1UB.
3. Calculated values were rounded to 3 significant figures.
µg/L: microgram per liter
lb/yr: pound per year
MDL: method detection limit
MG/yr: million gallons per year
MRL: method reporting limit
ND: non-detect
SES: Sevenson Environmental Services, Inc.
SVOC: semivolatile organic compound
VOC: volatile organic compound

Table 2-5
Annual Contaminant Mass Removed

Contaminant	Location	2015	2016	2017	2018	2019	2020	2021	2022	Cumulative
Benzene (lbs)	NWN	309	366	327	246	302	200	241	125	2115
	Siltronic	135	151	120	90.8	62.9	44.2	37.6	61.1	702
	Total	**444**	**517**	**446**	**336**	**365**	**244**	**279**	**186**	**2817**
Benzo(a)pyrene (lbs)	NWN	3.29	0.37	0.23	10.3	294	3.43	0.41	0.23	312
	Siltronic	0.00	0.31	5.61	16.7	20.4	2.81	2.23	3.06	51
	Total	**3.3**	**0.7**	**5.8**	**27.1**	**314.5**	**6.2**	**2.6**	**3.3**	**363.6**
Naphthalene (lbs)	NWN	239	336	296	534	1810	194	148	55	3612
	Siltronic	229	645	1390	2780	2320	1060	720	1270	10413
	Total	**468**	**981**	**1686**	**3314**	**4130**	**1254**	**868**	**1325**	**14026**
Cyanide (lbs)	NWN	142	162	118	101	109	106	85	66	889
	Siltronic	61.3	93.7	64.5	35.0	33.0	54.4	49.9	55.2	447
	Total	**203**	**256**	**183**	**136**	**142**	**160**	**135**	**122**	**1336**
Total VOCs (lbs)	NWN	356	430	387	293	350	228	271	146	2460
	Siltronic	278	274	261	304	217	149	134	172	1788
	Total	**634**	**703**	**648**	**597**	**567**	**377**	**405**	**318**	**4249**
Total SVOCs (lbs)	NWN	351	398	353	1100	12200	370	206	90	15069
	Siltronic	243	696	1770	4070	3500	1380	960	1270	13889
	Total	**594**	**1094**	**2123**	**5170**	**15700**	**1750**	**1166**	**1360**	**28958**
Copper (lbs)	NWN	0.56	0.46	0.42	0.35	0.05	0.00	0.00	2.54	4.38
	Siltronic	0.08	0.08	0.04	0.41	0.00	0.00	0.19	0.00	0.80
	Total	**0.64**	**0.54**	**0.46**	**0.75**	**0.05**	**0.00**	**0.19**	**2.54**	**5.18**
Iron (lbs)	NWN	41800	54400	48400	39700	50800	46800	45200	38600	365700
	Siltronic	7280	11900	10700	10700	8330	9680	9340	11120	79050
	Total	**49080**	**66300**	**59100**	**50400**	**59130**	**56480**	**54540**	**49720**	**444750**

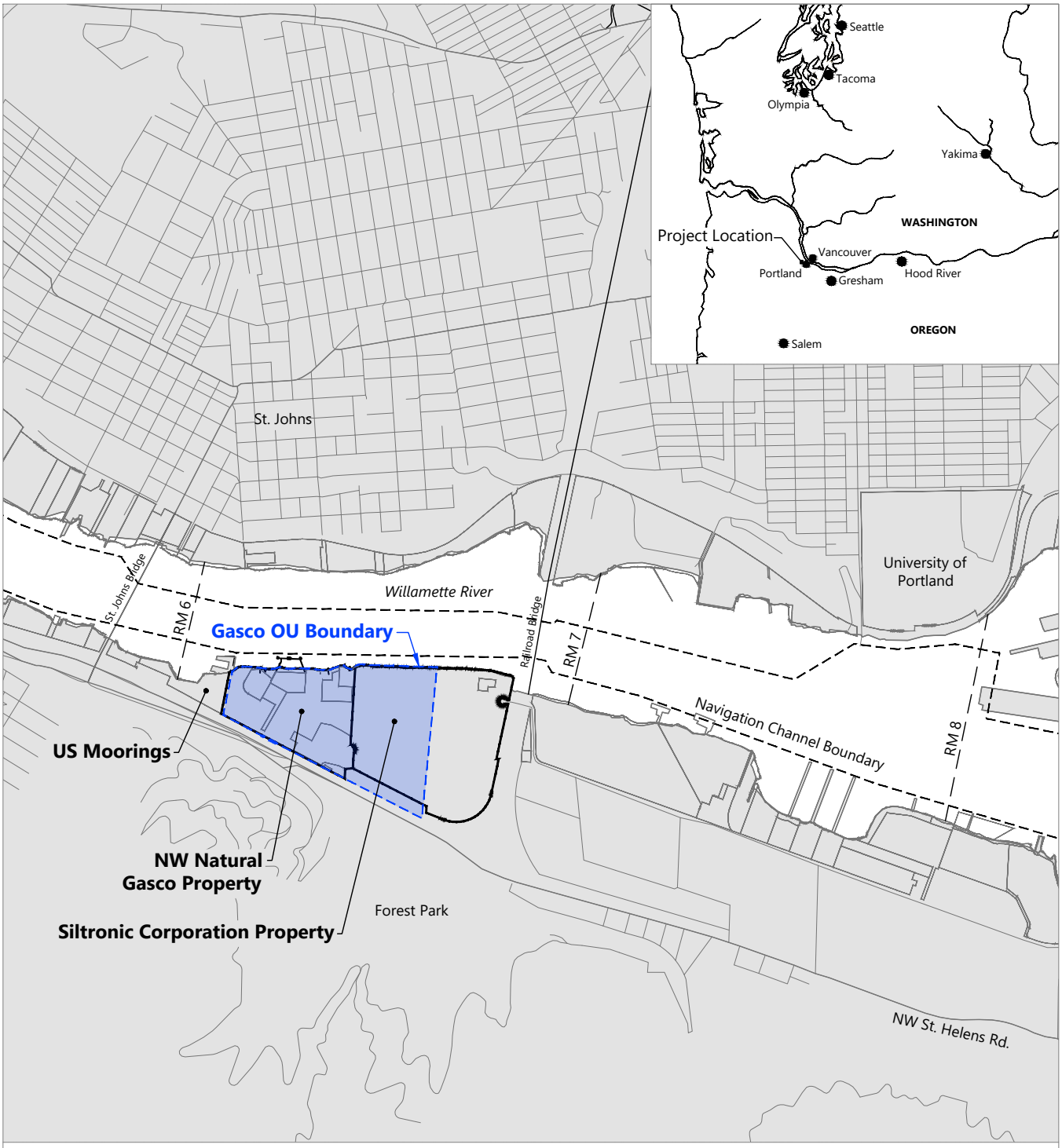
Notes:
Blank cells indicate that data are not available.
lbs: pounds
NWN: NW Natural
SVOC: semivolatile organic compound
VOC: volatile organic compound

Table 3-1
Summary of HC&C System Operational Figures

Subject	Figure No.	Count of Figures Prepared Semiannually/ Annually	Contents	Use
Potentiometric Surface Maps	3.1 (a, b, c, d) 3.2 (a, b, c, d)	48/96	Contours of the potentiometric surfaces for each of the four WBZs using Serfes 3-day average values (values recorded during two 3-day periods each month [e.g., July 11 through July 13 and July 24 through July 26])	Confirm that the nearshore groundwater elevations in the Upper and Lower Alluvium WBZs in the upland along the HC&C alignment are lower than the river level
Groundwater Elevation and River Elevation Differential Contour Maps	3.3 (a, b, c, d) 3.4 (a, b, c, d)	48/96	Contours of the difference between groundwater and river elevations for each of the four WBZs (for the same two 3-day periods each month as Figures 3-1a through 3-1d and 3-2)	Confirm that the nearshore groundwater elevations in the Upper and Lower Alluvium WBZs in the upland along the HC&C alignment are lower than the river level
Transducer Data and Serfes Averages for Individual Wells and the River	4.1 to 4.85	85/170	Plots of continuous (i.e., 15-minute intervals) water level data for each of 85 monitoring wells, the river stilling wells, and the difference between the groundwater elevation and the river elevation (based on continuous data and calculate Serfes average data)	Compare the river elevation to the groundwater elevation in each well; confirm that the groundwater elevations in the Upper, Lower, and Deep Alluvium WBZ wells are below the river elevation along the HC&C alignment
Vertical Gradients Between Upper and Lower Alluvium WBZs Downgradient of the Former Tar Pond	5.1 to 5.31	31/62	Plots of continuous groundwater elevations and the difference in the groundwater elevations for 31 well pairs in different WBZs (e.g., Lower Alluvium WBZ well WS-21-112 and Deep Lower Alluvium WBZ well WS-47-183) over a 6-month period	Confirm that an upward vertical hydraulic gradient is maintained at select Alluvium WBZ well pairs located along Segment 1, downgradient of the Former Tar Pond Area
Vertical Gradient Contour Maps	6.1 to 6.2	12/24	Contours of the differences between the potentiometric surfaces for the Upper and Lower Alluvium WBZs (for the same two 3-day periods each month shown in Figures 3-1a through 3-1d)	Confirm that an upward vertical hydraulic gradient is maintained at select Alluvium WBZ well pairs located along Segment 1, downgradient of the Former Tar Pond Area
Vertical Gradients Between Selected Well Pairs	7.1 to 7.16	16/32	Plots of continuous groundwater elevations and differences over a 6-month period between 16 well pairs in different WBZs (e.g., Lower Alluvium WBZ well WS-21-112 and Deep Lower Alluvium WBZ well WS-47-183)	Confirm that there is an upward hydraulic gradient from the Deep Lower Alluvium WBZ to the Lower Alluvium WBZ and the Lower Alluvium WBZ to the Upper Alluvium WBZ in selected well pairs
Transducer Data and Serfes Averages for Pumping Wells	8.1 to 8.29	29/58	For each of the 29 extraction wells, groundwater elevations in the well, pumping rates, and calculated Serfes 3-day average pumping rates; also, the pumping rate and Serfes 3-day average for the total combined pumping rate in the Upper and Lower Alluvium WBZs	Monitor well operation and performance

Notes:
HC&C: hydraulic control and containment
WBZ: water-bearing zone

Figures



HORIZONTAL DATUM: Oregon State Plane North Zone, North American Datum (NAD83/HARN 91), International Feet

NOTE: All locations are approximate.

0 2000
Feet

Publish Date: 2023/07/28 11:01 AM | User: dholmer
Filepath: K:\Projects\0029-NW Natural Gas Co\Gasco Source Control\HC&C System Annual Report 2022\0029-RP-001 (Vicinity Map).dwg Figure 1-1

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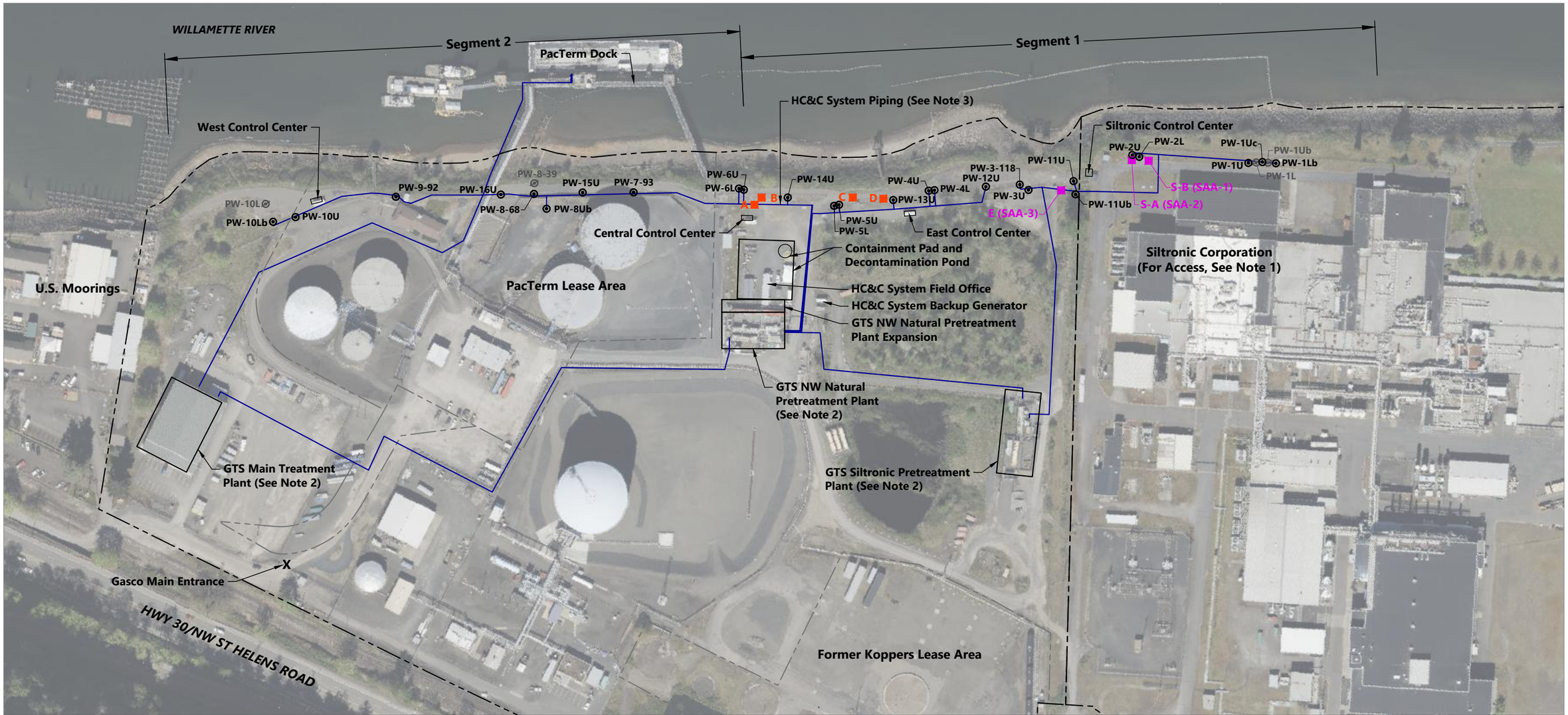
Figure 1-1
Vicinity Map

2022 HC&C System Annual Report
Gasco OU



HORIZONTAL DATUM: Oregon State Plane North Zone, North American Datum (NAD83/HARN 91), International Feet
VERTICAL DATUM: City of Portland
NOTES:

1. Access to Siltronic Corporation property is not available from the Gasco property. Main entrance to Siltronic Corporation property is not shown herein.
2. Piping for Groundwater Treatment System (GTS) not shown herein.
3. Control well and monitoring well installations not shown herein.
4. PW-1Uc was brought into service in February 2022.
5. PW-11Ub was brought into service in March 2022.

LEGEND:

- HC&C System Piping Footprint
- Existing HC&C System Extraction Well
- Decommissioned Extraction Well
- MGP-Only DNAPL Storage Location
- MGP/TCE DNAPL Storage Location (RCRA Satellite Accumulation Area – SAA)
- Lease Boundary (Approximate)
- Property Boundary (Approximate)

0 180
Feet

Publish Date: 2023/06/22 9:38 AM | User: dholmer
Filepath: K:\Projects\0029-NW Natural Gas Co\Gasco Source Control\HC&C System Annual Report 2022\0029-RP-002 (HC&C System Map).dwg Figure 1-2

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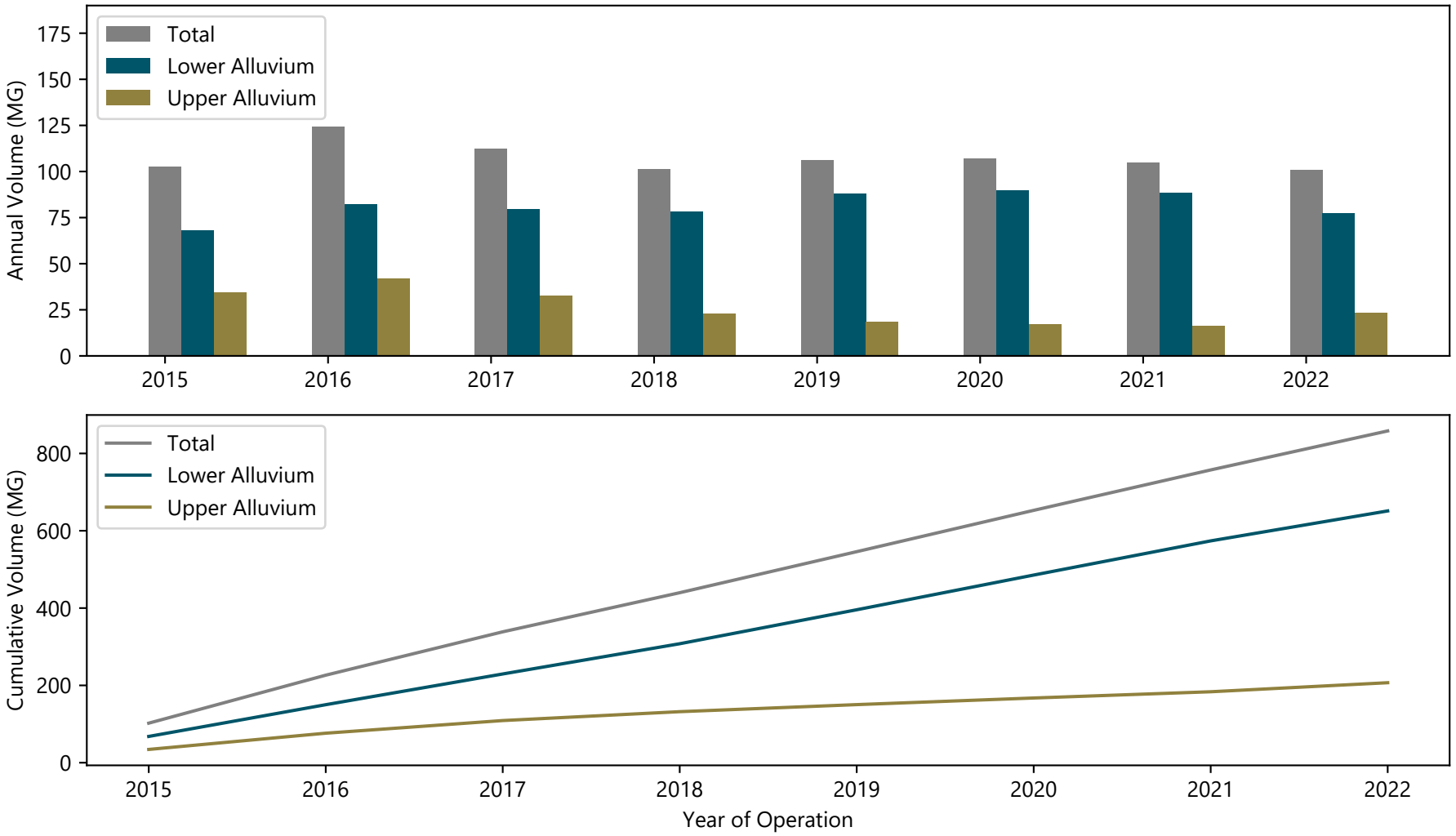
Figure 1-2
HC&C System Map
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual volume is calculated for each WBZ by taking the sum of 15-minute pumping data from January 1 to December 31 of each year.
2. Cumulative volume is the sum of annual volumes, starting January 1, 2015.
3. Lower alluvium WBZ wells include: PW-10L, PW-10LB, PW-9-92, PW-8-68, PW-7-93, PW-6L, PW-5L, PW-4L, PW-3-118, PW-2L, PW-1L, and PW-1LB.
4. Upper alluvium WBZ wells include: PW-10U, PW-16U, PW-8-39, PW8-UB, PW-15U, PW-6U, PW-14U, PW-5U, PW-13U, PW-4U, PW-12U, PW-3U, PW-11U, PW-11UB, PW-2U, PW-1U, PW-1UB and PW-1UC.
5. Total alluvium WBZ includes all wells in lower and upper alluvium.

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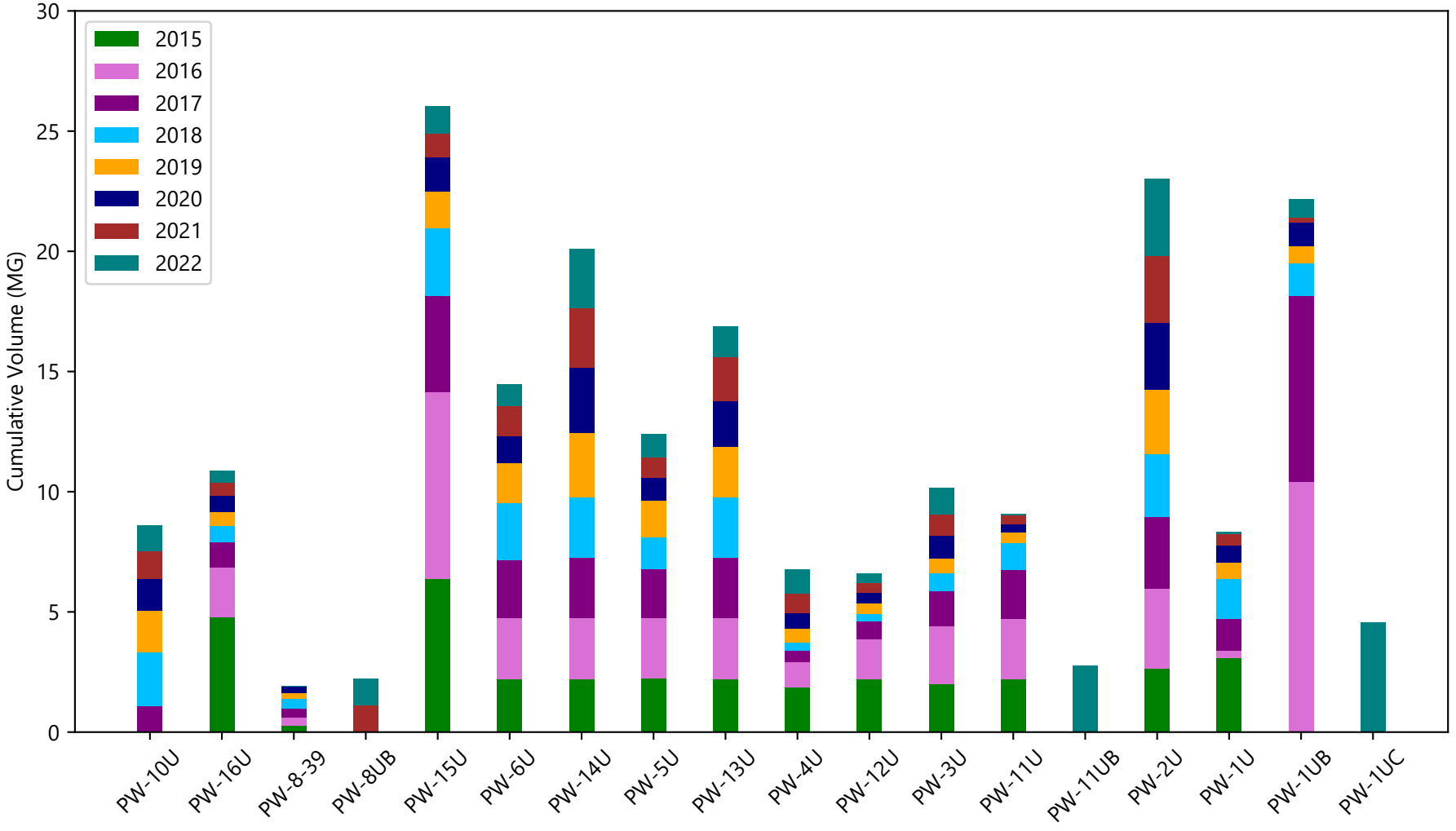
Figure 2-1
Annual and Cumulative Volume of Groundwater Extracted by the HC&C System (MG)
2022 HC&C System Annual Report
Gasco OU

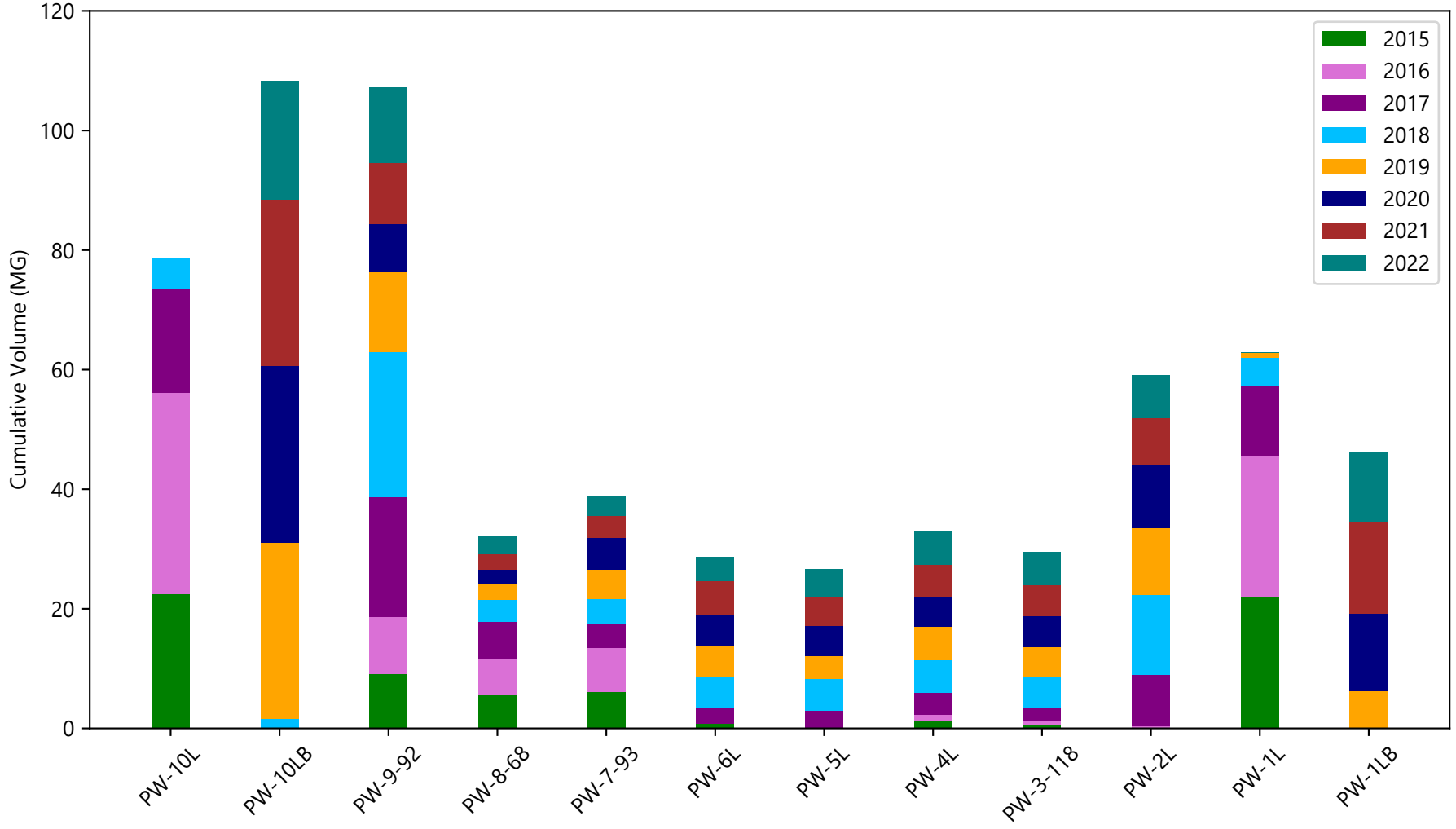


Notes:
1. Cumulative volume in million gallons (MG), is the sum of annual volumes, starting January 1, 2015.

Publish Date: 06/25/2023 22:19 PM | User: SEA-JLIN2
\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\Pumping Volumes\DailyVolume.py

ANCHOR QEA

Figure 2-2
Annual Volume of Groundwater Extracted in Upper Alluvium Wells (MG)
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Cumulative volume in million gallons (MG), is the sum of annual volumes, starting January 1, 2015.

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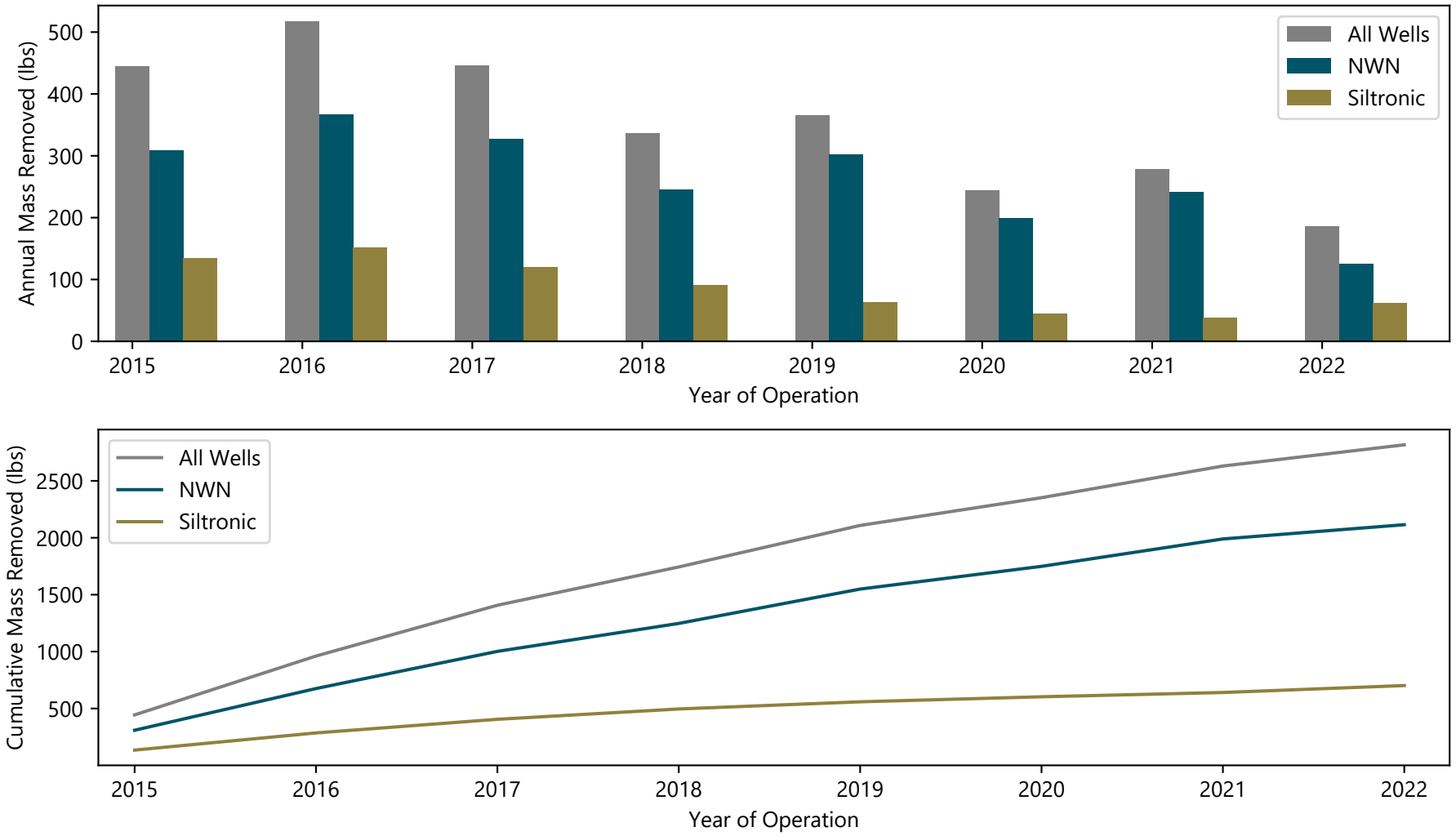
\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\Pumping Volumes\DailyVolume.py

ANCHOR QEA

Figure 2-3
Annual Volume of Groundwater Extracted in Lower Alluvium Wells (MG)
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

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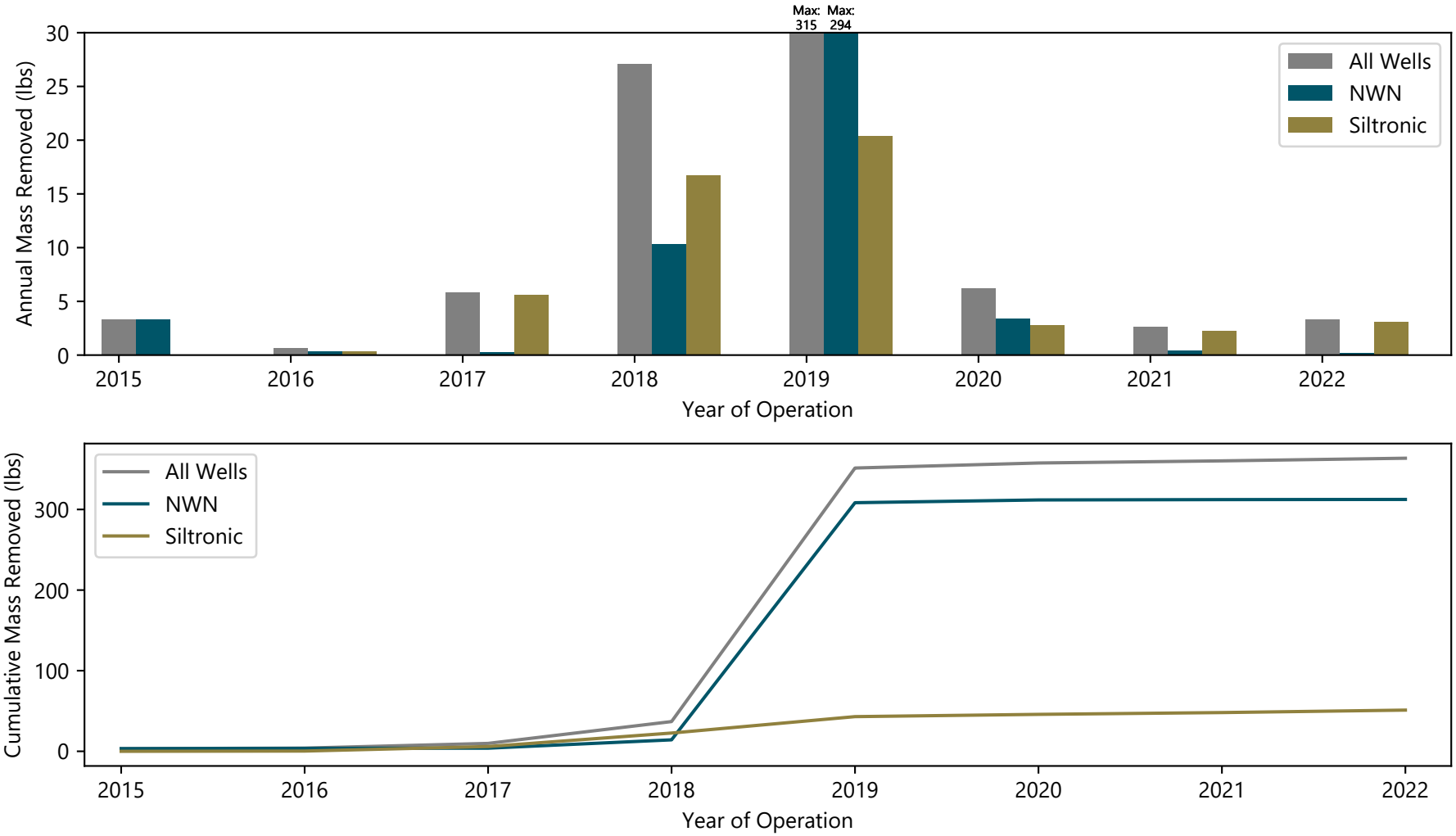
\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\ContaminantMass\ContaminantMass.py

ANCHOR QEA

Figure 2-4
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Benzene
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

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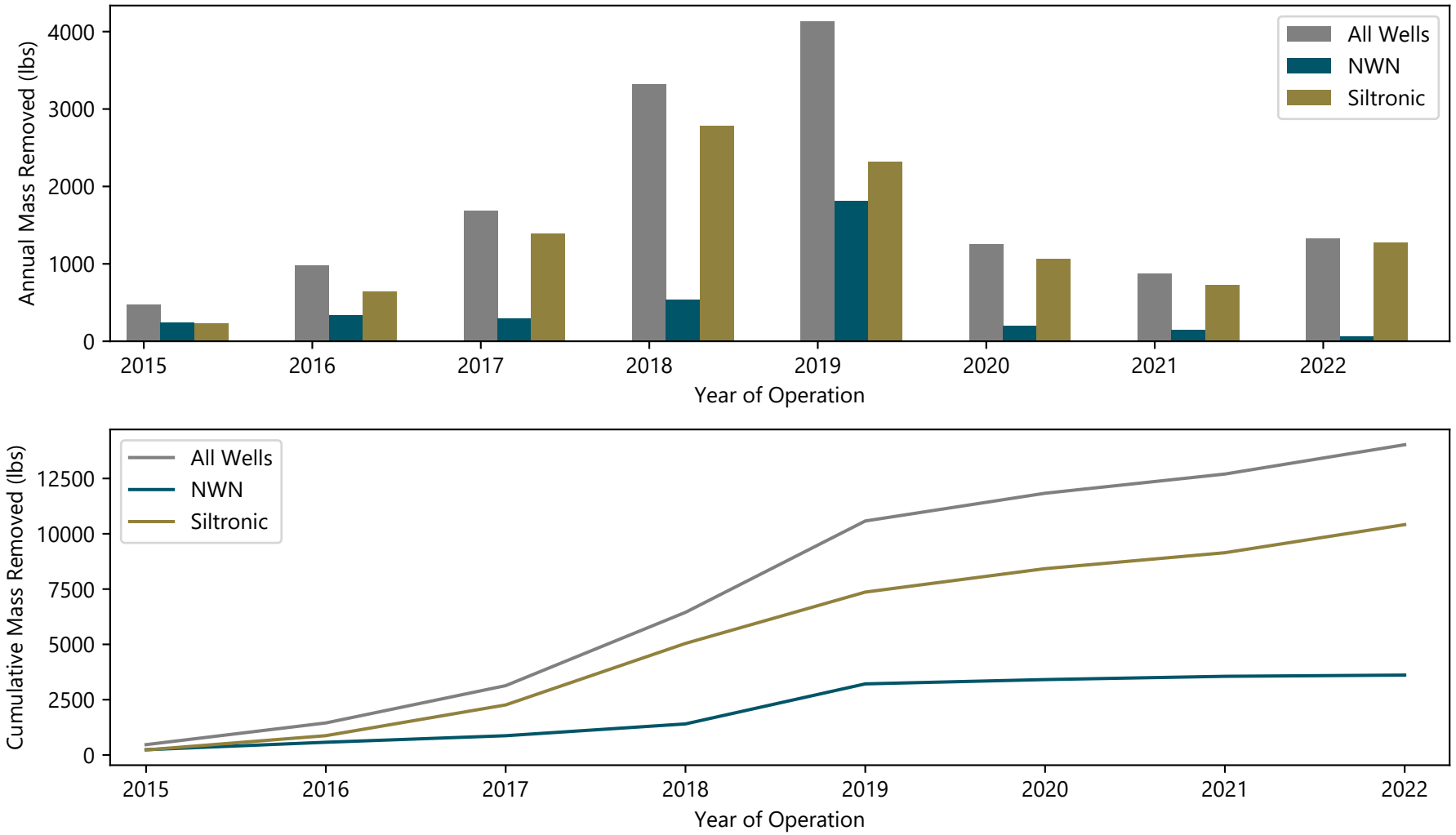
\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\ContaminantMass\ContaminantMass.py

ANCHOR QEA

Figure 2-5
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Benzo(a)pyrene
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

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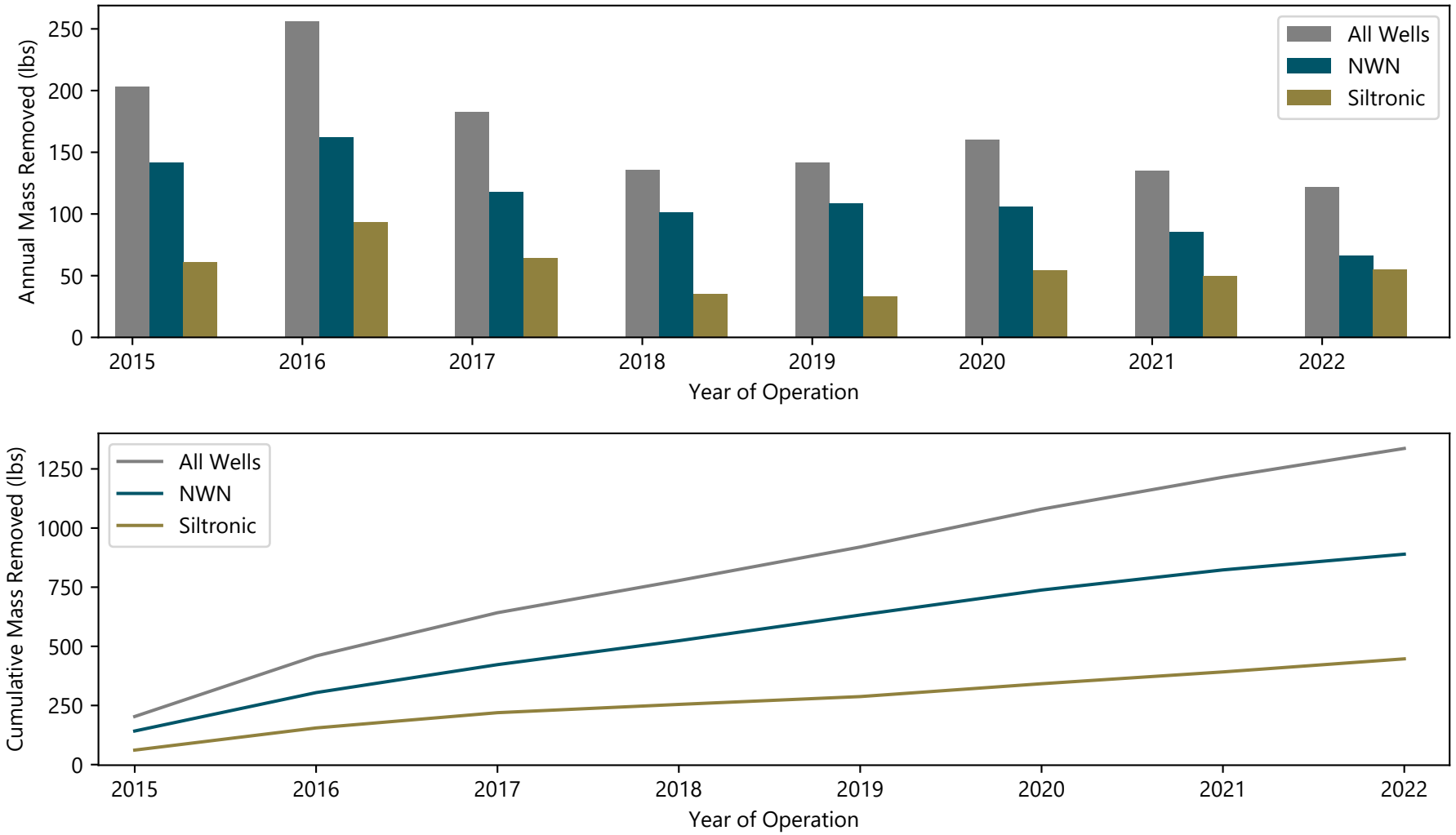
\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\ContaminantMass\ContaminantMass.py

ANCHOR QEA

Figure 2-6
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Napthalene
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

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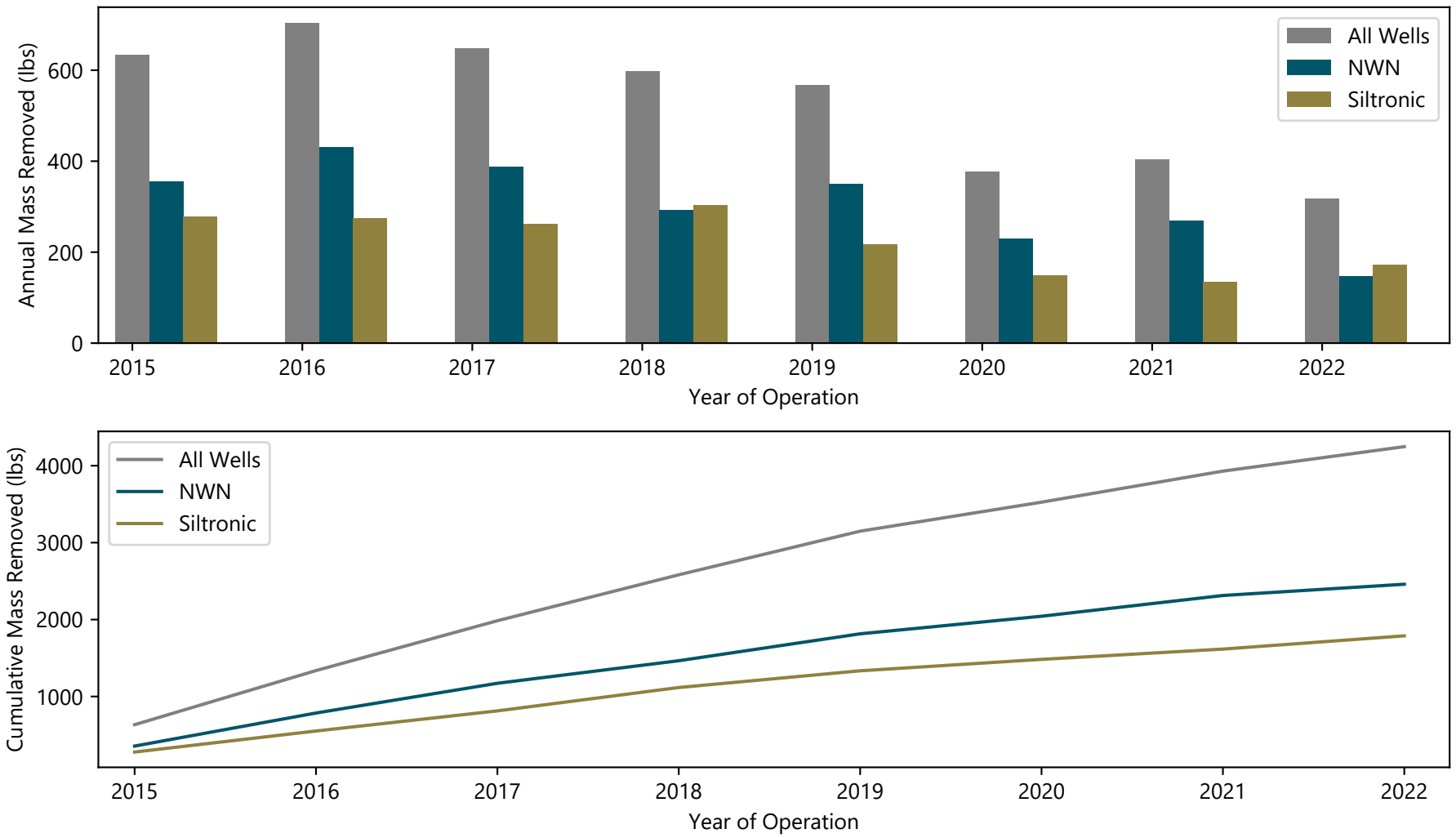
\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\ContaminantMass\ContaminantMass.py

ANCHOR QEA

Figure 2-7
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Cyanide
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

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\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\ContaminantMass\ContaminantMass.py

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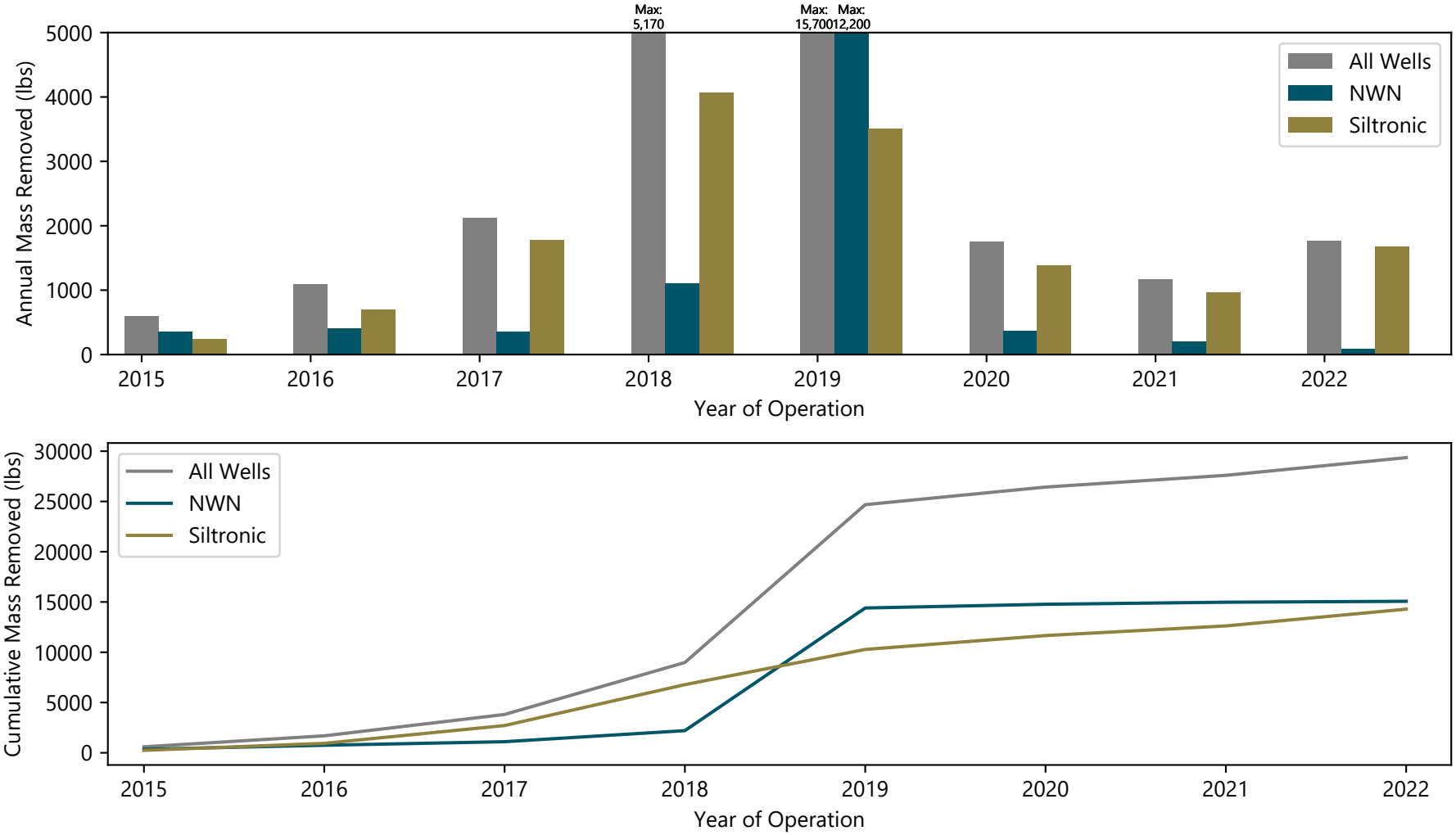
Figure 2-8
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Total VOCs
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

Publish Date: 06/25/2023 22:54 PM | User: SEA-JLIN2
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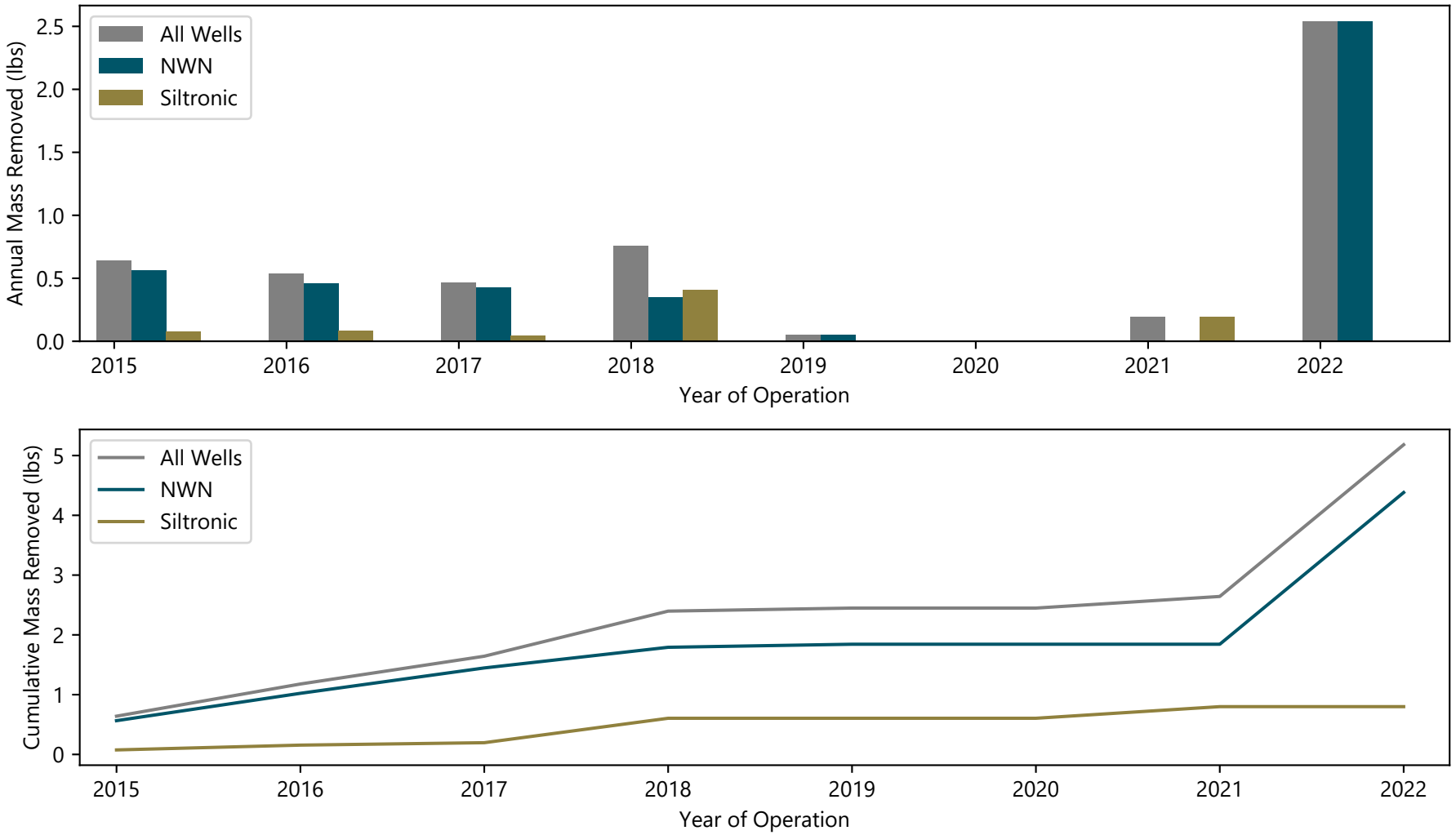
ANCHOR QEA

Figure 2-9
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Total SVOCs
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

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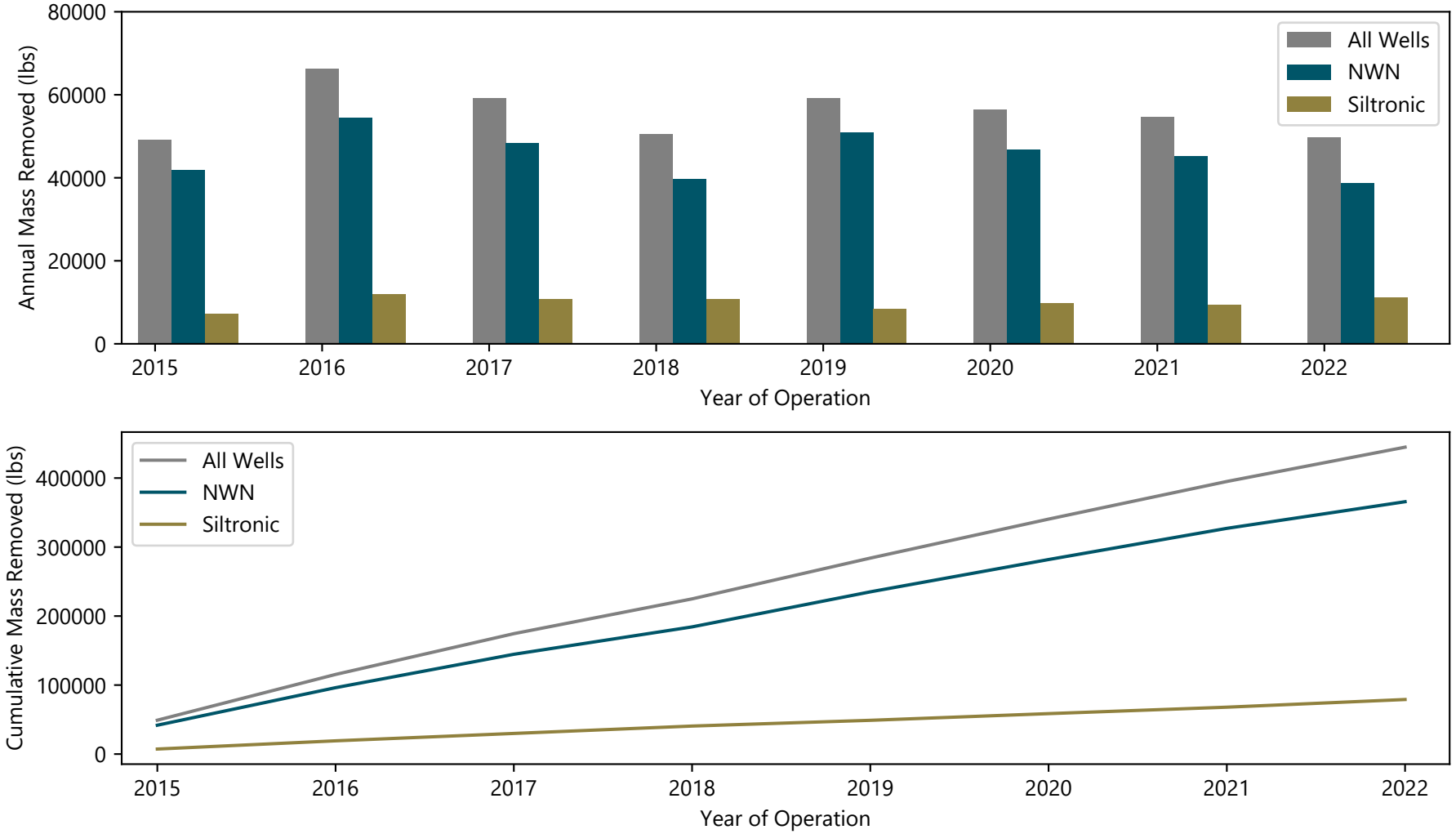
Figure 2-10
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Copper
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Annual mass for 2015 includes data from June to December. Annual mass for subsequent years include data from January to December. Please refer to Tables 2-3, 2-4 and 2-5 for more information.
2. Cumulative mass in pounds (lbs) is calculated from annual volumes, starting June 2015.
3. NWN: North West Natural wells.

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\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\ContaminantMass\ContaminantMass.py

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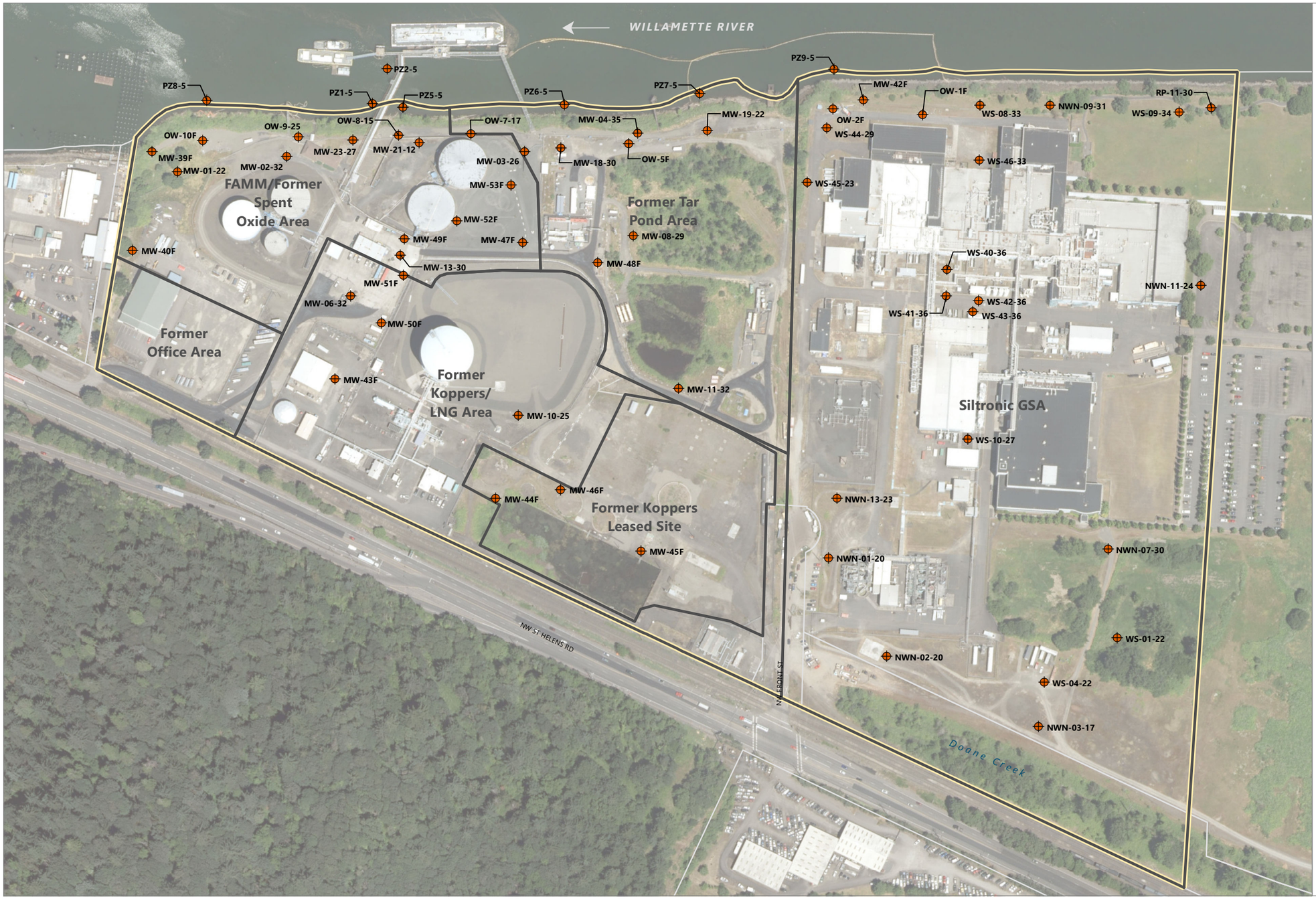
Figure 2-11
Annual and Cumulative Contaminant Mass Removed from the HC&C System - Iron
2022 HC&C System Annual Report
Gasco OU



LEGEND:

- Approximate Gasco OU Boundary
- Geographic Subareas
- Tax Lot Boundary
- Fill WBZ Wells

NOTES:

1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
3. Aerial imagery from City of Portland 2022.

0 300
Feet

Publish Date: 2023/06/22, 10:03 AM | User: alesueur
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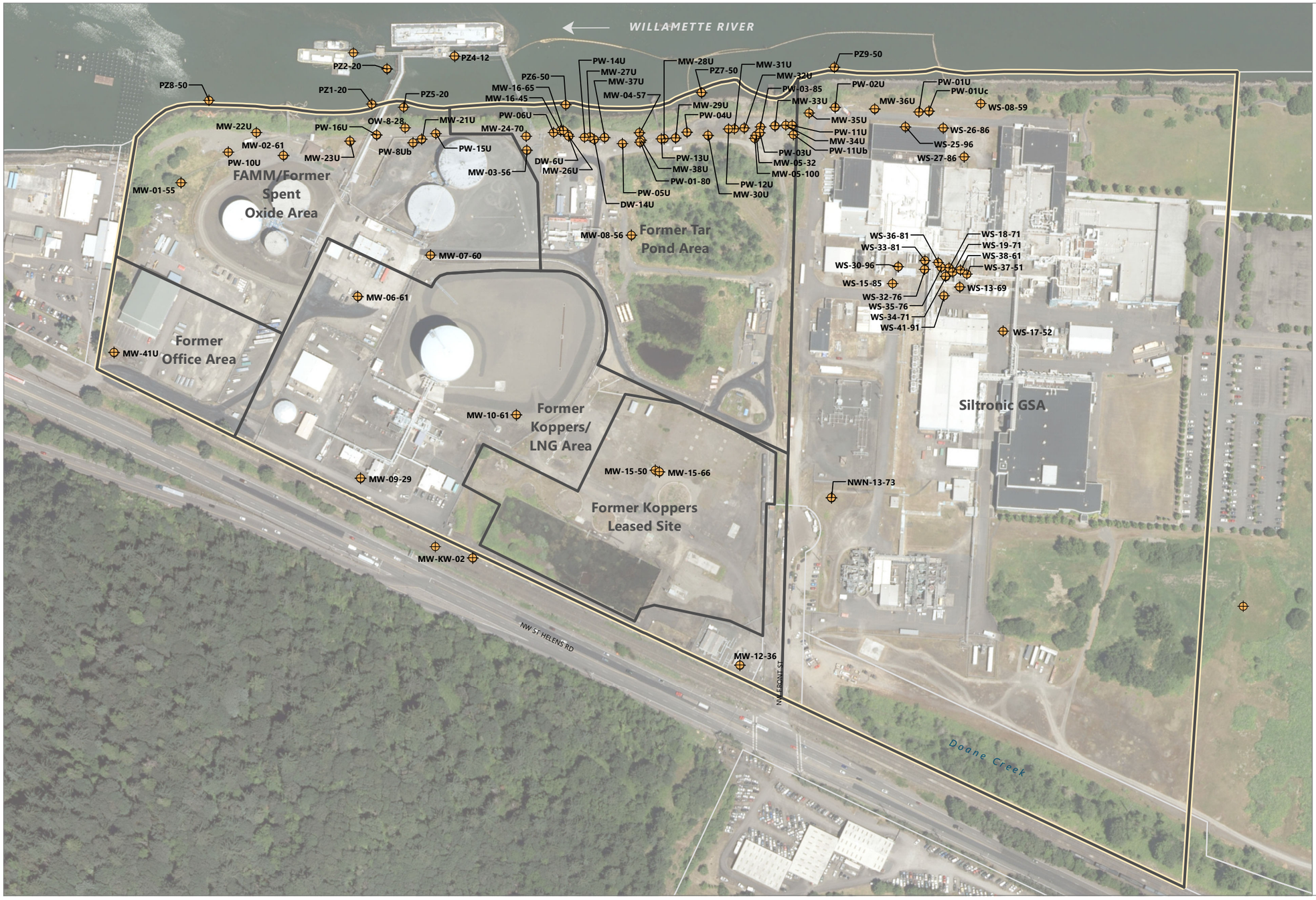
ANCHOR QEA

Figure 5-1
Fill WBZ Wells
2022 HC&C System Annual Report
Gasco OU



LEGEND:

- Approximate Gasco OU Boundary
- Geographic Subareas
- Tax Lot Boundary
- Upper Alluvium WBZ Wells

NOTES:

1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
3. Aerial imagery from City of Portland 2022.

0 300

Feet

Publish Date: 2023/06/22, 10:07 AM | User: alesueur
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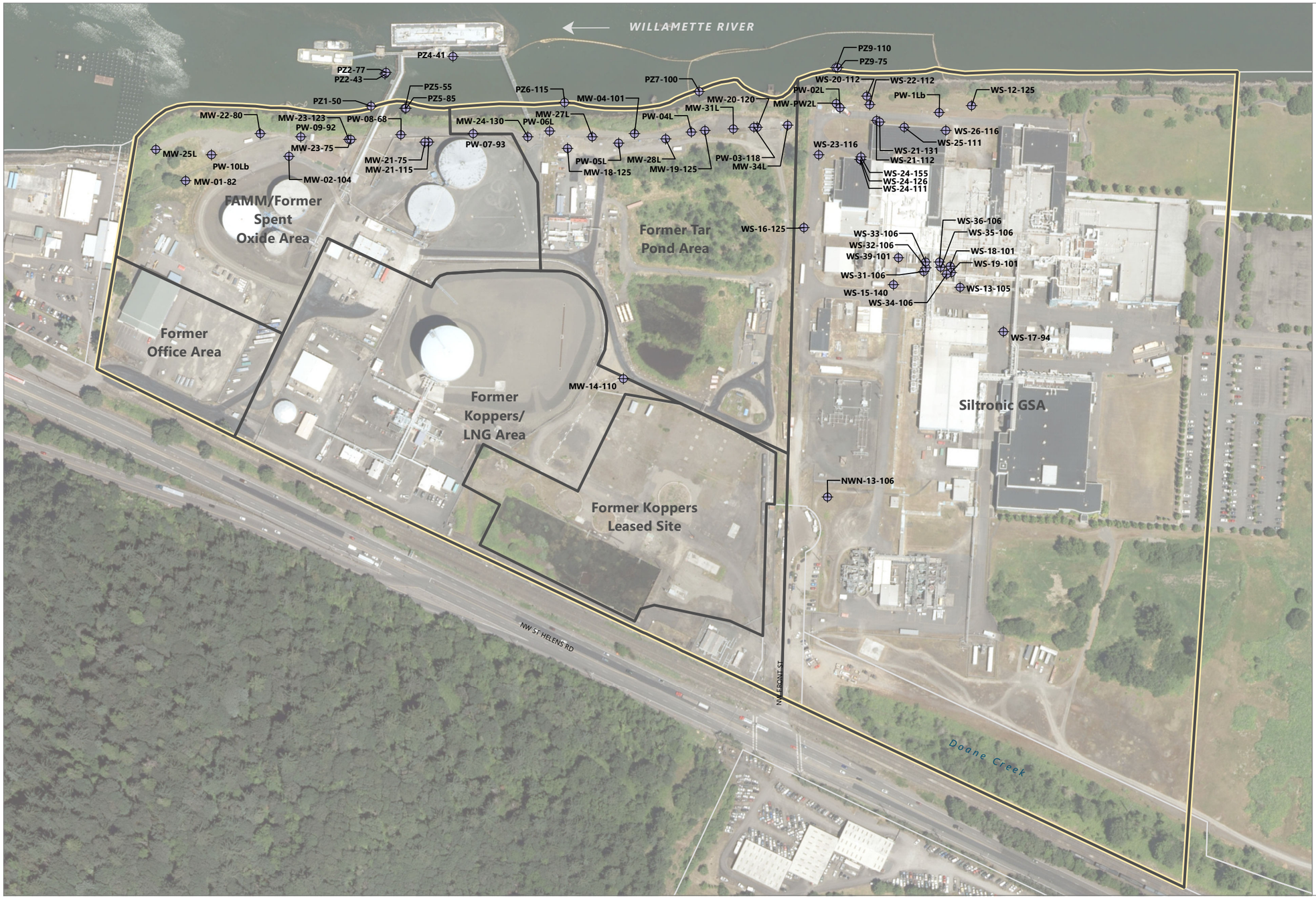
ANCHOR QEA

Figure 5-2
Upper Alluvium WBZ Wells
2022 HC&C System Annual Report
Gasco OU



LEGEND:

- Approximate Gasco OU Boundary
- Geographic Subareas
- Tax Lot Boundary
- Lower Alluvium WBZ Wells

NOTES:

1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
3. Aerial imagery from City of Portland 2022.

0 300

Feet

Publish Date: 2023/06/22, 10:09 AM | User: alesueur
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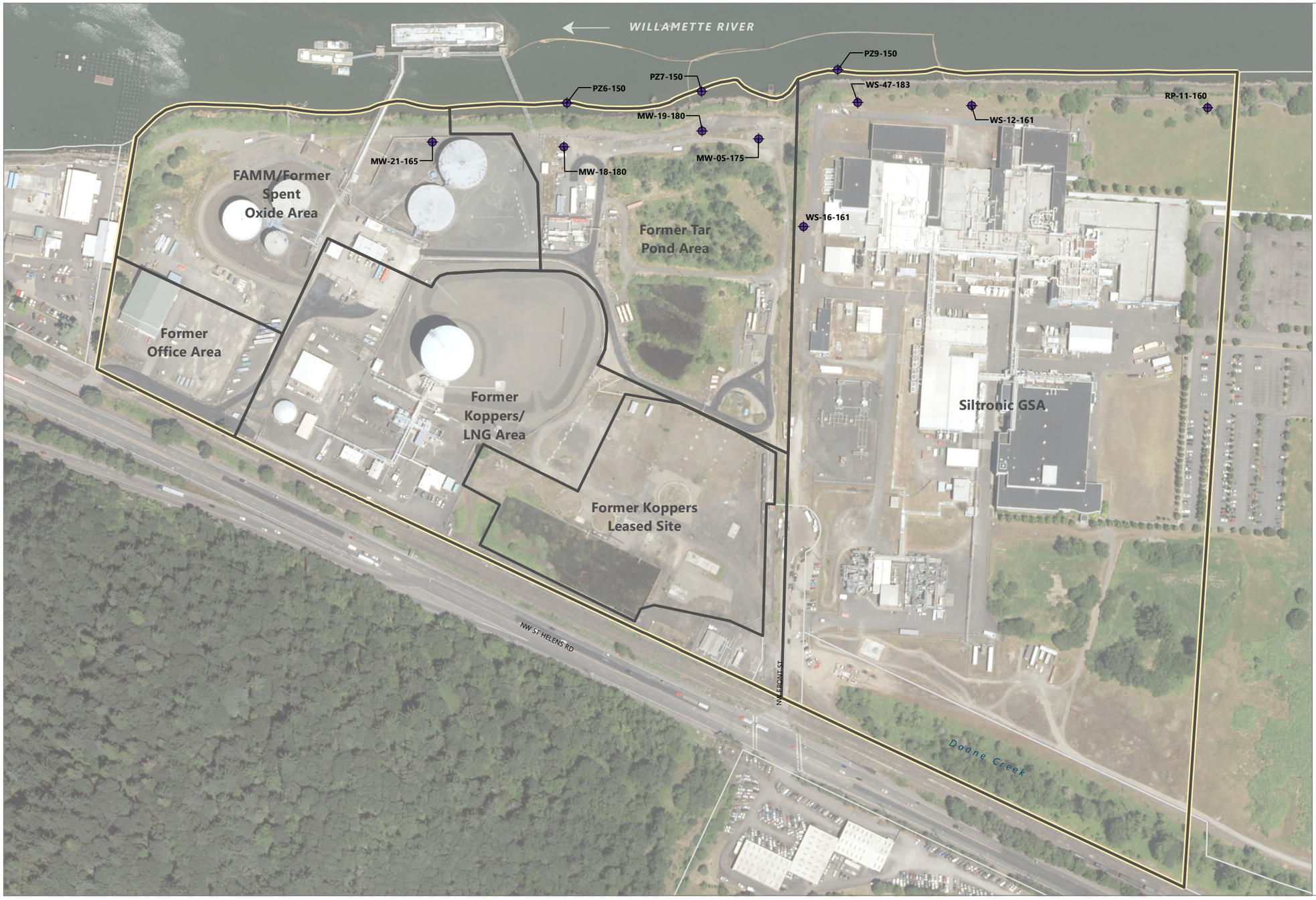
ANCHOR QEA

Figure 5-3
Lower Alluvium WBZ Wells
2022 HC&C System Annual Report
Gasco OU



LEGEND:

- Approximate Gasco OU Boundary
- Geographic Subareas
- Tax Lot Boundary
- Deep Lower Alluvium WBZ Wells

NOTES:

1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
3. Aerial imagery from City of Portland 2022.

0 300

Feet

Publish Date: 2023/06/22, 10:13 AM | User: alesueur
Filepath: \\orcas\gis\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Maps\HCCAnnualReport\2022\AQ_HCC_Fig5-4_WBZwells_DeepLowerAlluvium.mxd

ANCHOR QEA

Figure 5-4
Deep Lower Alluvium WBZ Wells
2022 HC&C System Annual Report
Gasco OU

Appendix A
Summary of HC&C System Maintenance Activities

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-1U				PW-1Ub				PW-1Uc				PW-1L				PW-1Lb				PW-2U				PW-2L				PW-3U				PW-3L (PW-3-118)				PW-4U				PW-4L				PW-5U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
6/1/2007																																		X														
3/1-4/2010																																																
8/19/2010																																																
4/13/2012																														X																		
4/19/2012																																																
4/23/2012																																														X		
4/30/2012																						X																										
5/10-31/2012																						X		X																						X		
6/12-15/2012																																																
11/16-20/2012																																																
1/1-30/2013		X		X										X		X																																
2/5-28/2013																																										X		X				
3/4-14/2013																										X		X										X		X								
1/21-28/2014		X		X										X		X																																
2/3-12/2014																						X		X																								
9/8-10/2014																																																
4/1-29/2015			X												X								X				X				X								X								X	
5/1-31/2015			X																																X								X					
12/10/2015																																					X	X		X								
1/6/2016																														X		X																
1/8/2016																																																
1/18/2016				X																				X																								
1/22/2016																																X								X								X
1/25/2016				X																																												
1/28/2016																																																
2/15/2016								X																																								
3/8/2016																																																
3/15/2016			X												X								X				X																					
3/16/2016																																			X													
3/17/2016																															X								X								X	
3/28/2016																																											X					

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-1U				PW-1Ub				PW-1Uc				PW-1L			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
3/30/2016																
4/15/2016																
5/17/2016																X
5/23/2016				X												X
7/13/2016																
7/18/2016																X
8/3/2016																
8/5/2016																
8/18/2016																
8/25/2016																
12/20/2016								X								
1/6/2017																
1/27/2017																
2/20-24/2017			X				X								X	
4/6/2017																
8/7-11/2017			X				X								X	
12/18-22/2017			X				X								X	
1/16/2018																
1/17/2018																
1/24/2018				X				X								X
1/25/2018																
1/26/2018																
1/29/2018																
2/6/2018																
2/7/2018																
2/12/2018																
3/19/2018							X									
3/21/2018					X	X	X									
5/24/2018																
5/24/2018																
5/25/2018				X				X								X
6/20/2018															X	

Production Well Downhole Maintenance	PW-1Lb				PW-2U				PW-2L				PW-3U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
3/30/2016																
4/15/2016																
5/17/2016												X				
5/23/2016																
7/13/2016																
7/18/2016																
8/3/2016																
8/5/2016																
8/18/2016																
8/25/2016																
12/20/2016																
1/6/2017																
1/27/2017																
2/20-24/2017							X				X				X	
4/6/2017																
8/7-11/2017							X				X				X	
12/18-22/2017							X				X				X	
1/16/2018																
1/17/2018																
1/24/2018								X								X
1/25/2018																
1/26/2018																
1/29/2018												X				
2/6/2018																
2/7/2018																X
2/12/2018																
3/19/2018																
3/21/2018																
5/24/2018																X
5/24/2018																
5/25/2018								X				X				
6/20/2018																

Production Well Downhole Maintenance	PW-3L (PW-3-118)				PW-4U				PW-4L				PW-5U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
3/30/2016							X									
4/15/2016																X
5/17/2016				X								X				
5/23/2016												X				
7/13/2016																
7/18/2016																
8/3/2016																
8/5/2016																
8/18/2016																
8/25/2016																
12/20/2016																
1/6/2017				X												
1/27/2017																
2/20-24/2017			X				X				X				X	
4/6/2017																
8/7-11/2017			X				X				X					
12/18-22/2017			X				X				X				X	
1/16/2018												X				
1/17/2018																
1/24/2018				X												
1/25/2018								X								X
1/26/2018																
1/29/2018																
2/6/2018																X
2/7/2018				X				X				X				
2/12/2018																
3/19/2018																
3/21/2018																
5/24/2018				X				X				X				X
5/24/2018																
5/25/2018																
6/20/2018																

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-1U				PW-1Ub				PW-1Uc				PW-1L				PW-1Lb				PW-2U				PW-2L				PW-3U				PW-3L (PW-3-118)				PW-4U				PW-4L				PW-5U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
7/17/2018																																																
8/6-9/2018			X				X								X								X				X				X				X				X				X				X	
8/10/2018																																																
8/15/2018																																																
8/16/2018																																X																
8/23/2018																																																
8/27/2018																																																
8/28/2018													X	X																																		
10/3/2018																																																
10/30/2018																																																
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2/21/2019																																																
2/27/2019																																																
3/25/2019																																																
3/27/2019																																																
4/10/2019																													X	X	X																	
4/17/2019																																													X	X	X	
4/24/2019																X	X	X		X																	X	X	X									
4/25/2019							X	X																																								
5/1/2019																																																
5/15/2019																																																
5/22/2019																																																
7/12/2019																																																
7/24/2019																																																
7/29/2019																																																
8/16/2019																																																
8/29/2019																					X	X	X																									
10/11/2019																																																
11/15/2019																																										X						
11/19/2019																																																
11/20/2019																																																

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-1U				PW-1Ub				PW-1Uc				PW-1L			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
11/25/2019																
12/2/2019																
12/4/2019																
12/9/2019			X													
12/12/2019																
1/20/2020																
1/21/2020																
1/28/2020																
2/12/2020																
2/18/2020																
2/24/2020																
2/27/2020																
3/24/2020																
3/30/2020																
4/7/2020																
6/3/2020																
6/17/2020																
6/23/2020																
7/21/2020																
7/28/2020					X	X										
7/30/2020																
8/12/2020																
10/28/2020																
11/18/2020																
11/28/2020																
12/21/2020																
1/11/2021																
1/19/2021																
1/21/2021																
1/25/2021																

Production Well Downhole Maintenance	PW-1Lb				PW-2U				PW-2L				PW-3U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
11/25/2019																
12/2/2019																
12/4/2019																
12/9/2019																
12/12/2019											X					
1/20/2020																
1/21/2020									X							
1/28/2020																
2/12/2020																
2/18/2020																
2/24/2020																
2/27/2020															X	
3/24/2020																
3/30/2020																
4/7/2020																
6/3/2020																
6/17/2020																
6/23/2020																
7/21/2020															X	
7/28/2020																
7/30/2020																
8/12/2020																
10/28/2020																
11/18/2020								X								
11/28/2020																
12/21/2020																
1/11/2021																
1/19/2021																
1/21/2021																
1/25/2021																

Production Well Downhole Maintenance	PW-3L (PW-3-118)				PW-4U				PW-4L				PW-5U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
11/25/2019																
12/2/2019																
12/4/2019			X													
12/9/2019																
12/12/2019																
1/20/2020																
1/21/2020																
1/28/2020																
2/12/2020																
2/18/2020																
2/24/2020																
2/27/2020																
3/24/2020																
3/30/2020																
4/7/2020							X									
6/3/2020																
6/17/2020															X	
6/23/2020																
7/21/2020																
7/28/2020																
7/30/2020																
8/12/2020																
10/28/2020																
11/18/2020																
11/28/2020																
12/21/2020																
1/11/2021																
1/19/2021																
1/21/2021																
1/25/2021											X					

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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-1U				PW-1Ub				PW-1Uc				PW-1L				PW-1Lb				PW-2U				PW-2L				PW-3U				PW-3L (PW-3-118)				PW-4U				PW-4L				PW-5U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
1/28/2021																																																
2/9/2021																																																
2/16/2021																																																
2/25/2021					X	X																	X																									
3/1/2021																																																
4/13/2021																																							X									
4/20/2021																																																
4/27/2021																																			X													
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6/15/2021																																																
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8/25/2021																																															X	
10/13/2021																																																
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10/26/2021																																																
10/28/2021																															X																	
11/11/2021																																																
11/16/2021																																							X									
11/22/2021			X																																													
11/24/2021																																																
11/29/2021																			X																													
12/1/2021																							X																									
12/24/2021												X																																				
1/12/2022									X																																							
2/1/2022																																																
2/3/2022	X																																															
2/4/2022												X																																				

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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-1U				PW-1Ub				PW-1Uc				PW-1L				PW-1Lb				PW-2U				PW-2L				PW-3U				PW-3L (PW-3-118)				PW-4U				PW-4L				PW-5U			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
2/10/2022																																																
2/11/2022																																																
2/17/2022																																																
4/13/2022																																							X									
4/18/2022																																																
4/20/2022																																																
4/26/2022																																											X					
5/11/2022																																																
5/16/2022																																															X	
5/19/2022																																																
5/24/2022																															X																	
6/23/2022																																																
6/27/2022																									X			X																				
7/21/2022																																			X													
7/25/2022																																																
7/27/2022																																																
8/25/2022																																																
8/30/2022																																																
11/8/2022																																							X									
11/10/2022																																																
11/21/2022																																																
11/28/2022																																																
12/1/2022																																																

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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-5L				PW-6U				PW-6L				PW-7L (PW-7-93)				PW-8U				PW-8Ub				PW-8L (PW-8-68)				PW-9L (PW-9-92)				PW-10U				PW-10Ub				PW-10L				PW-10Lb			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
6/1/2007																																																
3/1-4/2010													X	X		X									X	X		X	X	X		X																
8/19/2010																	X	X																														
4/13/2012																																																
4/19/2012						X																																										
4/23/2012																																																
4/30/2012																																																
5/10-31/2012						X																																										
6/12-15/2012																		X												X																		
11/16-20/2012										X																																X						
1/1-30/2013		X		X																																												
2/5-28/2013																																										X		X				
3/4-14/2013																																																
1/21-28/2014																																																
2/3-12/2014																		X		X																												
9/8-10/2014																																																
4/1-29/2015							X				X				X				X								X																					
5/1-31/2015			X																																													
12/10/2015																																																
1/6/2016																																																
1/8/2016																																									X							
1/18/2016																																																
1/22/2016								X												X																												
1/25/2016																																																
1/28/2016																																																
2/15/2016																																																
3/8/2016																																																
3/15/2016																																																
3/16/2016			X				X																																									
3/17/2016																											X																					
3/28/2016															X																X												X					

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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-5L				PW-6U				PW-6L				PW-7L (PW-7-93)				PW-8U				PW-8Ub				PW-8L (PW-8-68)				PW-9L (PW-9-92)				PW-10U				PW-10Ub				PW-10L				PW-10Lb			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
3/30/2016											X				X												X																					
4/15/2016																																																
5/17/2016				X								X				X												X				X												X				
5/23/2016																																																
7/13/2016																																												X				
7/18/2016																																																
8/3/2016																X																																
8/5/2016																																																
8/18/2016																																																
8/25/2016																																																
12/20/2016																																																
1/6/2017																																																
1/27/2017																																												X				
2/20-24/2017			X				X				X				X												X				X												X					
4/6/2017																																				X												
8/7-11/2017															X												X																					
12/18-22/2017			X				X				X				X												X				X				X								X					
1/16/2018				X								X																																				
1/17/2018																X												X				X												X				
1/24/2018																																																
1/25/2018																				X																X												
1/26/2018								X																																								
1/29/2018																																																
2/6/2018				X																																												
2/7/2018																																																
2/12/2018												X				X				X								X				X				X								X				
3/19/2018																																																
3/21/2018																																																
5/24/2018				X				X				X				X				X								X				X				X								X				
5/24/2018								X																				X				X																
5/25/2018																																																
6/20/2018																															X																	

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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-5L				PW-6U				PW-6L				PW-7L (PW-7-93)			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
7/17/2018																
8/6-9/2018			X				X				X				X	
8/10/2018																
8/15/2018																
8/16/2018																
8/23/2018																
8/27/2018																
8/28/2018																
10/3/2018																
10/30/2018																X
11/1/2018																
2/6/2019																
2/21/2019																
2/27/2019							X									
3/25/2019																
3/27/2019																
4/10/2019																
4/17/2019																
4/24/2019																
4/25/2019																
5/1/2019																
5/15/2019																
5/22/2019													X	X	X	
7/12/2019																
7/24/2019																
7/29/2019																
8/16/2019																
8/29/2019																
10/11/2019																
11/15/2019																
11/19/2019			X													
11/20/2019																

Production Well Downhole Maintenance	PW-8U				PW-8Ub				PW-8L (PW-8-68)				PW-9L (PW-9-92)			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
7/17/2018												X				
8/6-9/2018											X				X	
8/10/2018																
8/15/2018																
8/16/2018																
8/23/2018				X												
8/27/2018									X	X						
8/28/2018																
10/3/2018																
10/30/2018				X								X				
11/1/2018																
2/6/2019																
2/21/2019											X					
2/27/2019																
3/25/2019																
3/27/2019																
4/10/2019																
4/17/2019																
4/24/2019																
4/25/2019																
5/1/2019																
5/15/2019																
5/22/2019																
7/12/2019											X					
7/24/2019															X	
7/29/2019																
8/16/2019																
8/29/2019																
10/11/2019																
11/15/2019																
11/19/2019																
11/20/2019																

Production Well Downhole Maintenance	PW-10U				PW-10Ub				PW-10L				PW-10Lb			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
7/17/2018																
8/6-9/2018			X								X					
8/10/2018									X	X						
8/15/2018												X				
8/16/2018																
8/23/2018																
8/27/2018																
8/28/2018																
10/3/2018												X				
10/30/2018																
11/1/2018													X	X		X
2/6/2019												X				
2/21/2019																
2/27/2019																
3/25/2019																
3/27/2019																
4/10/2019																
4/17/2019																
4/24/2019																
4/25/2019																
5/1/2019																
5/15/2019																
5/22/2019																
7/12/2019																
7/24/2019																
7/29/2019																
8/16/2019															X	
8/29/2019																
10/11/2019																
11/15/2019																
11/19/2019																
11/20/2019																

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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-5L				PW-6U				PW-6L				PW-7L (PW-7-93)				PW-8U				PW-8Ub				PW-8L (PW-8-68)				PW-9L (PW-9-92)				PW-10U				PW-10Ub				PW-10L				PW-10Lb			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
11/25/2019											X																																					
12/2/2019																																																
12/4/2019																																																
12/9/2019																																																
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1/20/2020																																																
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1/28/2020																																			X													
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6/23/2020															X																																	
7/21/2020																																																
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8/12/2020																																																
10/28/2020																						X																										
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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-5L				PW-6U				PW-6L				PW-7L (PW-7-93)				PW-8U				PW-8Ub				PW-8L (PW-8-68)				PW-9L (PW-9-92)				PW-10U				PW-10Ub				PW-10L				PW-10Lb			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
1/28/2021											X																																					
2/9/2021																																																
2/16/2021																																																
2/25/2021																																																
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4/13/2021																																																
4/20/2021																																																
4/27/2021																																																
5/11/2021							X																																									
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5/20/2021																											X																					
6/15/2021															X																																	
8/17/2021																																																
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10/13/2021																																			X													
10/20/2021																																															X	
10/26/2021																							X																									
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2/3/2022																																																
2/4/2022									X																																							

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Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-5L				PW-6U				PW-6L				PW-7L (PW-7-93)			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
2/10/2022																X
2/11/2022																
2/17/2022													X	X	X	
4/13/2022																
4/18/2022			X													
4/20/2022											X					
4/26/2022																
5/11/2022							X									
5/16/2022																
5/19/2022																
5/24/2022																
6/23/2022																
6/27/2022																
7/21/2022																
7/25/2022																
7/27/2022																
8/25/2022																
8/30/2022																
11/8/2022																
11/10/2022																
11/21/2022																
11/28/2022																
12/1/2022																

Production Well Downhole Maintenance	PW-8U				PW-8Ub				PW-8L (PW-8-68)				PW-9L (PW-9-92)			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
2/10/2022																
2/11/2022																
2/17/2022																
4/13/2022																
4/18/2022																
4/20/2022																
4/26/2022																
5/11/2022																
5/16/2022																
5/19/2022																
5/24/2022																
6/23/2022																
6/27/2022																
7/21/2022																
7/25/2022											X	X				
7/27/2022																
8/25/2022																
8/30/2022															X	
11/8/2022																
11/10/2022																
11/21/2022																
11/28/2022							X									
12/1/2022																

Production Well Downhole Maintenance	PW-10U				PW-10Ub				PW-10L				PW-10Lb			
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)
2/10/2022																
2/11/2022																
2/17/2022																
4/13/2022																
4/18/2022																
4/20/2022																
4/26/2022																
5/11/2022																
5/16/2022																
5/19/2022																
5/24/2022																
6/23/2022																
6/27/2022																
7/21/2022																
7/25/2022																
7/27/2022																
8/25/2022													X	X		X
8/30/2022																
11/8/2022																
11/10/2022			X													
11/21/2022																
11/28/2022																
12/1/2022				X												

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-10Lc				PW-11U				PW-11Ub				PW-12U				PW-13U				PW-14U				PW-15U				PW-16U				
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	Comment
6/1/2007																																	Initial development
3/1-4/2010																																	Initial development, includes air lifting
8/19/2010																																	Initial development
4/13/2012																																	Initial development
4/19/2012																																	Initial development
4/23/2012																																	Initial development
4/30/2012																																	Initial development
5/10-31/2012																																	2nd round development
6/12-15/2012																																	2nd round development
11/16-20/2012																																	Initial development, includes air lifting
1/1-30/2013						X		X														X		X									Initial and 2nd round development, includes airlift and jetting
2/5-28/2013														X		X		X		X													Initial development, includes air lifting and jetting
3/4-14/2013																																	Initial development, includes air lifting
1/21-28/2014																																	3rd development with air lift & jetting, video taken
2/3-12/2014																						X											
9/8-10/2014																										X		X		X		X	Mid-install and initial developments (jetting on initial)
4/1-29/2015							X								X				X														CO2 injections
5/1-31/2015																																	CO2 injections
12/10/2015																																	Reused motor, removed air relief valve
1/6/2016																																	Reused motor, pump & piping, removed air relief valve
1/8/2016																																	
1/18/2016																																	Remove air relief, flushed line.
1/22/2016								X								X				X				X				X				X	Removed air relief valve.
1/25/2016																																	Clean out downhole piping
1/28/2016														X																			Clean out downhole piping
2/15/2016																																	New well completion.
3/8/2016																																X	Flowmeter displaying 6,7 gpm when idle, repaired
3/15/2016															X				X														CO2 injection
3/16/2016							X																										CO2 injection
3/17/2016																											X				X		CO2 injection
3/28/2016																							X				X						CO2 injection

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-10Lc				PW-11U				PW-11Ub				PW-12U				PW-13U				PW-14U				PW-15U				PW-16U				
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	Comment
3/30/2016															X																X		CO2 injection
4/15/2016																														X		X	Replaced SS check valve and pump only.
5/17/2016																																	Removed air relief valve.
5/23/2016																																	Replaced back flowing check valve
7/13/2016																																	Repair leak at discharge tee.
7/18/2016																																	Unclog CO2 downhole pipe
8/3/2016																																	Repair leaking pipe at discharge valve
8/5/2016																												X					Replaced back flowing check valve
8/18/2016															X																X		WSE Well Screen Maintenance
8/25/2016																																X	Replaced flowmeter, reading sparratic.
12/20/2016																																	Repair leaking pipe at union
1/6/2017																																	Pipe freeze, cracked at tee, 1/27/17replaced
1/27/2017																																	Replaced pipe at red bushing.
2/20-24/2017							X								X				X								X				X		X
4/6/2017																																	New well install.
8/7-11/2017							X								X												X				X		CO2 Injection.
12/18-22/2017							X								X				X				X				X				X		CO2 Injection.
1/16/2018																																	Cleaned all drop tubes.
1/17/2018																																	Cleaned all drop tubes.
1/24/2018																												X				X	Cleaned all drop tubes.
1/25/2018																X																	Cleaned all drop tubes.
1/26/2018								X												X				X									Cleaned all drop tubes.
1/29/2018																																	Cleaned all drop tubes.
2/6/2018																X																	Clean flowmeter internals
2/7/2018																																	Clean flowmeter internals
2/12/2018																												X				X	Clean flowmeter internals
3/19/2018																													X	X			Replaced pump only
3/21/2018																																	Lower pump to bottom of screen
5/24/2018								X								X				X				X				X				X	Install sun lids on flowmeter displays.
5/24/2018																X																	Replace flowmeter keypad and display
5/25/2018																																	Install sun lids on flowmeter displays.
6/20/2018																																	Boresaver

Appendix A

Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-10Lc				PW-11U				PW-11Ub				PW-12U				PW-13U				PW-14U				PW-15U				PW-16U				
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	Comment
7/17/2018																																	Clean flowmeter internals
8/6-9/2018						X								X				X				X				X				X			CO2 Injection.
8/10/2018																																	
8/15/2018																																	OFF - well screen comprimised.
8/16/2018																																	Install new flowmeter, read -9 gpm with no flow.
8/23/2018																																	Install new check valve, old allowed backflow.
8/27/2018																																	
8/28/2018																																	
10/3/2018																																	Removal of pump, motor, piping for abandonment.
10/30/2018																												X				X	Clean out CO2 injection drop tube.
11/1/2018																																	New well install.
2/6/2019																																	Decommision - well removed from service.
2/21/2019																																	Boresaver
2/27/2019																																	Boresaver
3/25/2019							X																										Boresaver
3/27/2019															X																		Unicid + catalyst
4/10/2019																																	Unicid + catalyst
4/17/2019																																	Unicid + catalyst
4/24/2019																																	
4/25/2019																																	Removed sand in sump w/ 1" waterra, Boresaver
5/1/2019													X	X	X																		Unicid + catalyst
5/15/2019																													X	X	X		Unicid + catalyst, replaced pump only
5/22/2019																																	Unicid + catalyst, reused pump, new piping
7/12/2019																																	Boresaver
7/24/2019																																	Boresaver
7/29/2019																											X						Boresaver
8/16/2019																																	Boresaver
8/29/2019																																	Unicid + catalyst
10/11/2019																															X		Boresaver - short treatment, recirc 8 hours
11/15/2019																																	Unicid + catalyst
11/19/2019																																	Boresaver
11/20/2019																			X														Boresaver

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-10Lc				PW-11U				PW-11Ub				PW-12U				PW-13U				PW-14U				PW-15U				PW-16U				
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	Comment
11/25/2019																																	Unicid + catalyst
12/2/2019																							X										Unicid + catalyst
12/4/2019																																	Unicid + catalyst
12/9/2019																																	Boresaver
12/12/2019																																	Boresaver
1/20/2020															X																		Boresaver
1/21/2020																																	All new pump, motor, SS piping, PVC drop tubes, electrical lead.
1/28/2020																																	Boresaver
2/12/2020							X																										Boresaver
2/18/2020																															X		Boresaver
2/24/2020																																	Boresaver
2/27/2020																																	Boresaver
3/24/2020																											X						Boresaver
3/30/2020																																	Boresaver
4/7/2020																																	
6/3/2020																													X	X			Replaced All, Bail only
6/17/2020																																	Boresaver
6/23/2020																																	Boresaver
7/21/2020																																	
7/28/2020																																	
7/30/2020																																	
8/12/2020																			X														Boresaver
10/28/2020																																	Initial installation and development
11/18/2020							X				X																						Boresaver at PW-11U; new flowmeter at PW-2U
11/28/2020																																	Initial install of pump & piping
12/21/2020																																	Boresaver
1/11/2021																															X		Boresaver
1/19/2021							X																										Unicid + catalyst
1/21/2021																																	Unicid + catalyst
1/25/2021																																	Unicid + catalyst

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-10Lc				PW-11U				PW-11Ub				PW-12U				PW-13U				PW-14U				PW-15U				PW-16U				
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	Comment
1/28/2021																																	Boresaver
2/9/2021																			X														
2/16/2021																									X	X							
2/25/2021																																	PW-1Ub turned off
3/1/2021																												X			X		16U - Boresaver, 15U cleaned sump
4/13/2021																																	
4/20/2021															X																		
4/27/2021																																	
5/11/2021																																	Boresaver
5/13/2021																															X		Boresaver
5/18/2021																																	Boresaver
5/20/2021																																	Boresaver
6/15/2021																																	Boresaver
8/17/2021																							X										Boresaver
8/25/2021																																	Boresaver
10/13/2021																																	Boresaver, Transducer stuck in well, no air surging performed.
10/20/2021																																	Boresaver, troubleshoot pump/VFD issues at start up.
10/26/2021																																	Boresaver
10/28/2021																																	Boresaver
11/11/2021																											X						Boresaver, excessive silting, no air surging performed.
11/16/2021																																	Boresaver
11/22/2021																																	Boresaver
11/24/2021																									X	X							
11/29/2021																																	Boresaver
12/1/2021																																	Boresaver
12/24/2021																																	Well installation complete.
1/12/2022																																	Initial install.
2/1/2022												X																					Initial install.
2/3/2022																																	Old pump at 100% FLA, pump fualt in past. Runtime reset on 2/11/22.
2/4/2022																																	Initial start-up PW-1Uc, Pump faulted PW-6L (both runtimes reset on 2/11/22)

Appendix A
Summary of HC&C System Maintenance Activities

Production Well Downhole Maintenance	PW-10Lc				PW-11U				PW-11Ub				PW-12U				PW-13U				PW-14U				PW-15U				PW-16U				
Date	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	New Pump, Motor, Piping	Surge and Bail	Well Screen Maintenance	Other (Note in Comments)	Comment
2/10/2022																																	Pump fault, run F->R, now running at 7.4 amps, 10.5 FLA
2/11/2022									X																								Initial pump install. Online on 3/24/2022. PW-11U in standby on 3/28/2022.
2/17/2022																																	Used Boresaver 2/15 & 2/16, bailed to remove 5' of sediment
4/13/2022																																	
4/18/2022																																	Boresaver
4/20/2022																																	Boresaver
4/26/2022																																	Boresaver
5/11/2022																																	Boresaver
5/16/2022																																	Boresaver
5/19/2022															X																		Boresaver
5/24/2022																																	Boresaver
6/23/2022																															X		Boresaver
6/27/2022																																	Covers well screen cleaning.
7/21/2022																																	Boresaver
7/25/2022																																	Boresaver, pump fault on restart, pump replacement scheduled and completed on 8/2/2022
7/27/2022																			X														Boresaver
8/25/2022																							X										PW-10Lb had 10' packer installed at top of screen
8/30/2022																																	Boresaver
11/8/2022																																	Boresaver
11/10/2022																																	Boresaver, no air surging, stuck transducer.
11/21/2022																											X						Boresaver, no air surging, excess silt.
11/28/2022																																	Boresaver
12/1/2022																																	Pump off, casing failure from 11/25.

Note:

2023 well screen maintenance still required for these wells: PW-1Lb, PW-1Uc, PW-2U, PW-3L, PW-4U, PW-8L, PW-8Ub, PW-9L, PW-13U, PW-14U, PW-15U.

Appendix B
HC&C System Operational Figures

Appendix B1
January Through June 2022

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/02/23, 11:46 AM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\01 January\Figure_3.1a_Avg_GW_Contours_fill_2022_01_11_13.mxd

ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/02/23, 12:02 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\01 January\Figure_3.1b_Avg_GW_Contours_ua_2022_01_11_13.mxd

ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

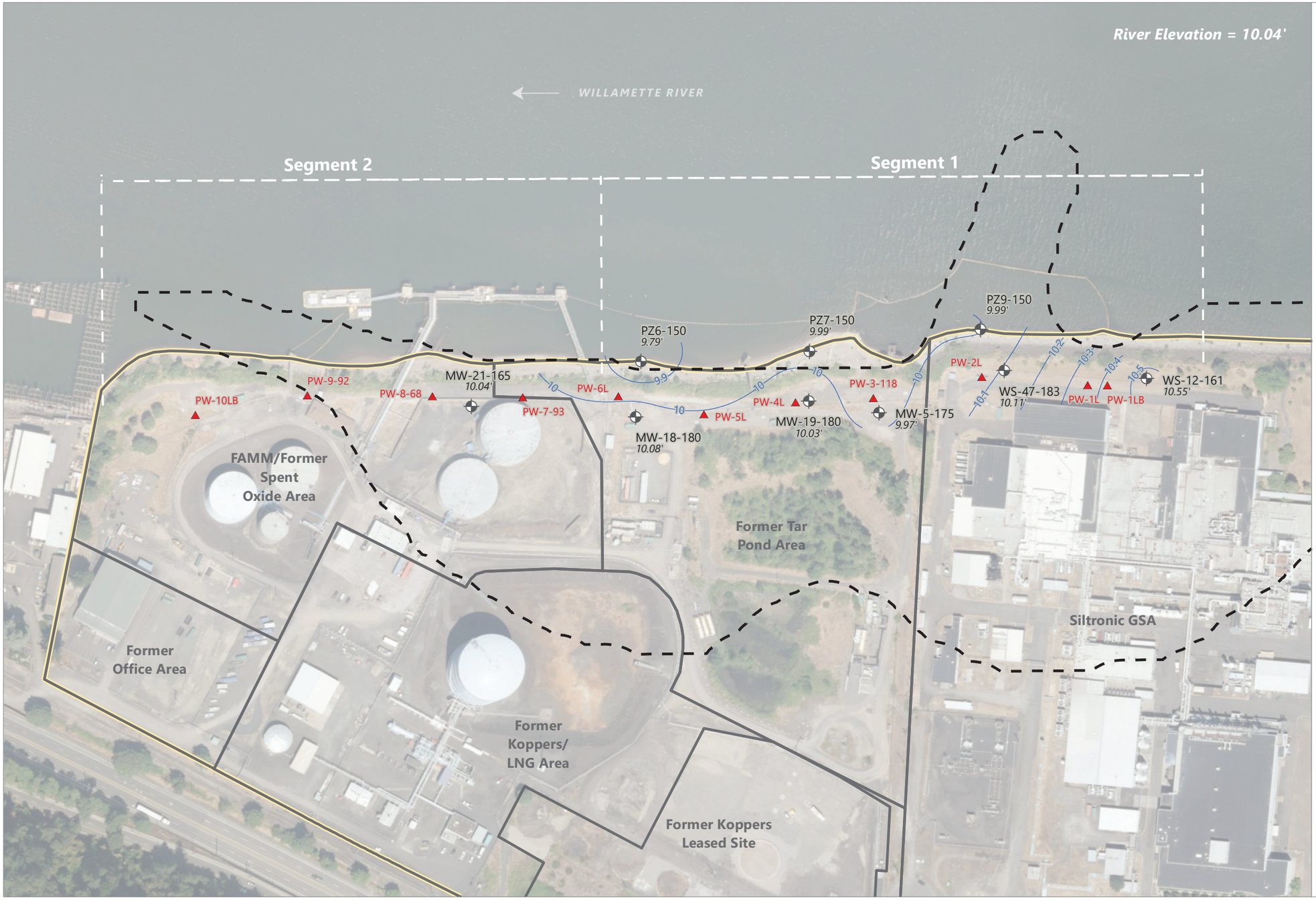
1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/02/23, 12:21 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\01 January\Figure_3.1c_Avg_GW_Contours_la_2022_01_11_13.mxd

ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/08/17, 3:53 PM | User: cgardner
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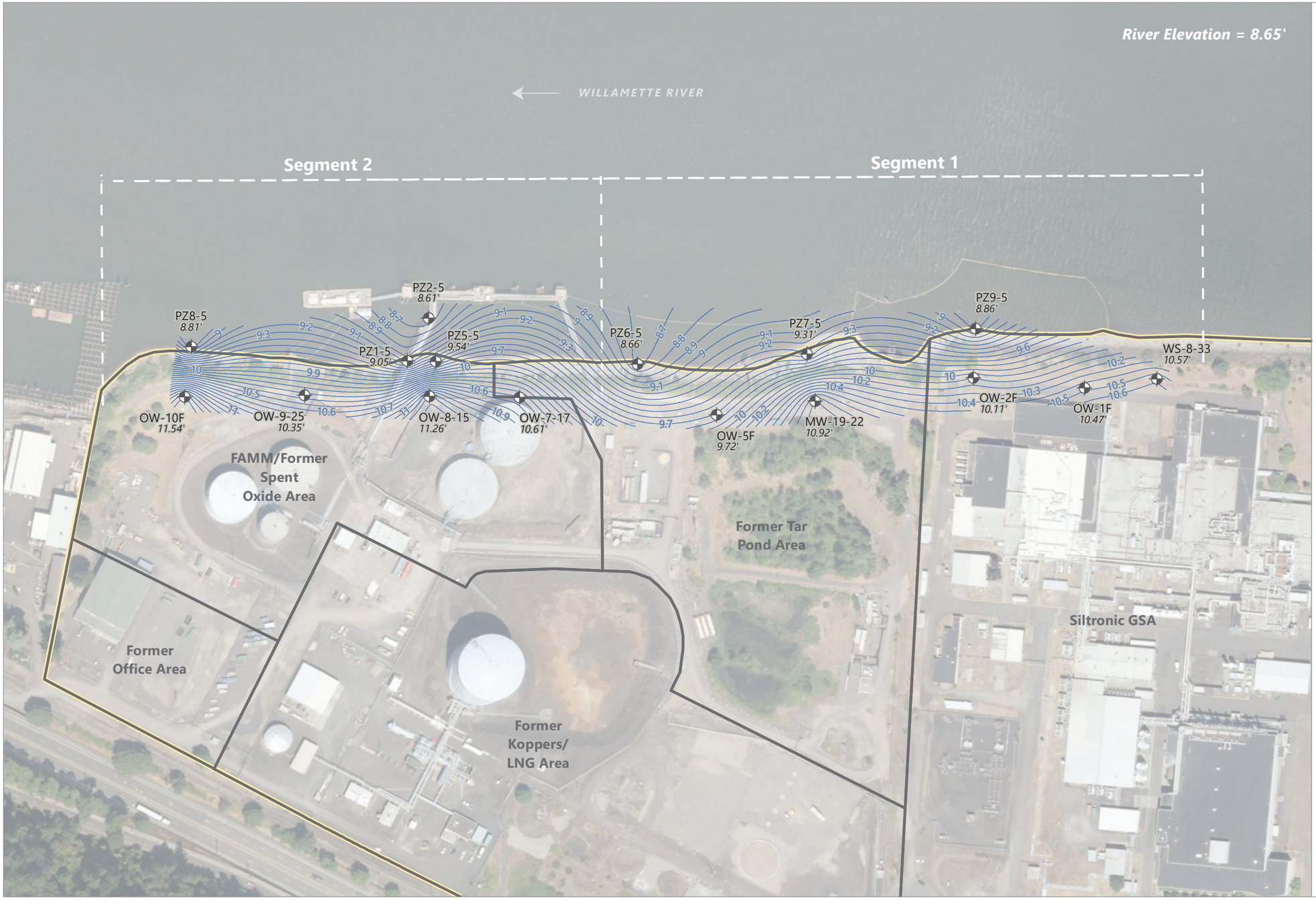
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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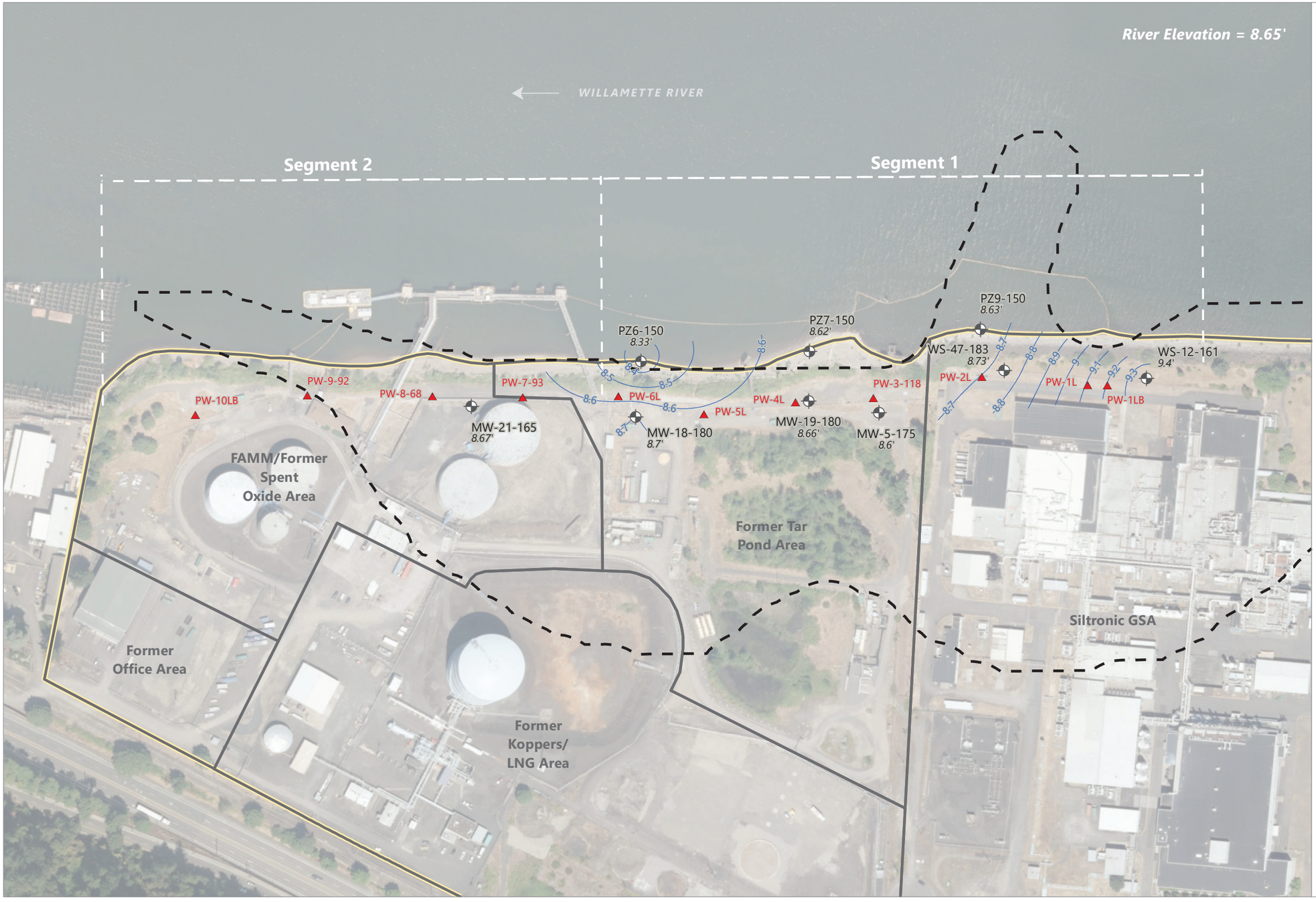
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300

Feet

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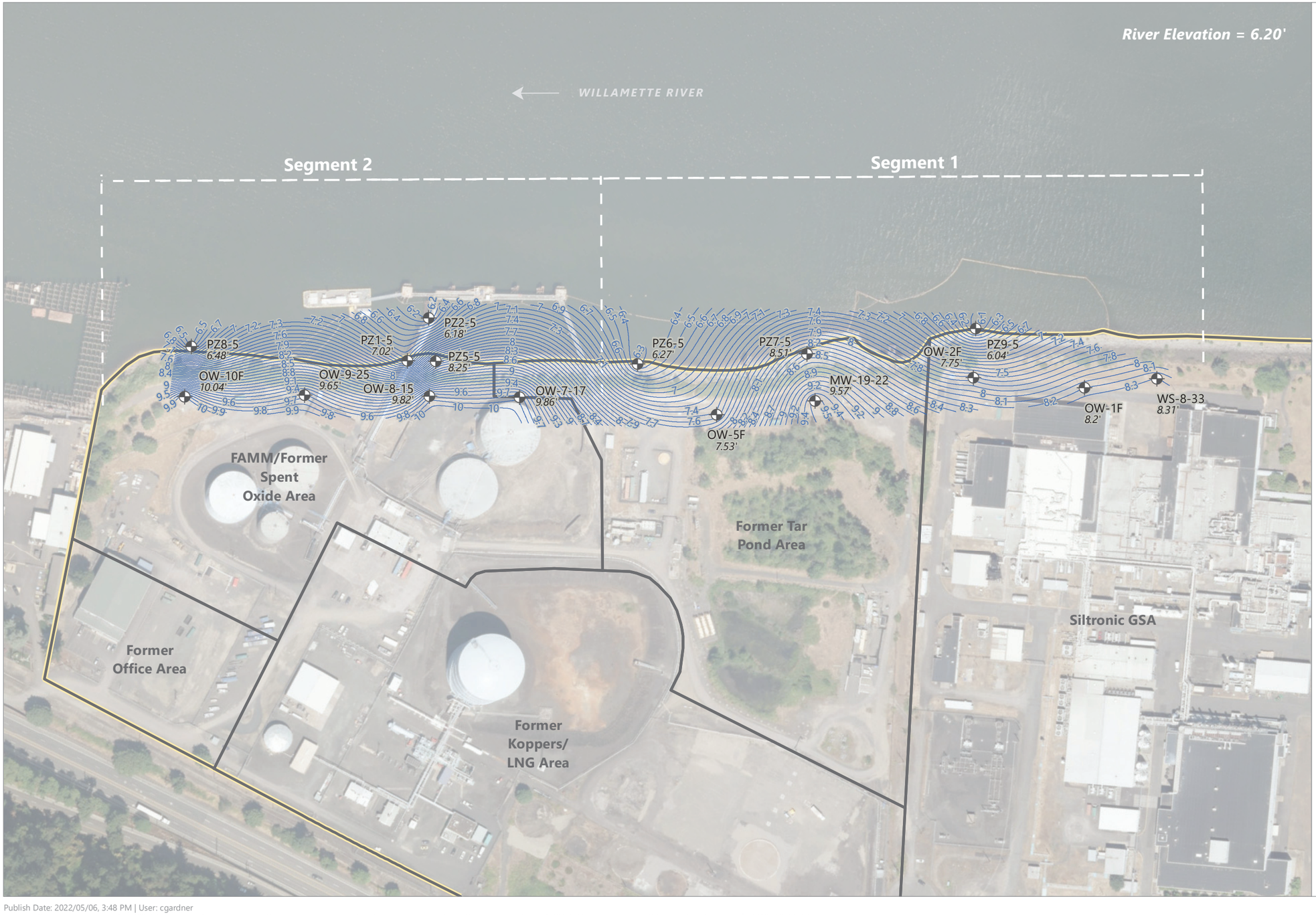
ANCHOR QEA

Figure 3.2d

Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
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ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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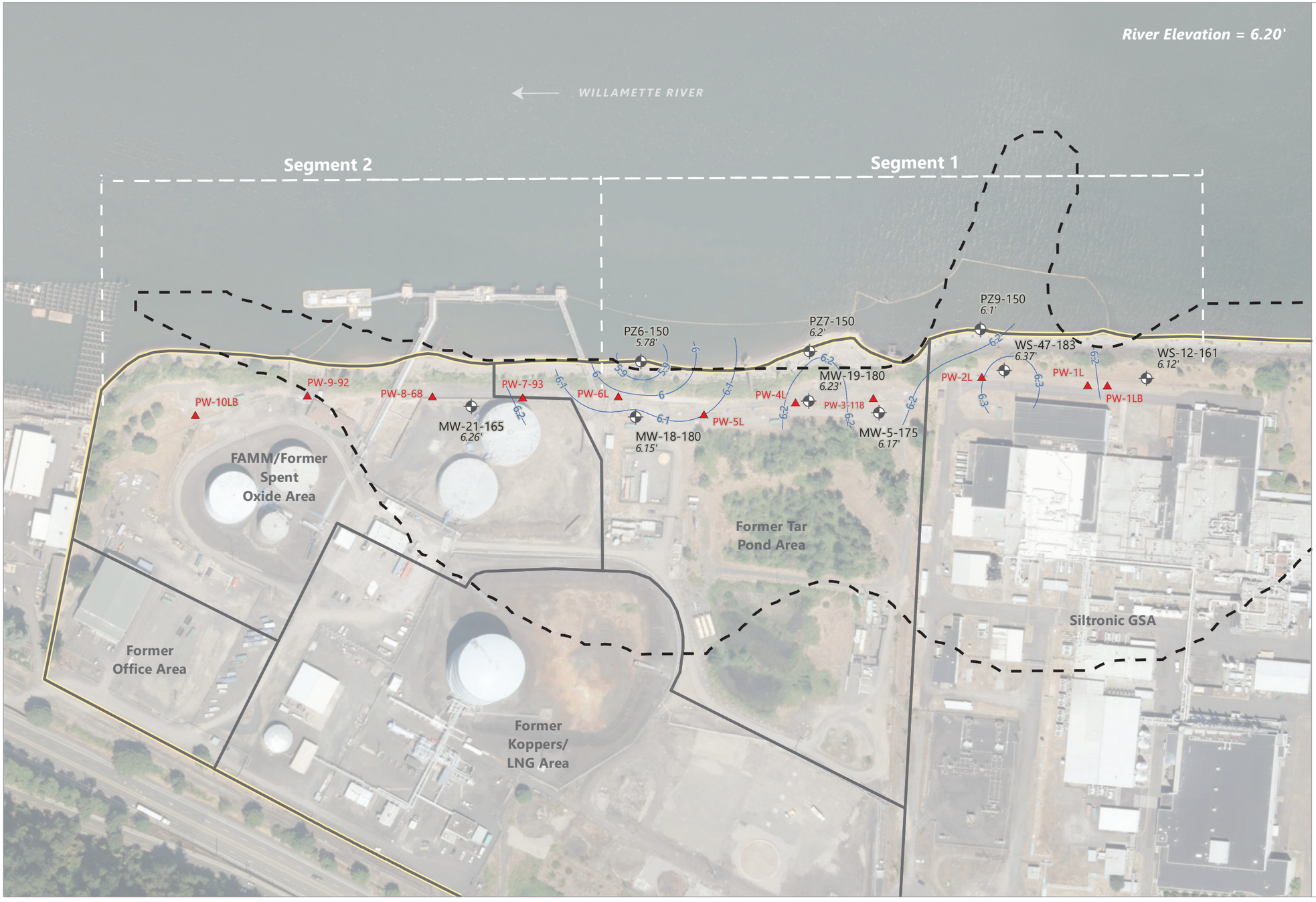
ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022
NWN Gasco Site
Portland, Oregon



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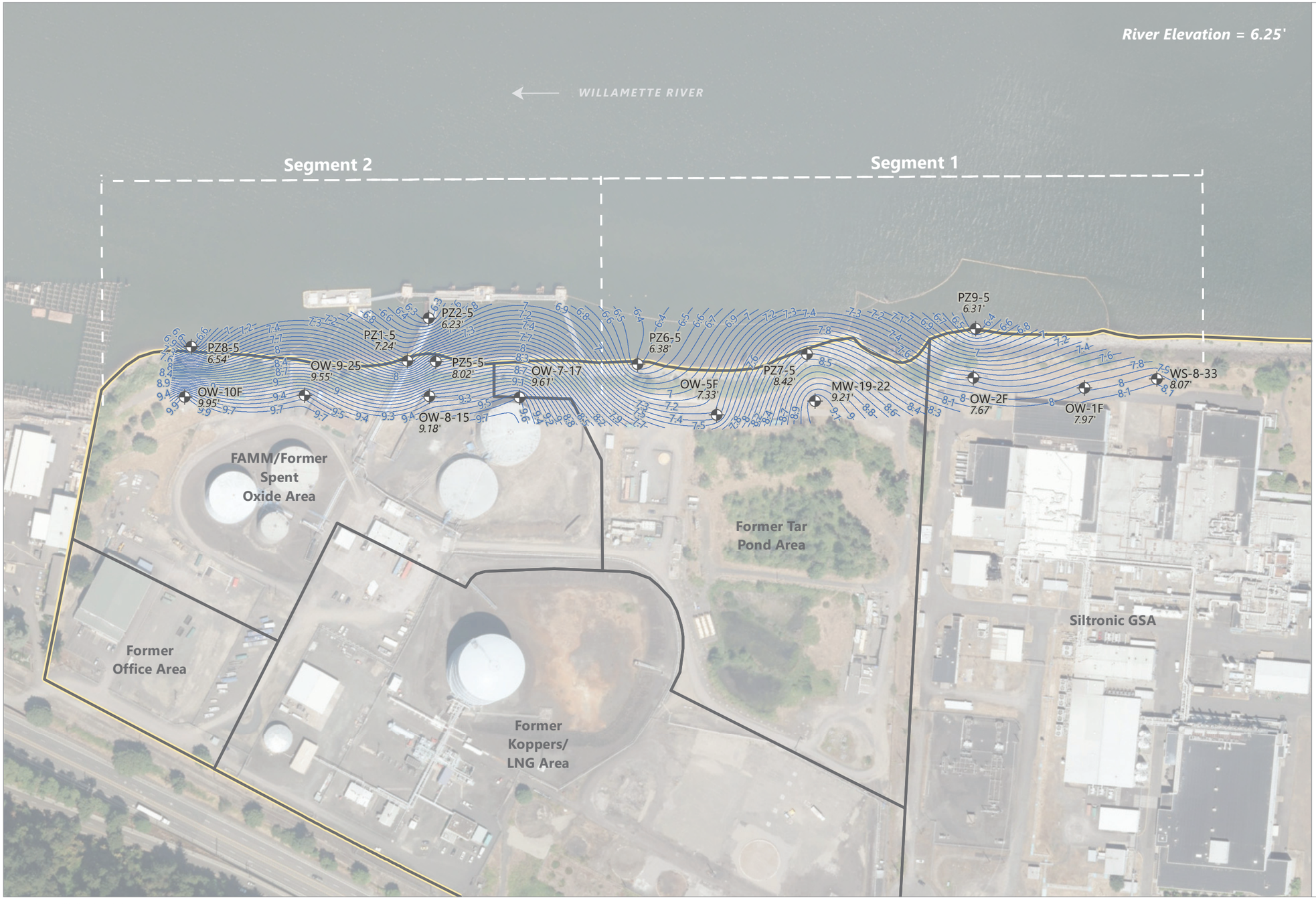
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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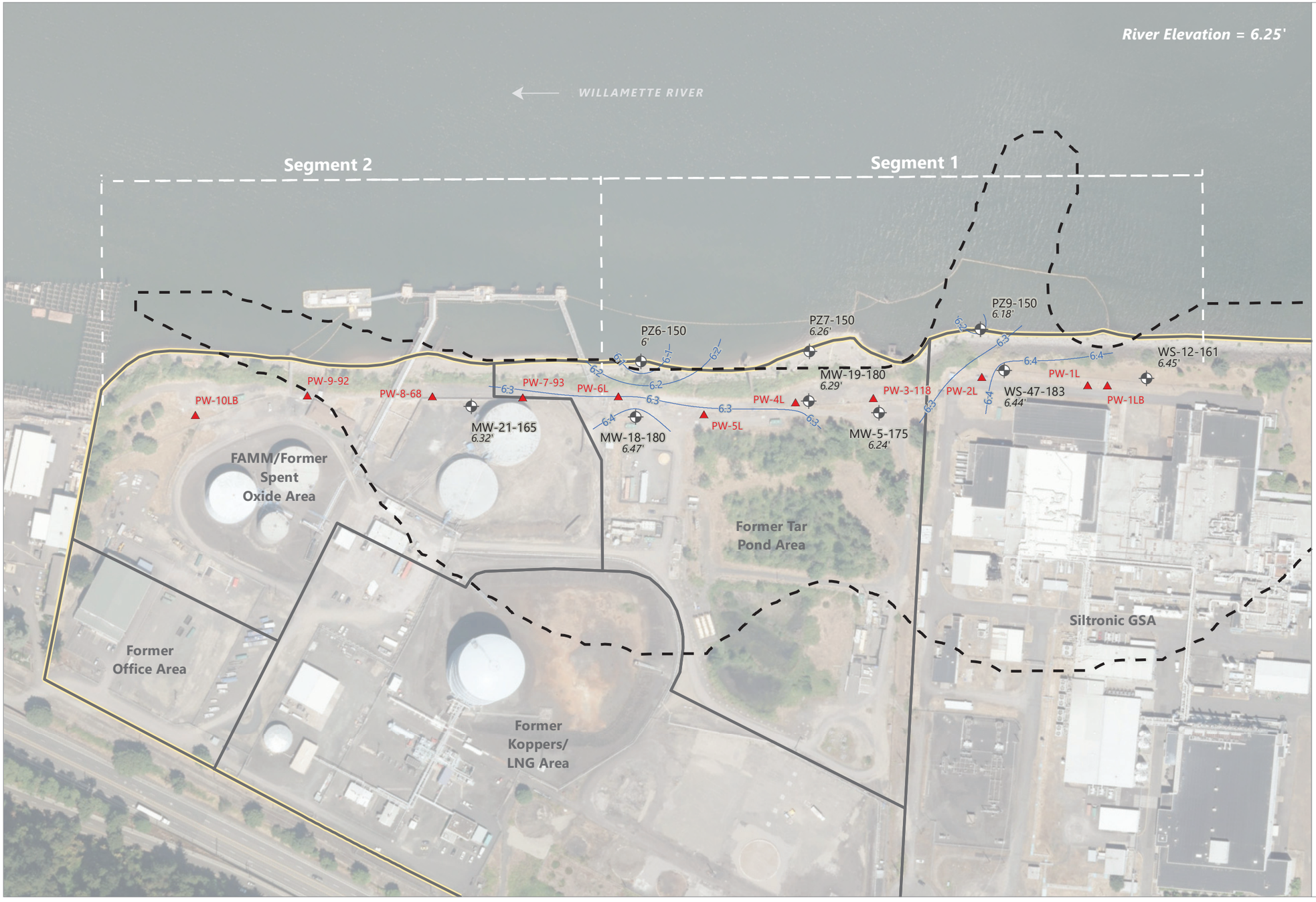
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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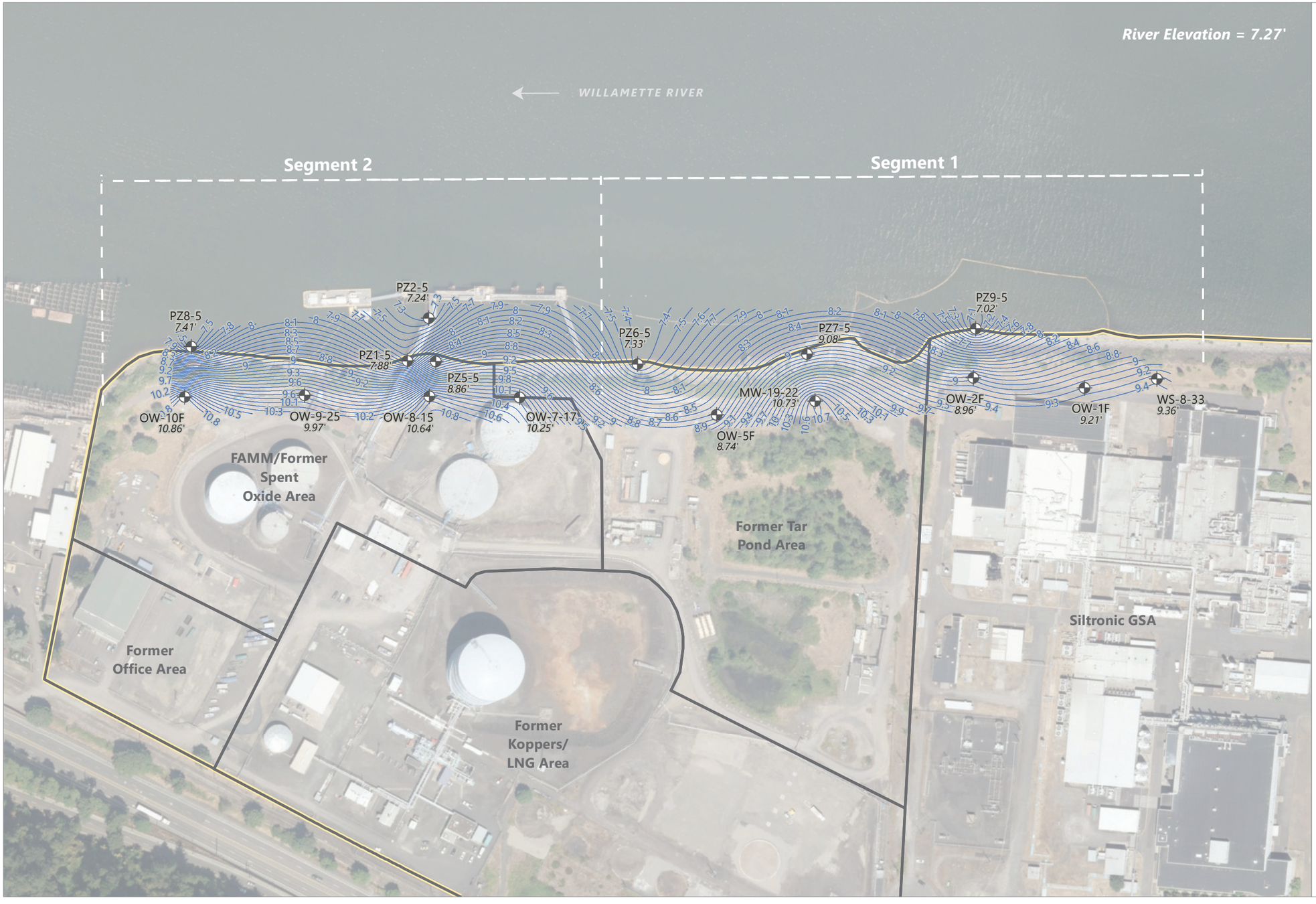
ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

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5. Aerial imagery from City of Portland 2018.

0 300
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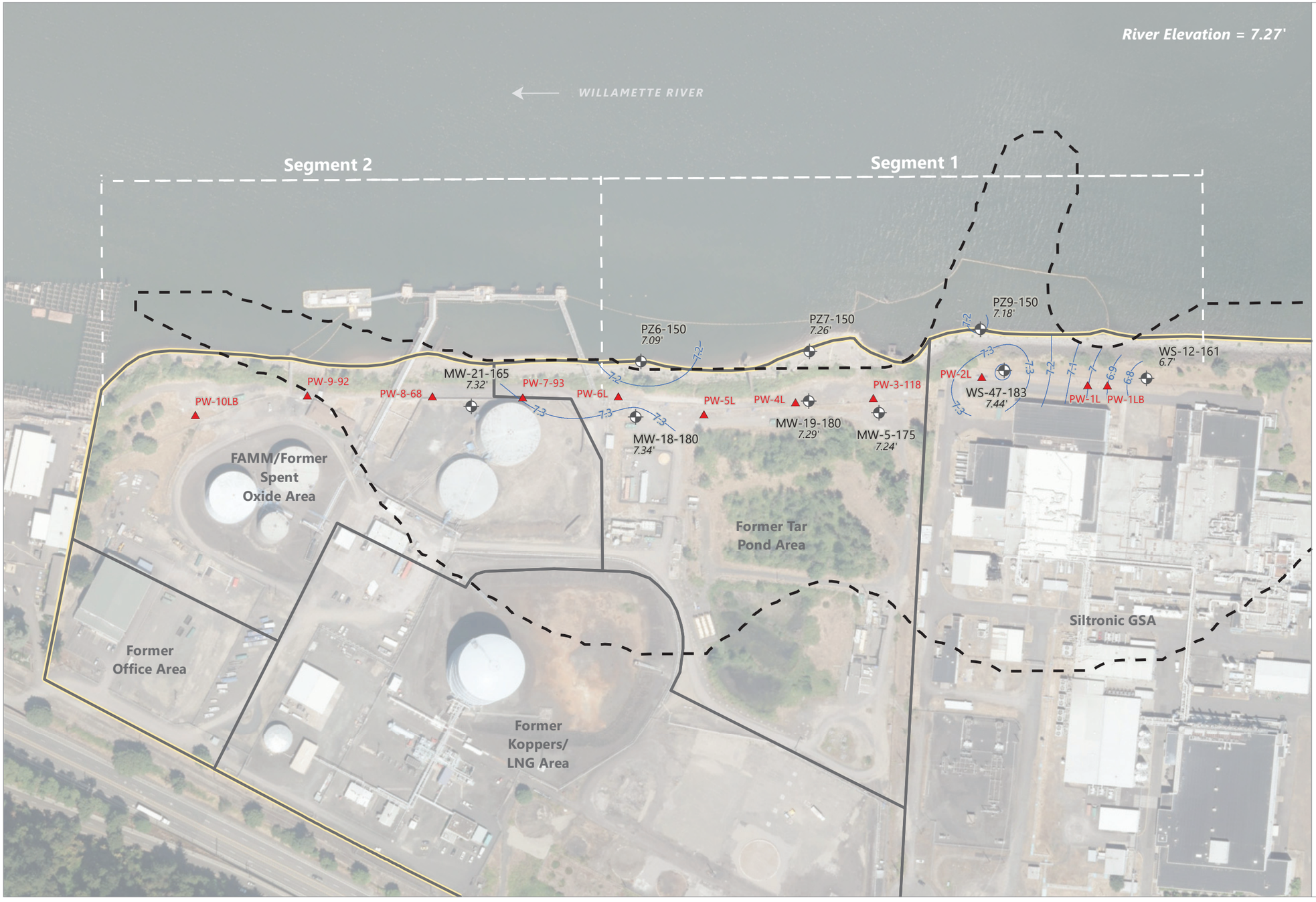
ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
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3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/06/08, 5:46 PM | User: cgardner
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ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
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- Approximate Gasco OU Boundary
- Geographic Subareas

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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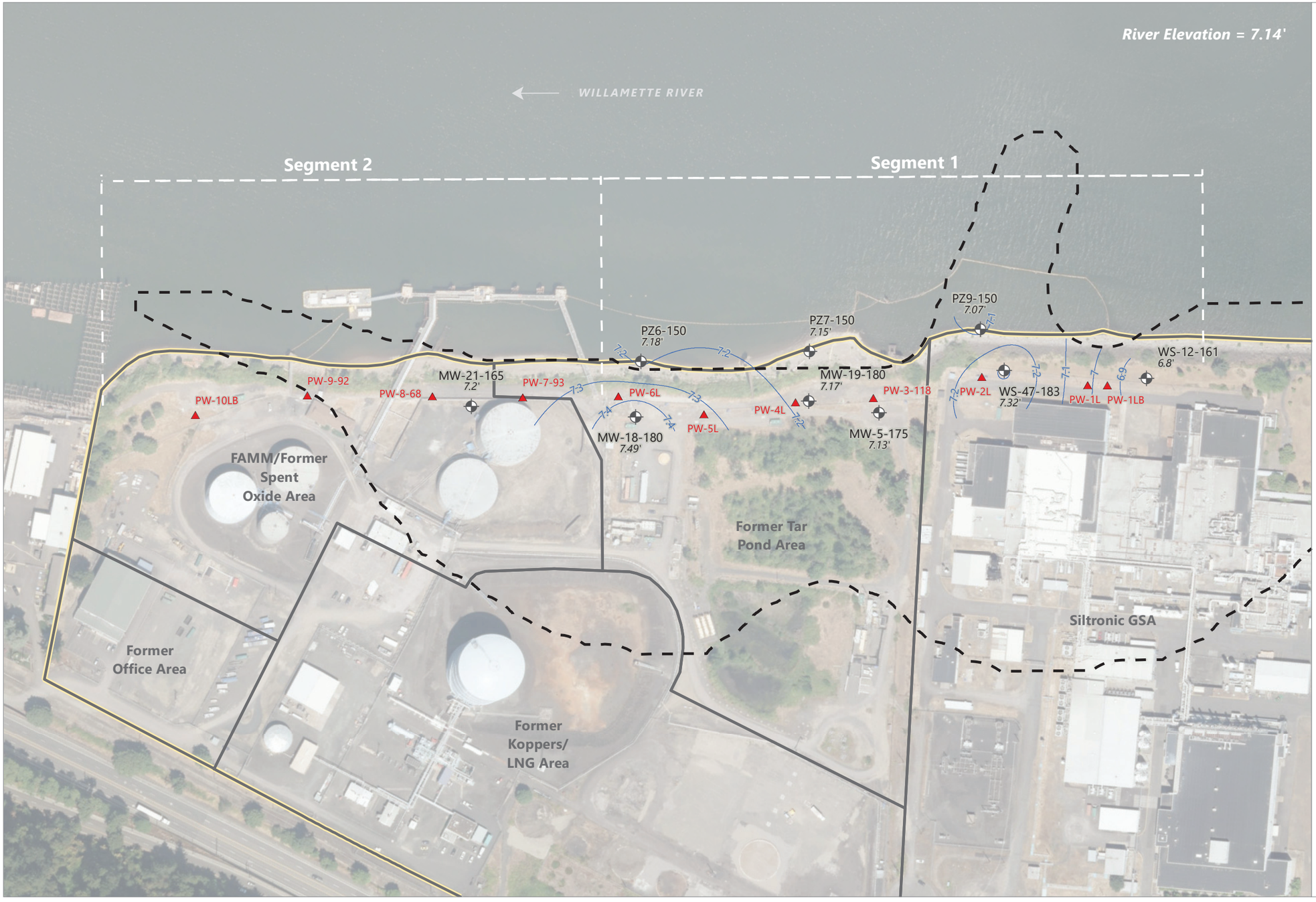
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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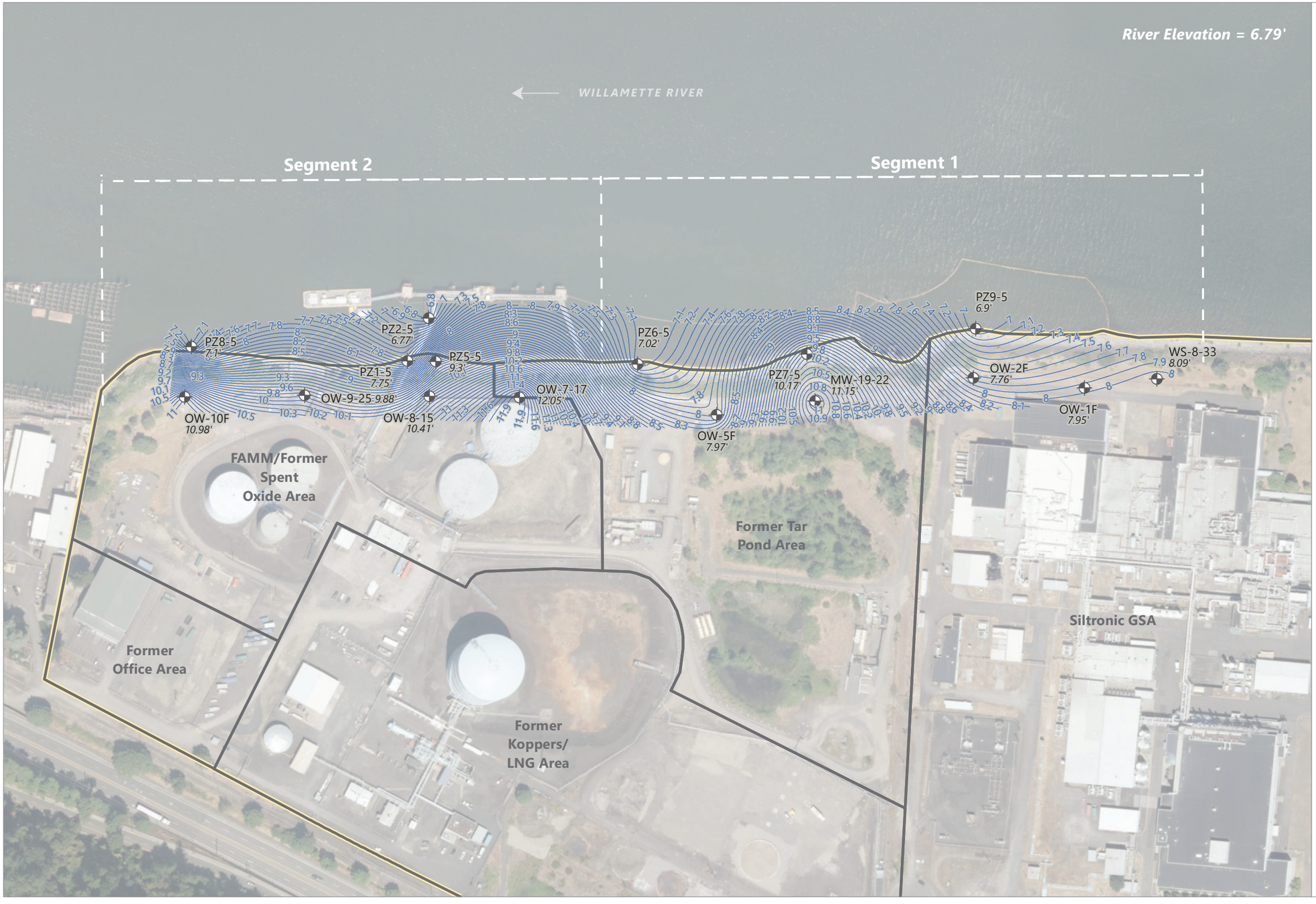
ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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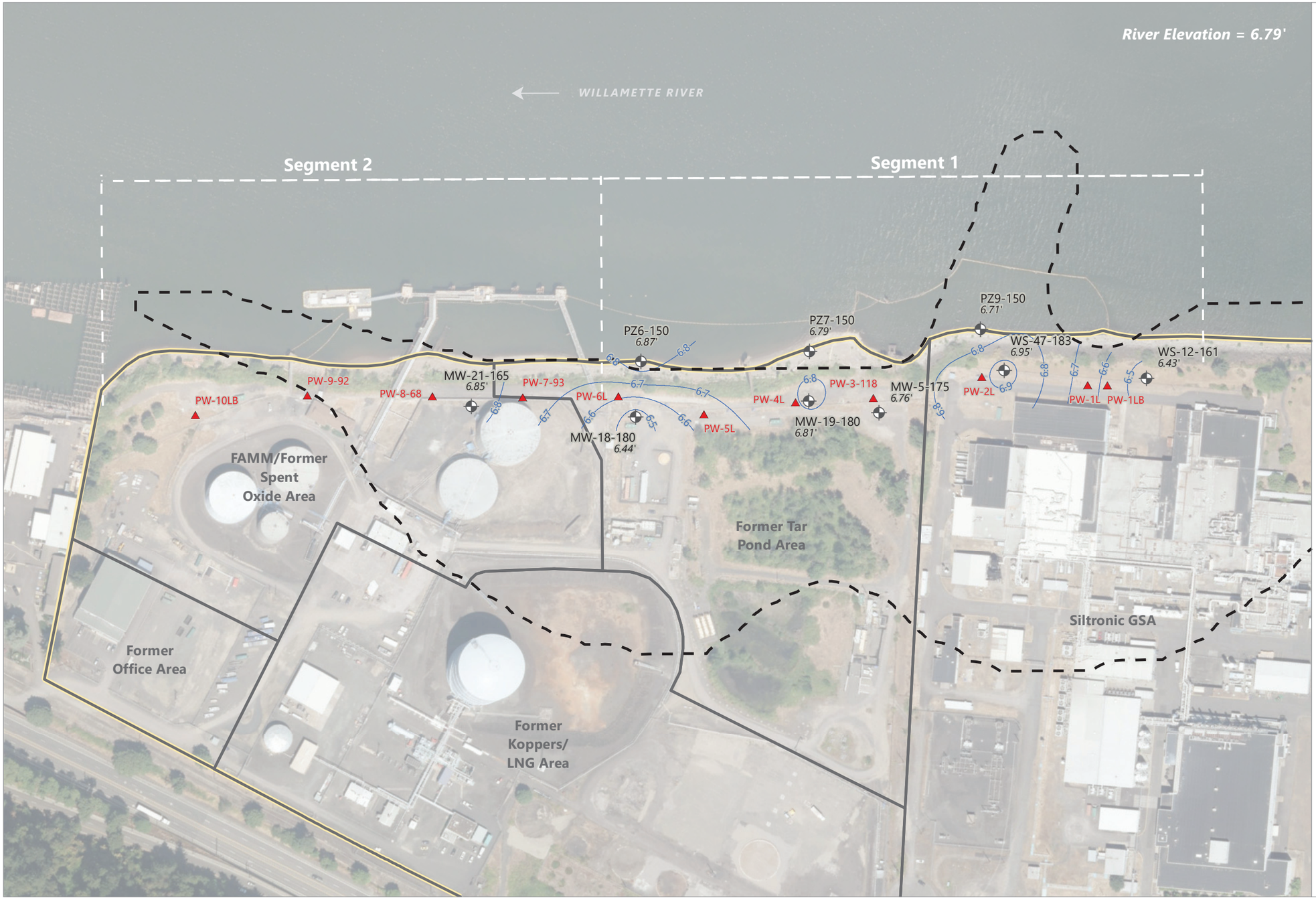
ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

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Feet

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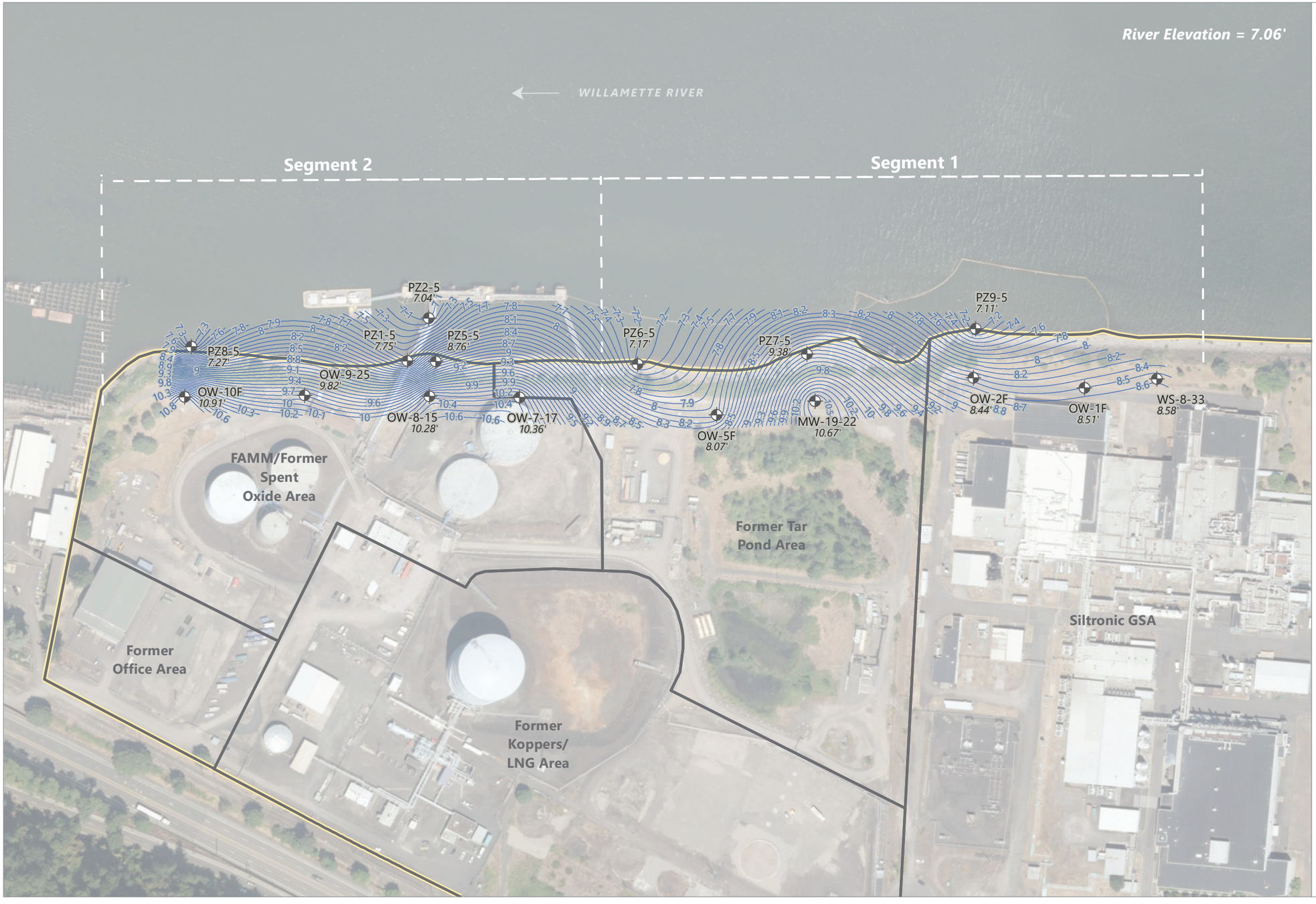
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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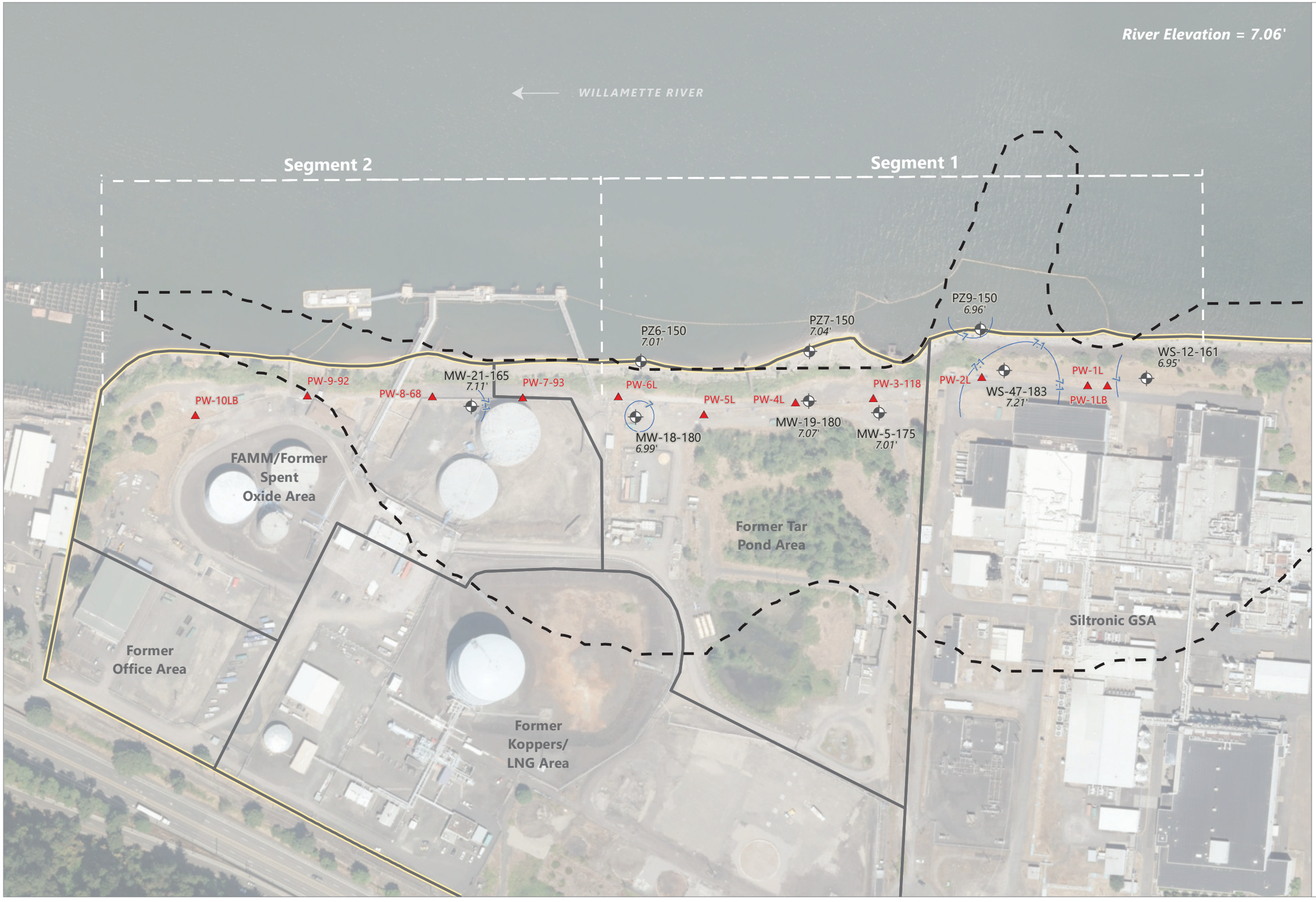
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

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Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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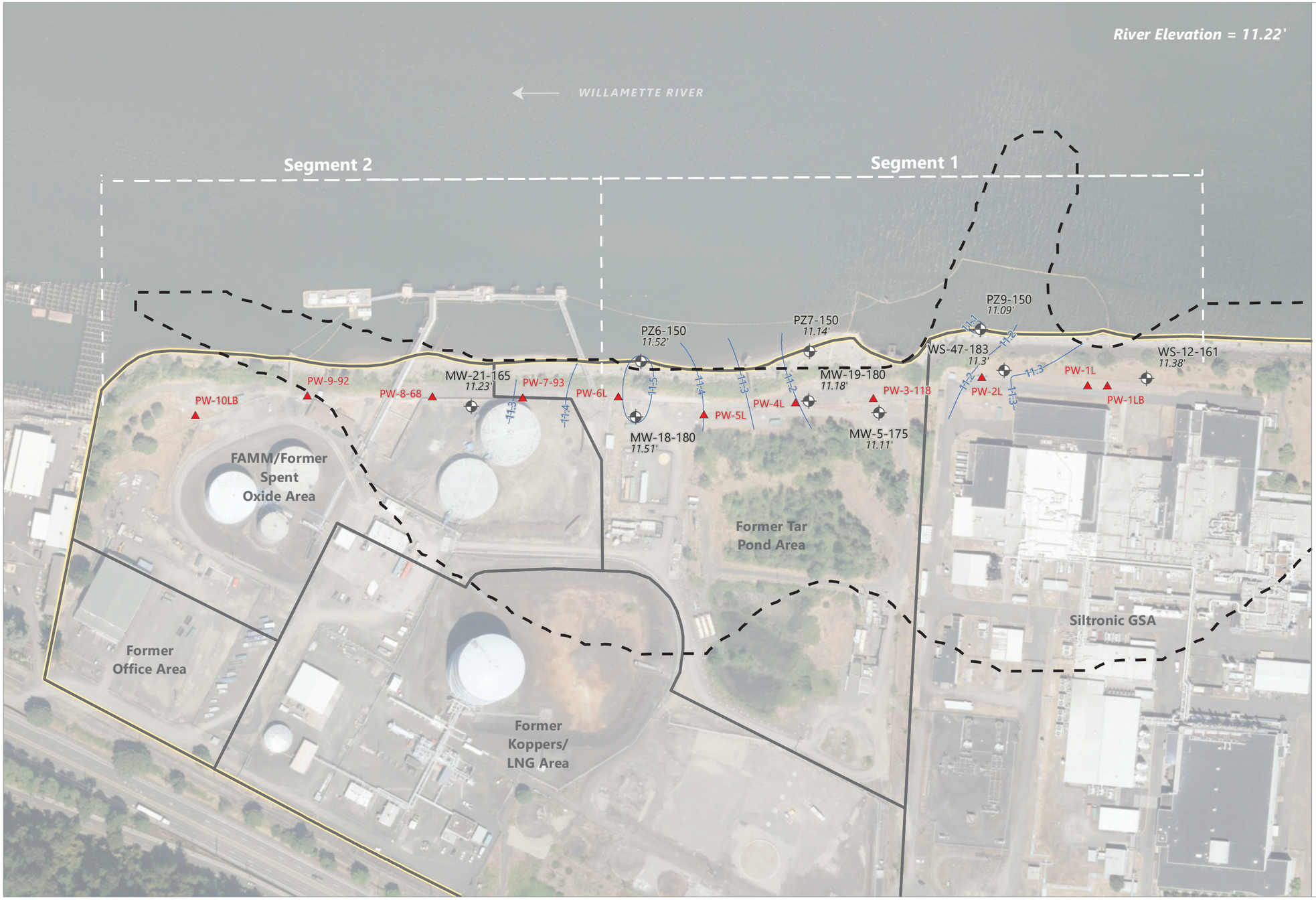
ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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5. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.1d

Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
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6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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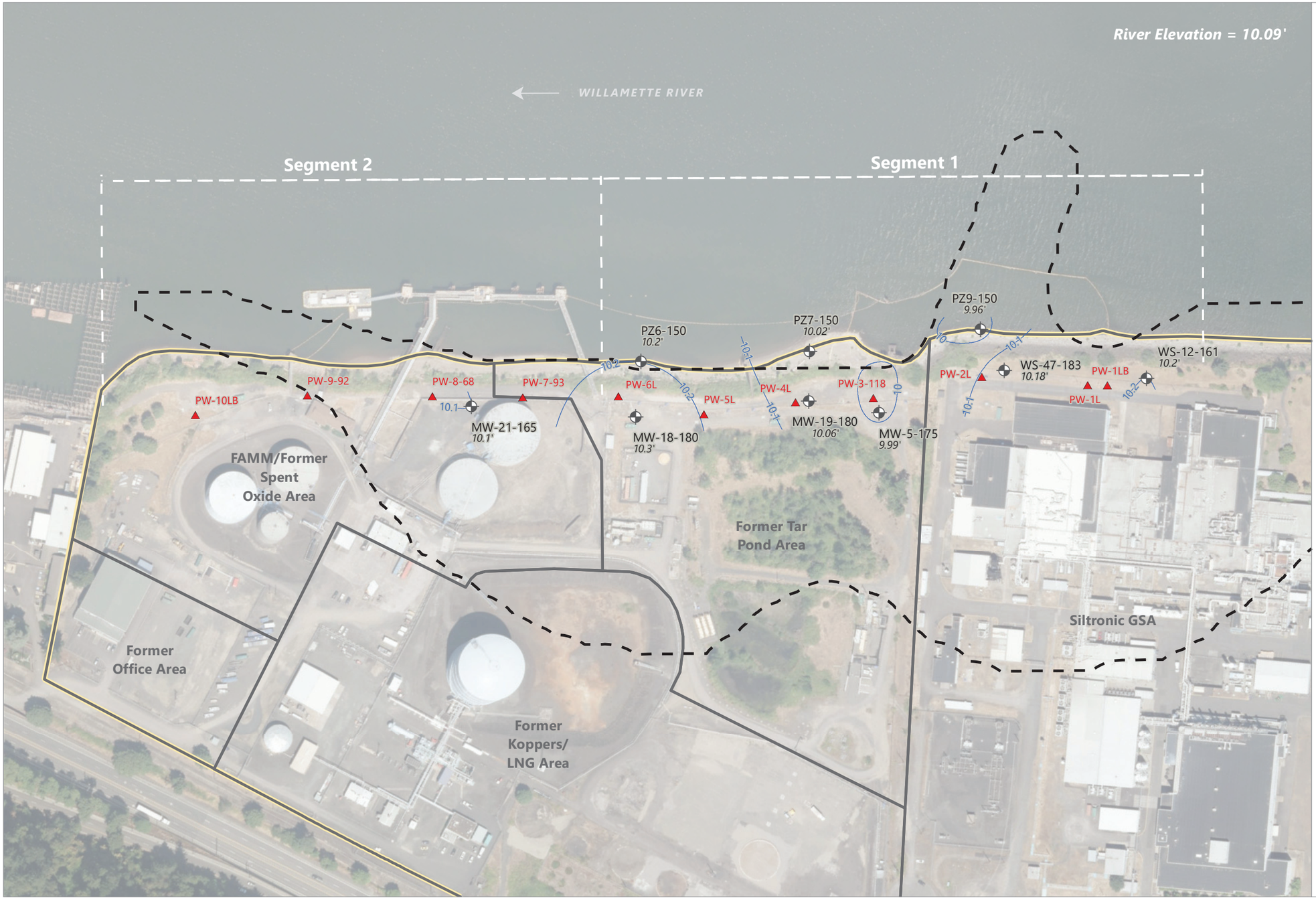
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

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0 300
Feet

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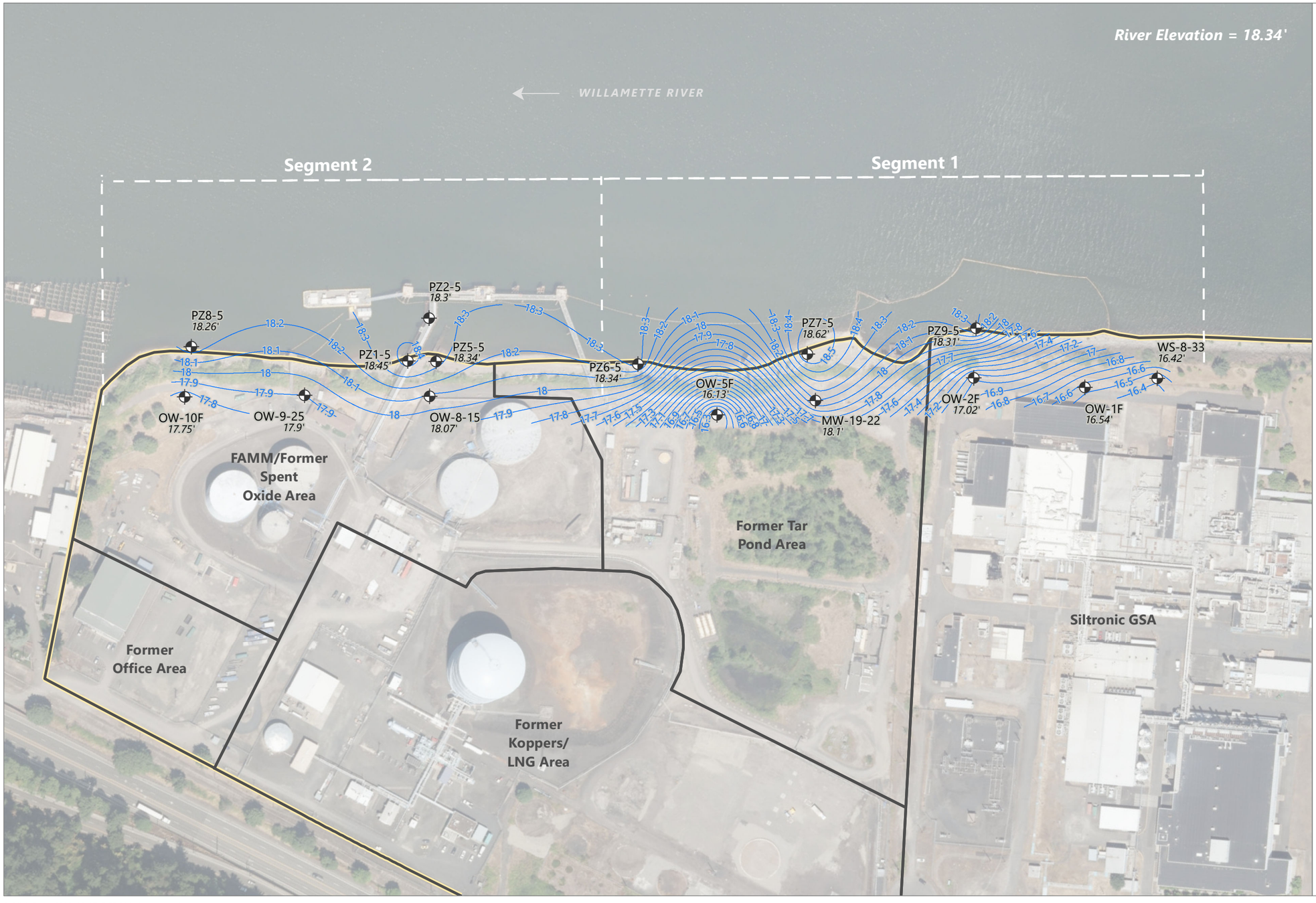
ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
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5. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
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6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

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0 300

Feet

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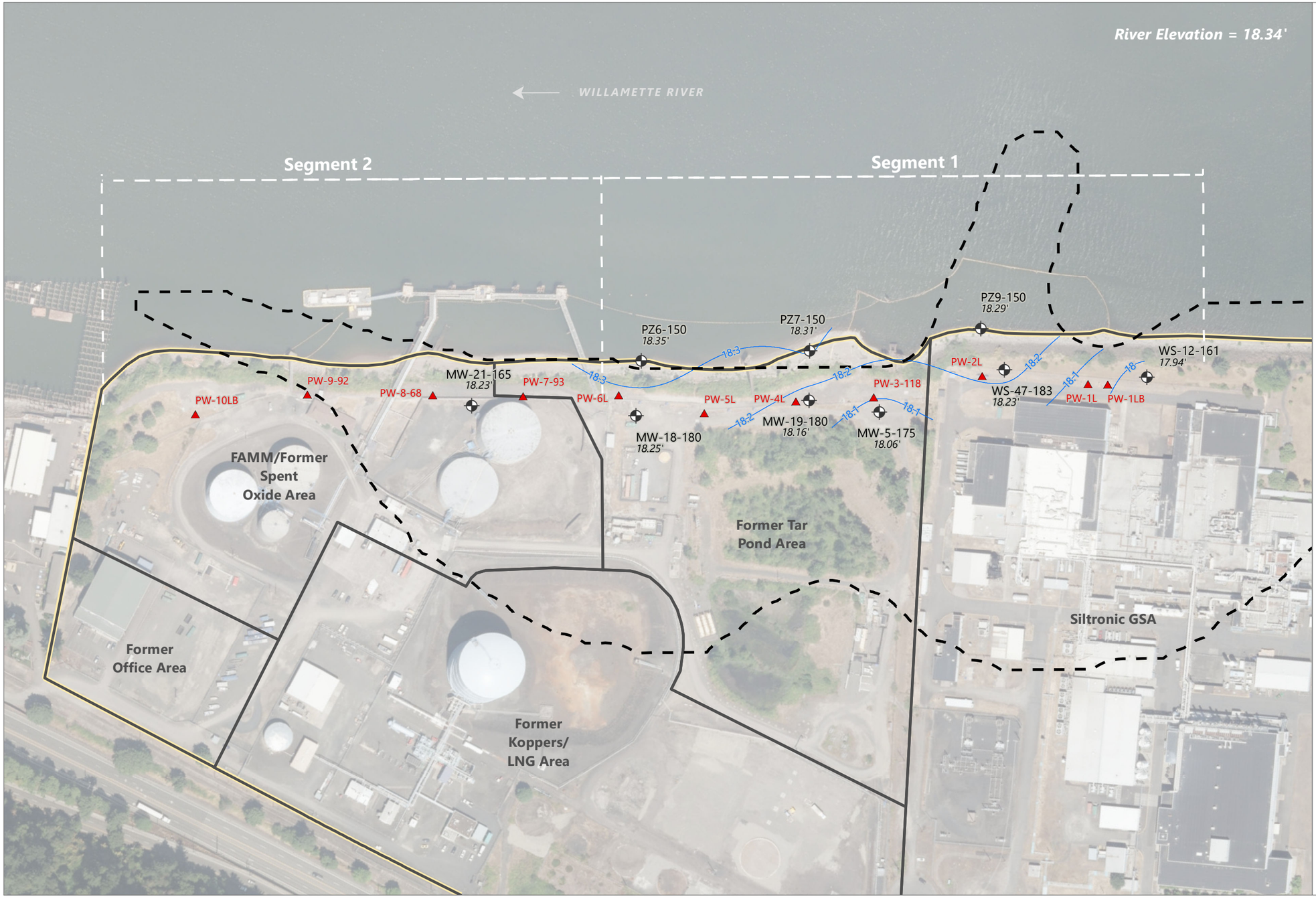
ANCHOR QEA

Figure 3.1c

Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
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5. Aerial imagery from City of Portland 2018.

0 300
Feet

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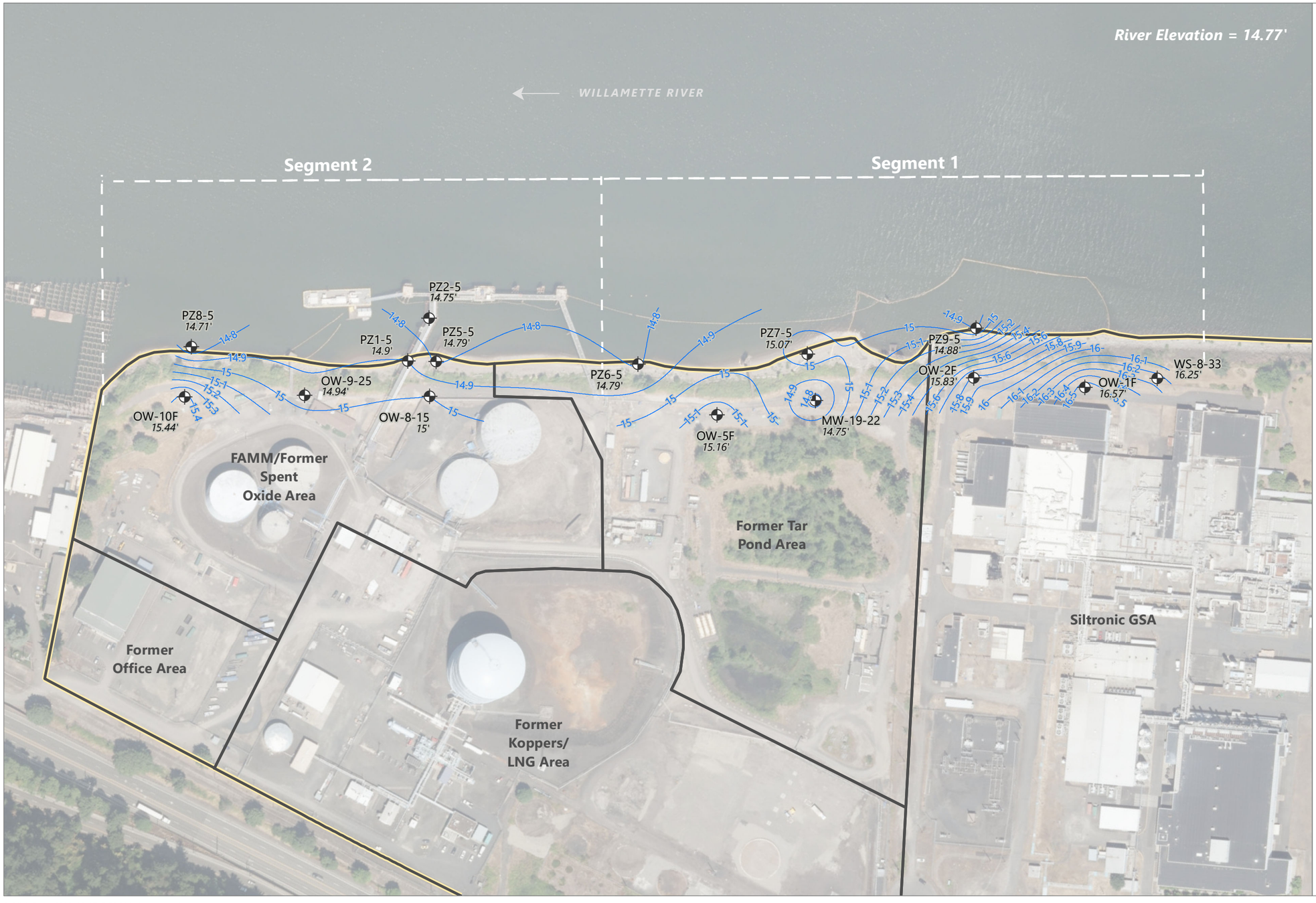
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

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- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
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0 300

Feet

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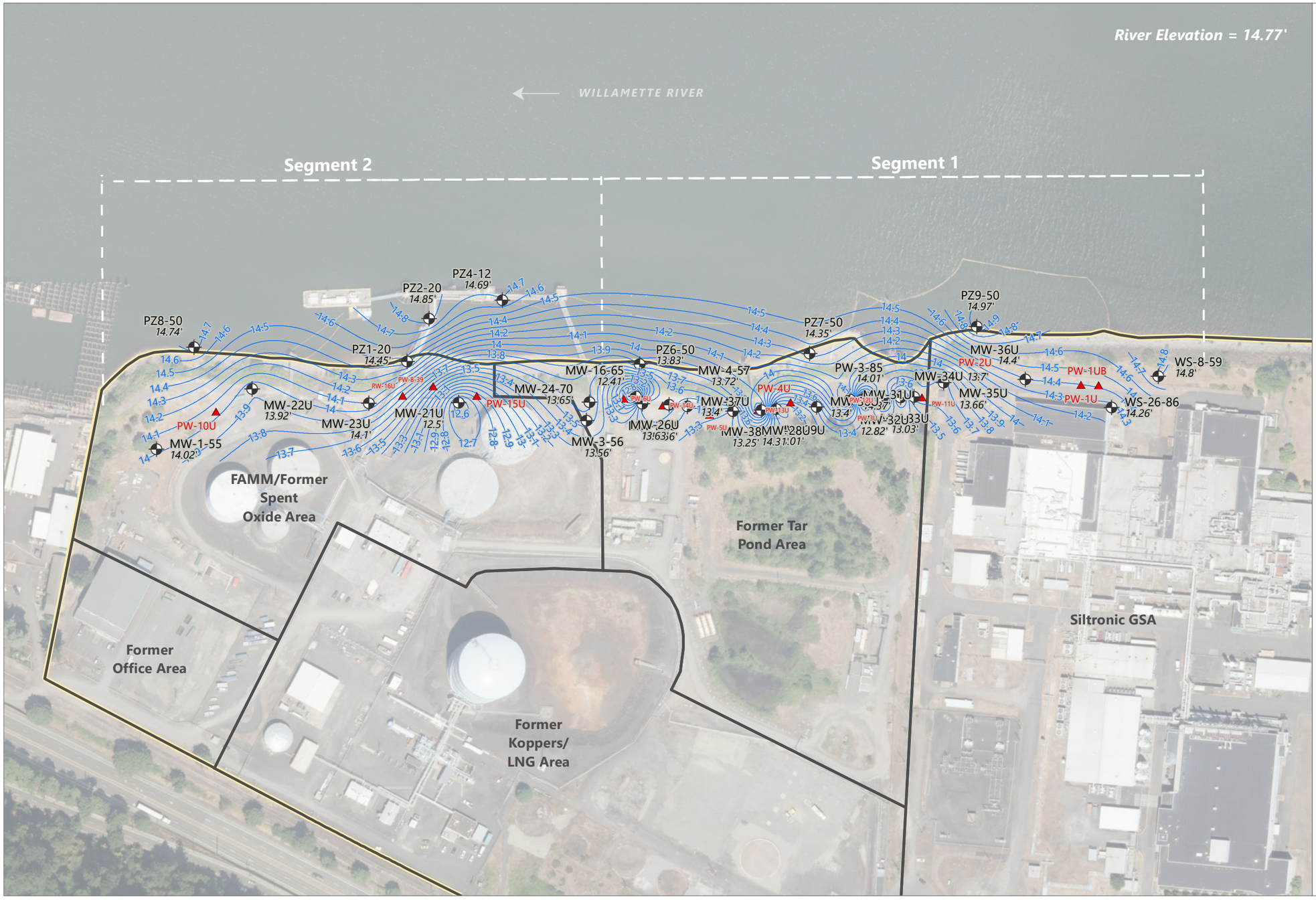
ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300

Feet

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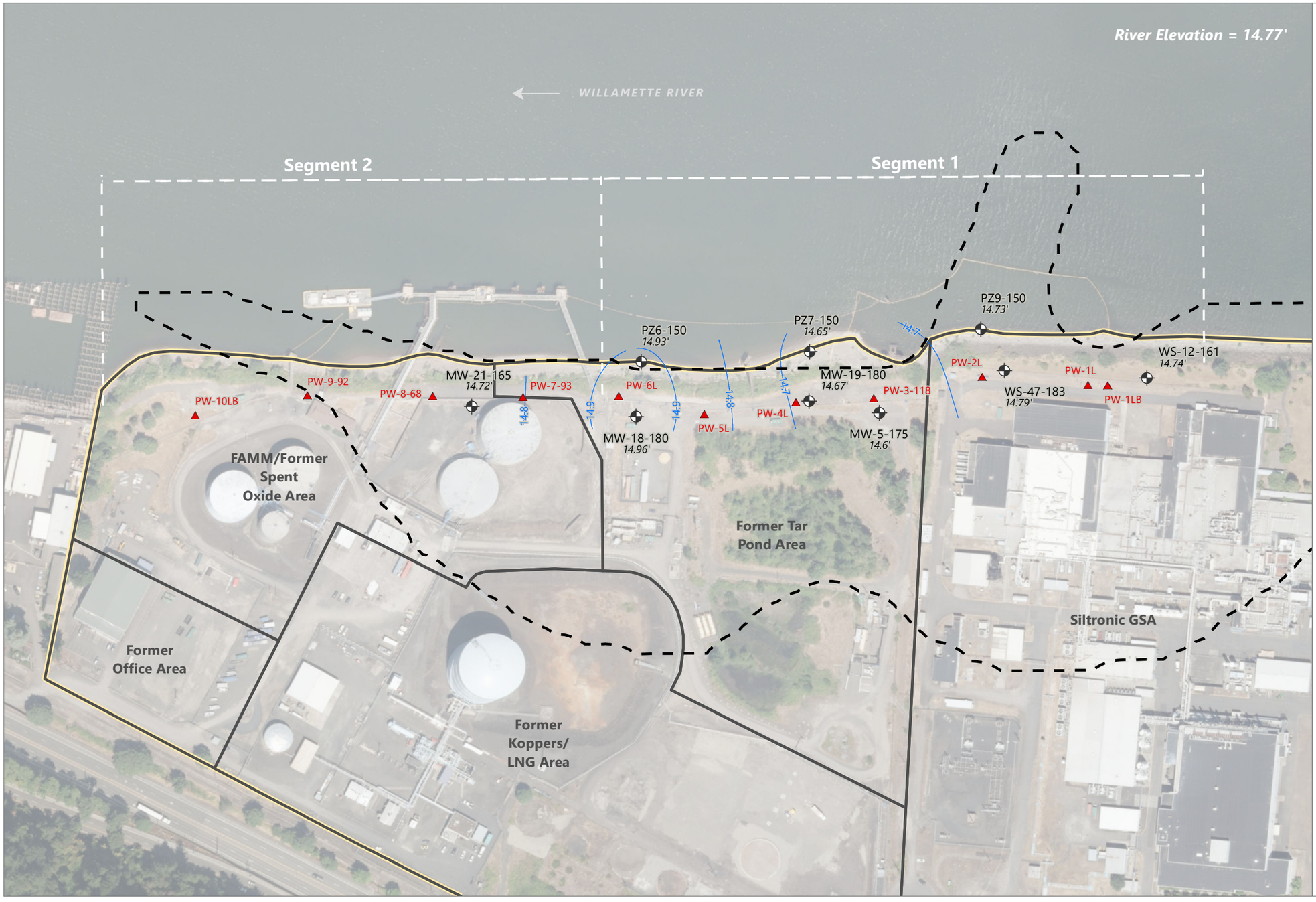
ANCHOR QEA

Figure 3.2c

Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/08/17, 5:59 PM | User: cgardner
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ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.3a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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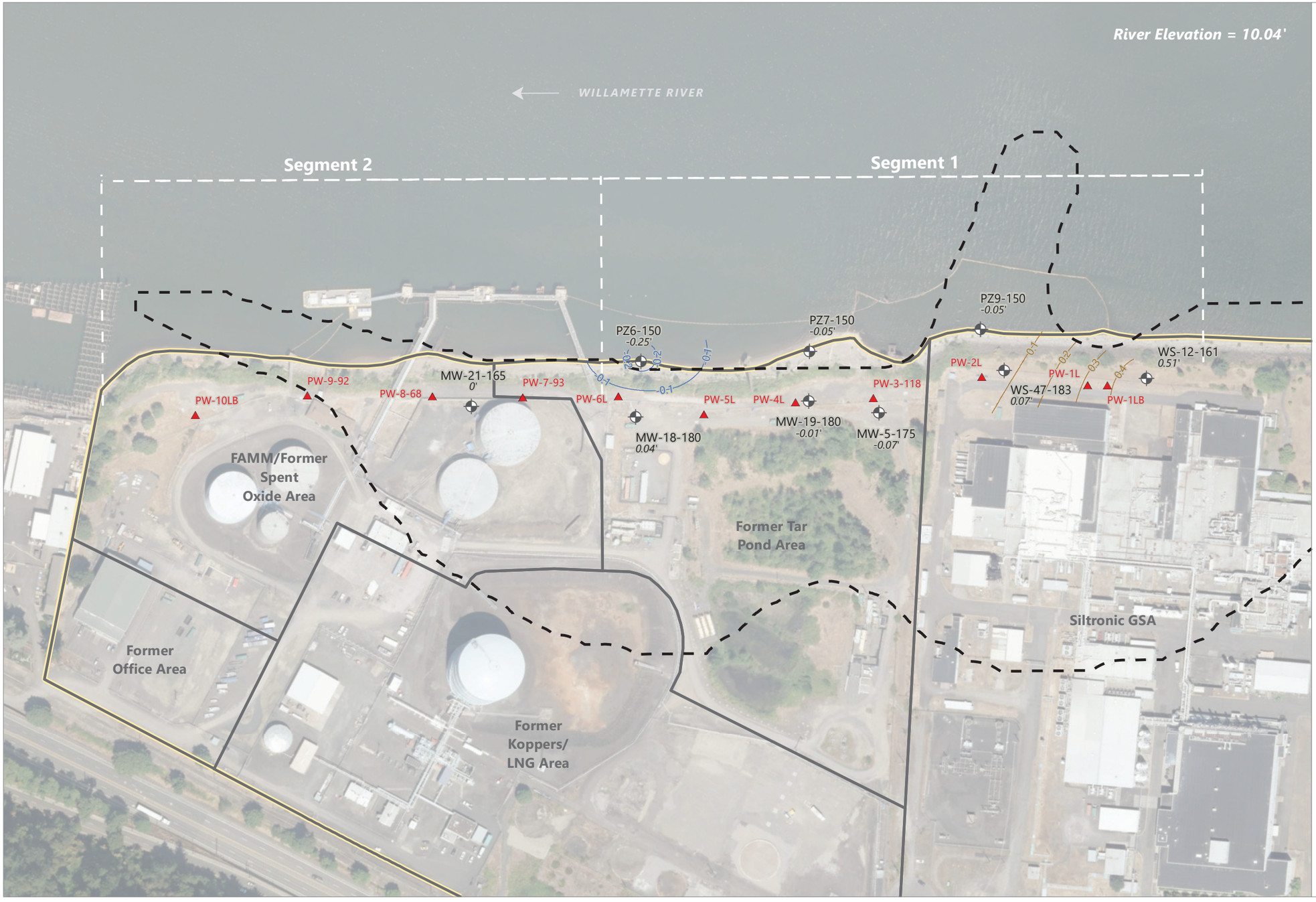
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.3d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.4a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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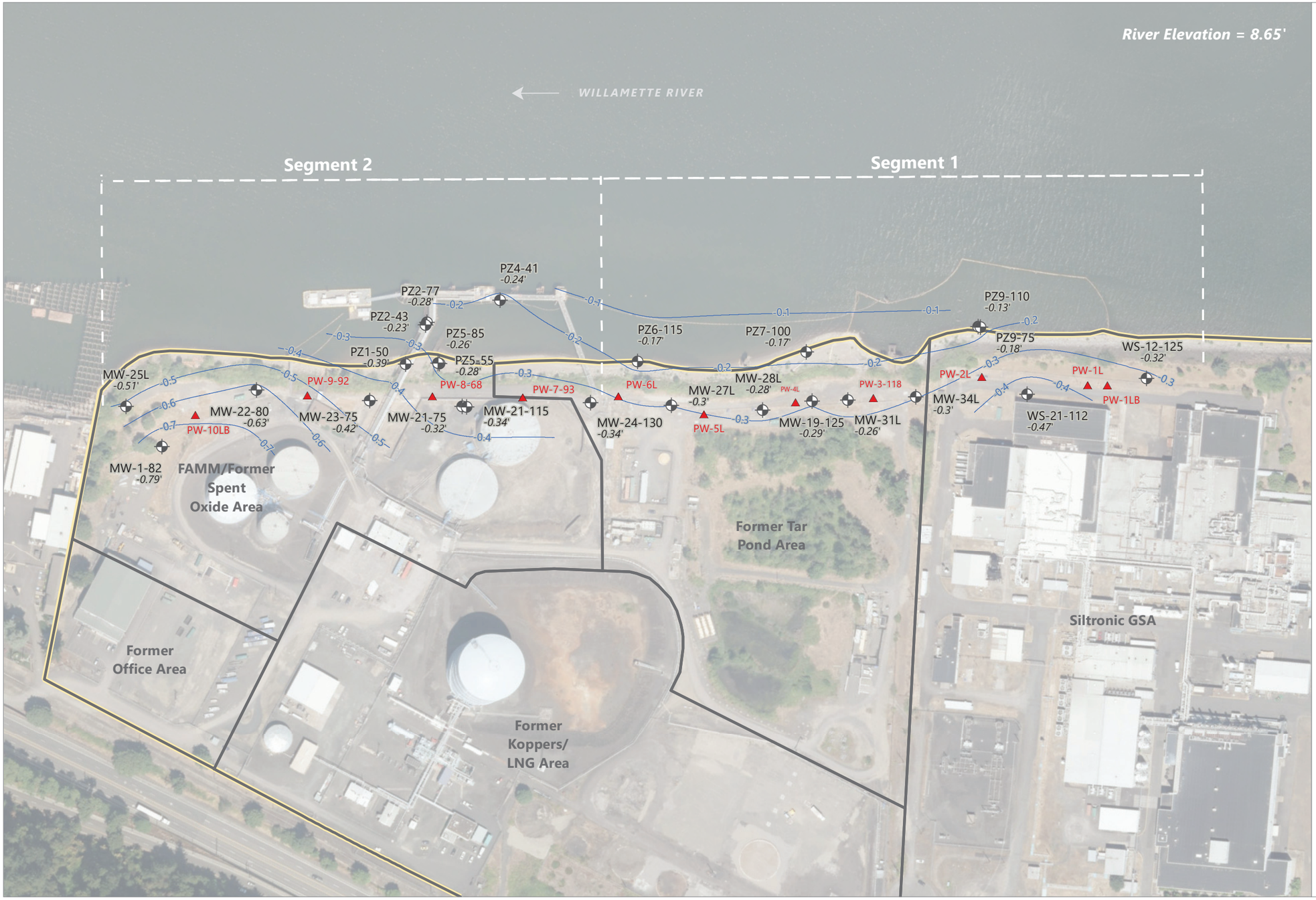
ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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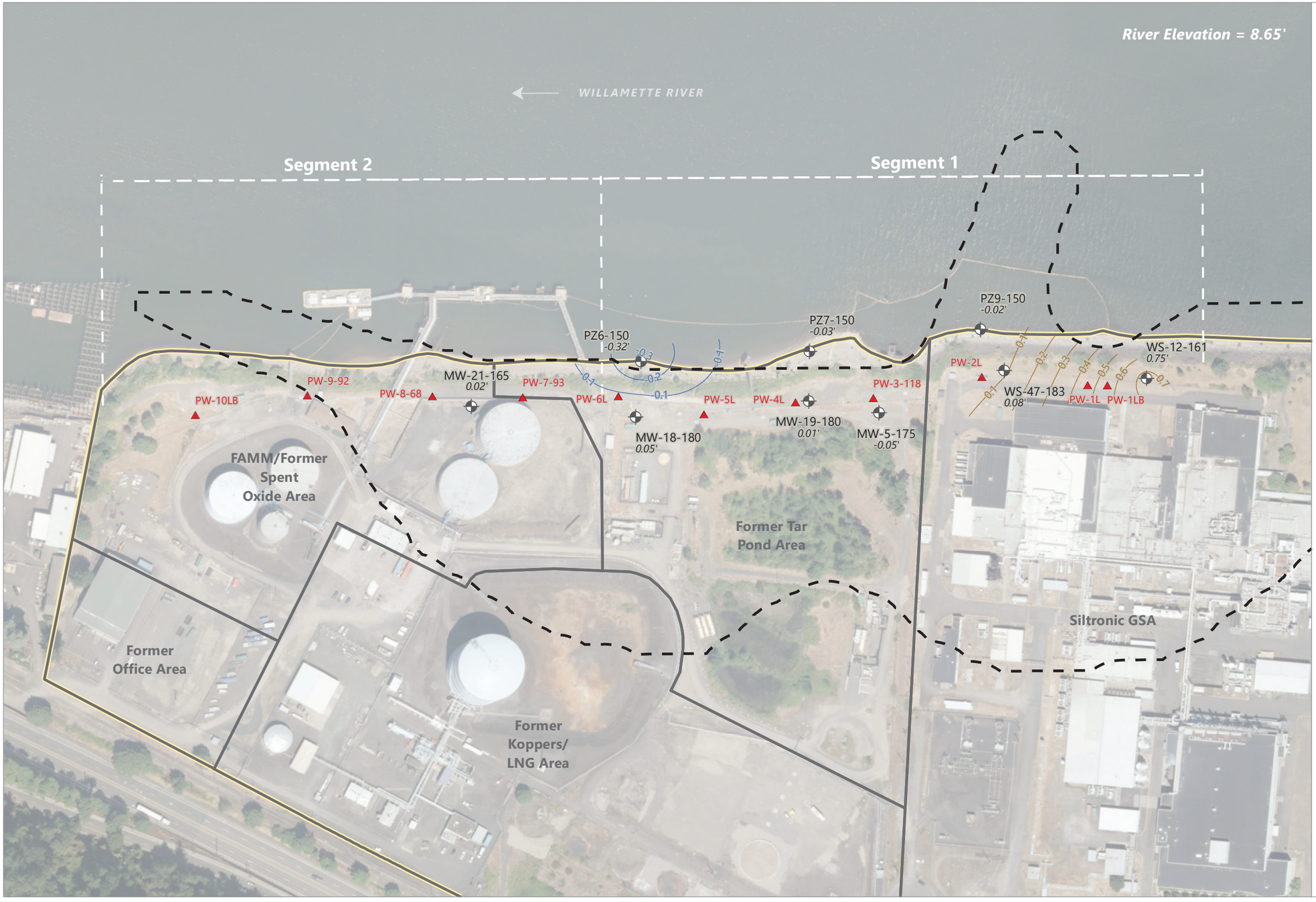
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.3a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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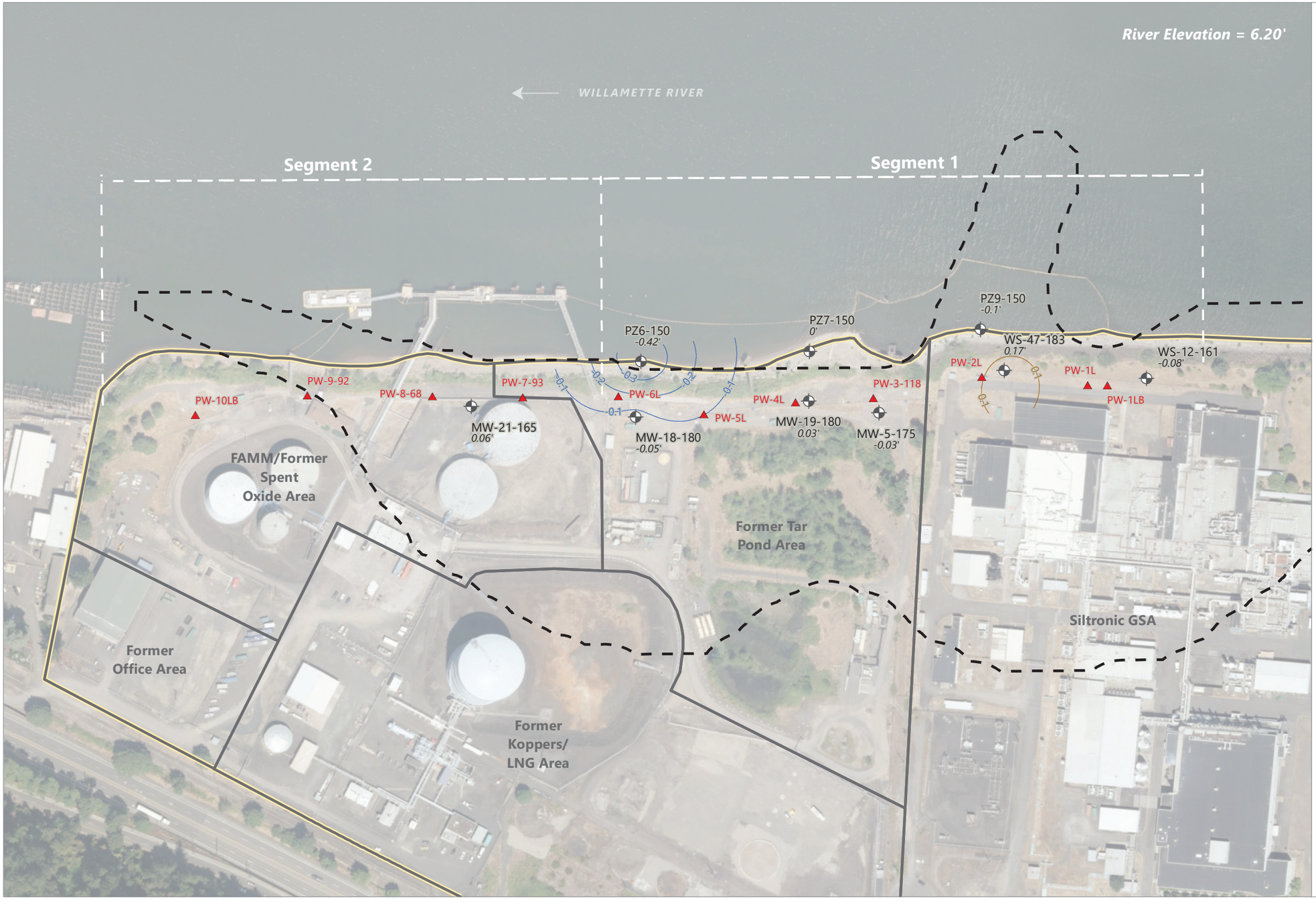
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.3d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.4a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
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ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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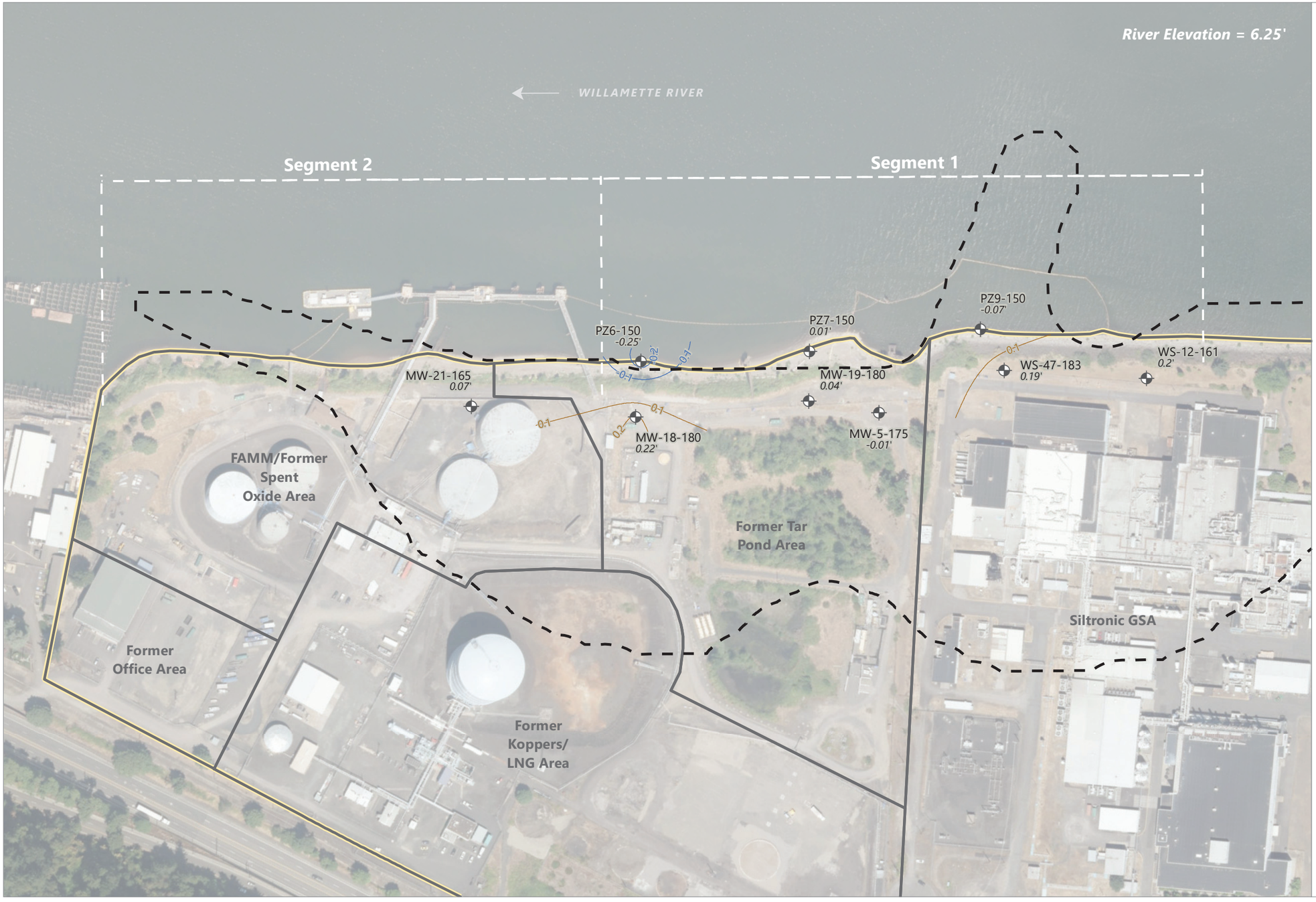
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/03, 1:53 PM | User: cgardner
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ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3a
Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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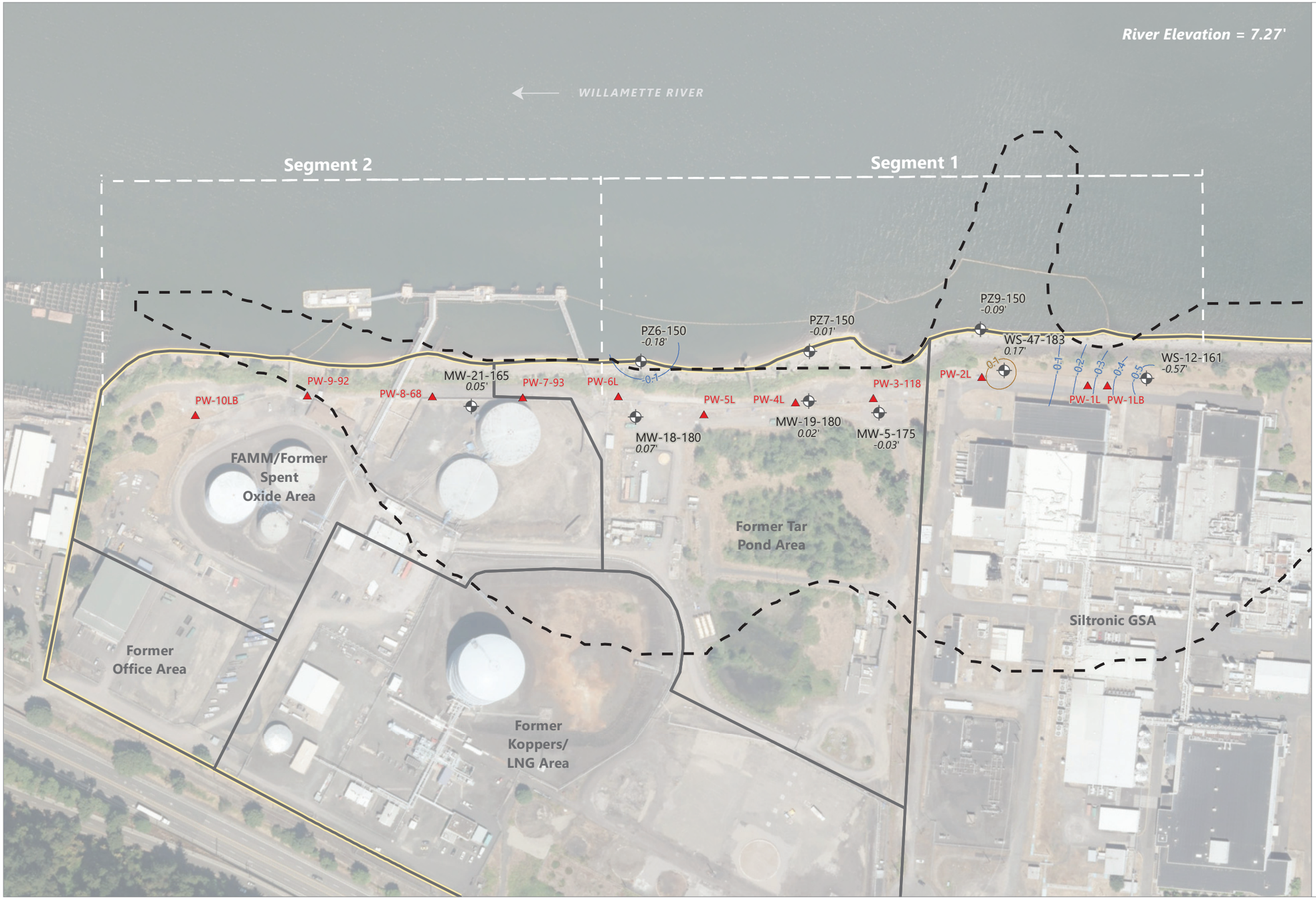
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3d
Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.4a
Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
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4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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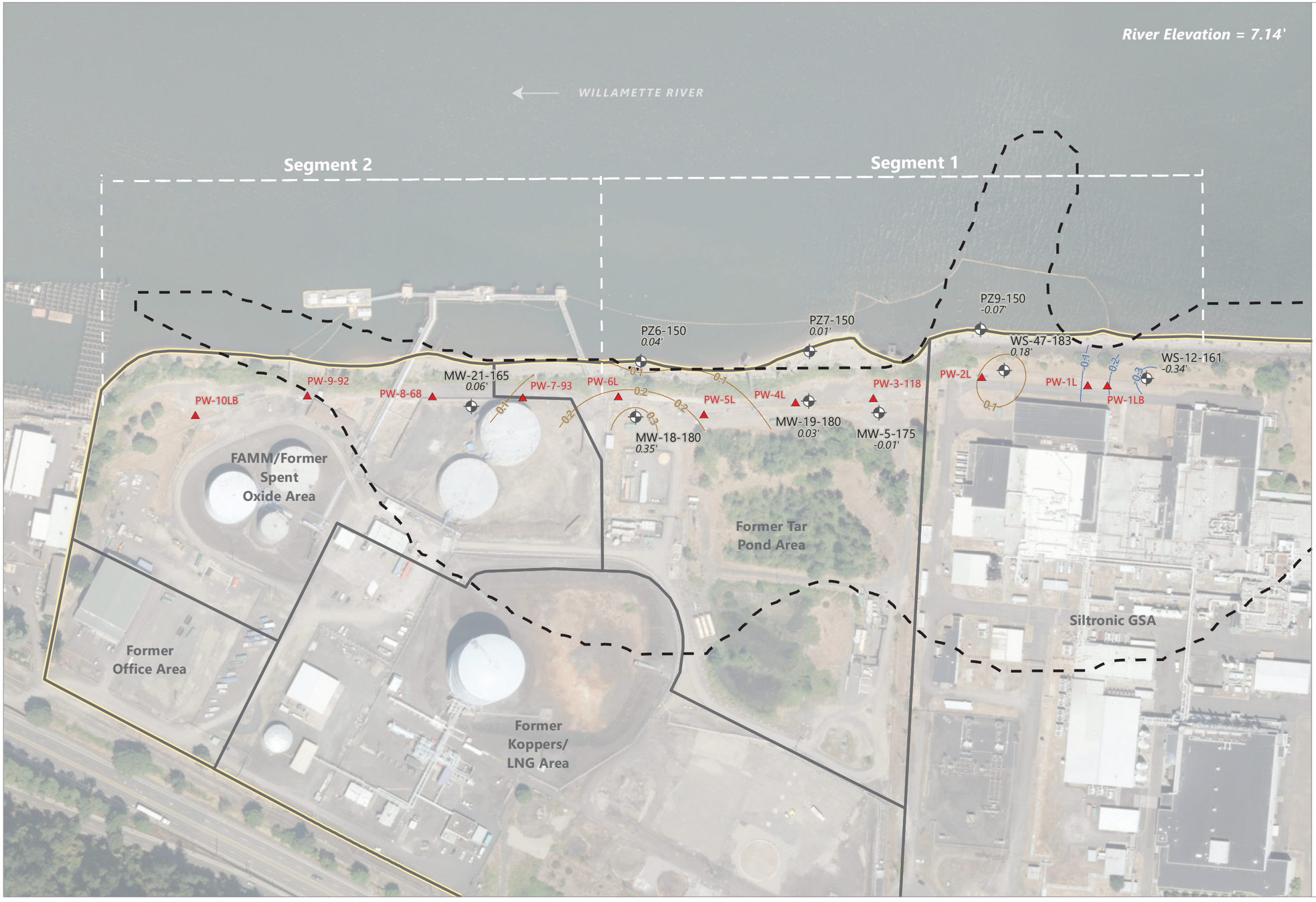
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.4d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3a
Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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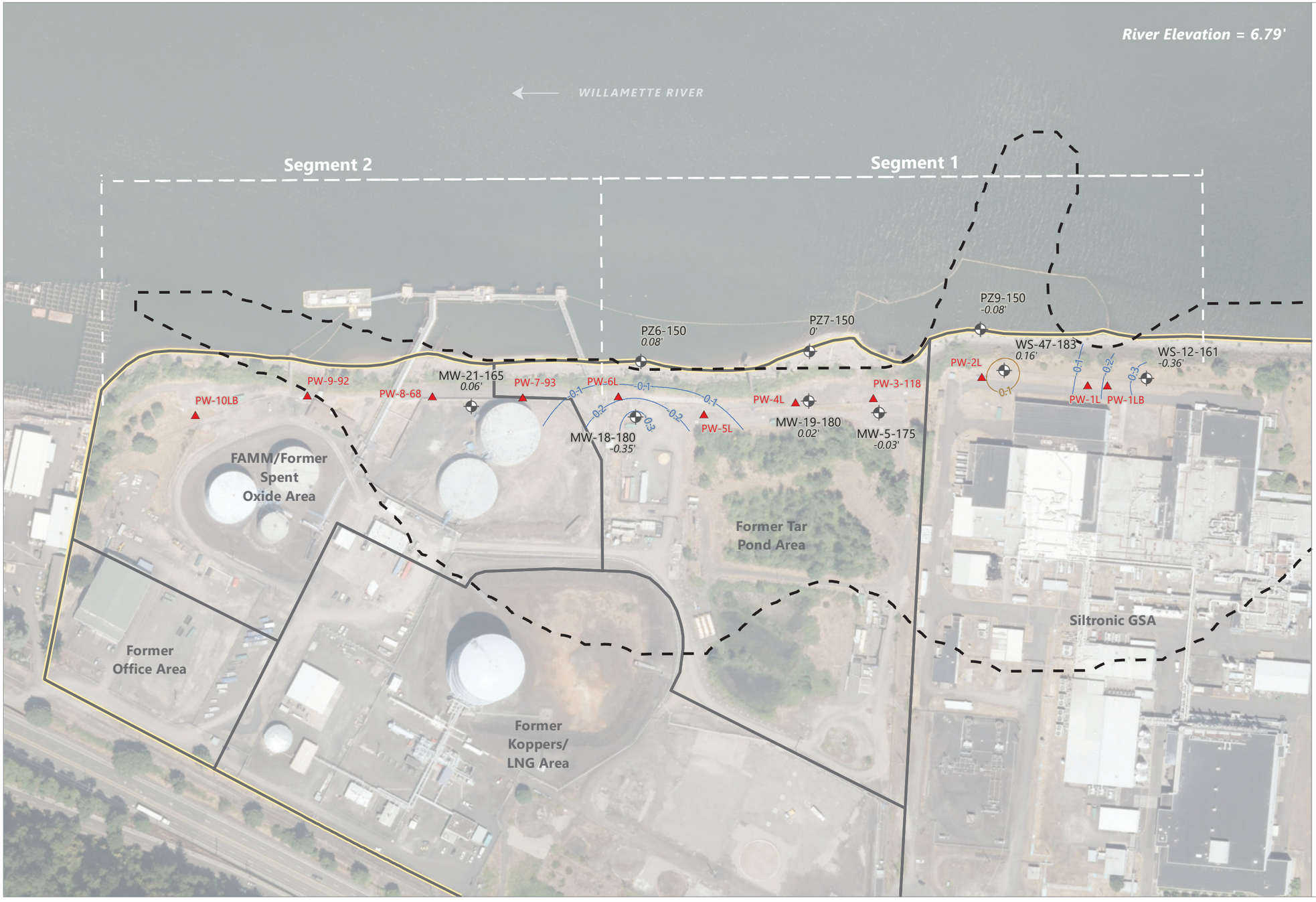
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.3d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.4a
Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/19, 12:15 PM | User: cgardner
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ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/16, 5:26 PM | User: cgardner
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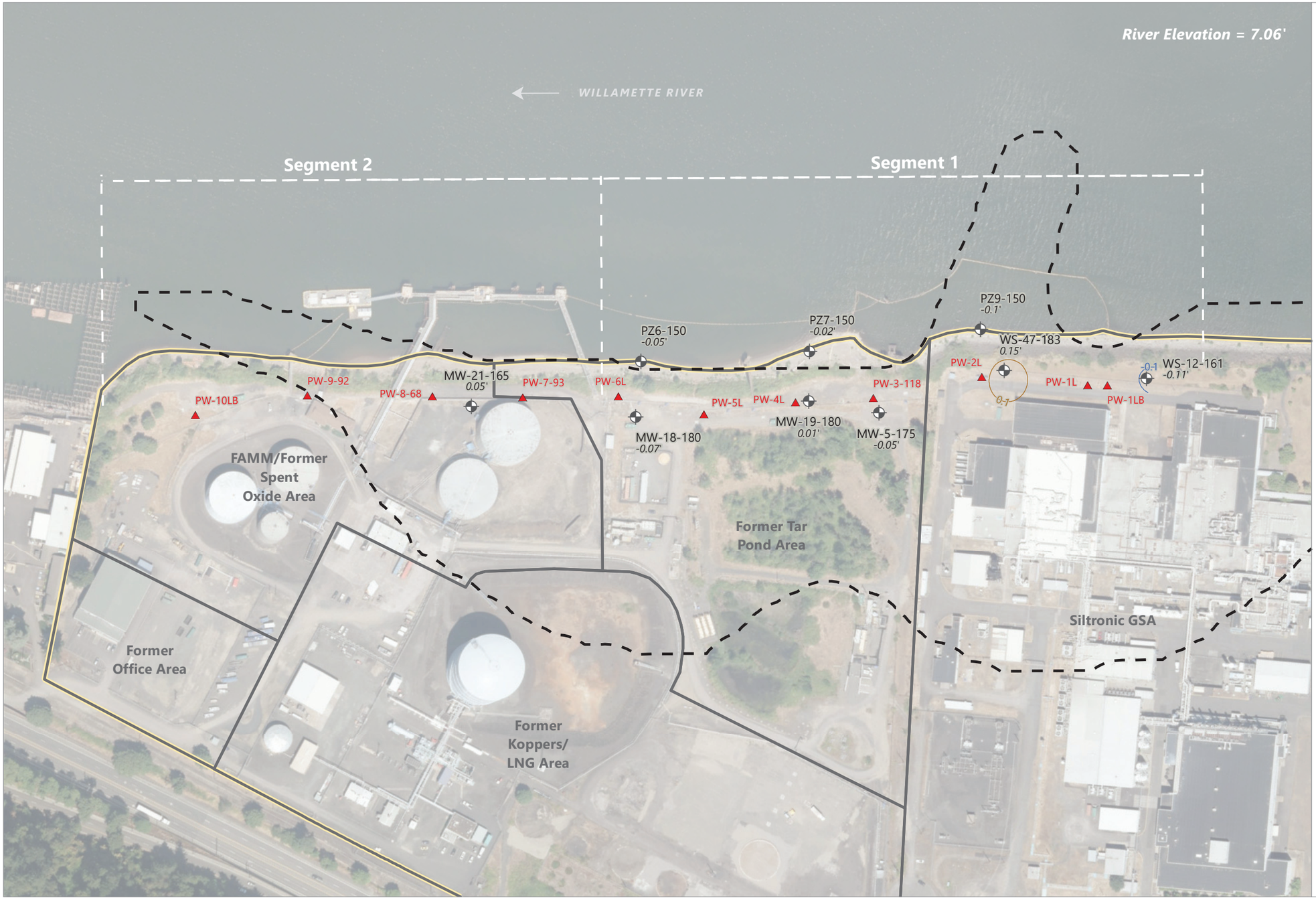
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.3a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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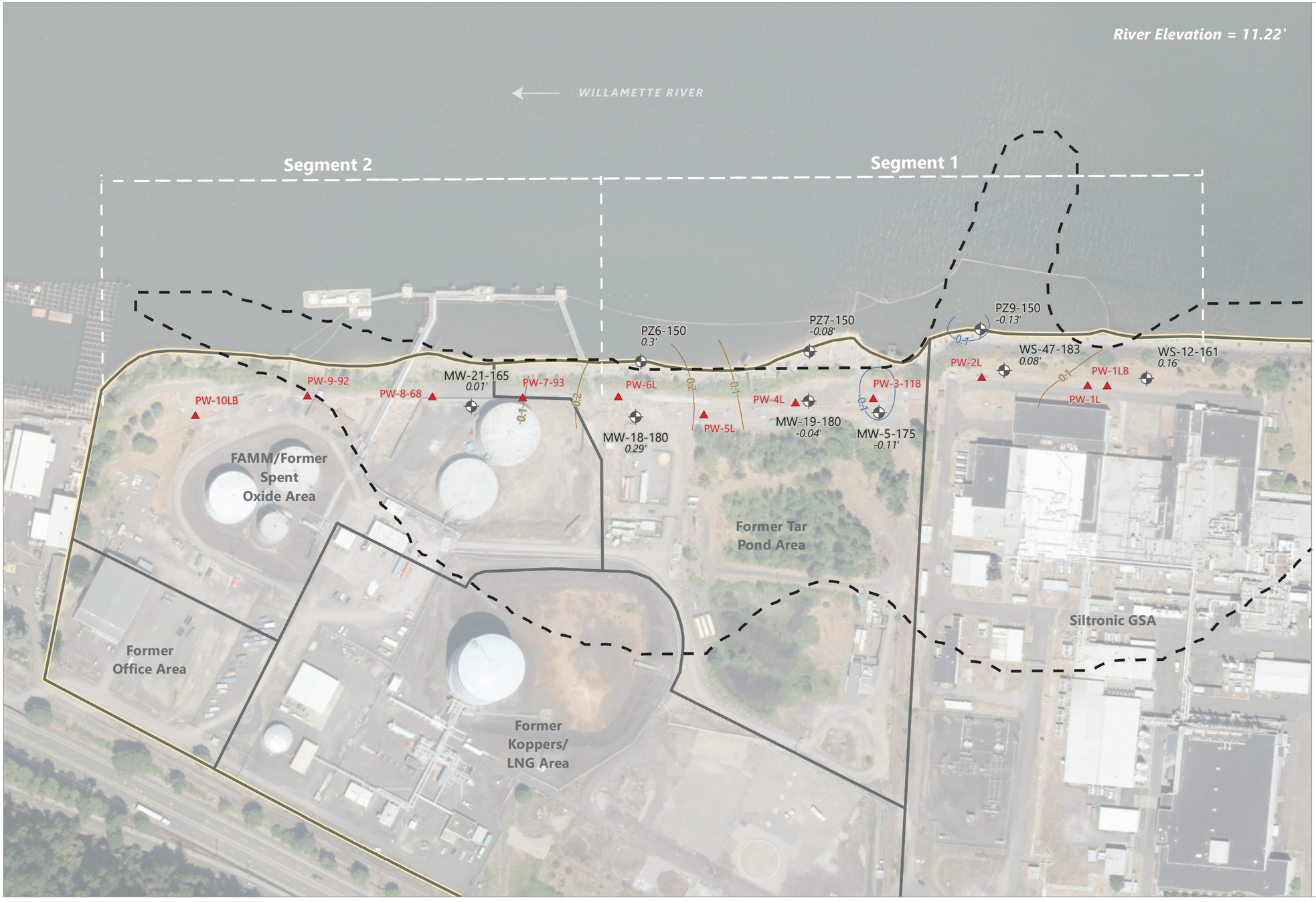
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
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6. Aerial imagery from City of Portland 2018.

0 300

Feet

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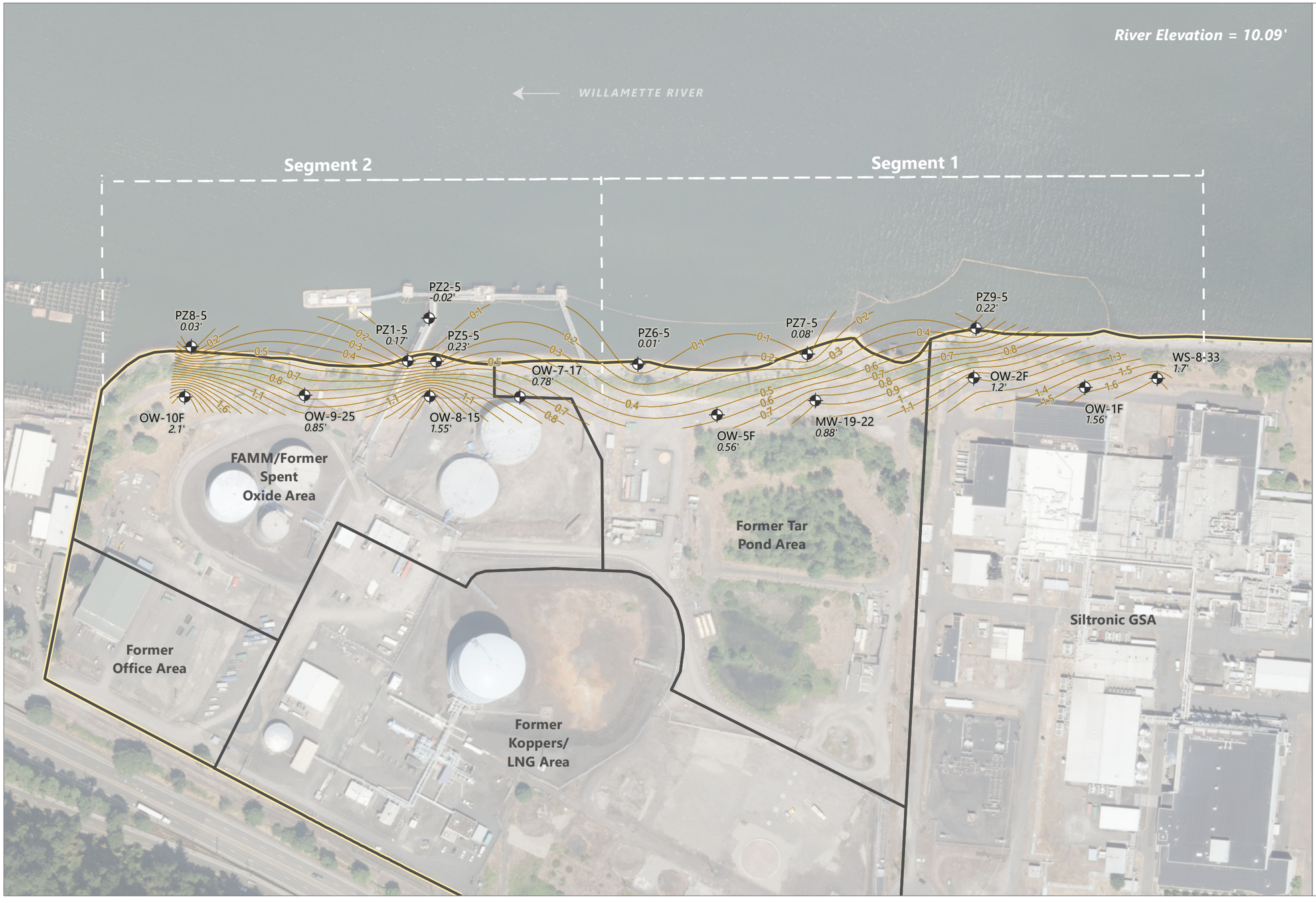
ANCHOR QEA

Figure 3.3d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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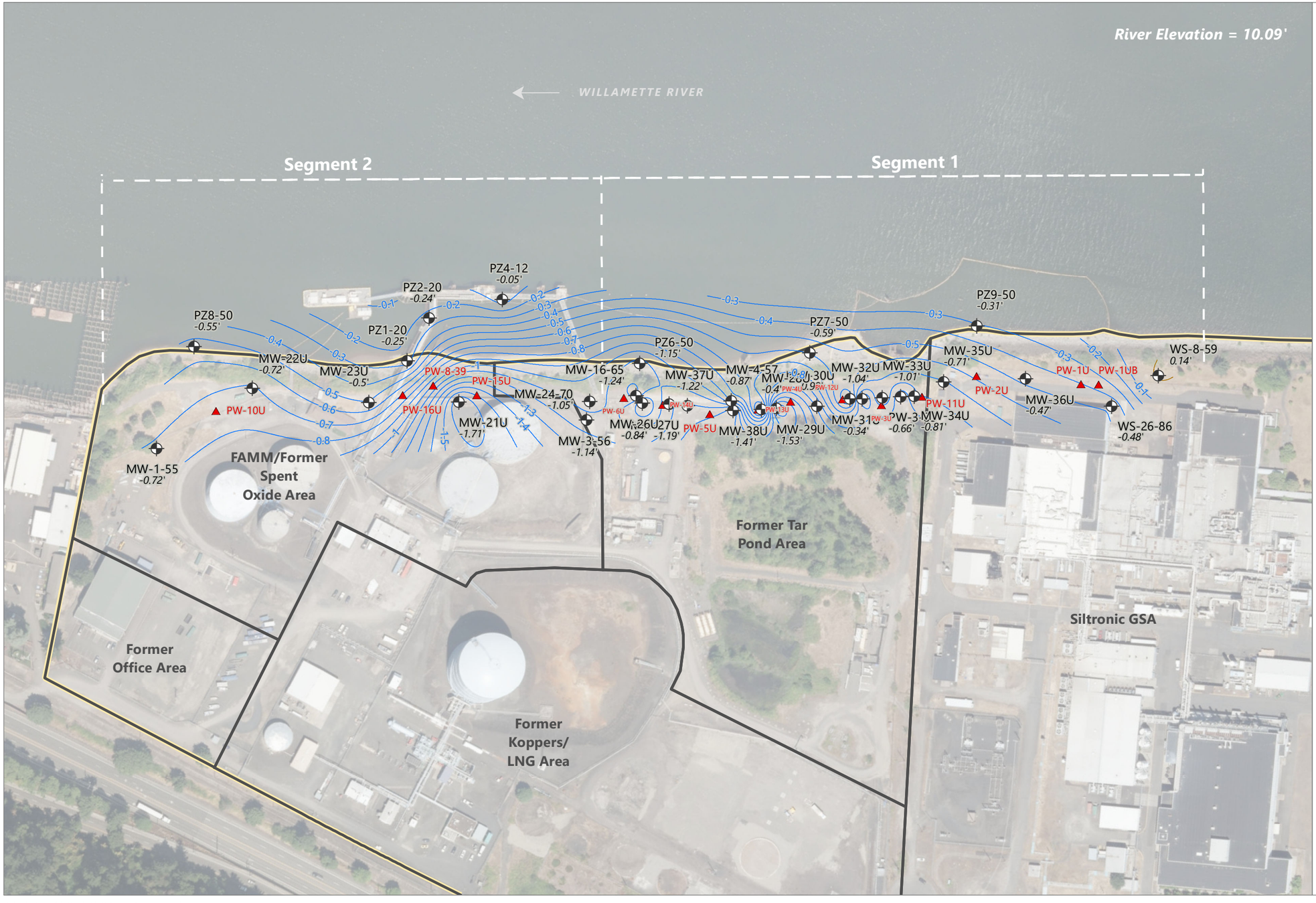
ANCHOR QEA

Figure 3.4a
Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Arrow indicates direction of flow of river.
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7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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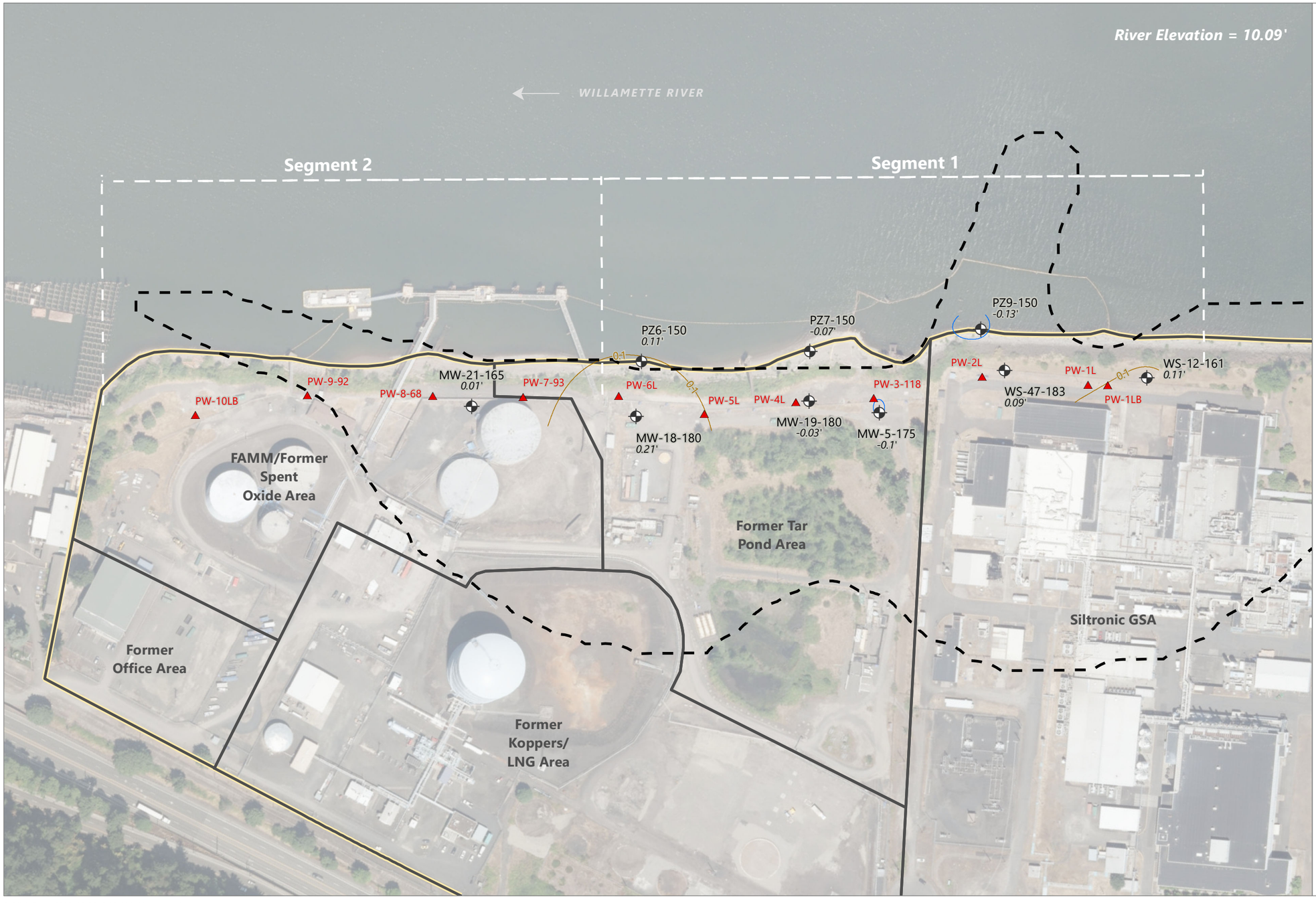
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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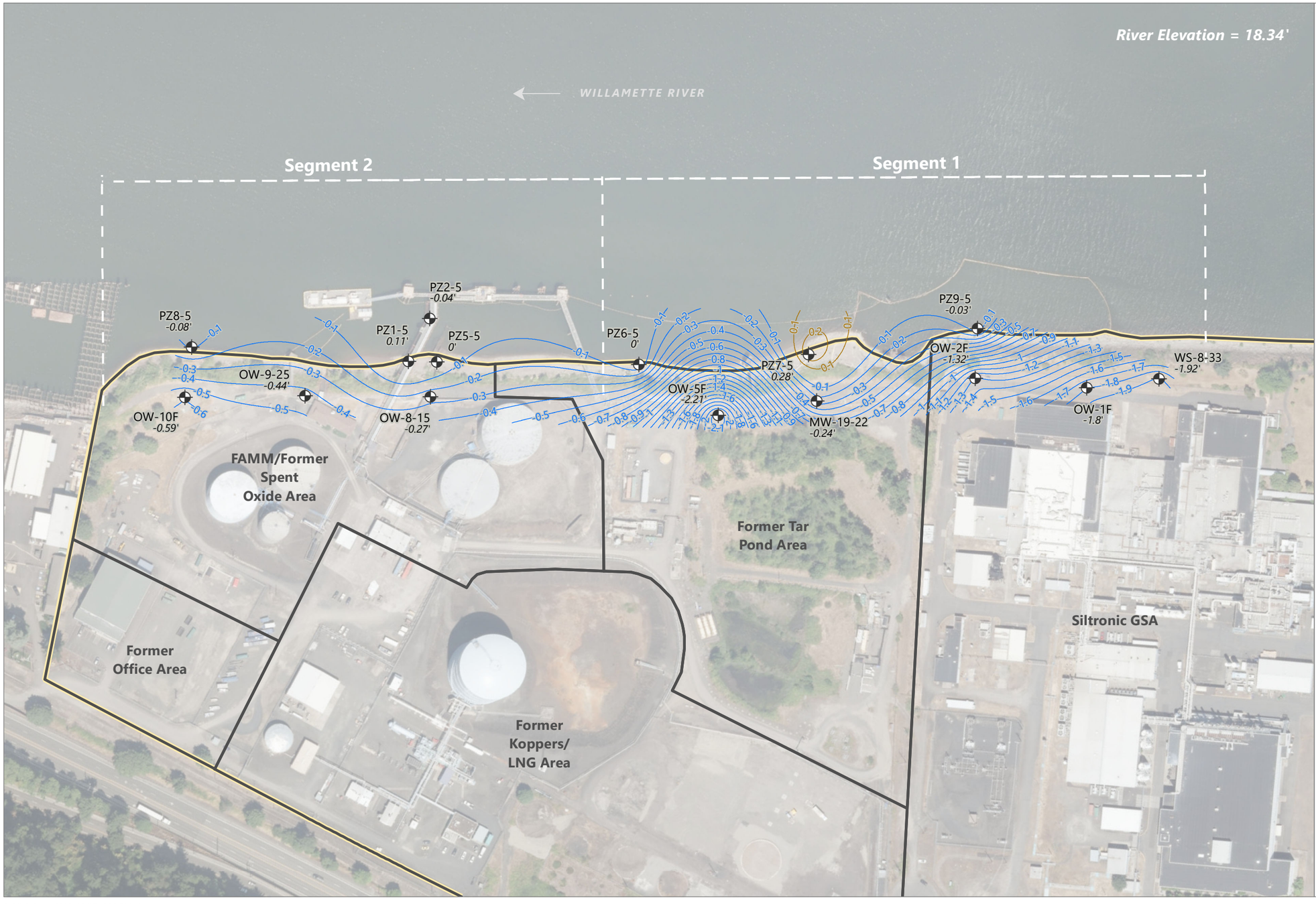
ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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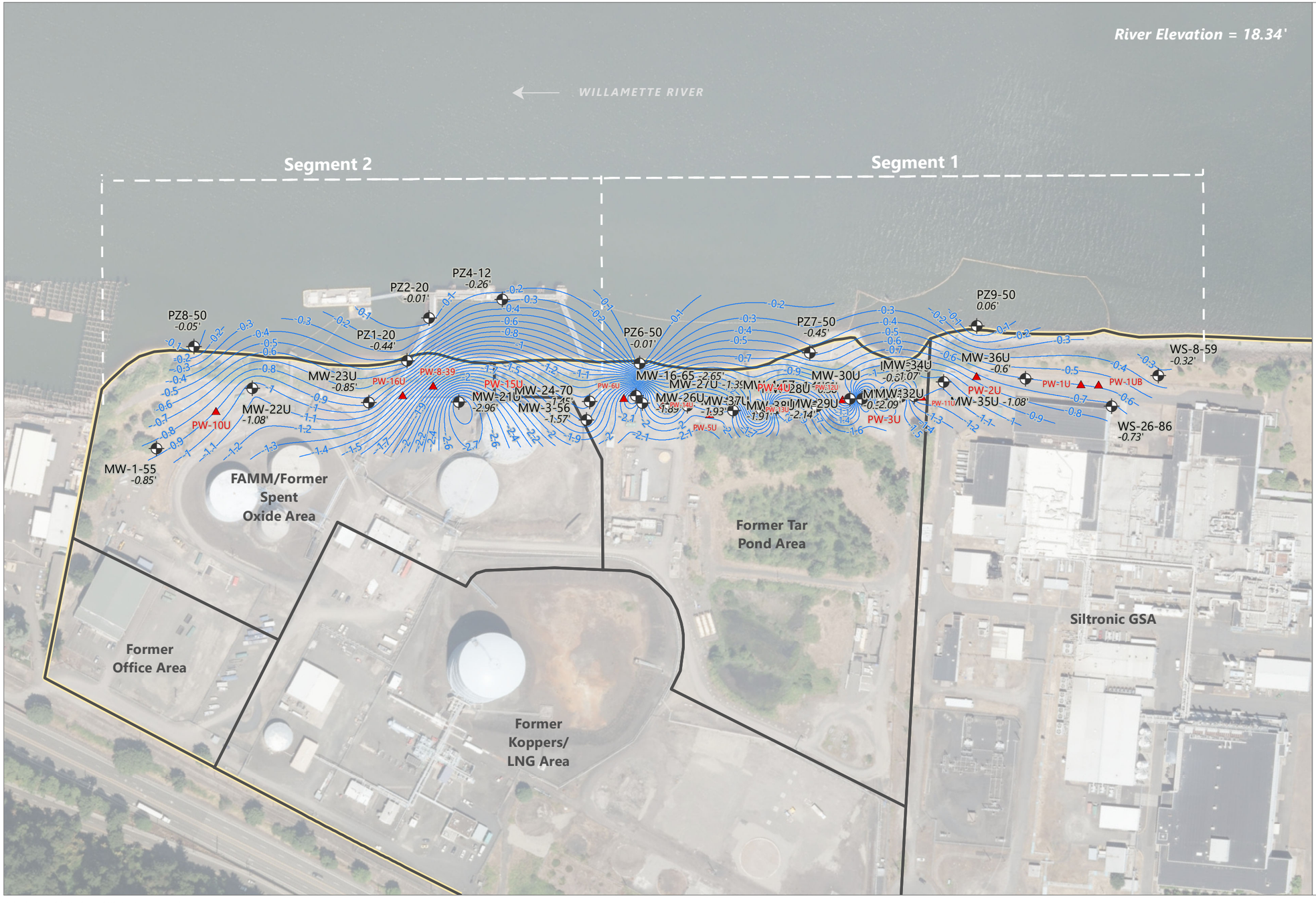
ANCHOR QEA

Figure 3.3a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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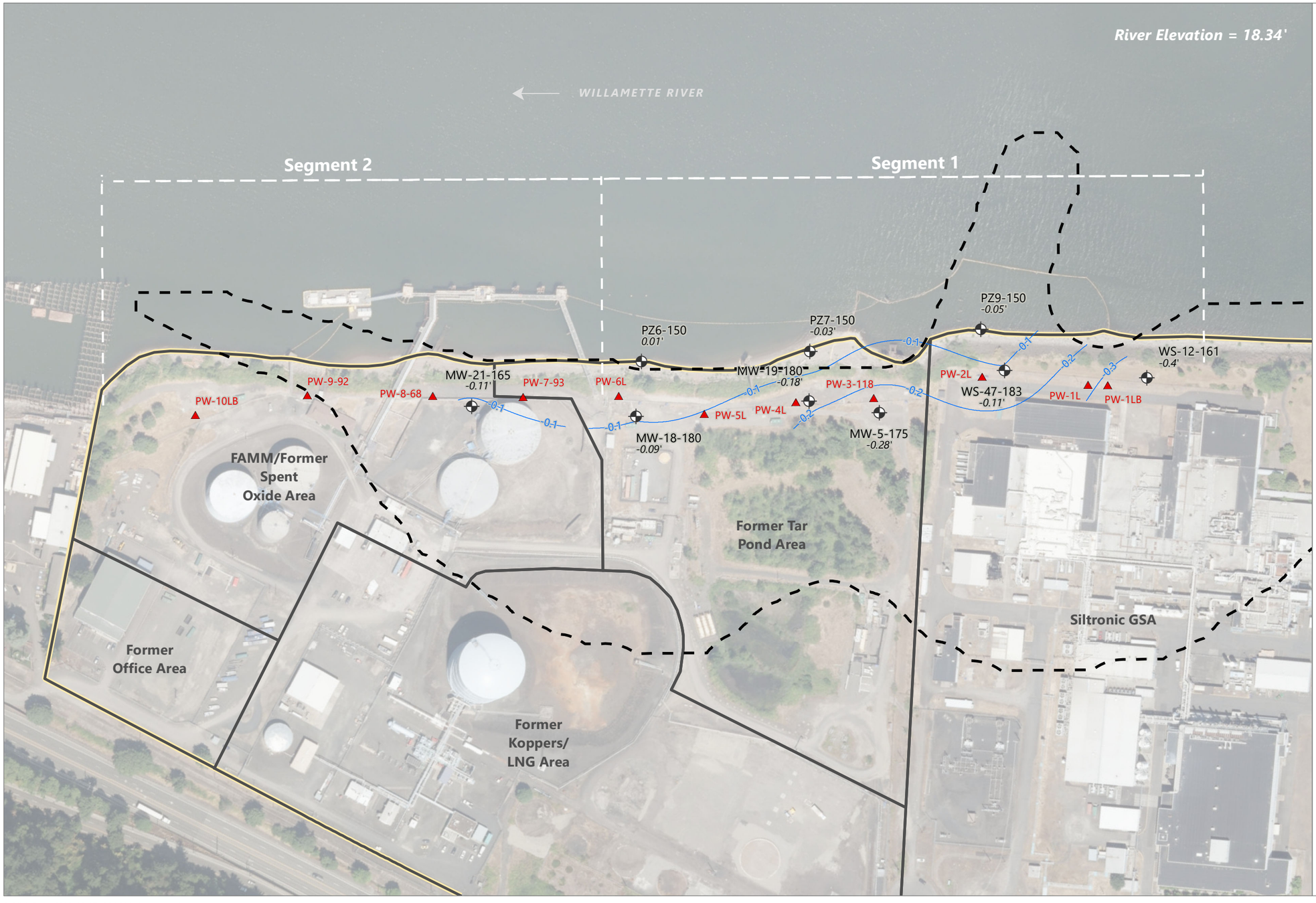
Figure 3.3c

Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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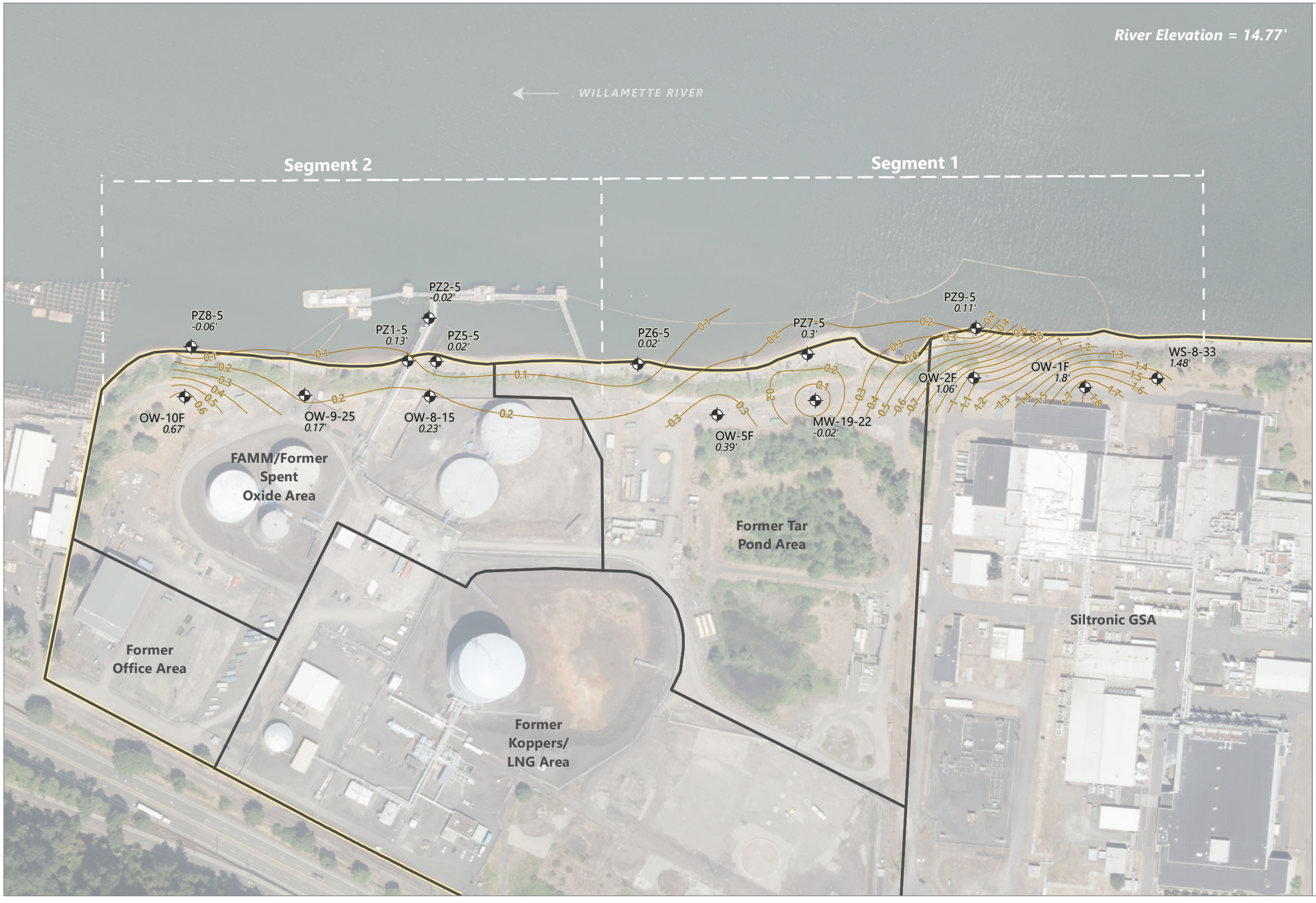
Figure 3.3d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
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NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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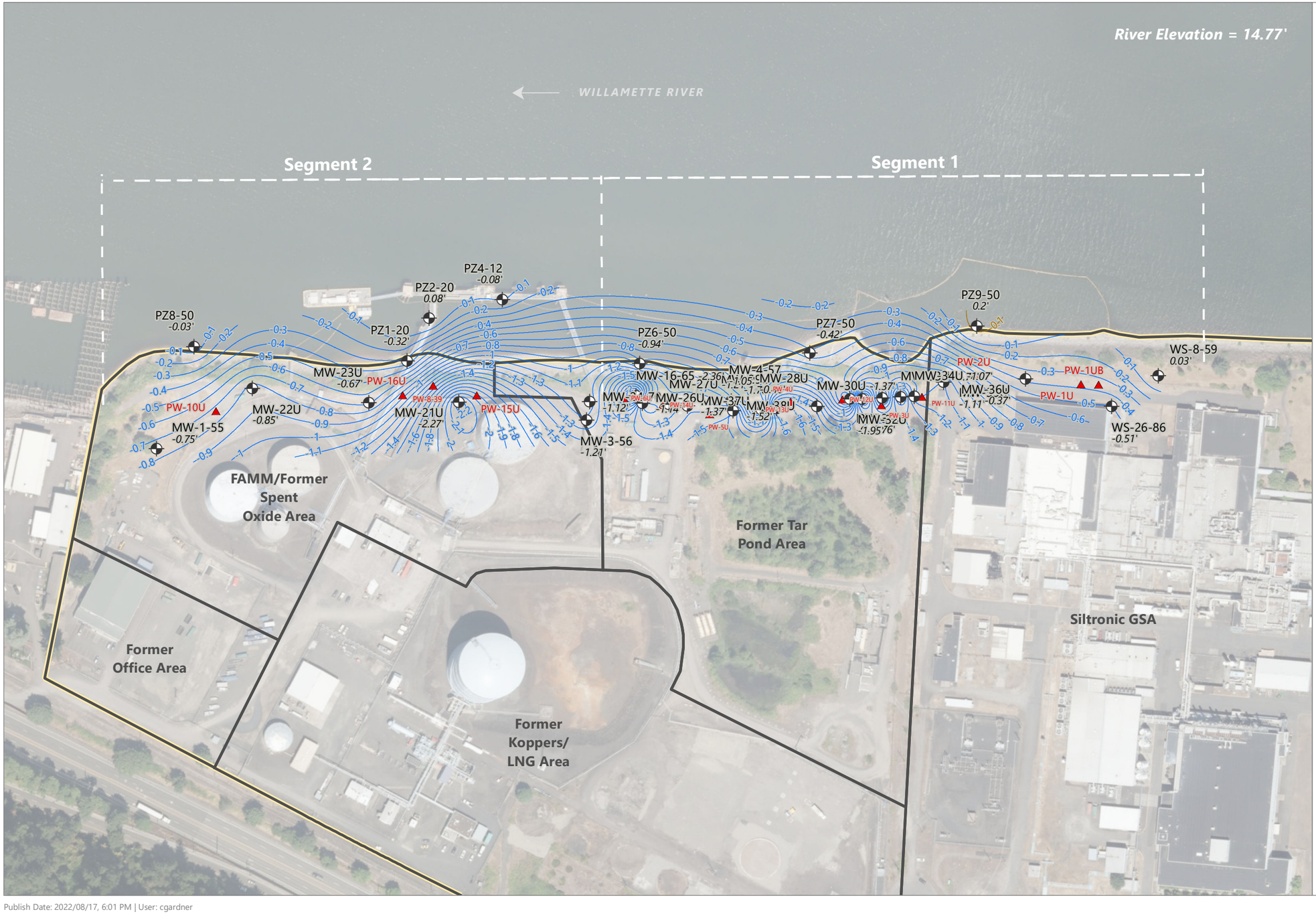
ANCHOR QEA

Figure 3.4a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

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5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300

Feet

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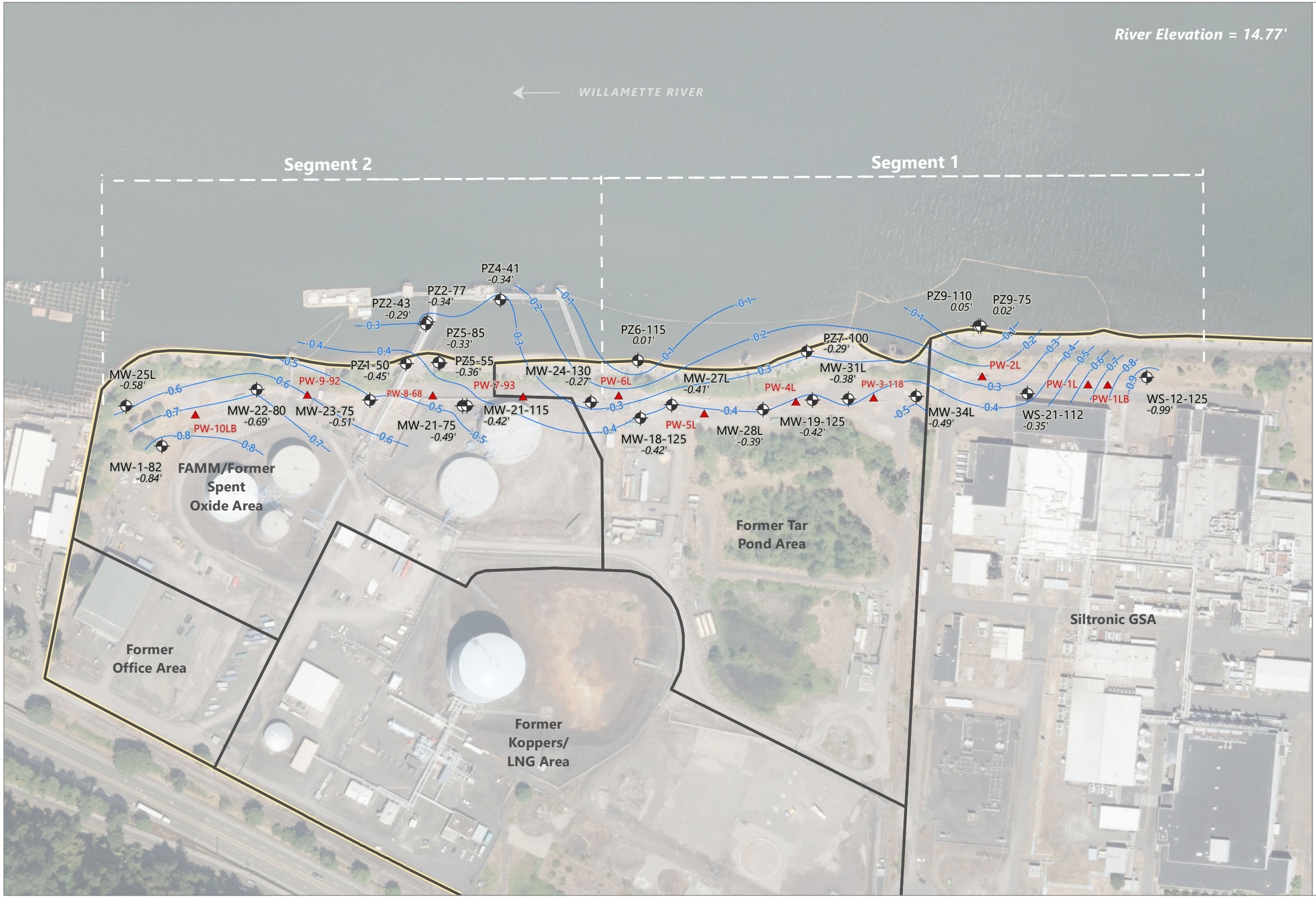
Figure 3.4b

Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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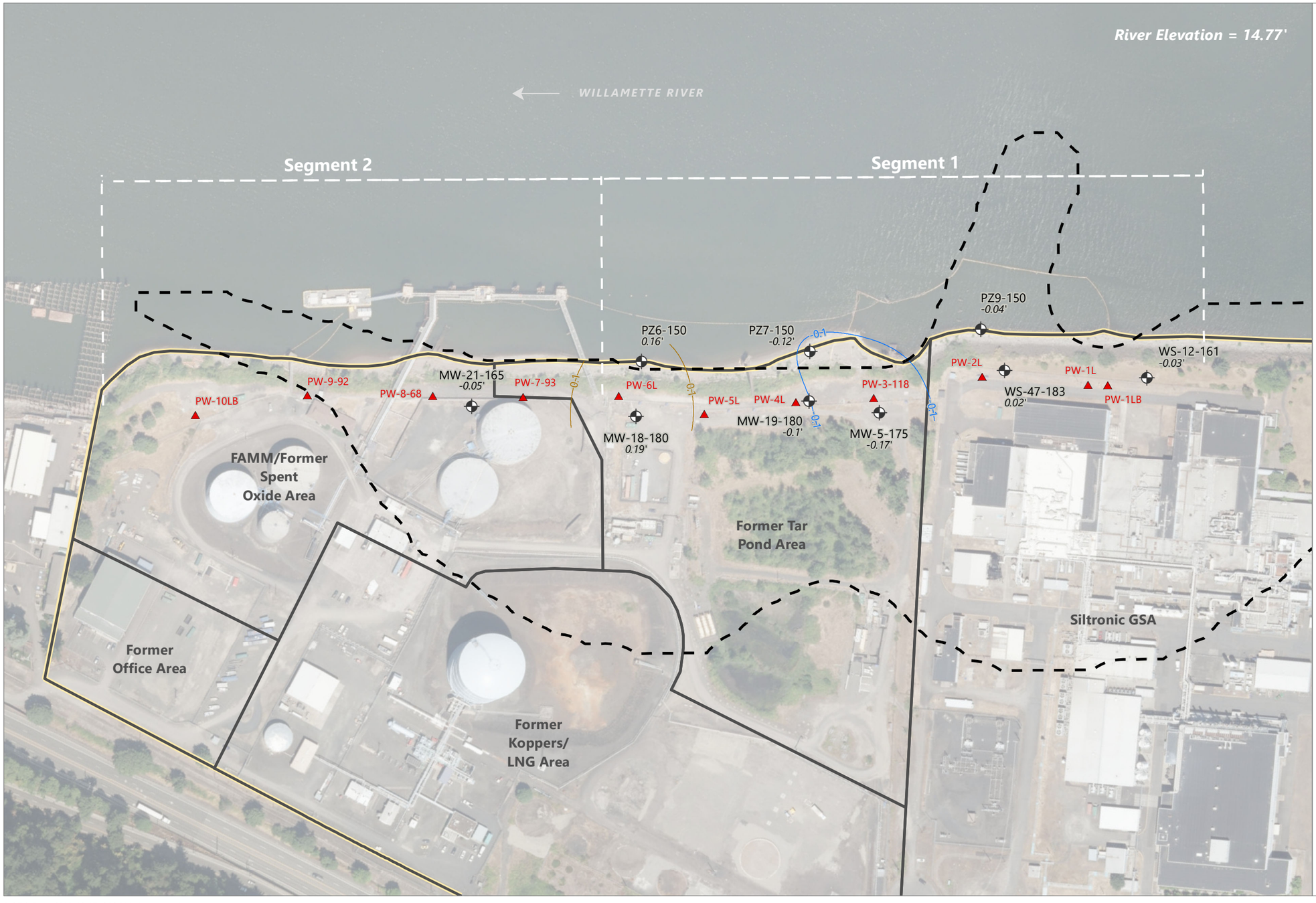
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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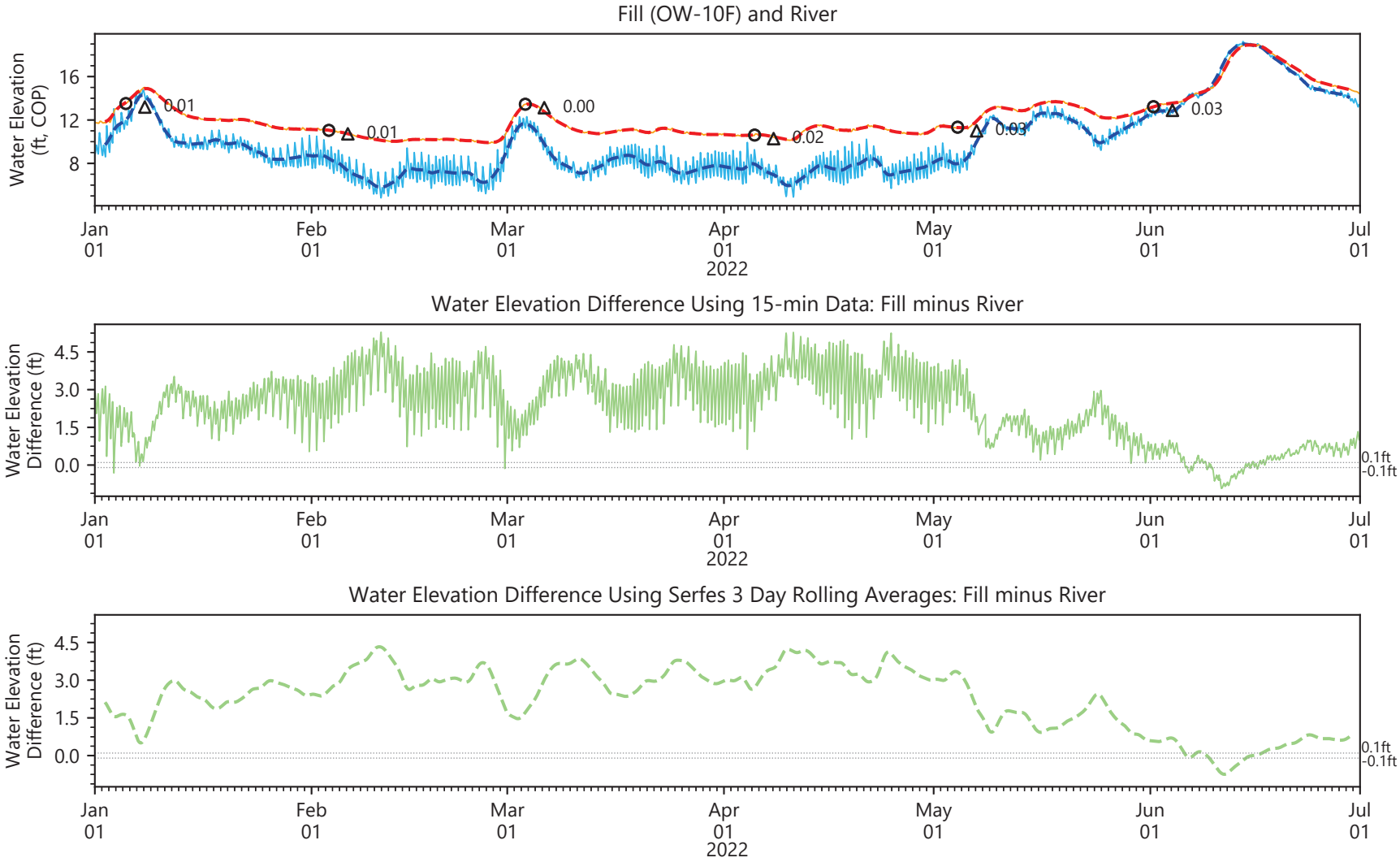
ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022
NWN Gasco Site
Portland, Oregon



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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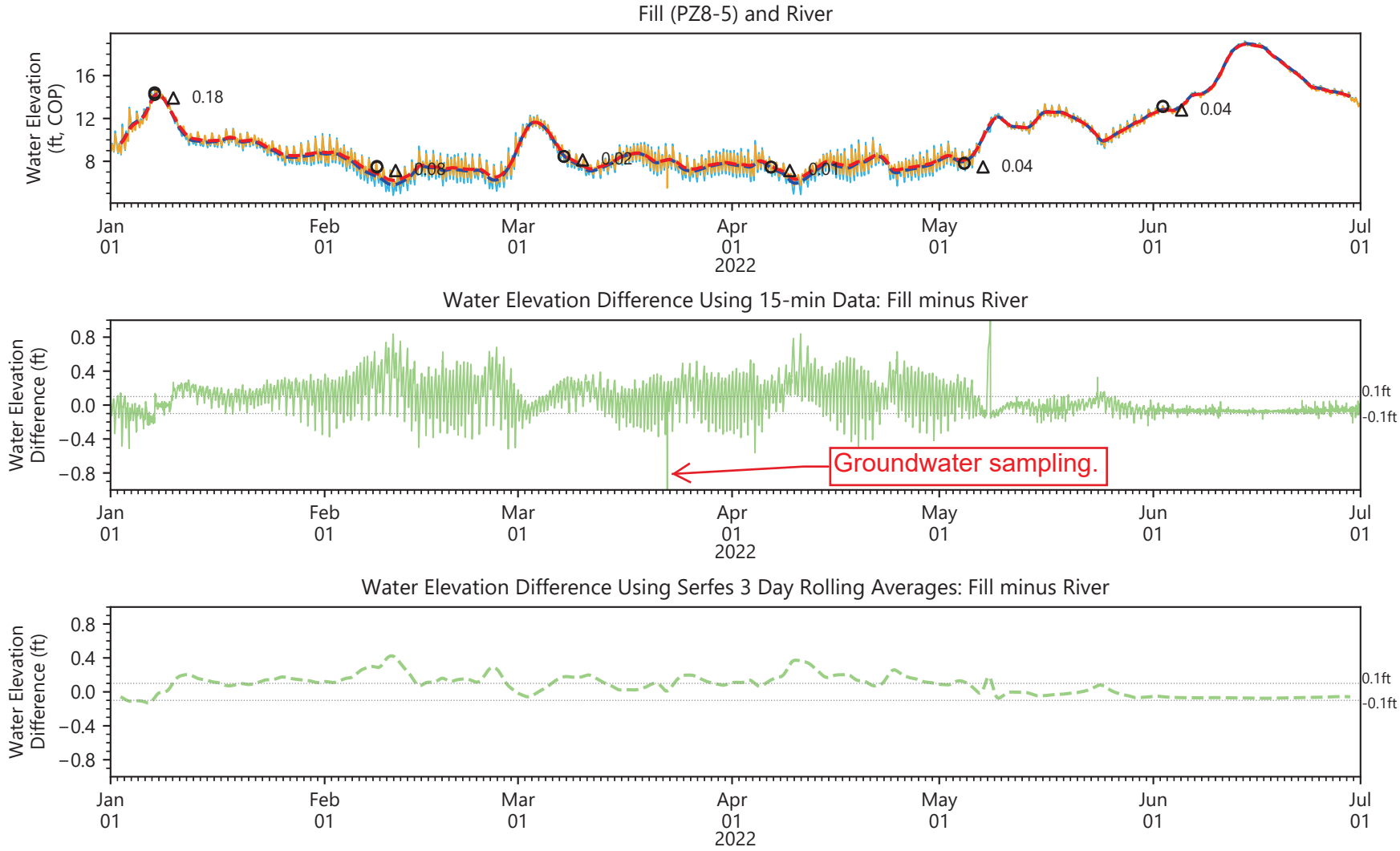
ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.1
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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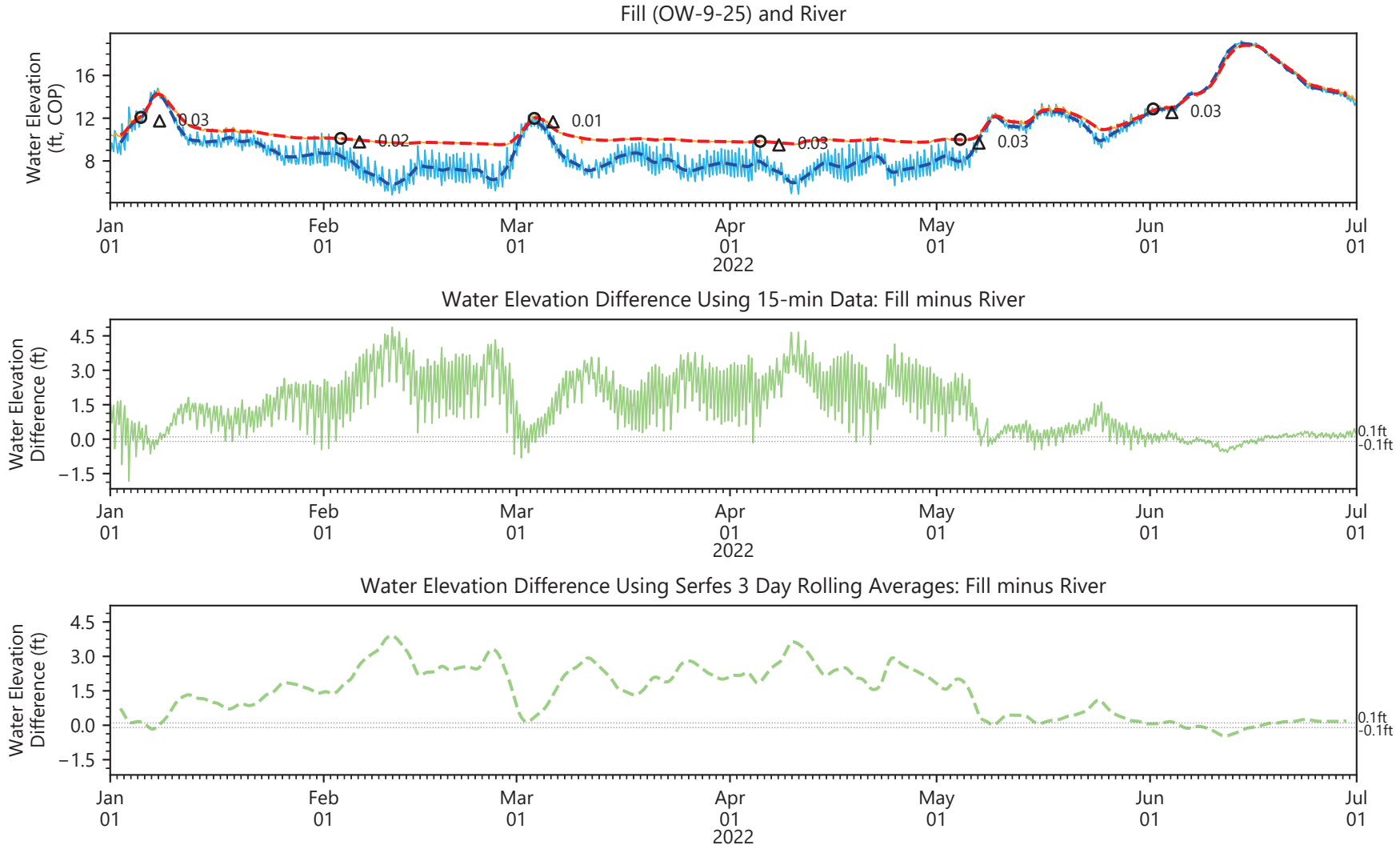
ANCHOR QEA

Figure 4.2
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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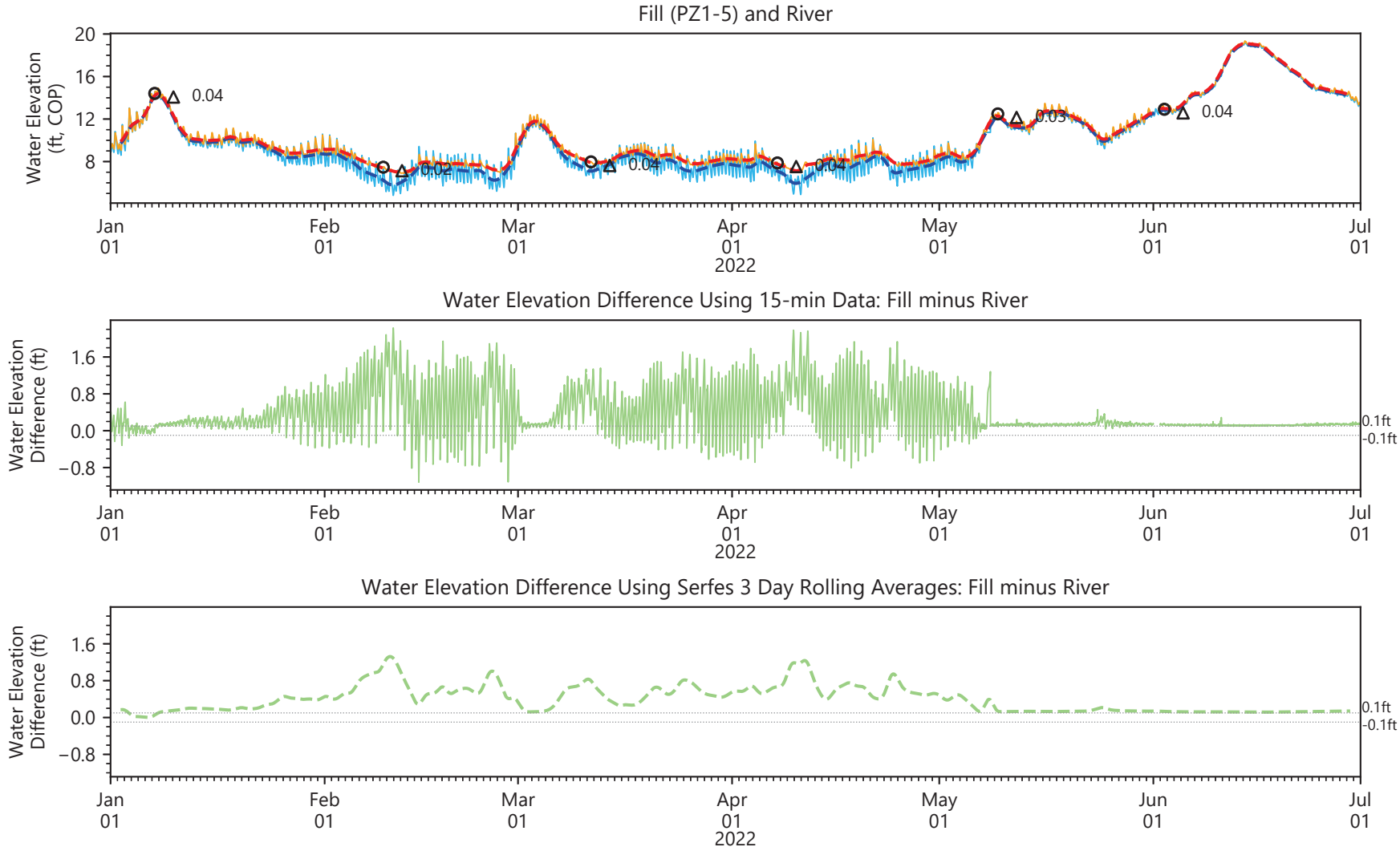
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.3
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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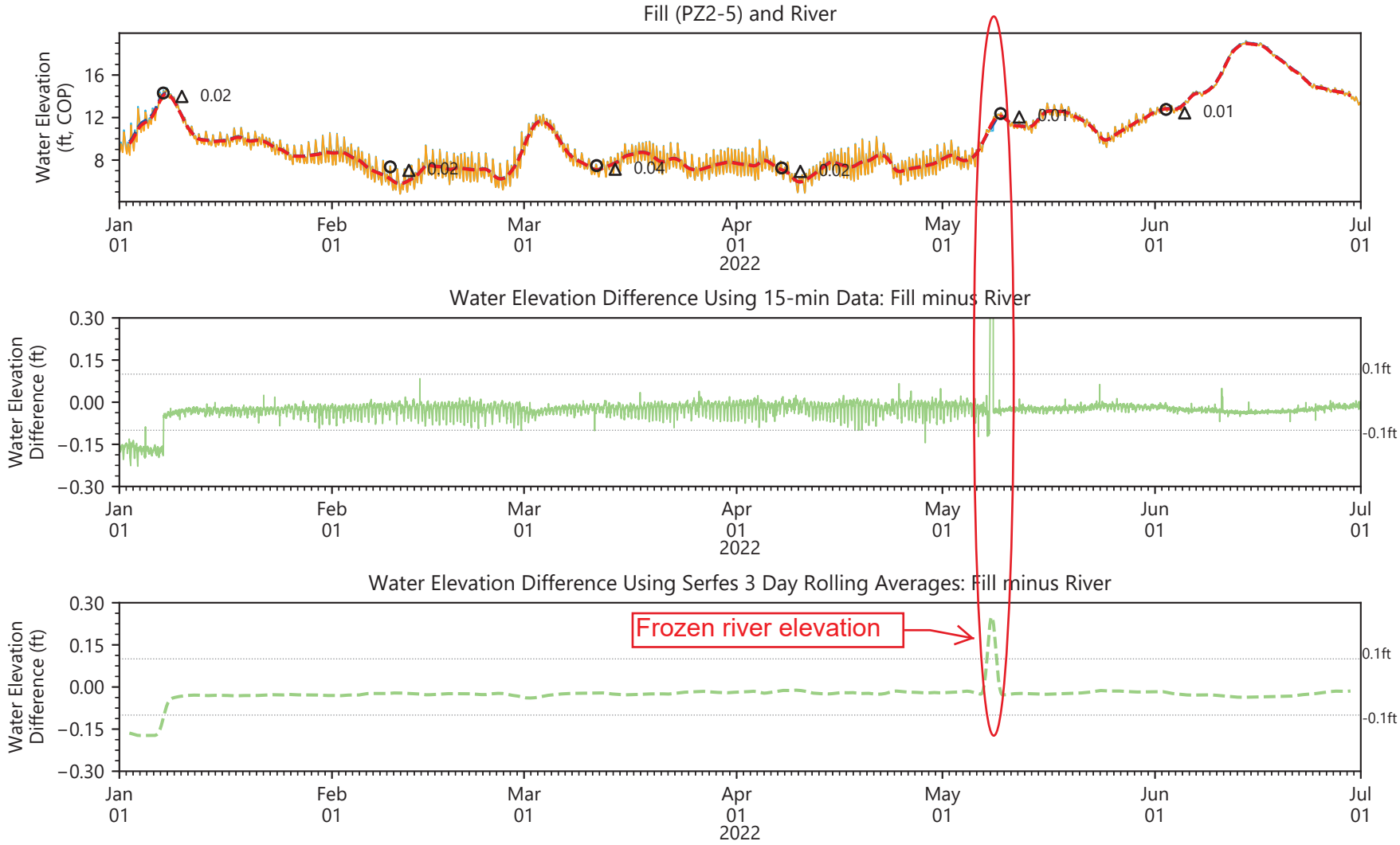
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.4
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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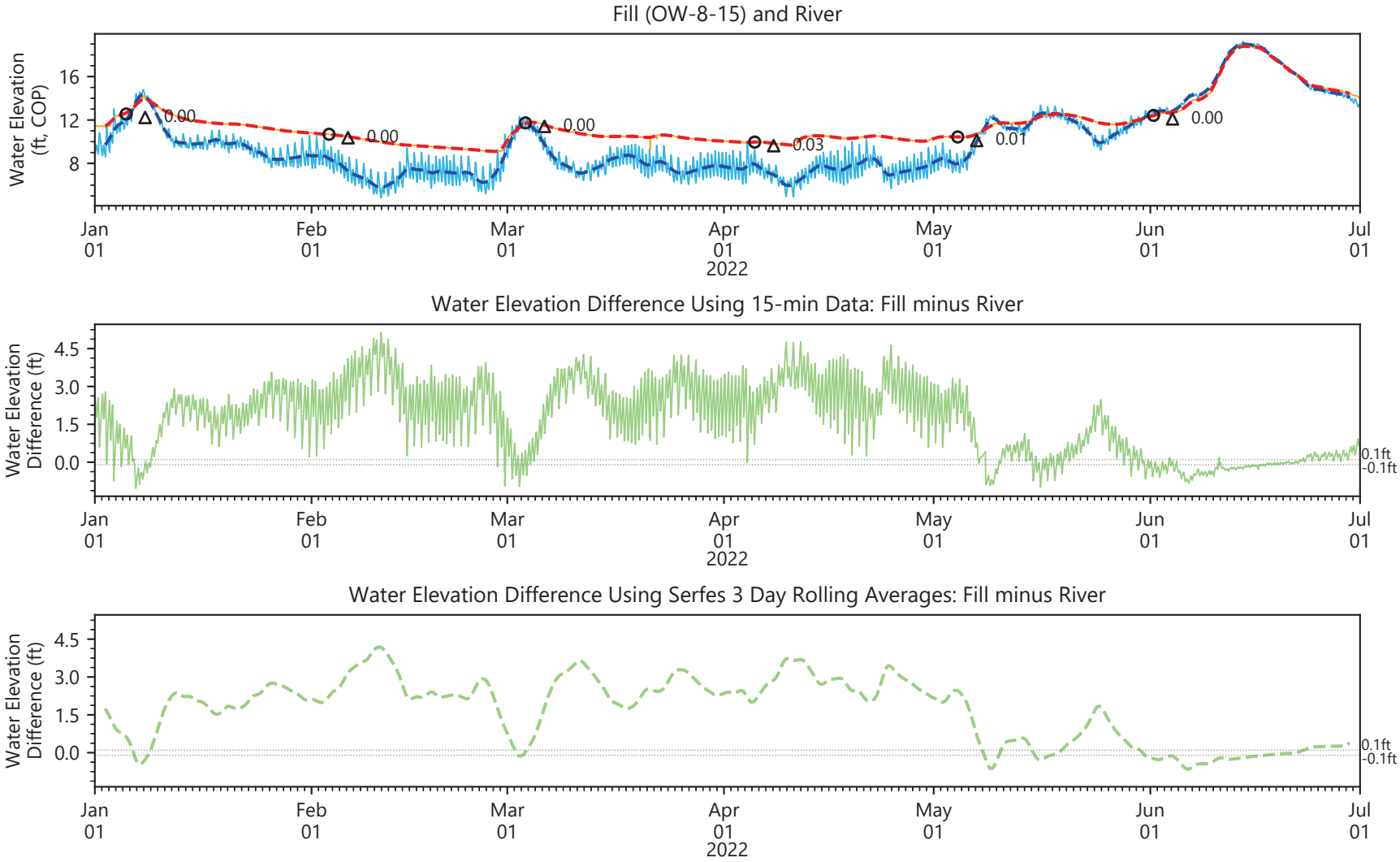
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.5
Groundwater Elevation Differences
NW Natural Gasco Site



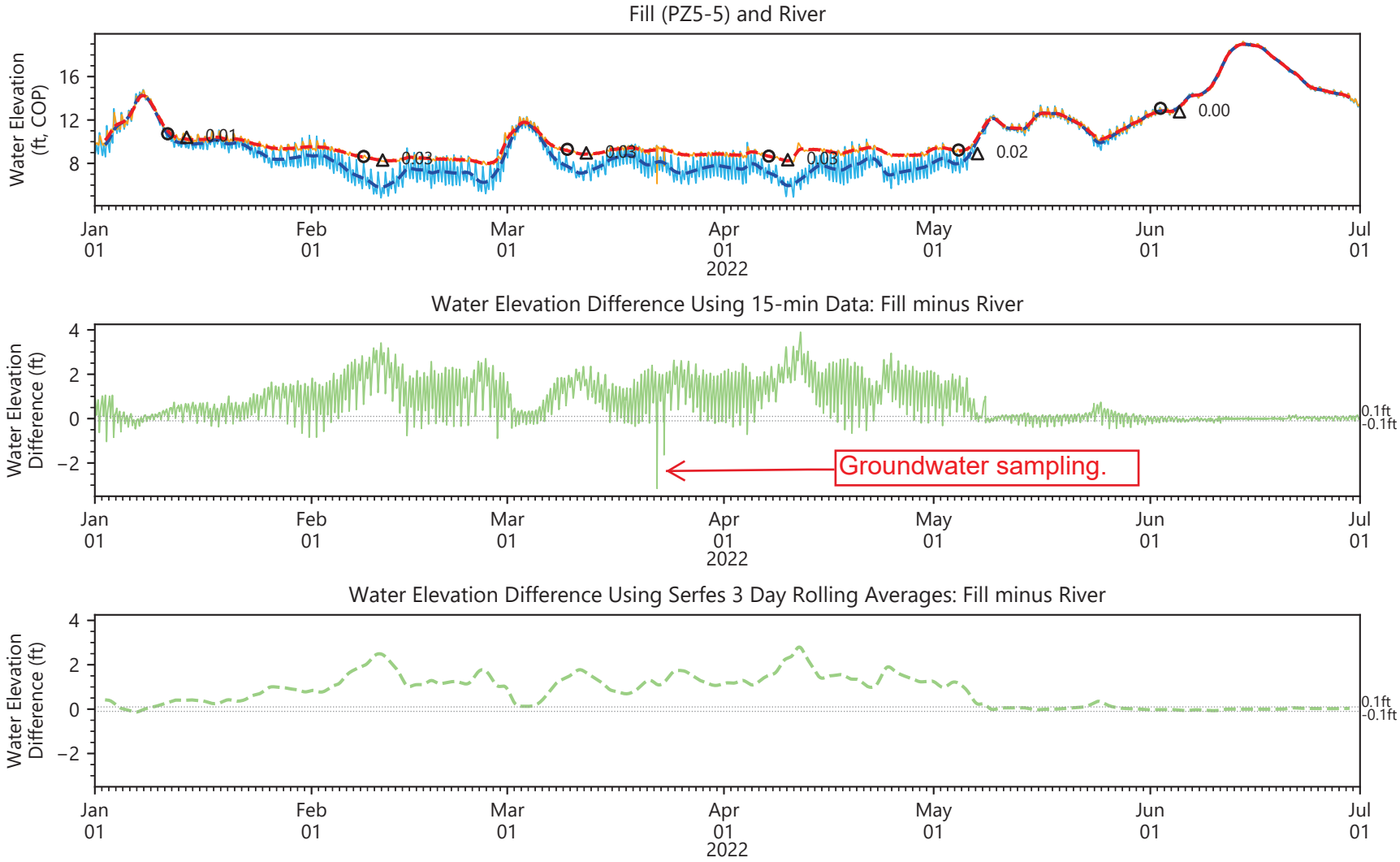
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.6
Groundwater Elevation Differences
NW Natural Gasco Site

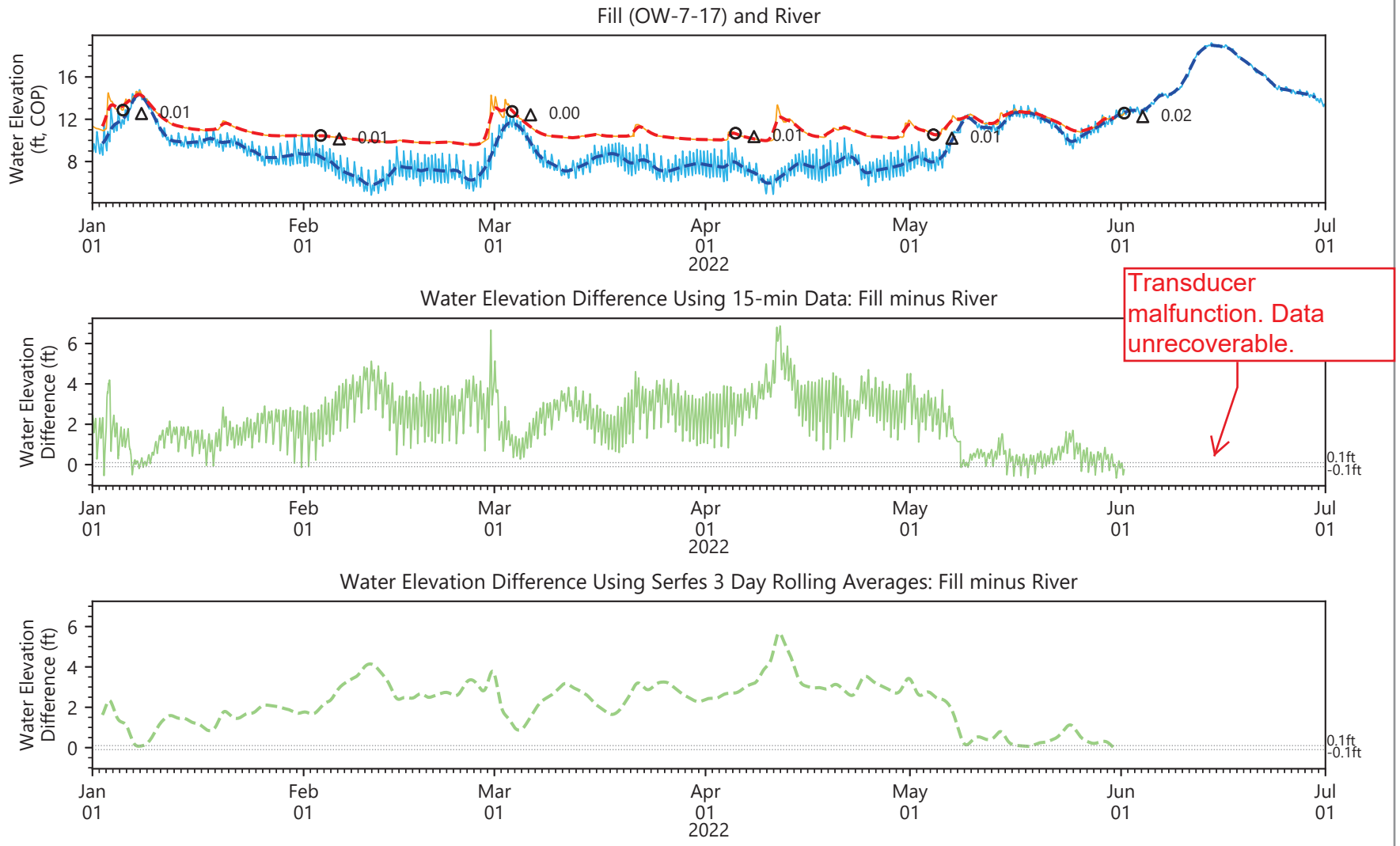


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.7
Groundwater Elevation Differences
NW Natural Gasco Site



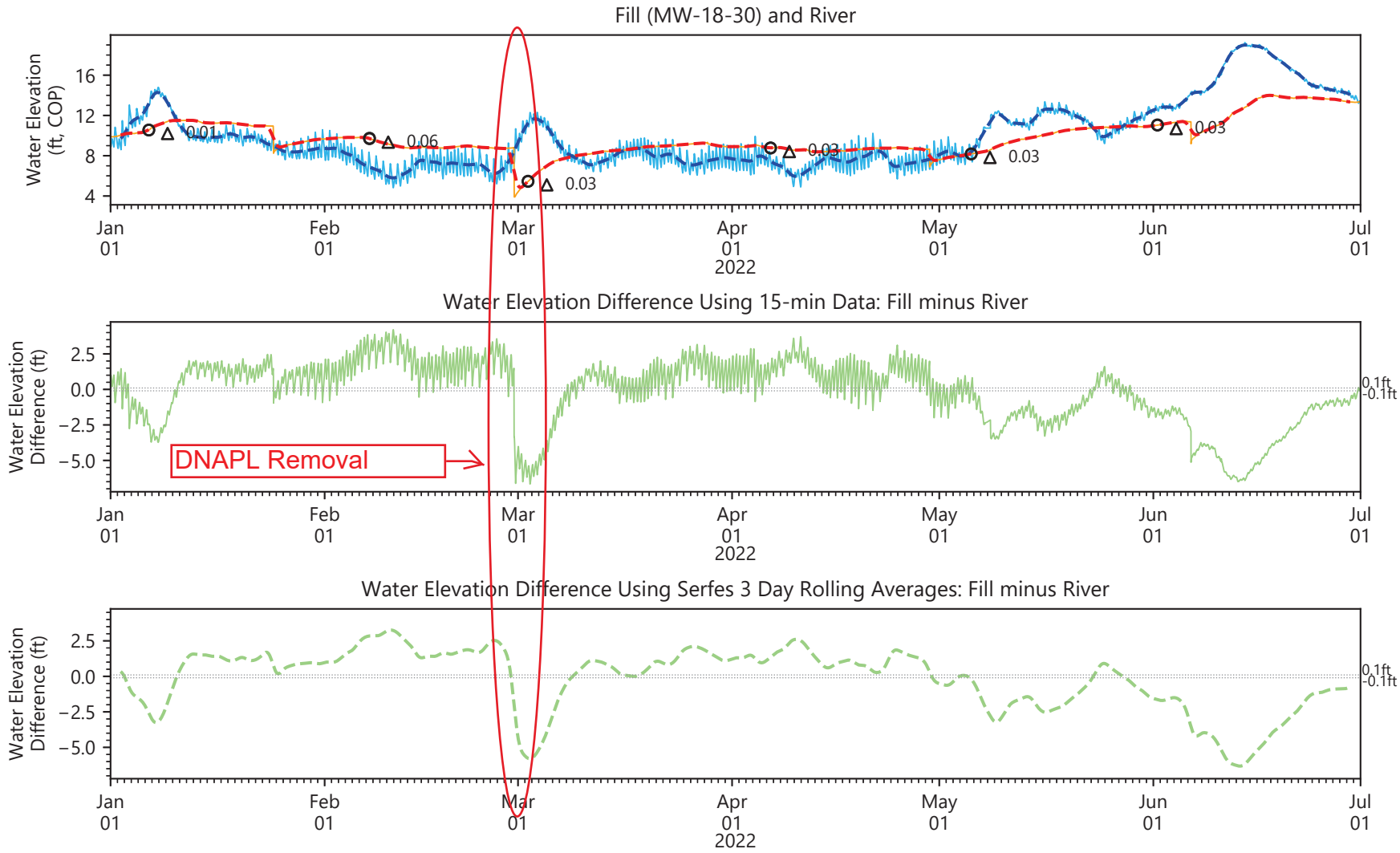
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.8
Groundwater Elevation Differences
NW Natural Gasco Site

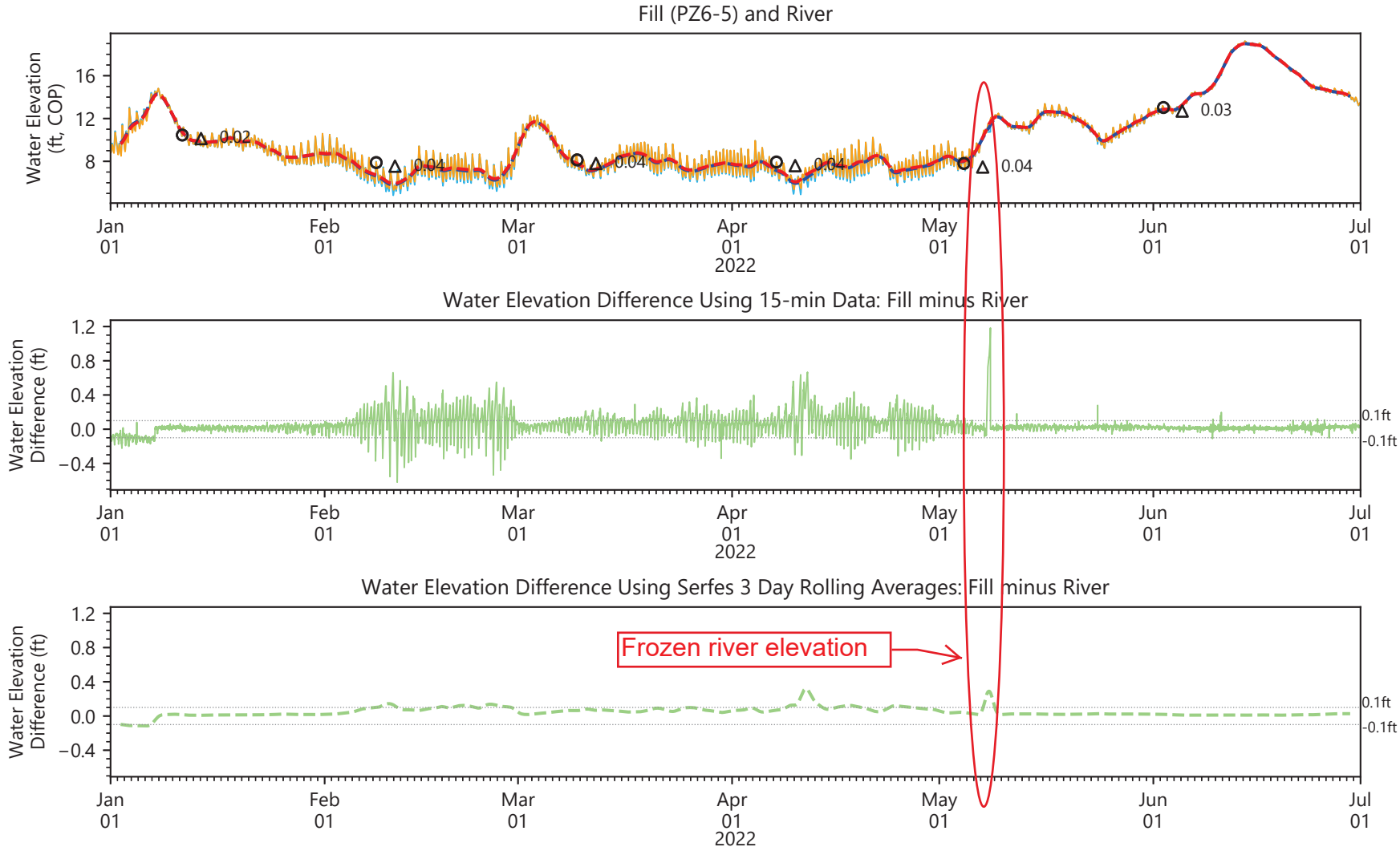


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.9
Groundwater Elevation Differences
NW Natural Gasco Site



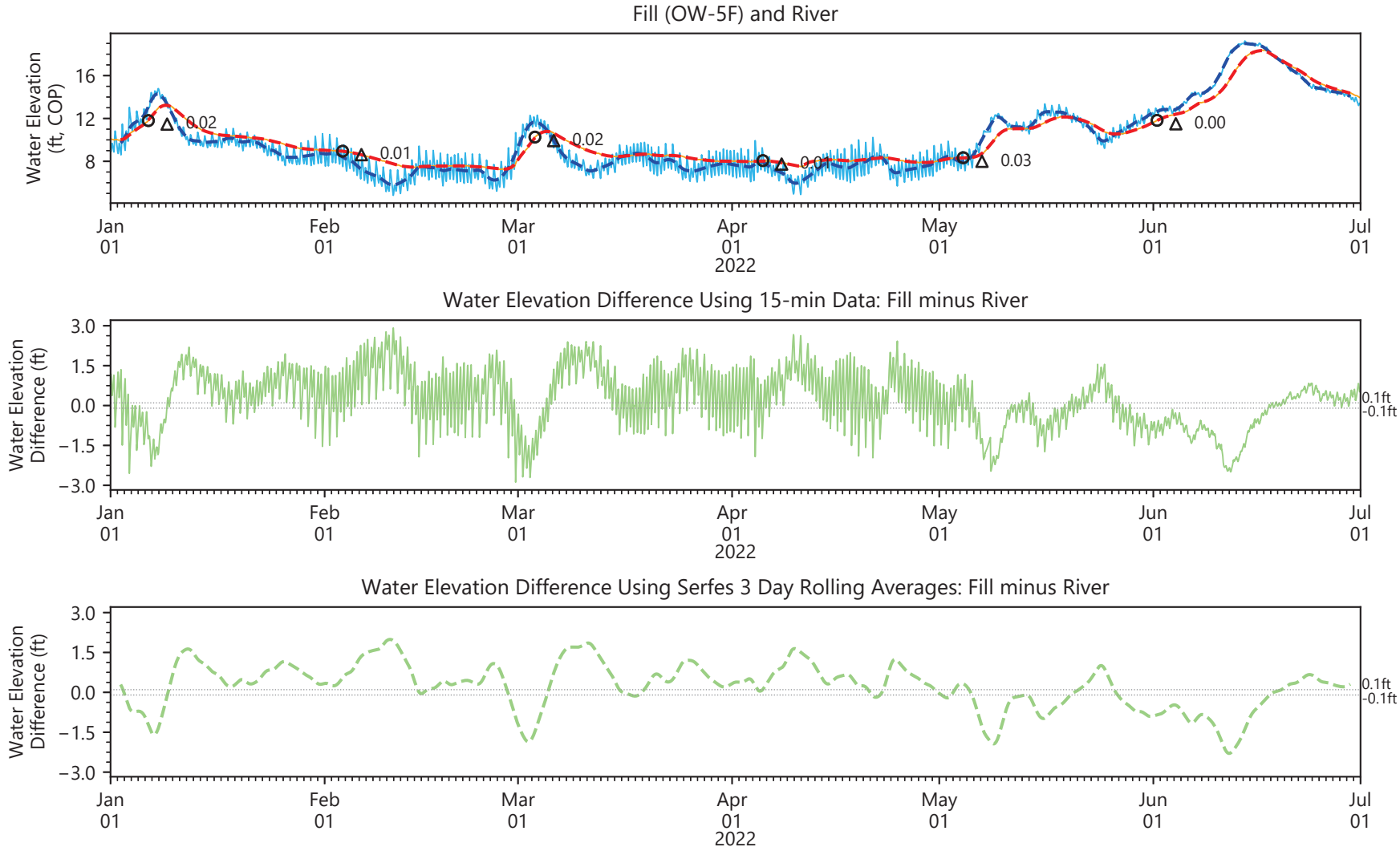
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.10
Groundwater Elevation Differences
NW Natural Gasco Site

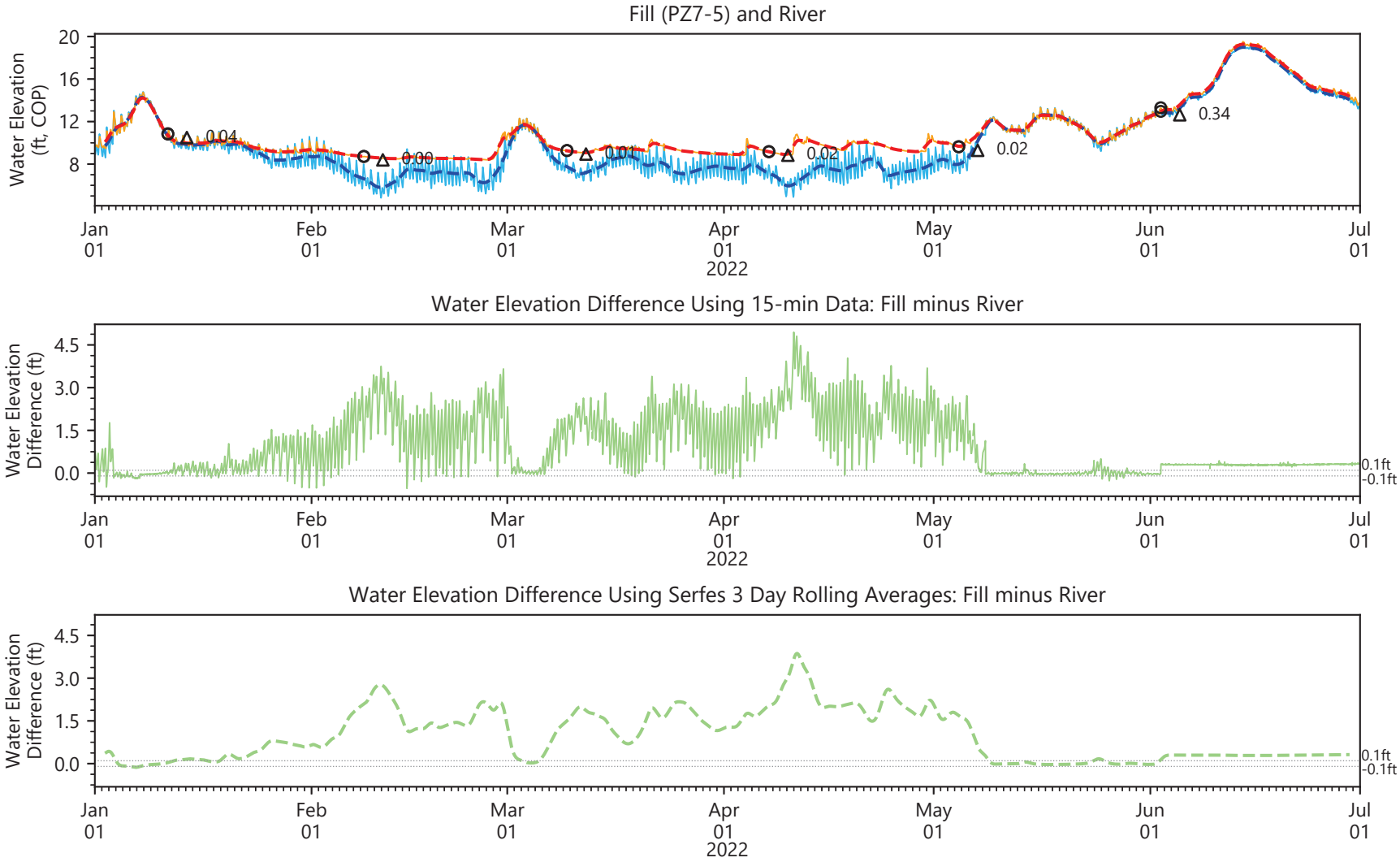


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.11
Groundwater Elevation Differences
NW Natural Gasco Site

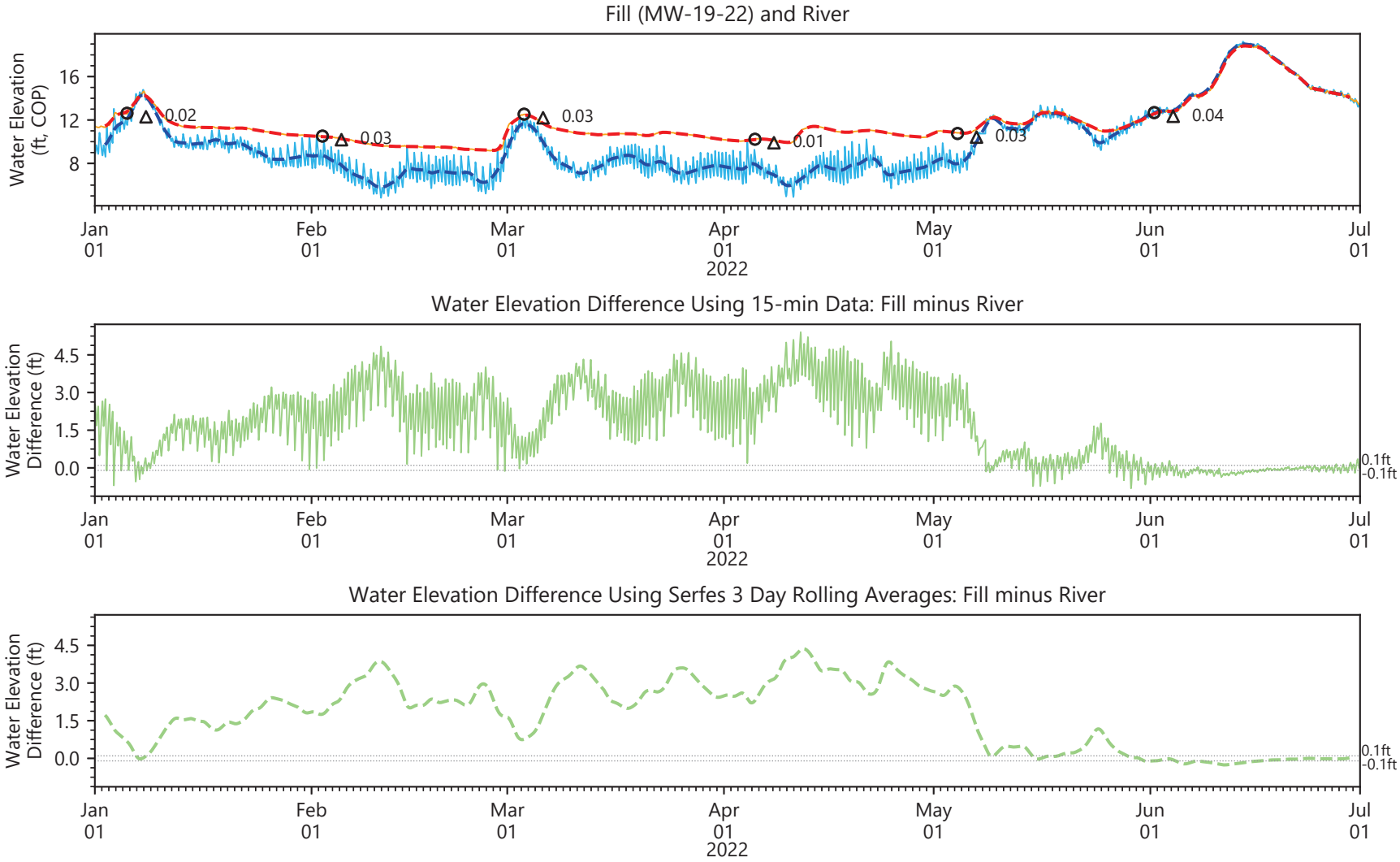


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.12
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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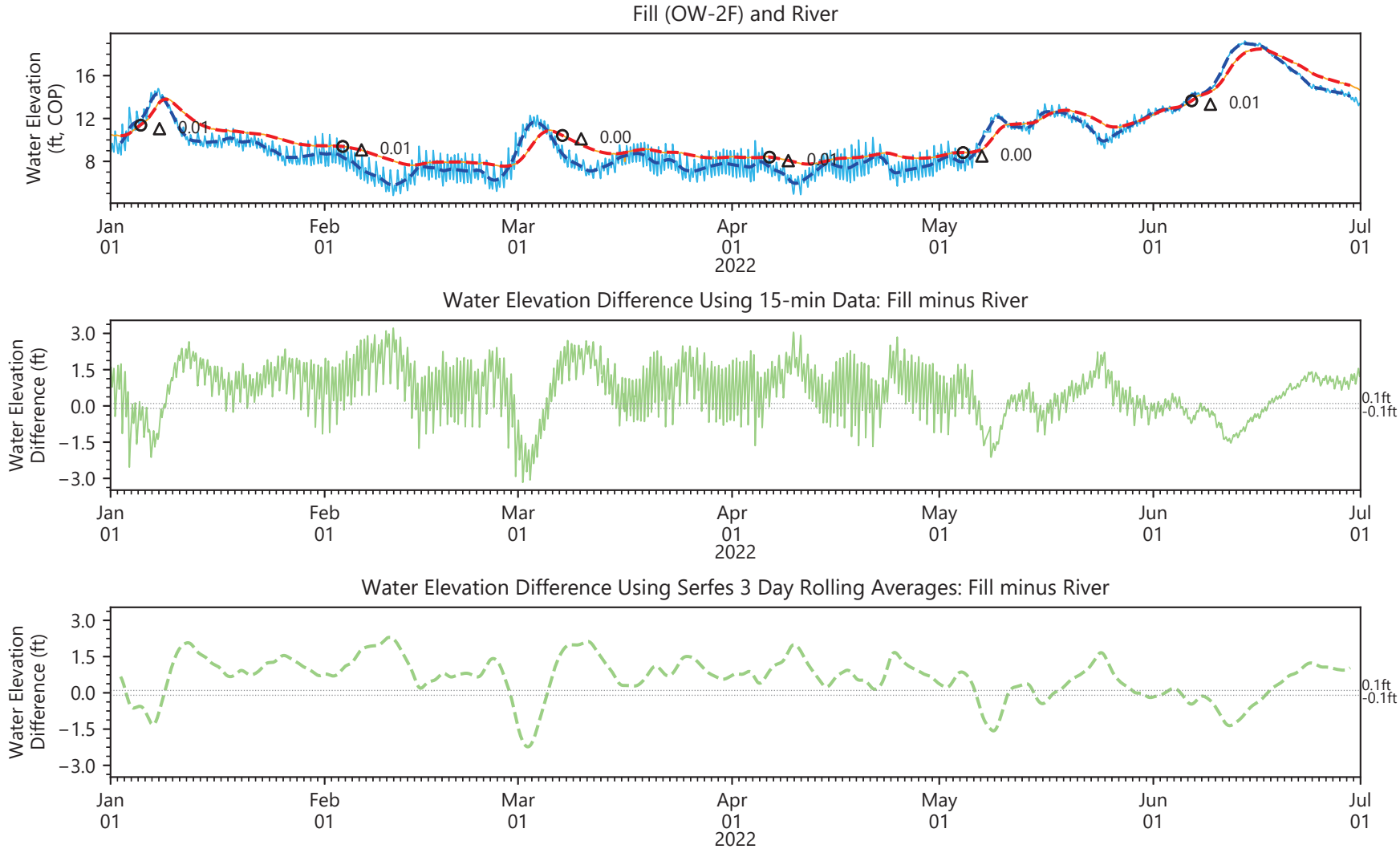
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.13
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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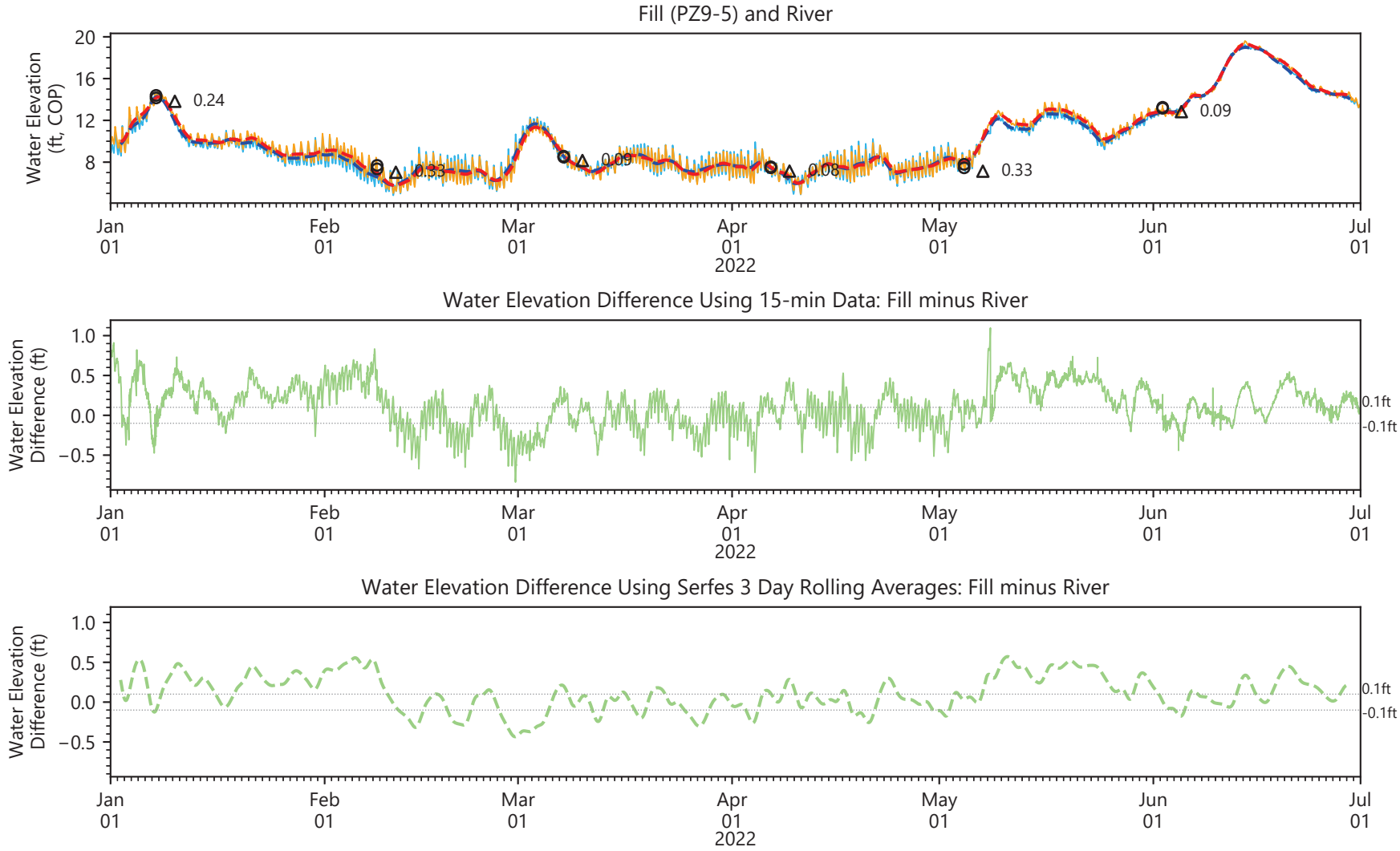
ANCHOR QEA

Figure 4.14
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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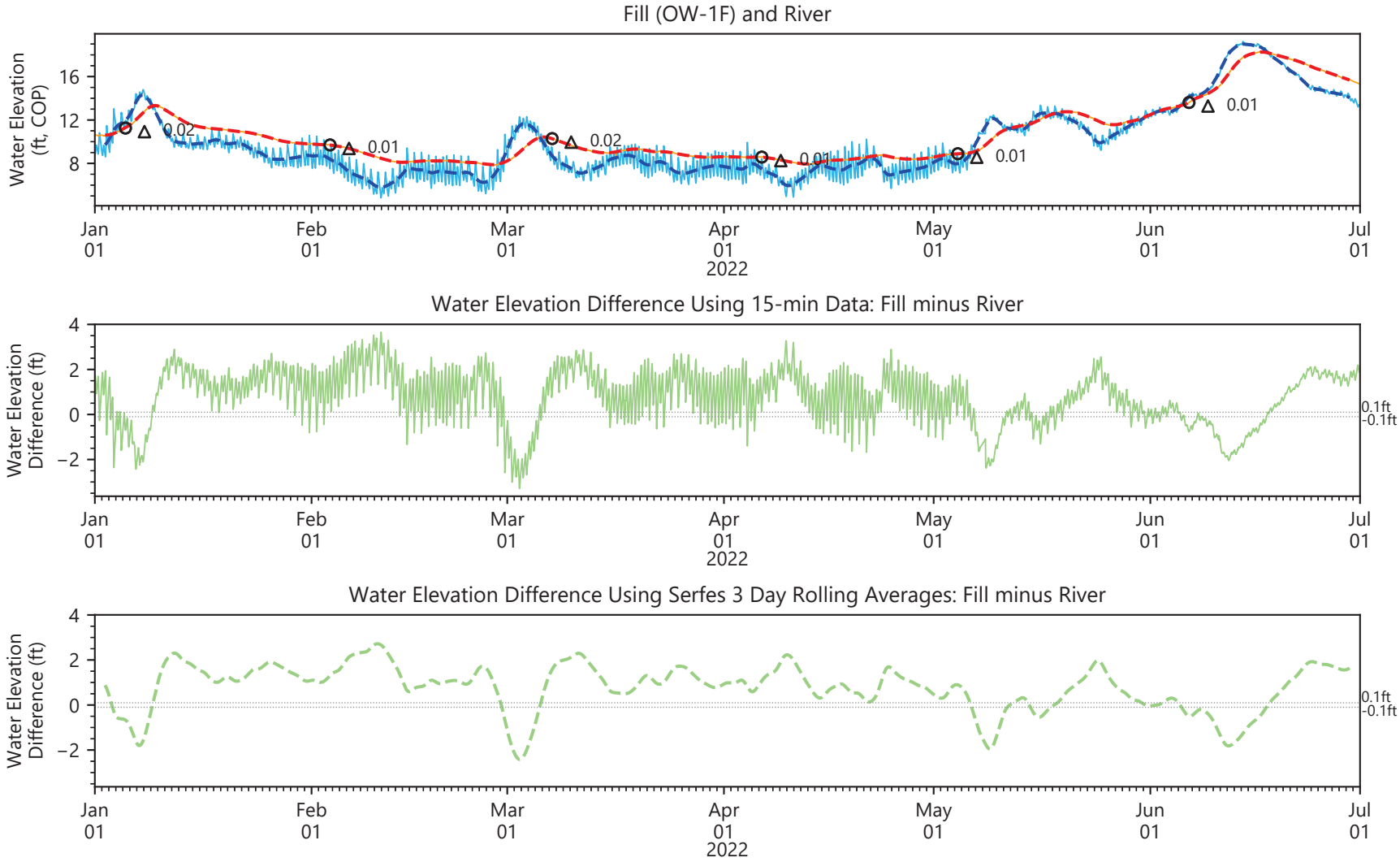
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.15
Groundwater Elevation Differences
NW Natural Gasco Site



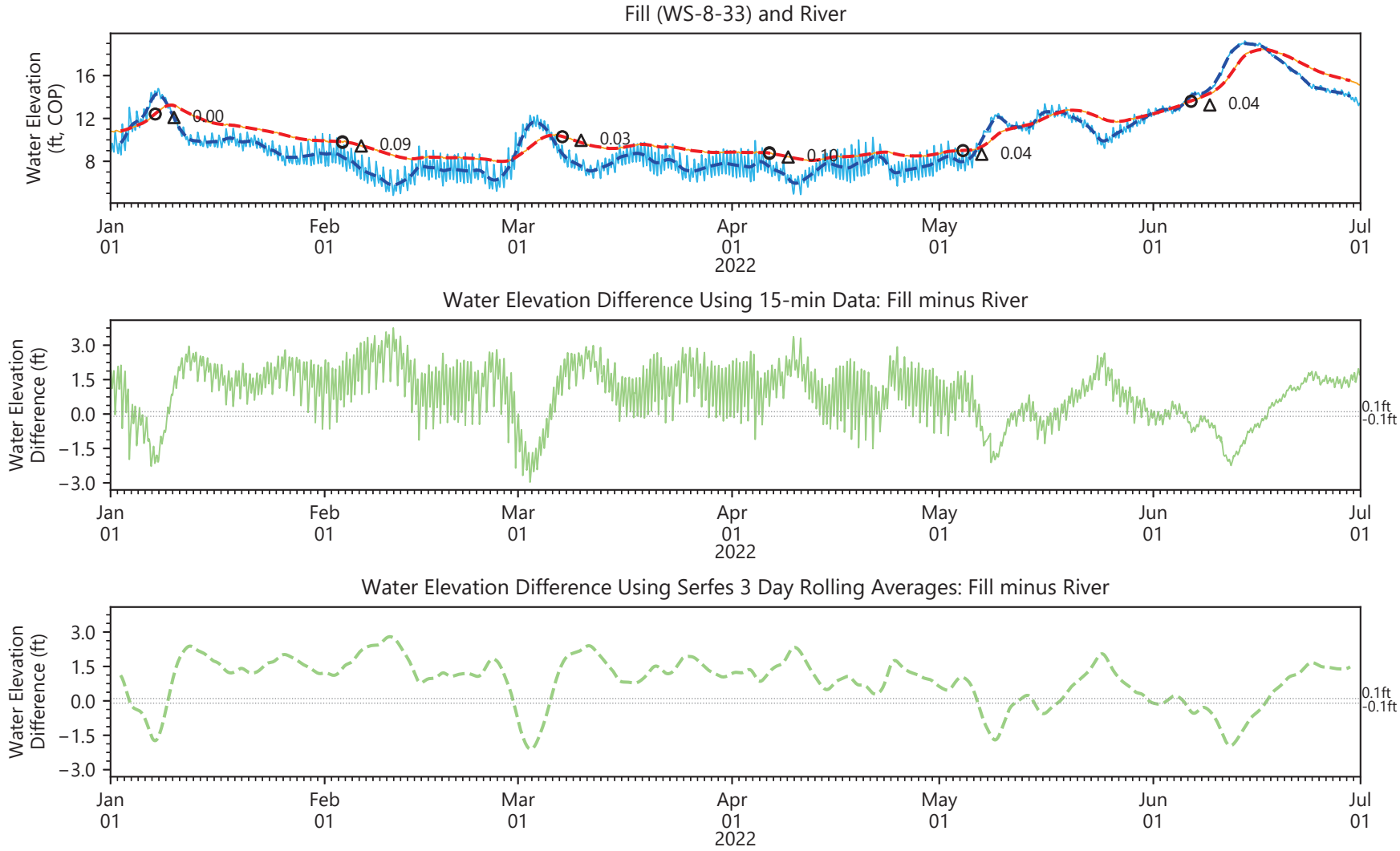
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.16
Groundwater Elevation Differences
NW Natural Gasco Site



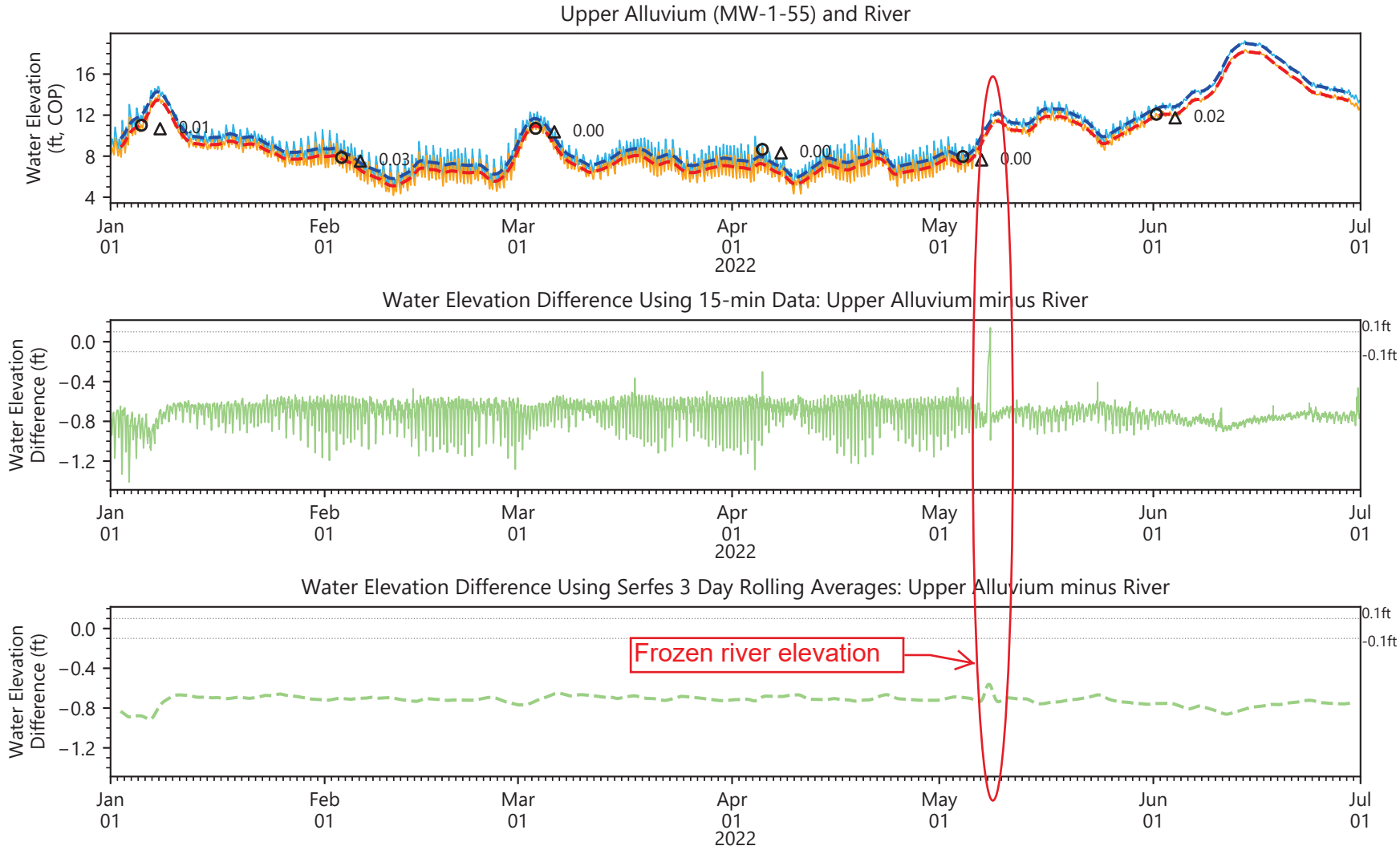
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.17
Groundwater Elevation Differences
NW Natural Gasco Site



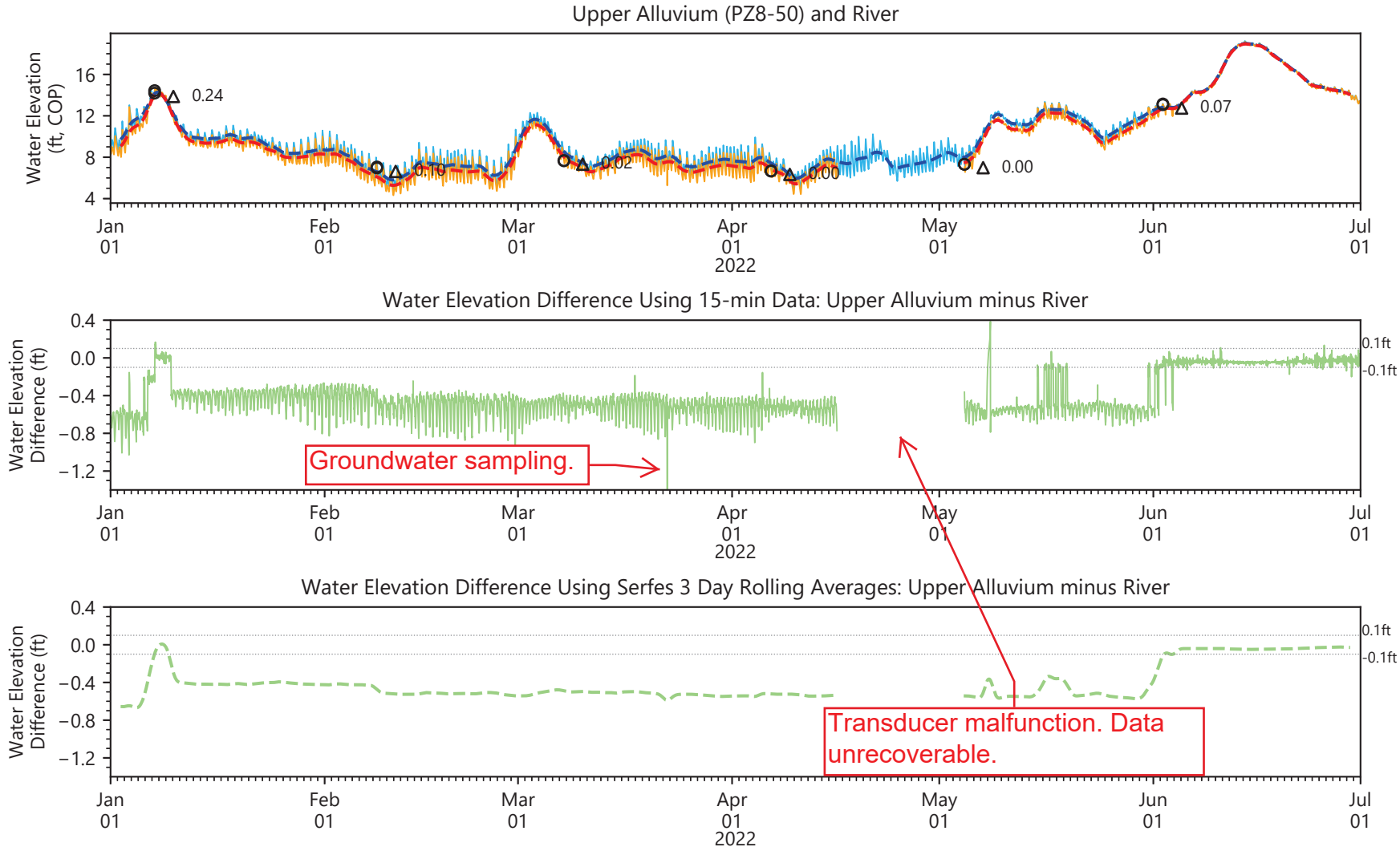
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.18
Groundwater Elevation Differences
NW Natural Gasco Site

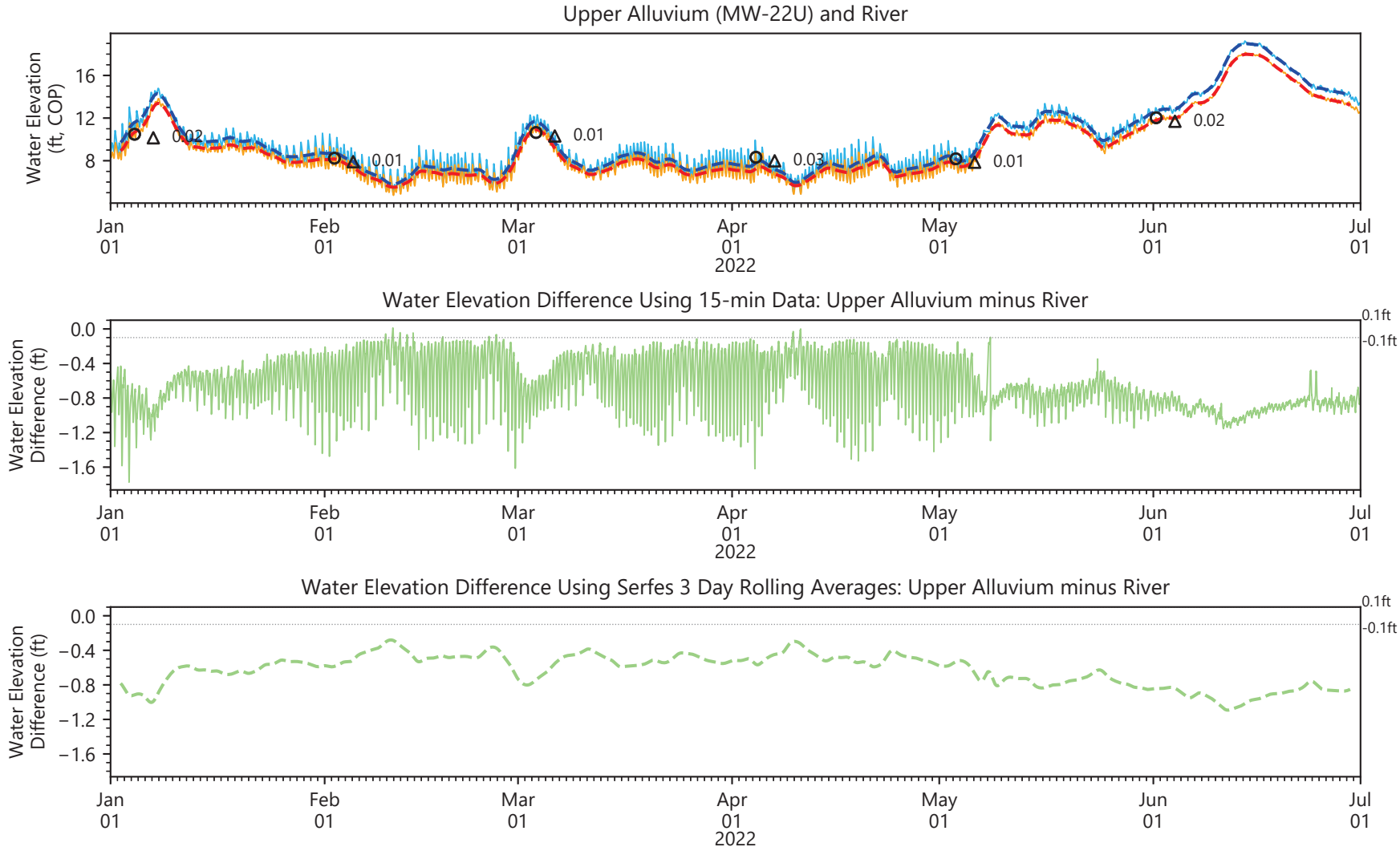


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.19
Groundwater Elevation Differences
NW Natural Gasco Site

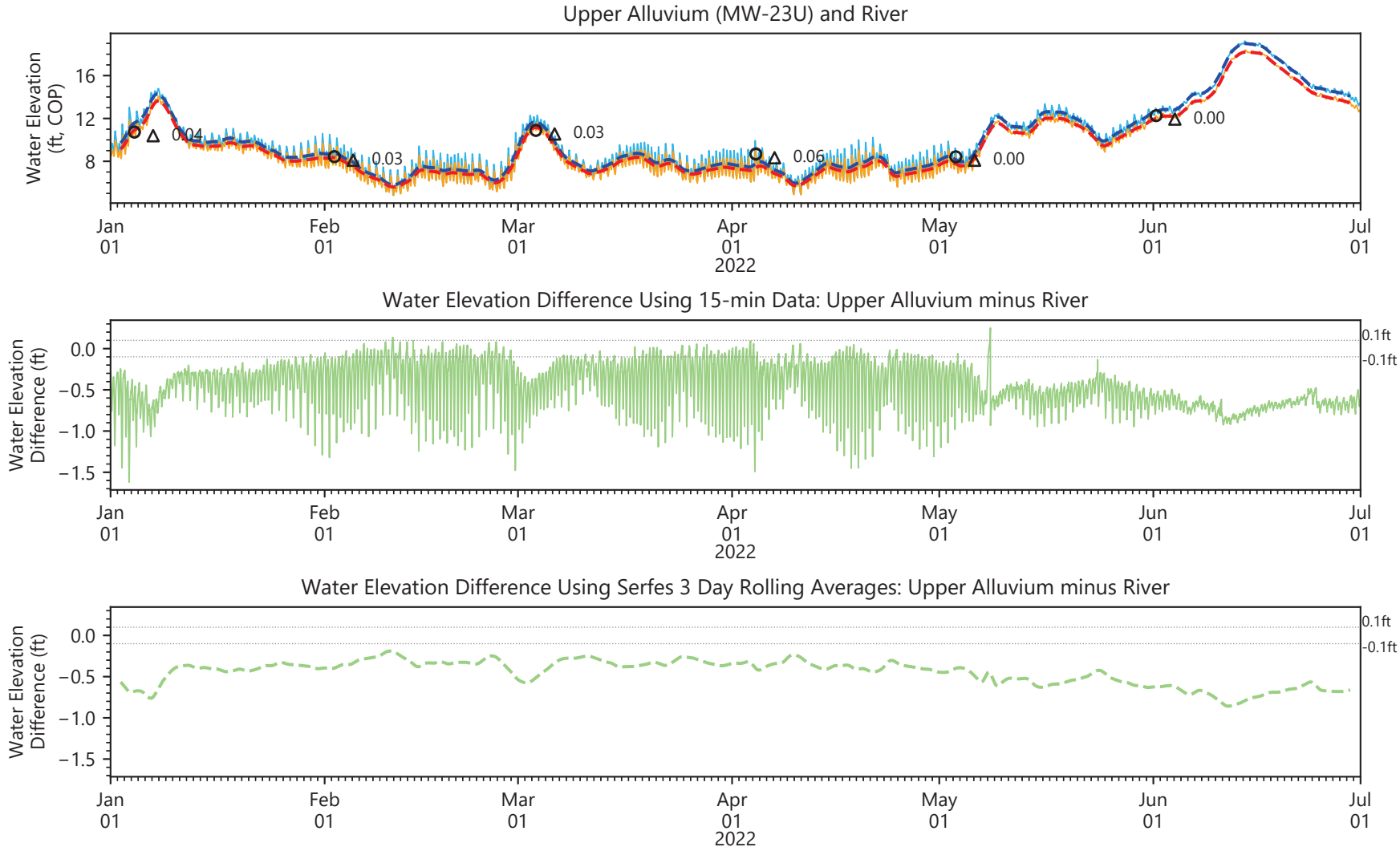


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.20
Groundwater Elevation Differences
NW Natural Gasco Site

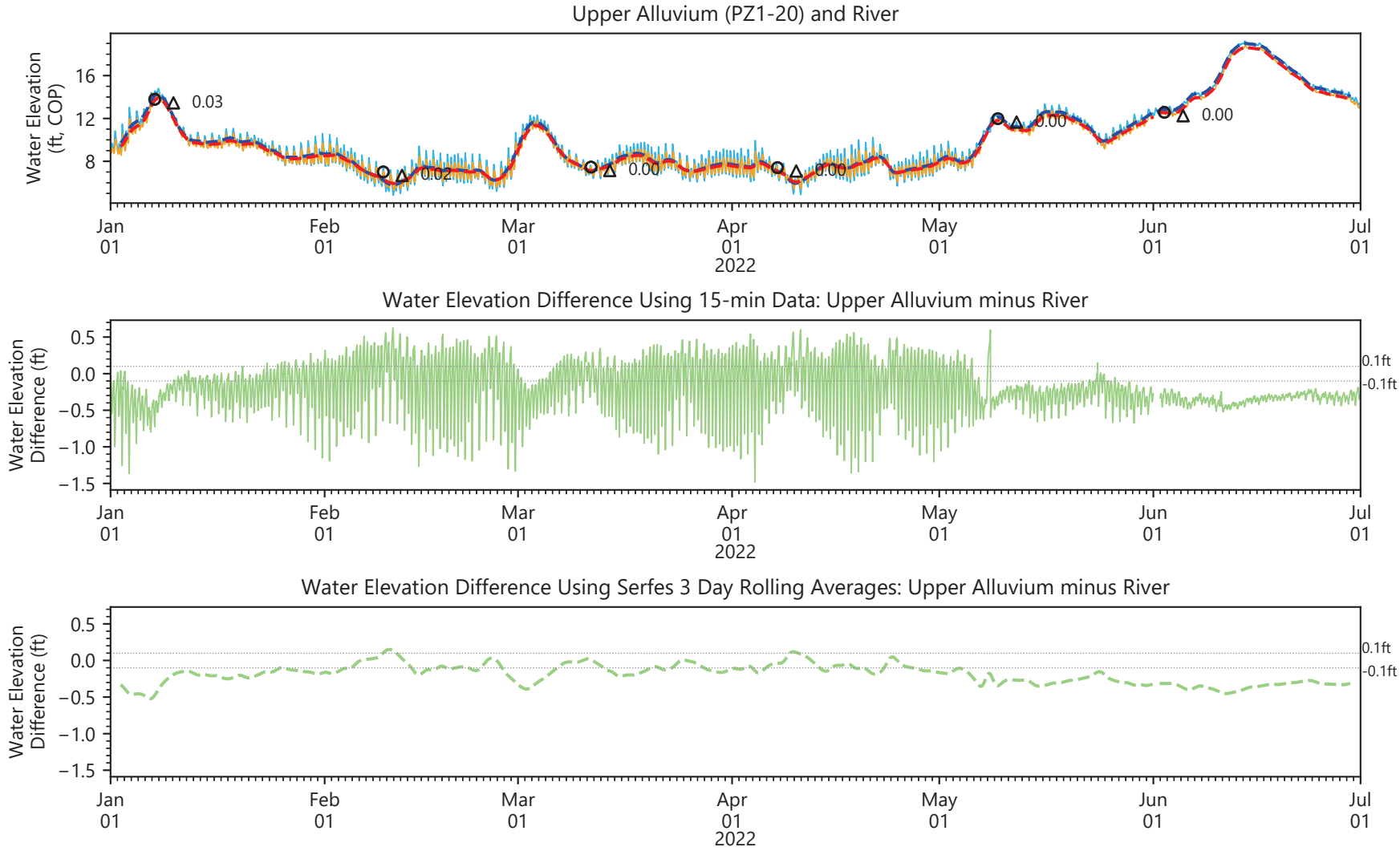


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.21
Groundwater Elevation Differences
NW Natural Gasco Site

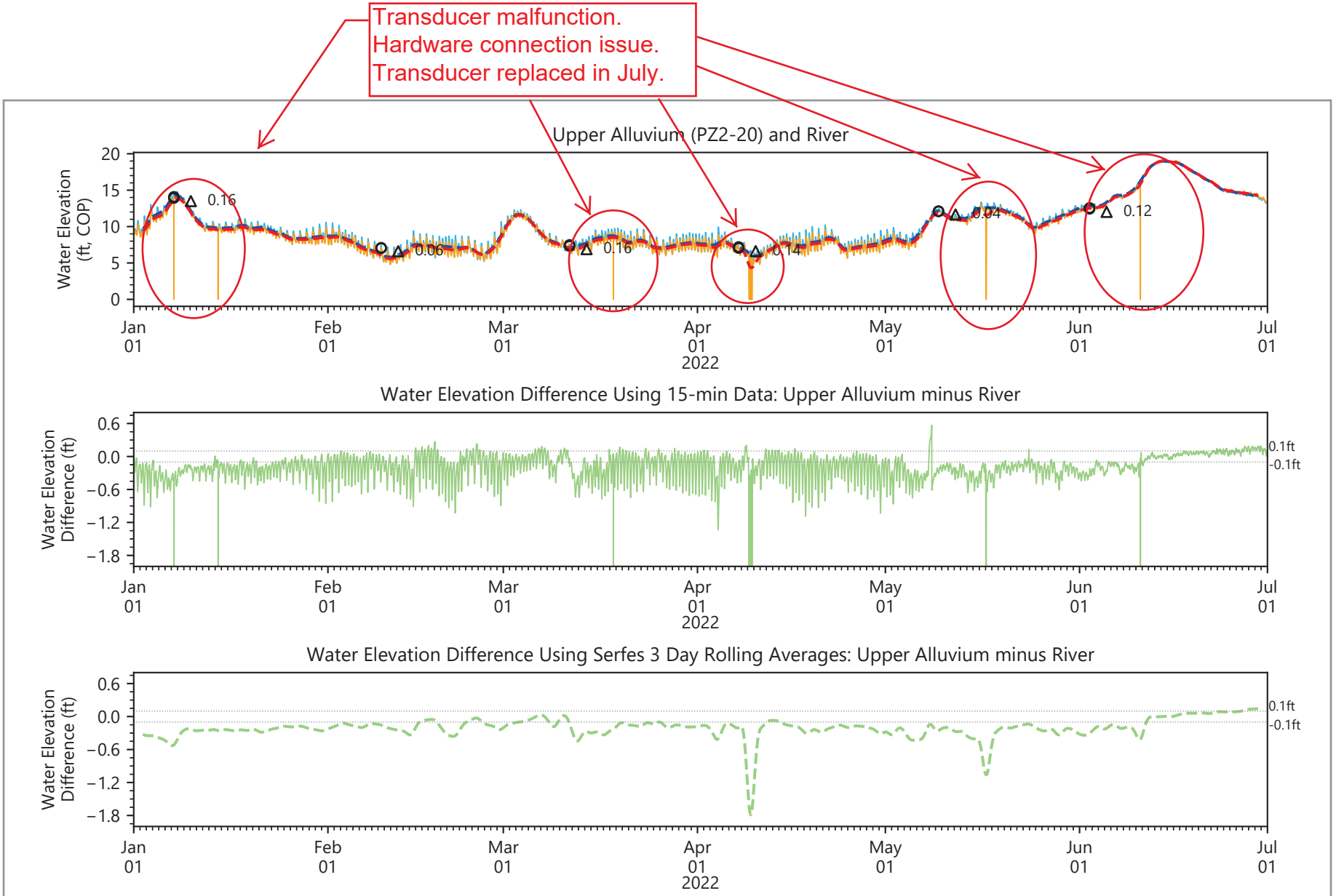


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.22
Groundwater Elevation Differences
NW Natural Gasco Site



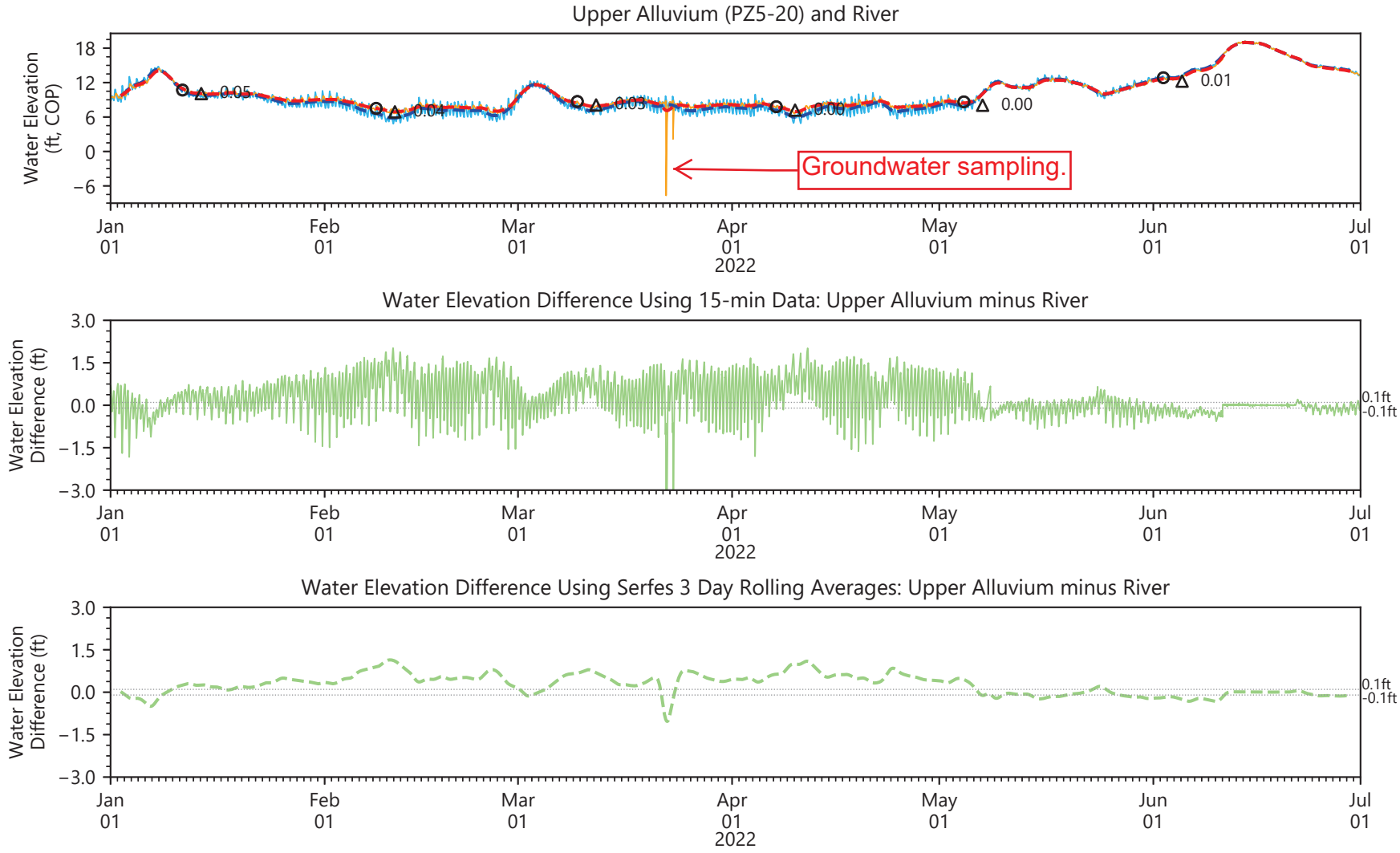
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.23
Groundwater Elevation Differences
NW Natural Gasco Site

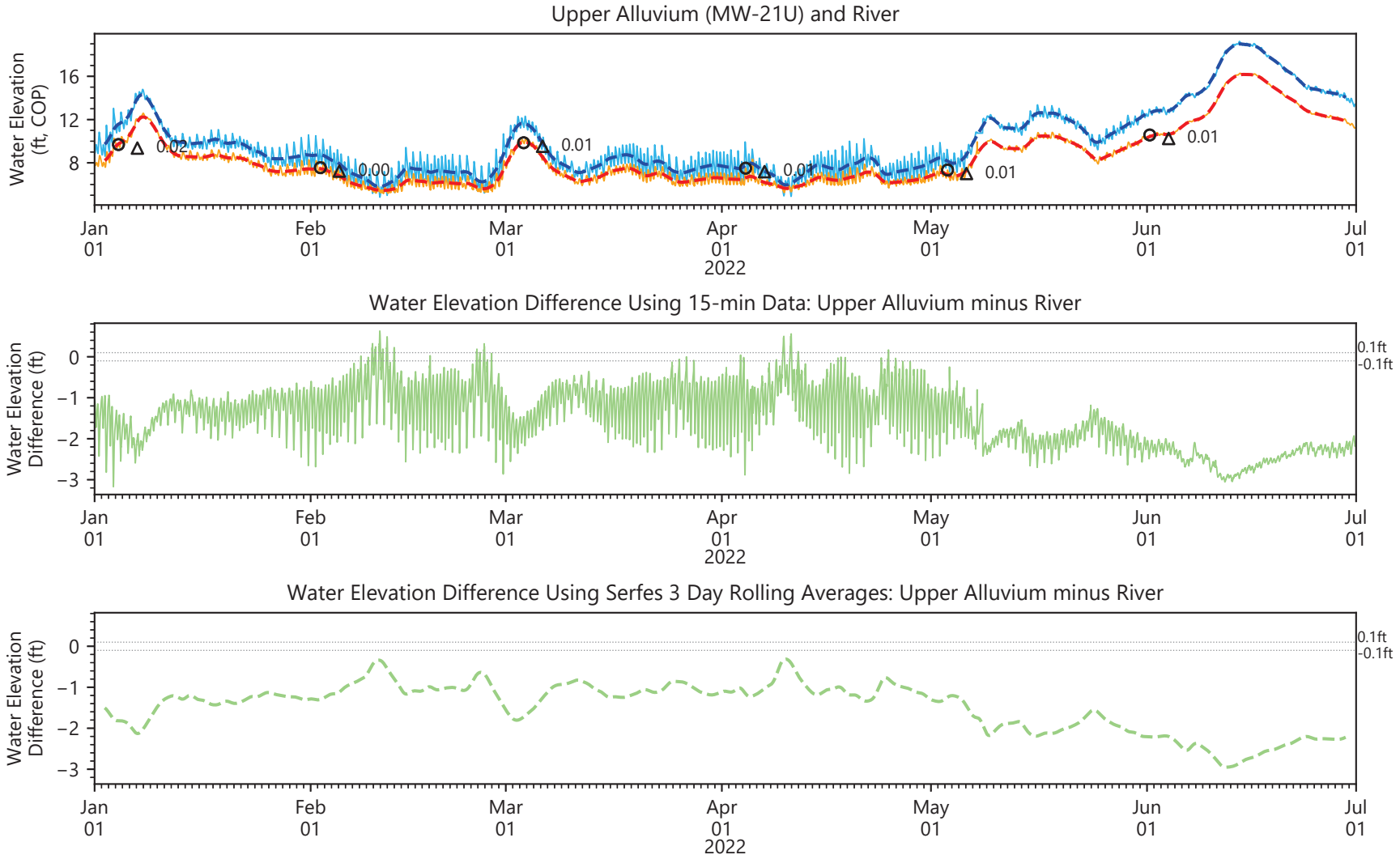


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.24
Groundwater Elevation Differences
NW Natural Gasco Site

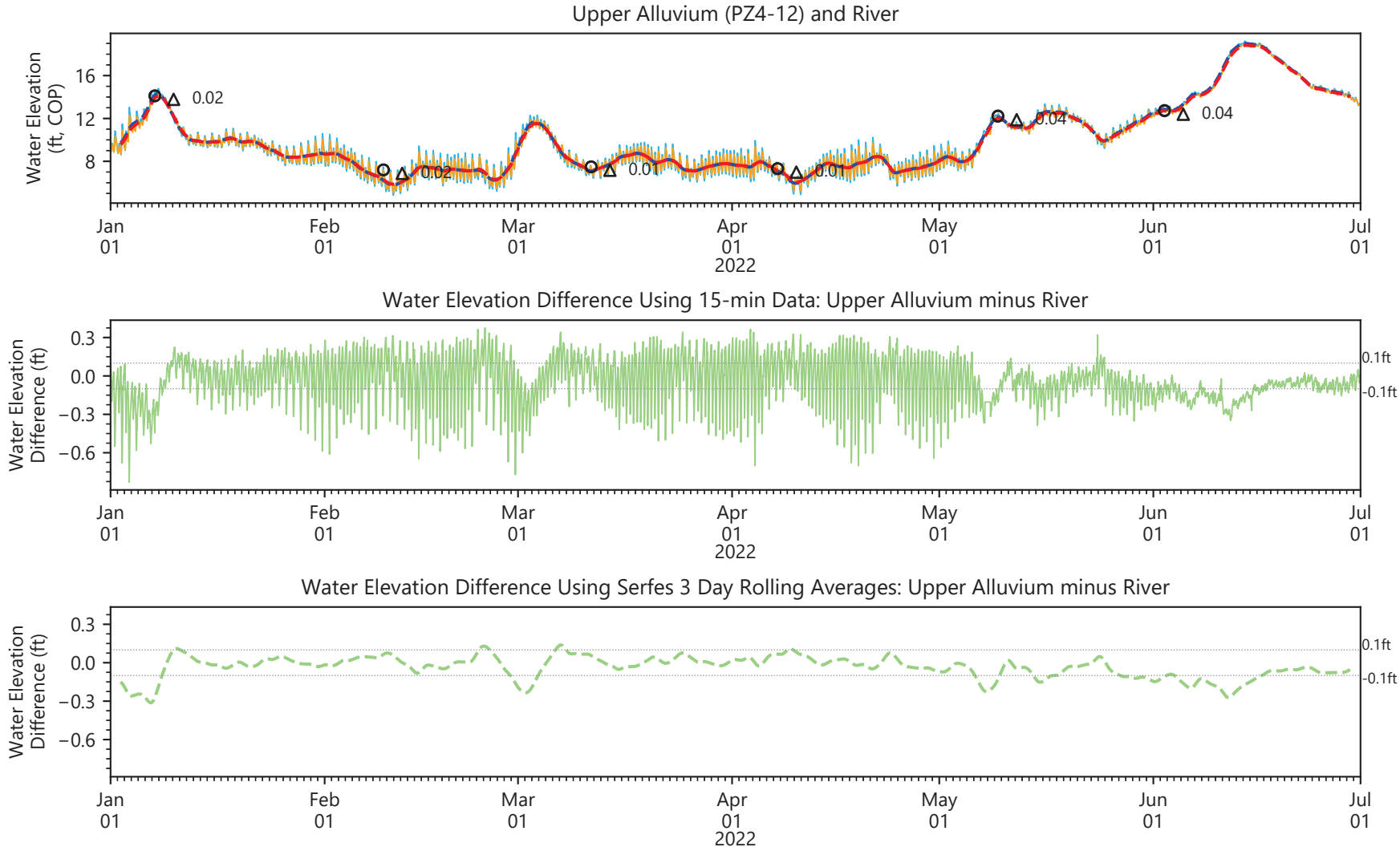


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.25
Groundwater Elevation Differences
NW Natural Gasco Site

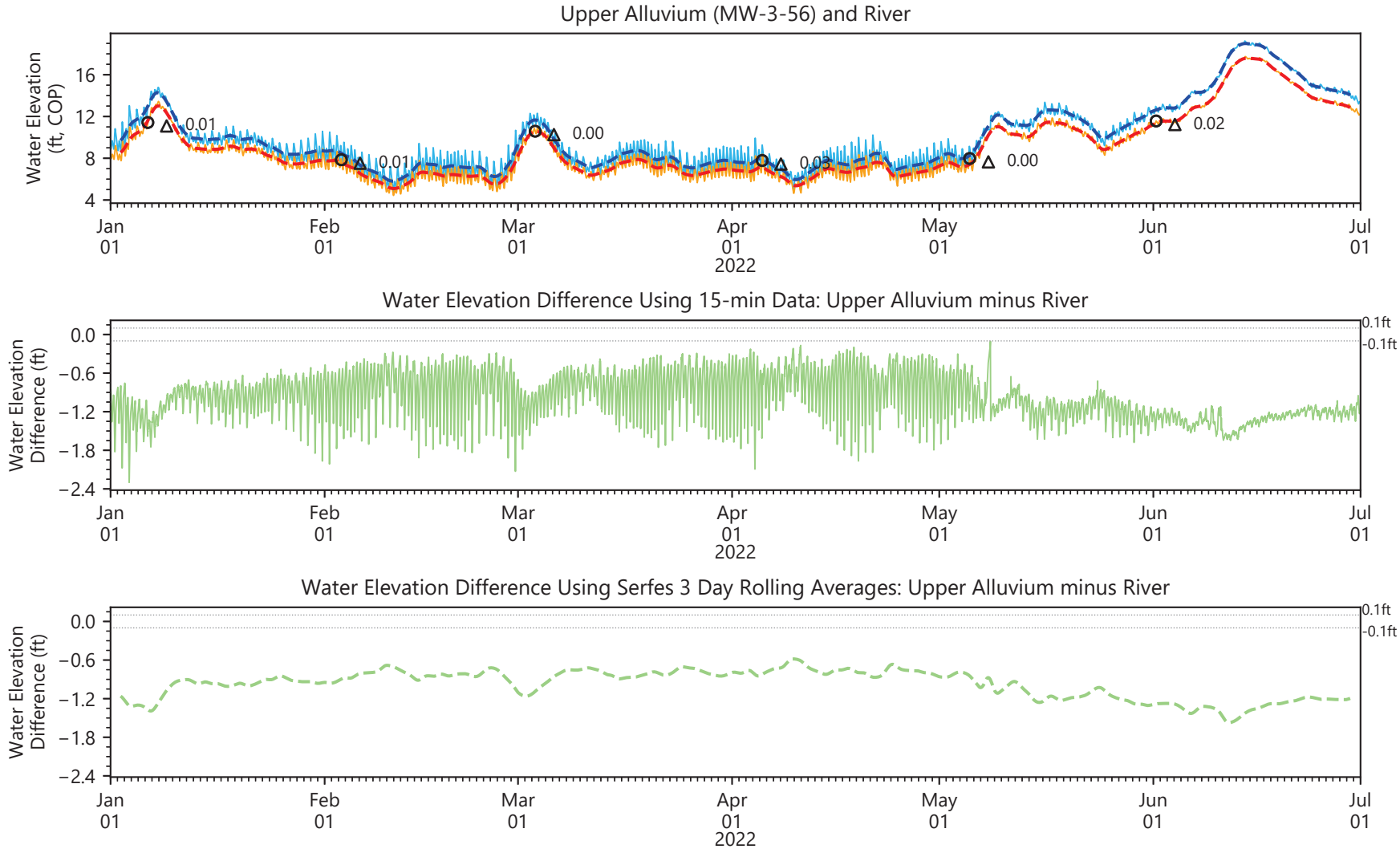


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.26
Groundwater Elevation Differences
NW Natural Gasco Site

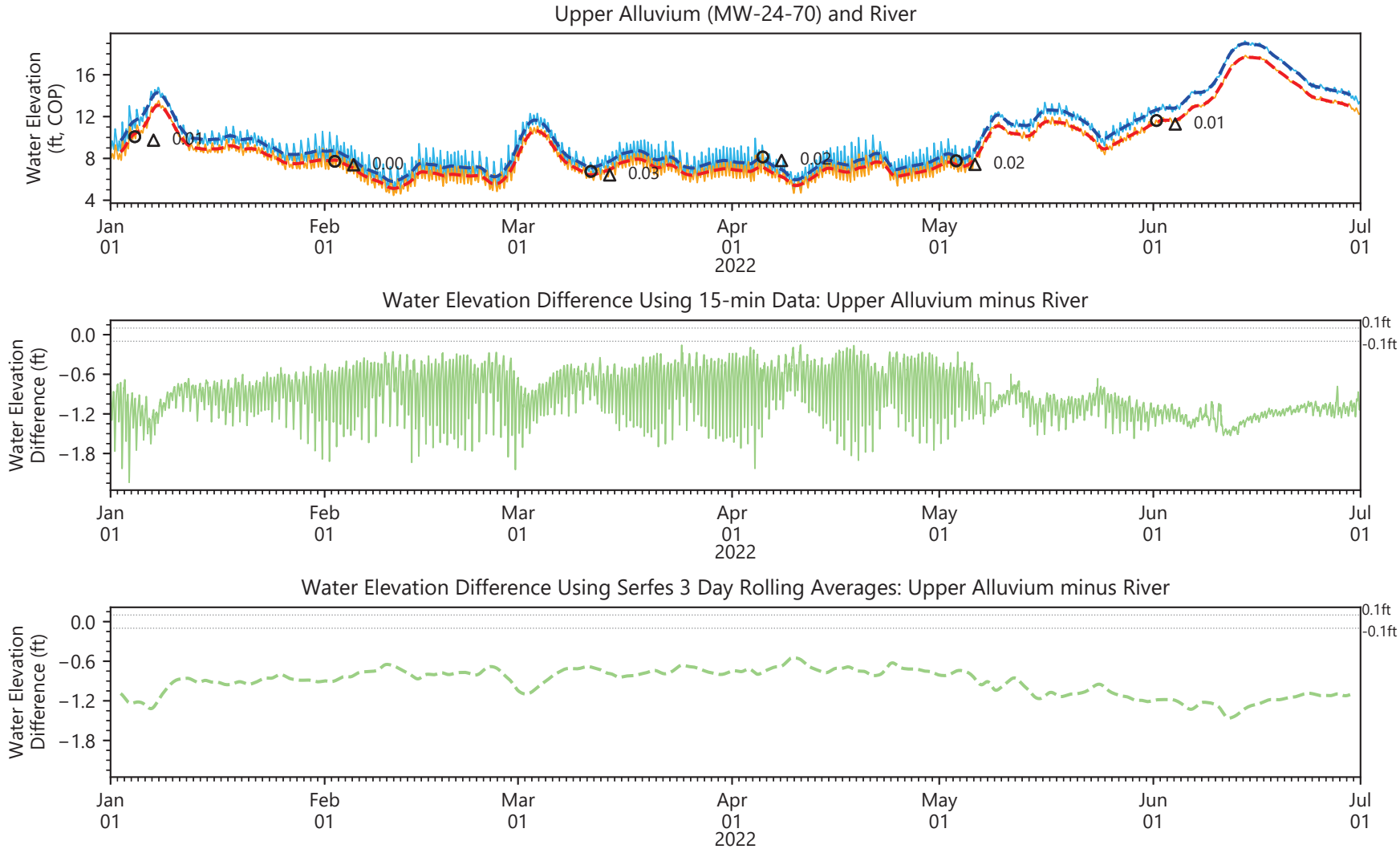


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.27
Groundwater Elevation Differences
NW Natural Gasco Site

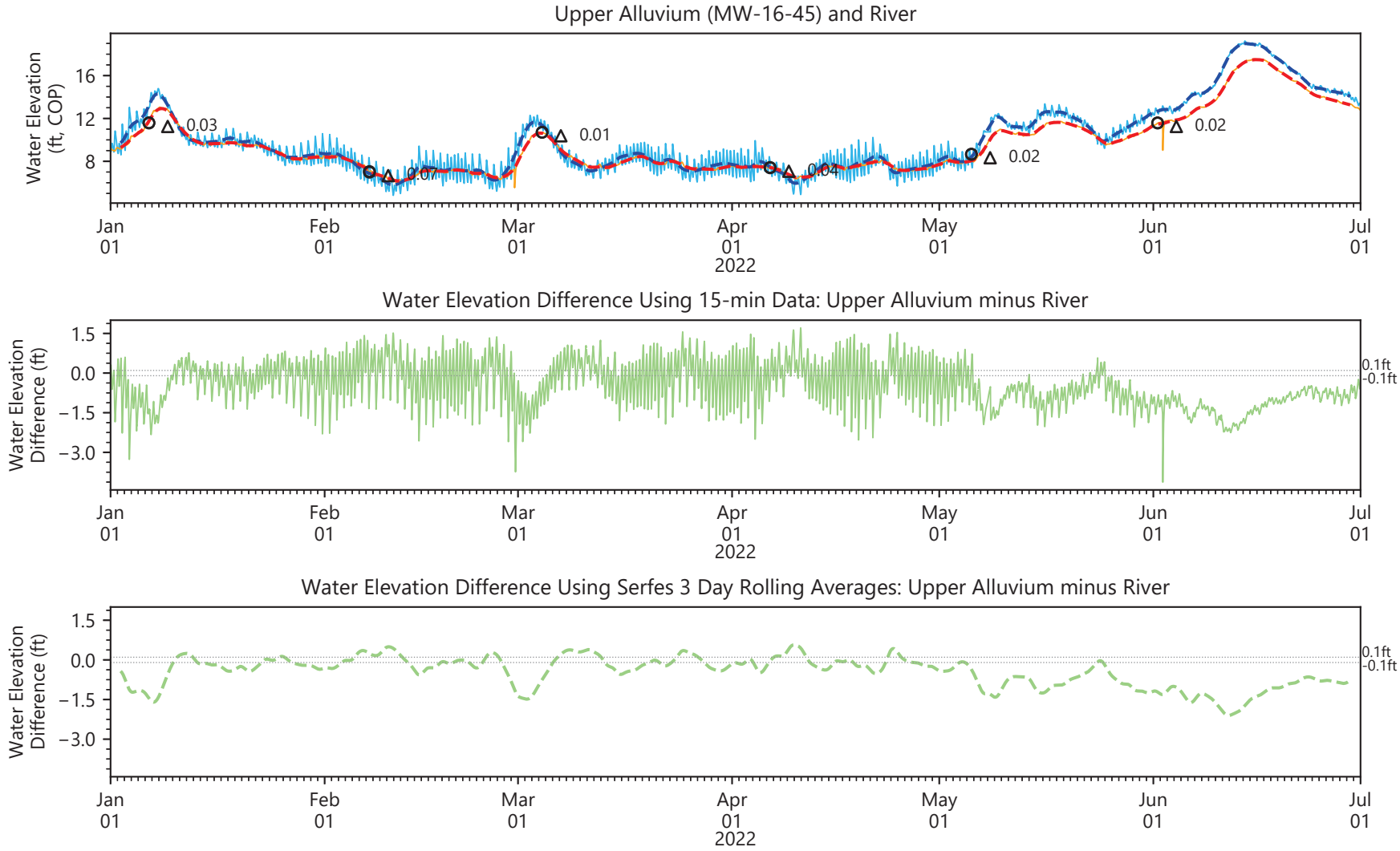


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.28
Groundwater Elevation Differences
NW Natural Gasco Site

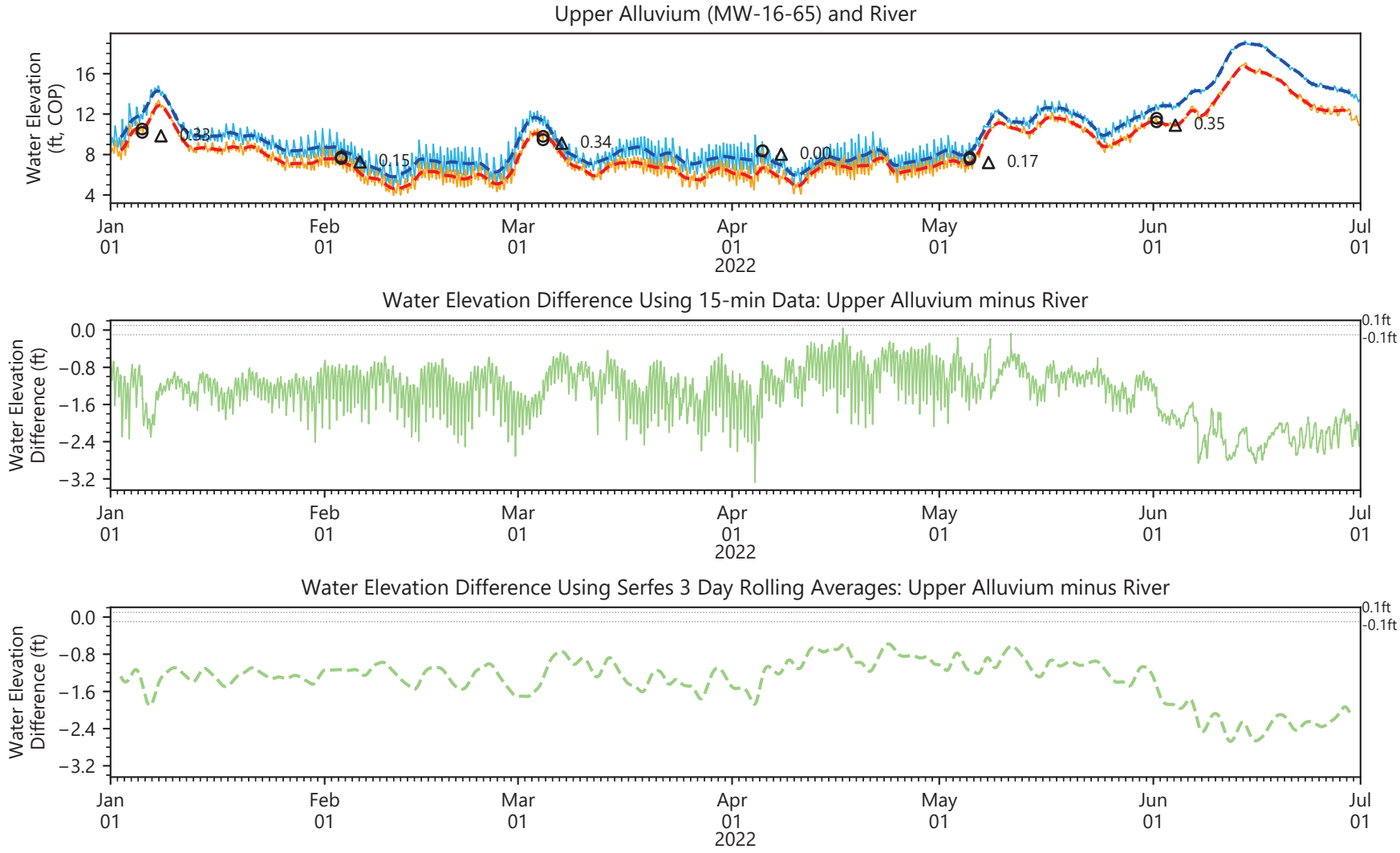


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.29
Groundwater Elevation Differences
NW Natural Gasco Site

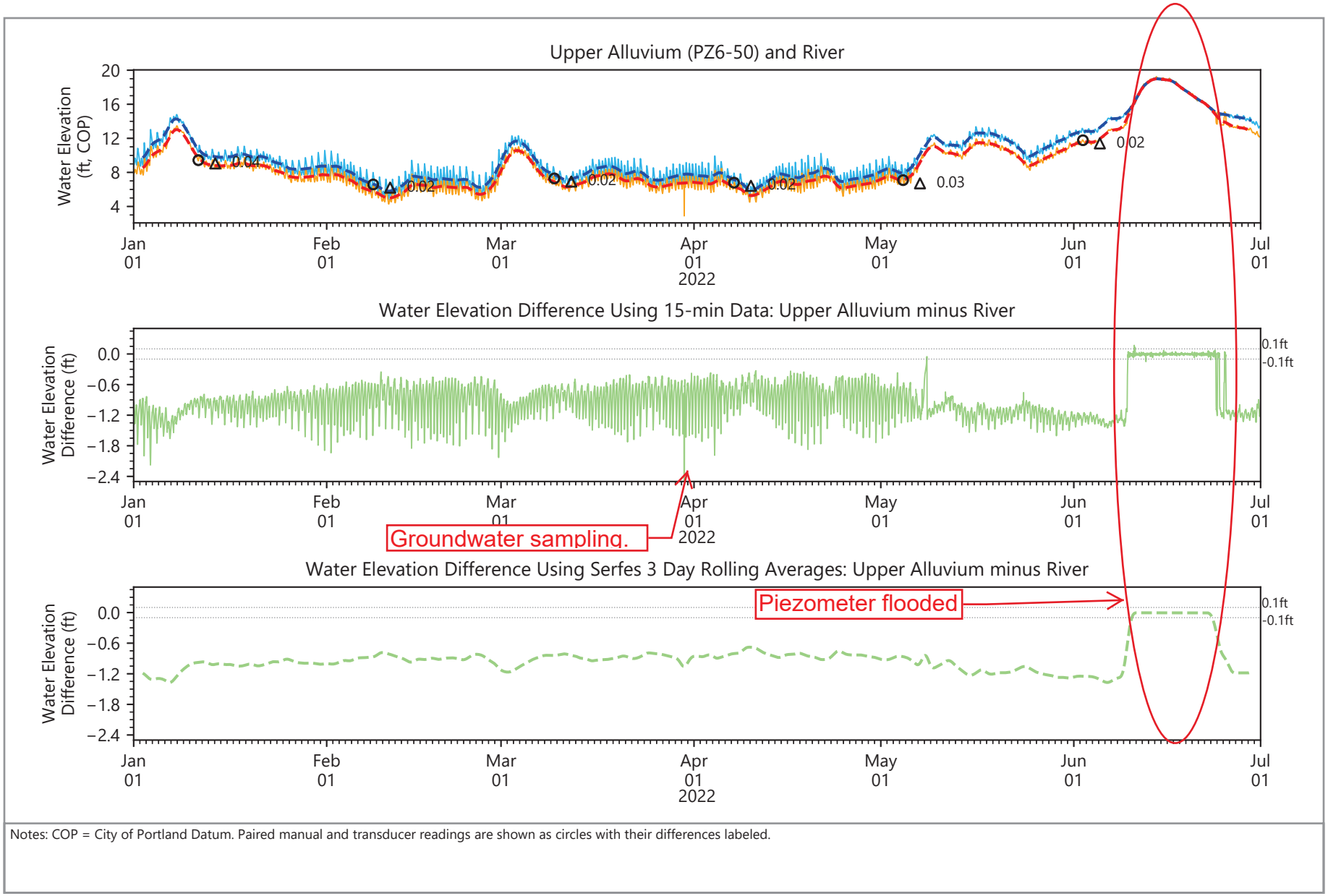


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.30
Groundwater Elevation Differences
NW Natural Gasco Site



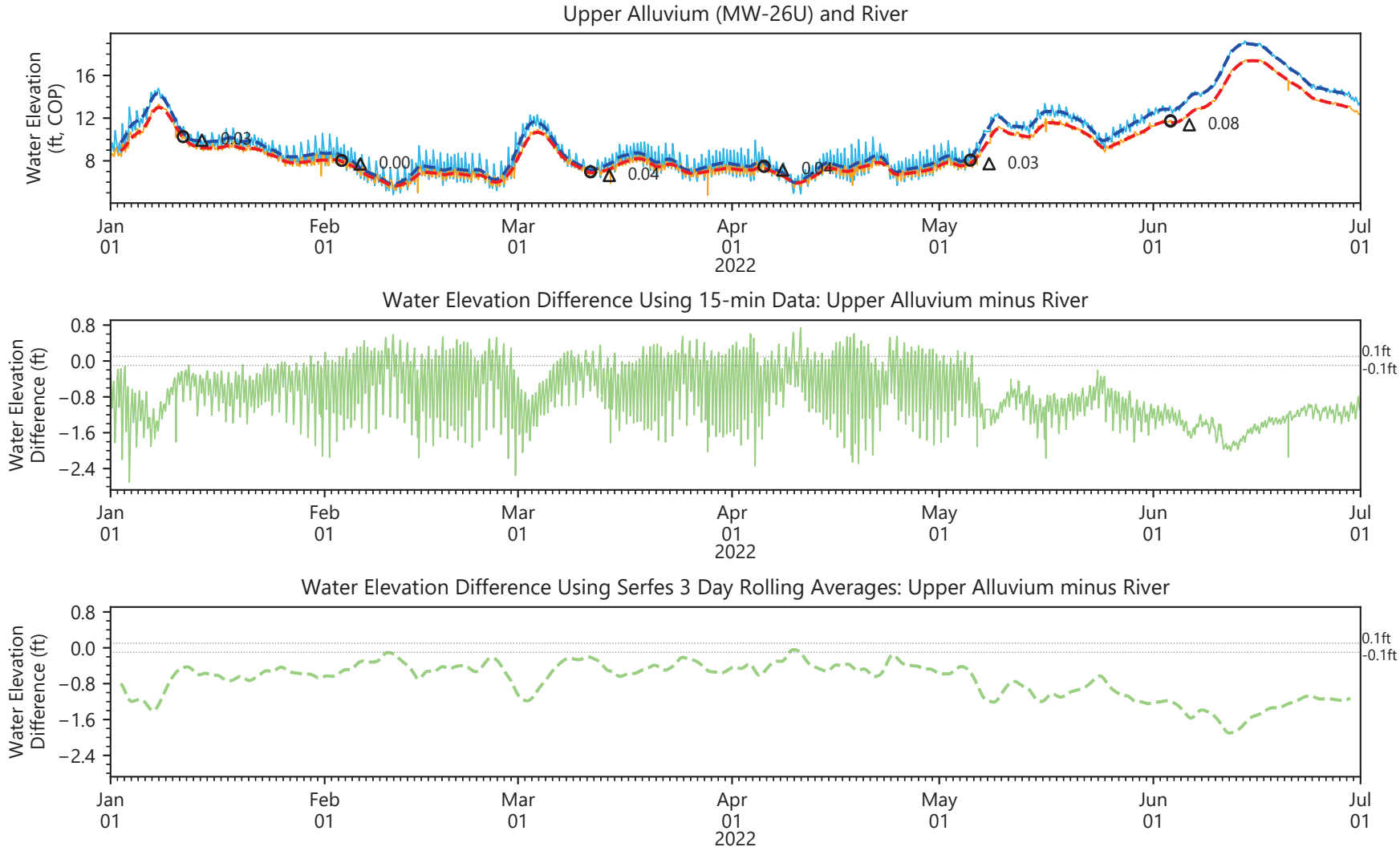
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.31
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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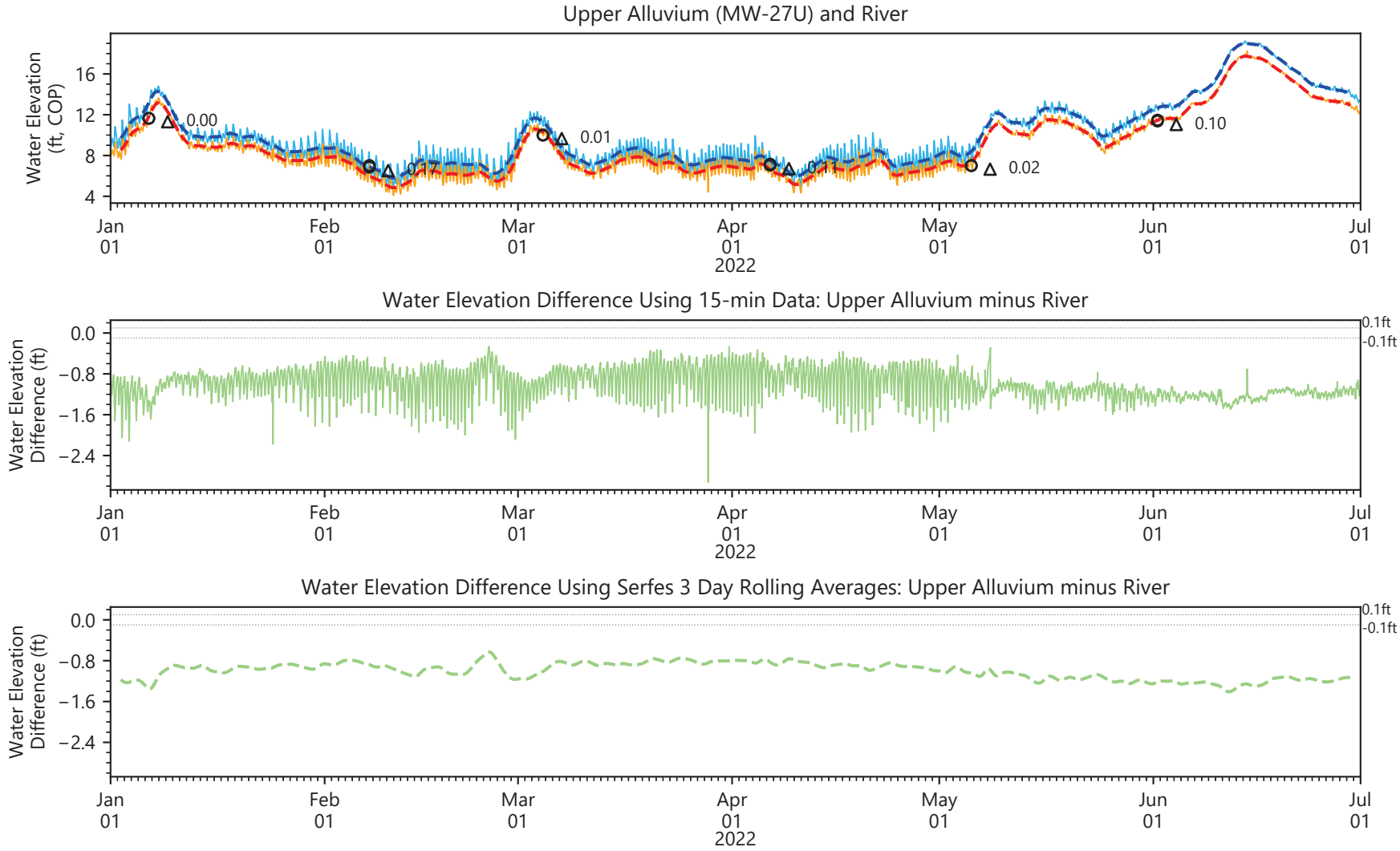
ANCHOR QEA

Figure 4.32
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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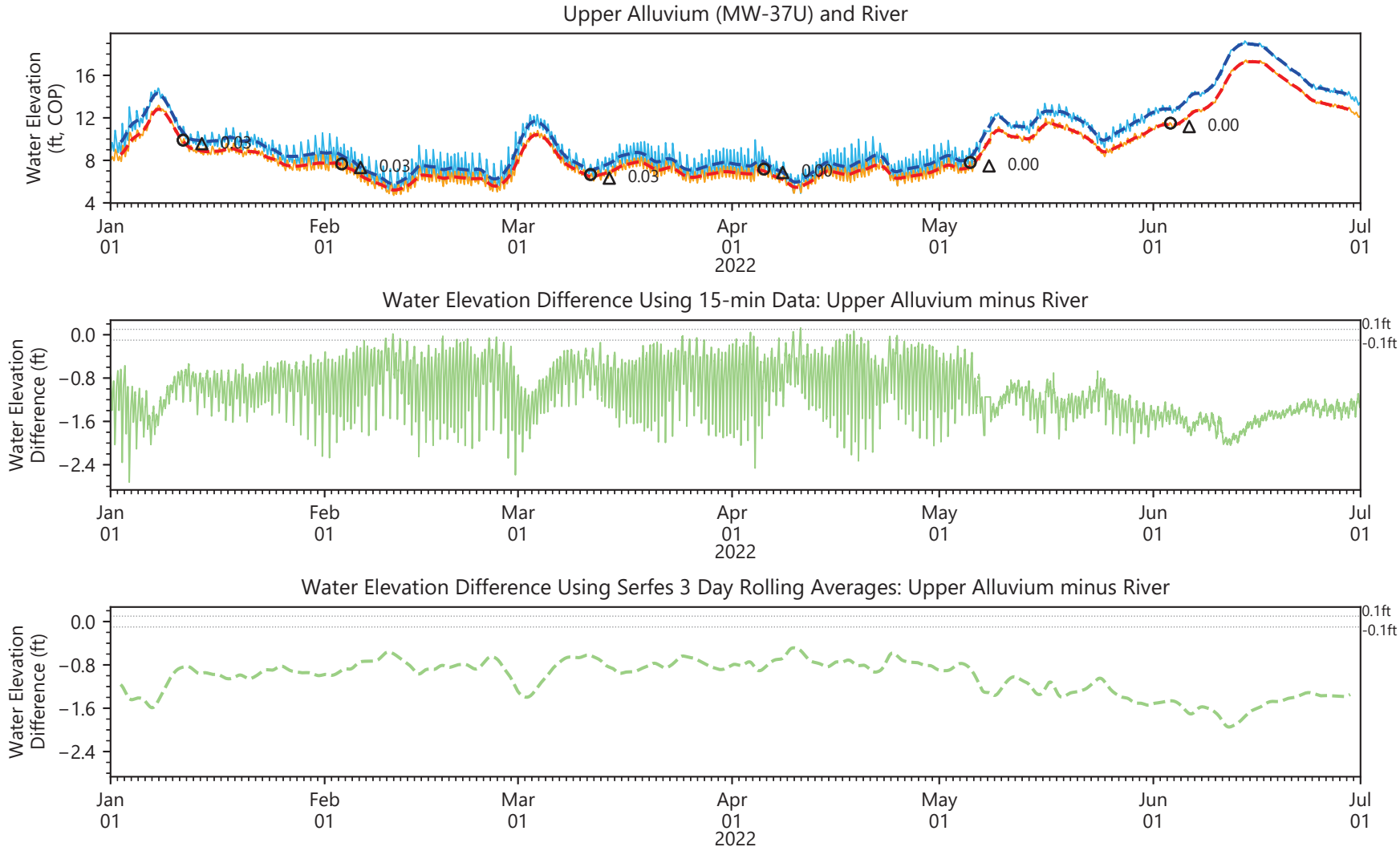
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.33
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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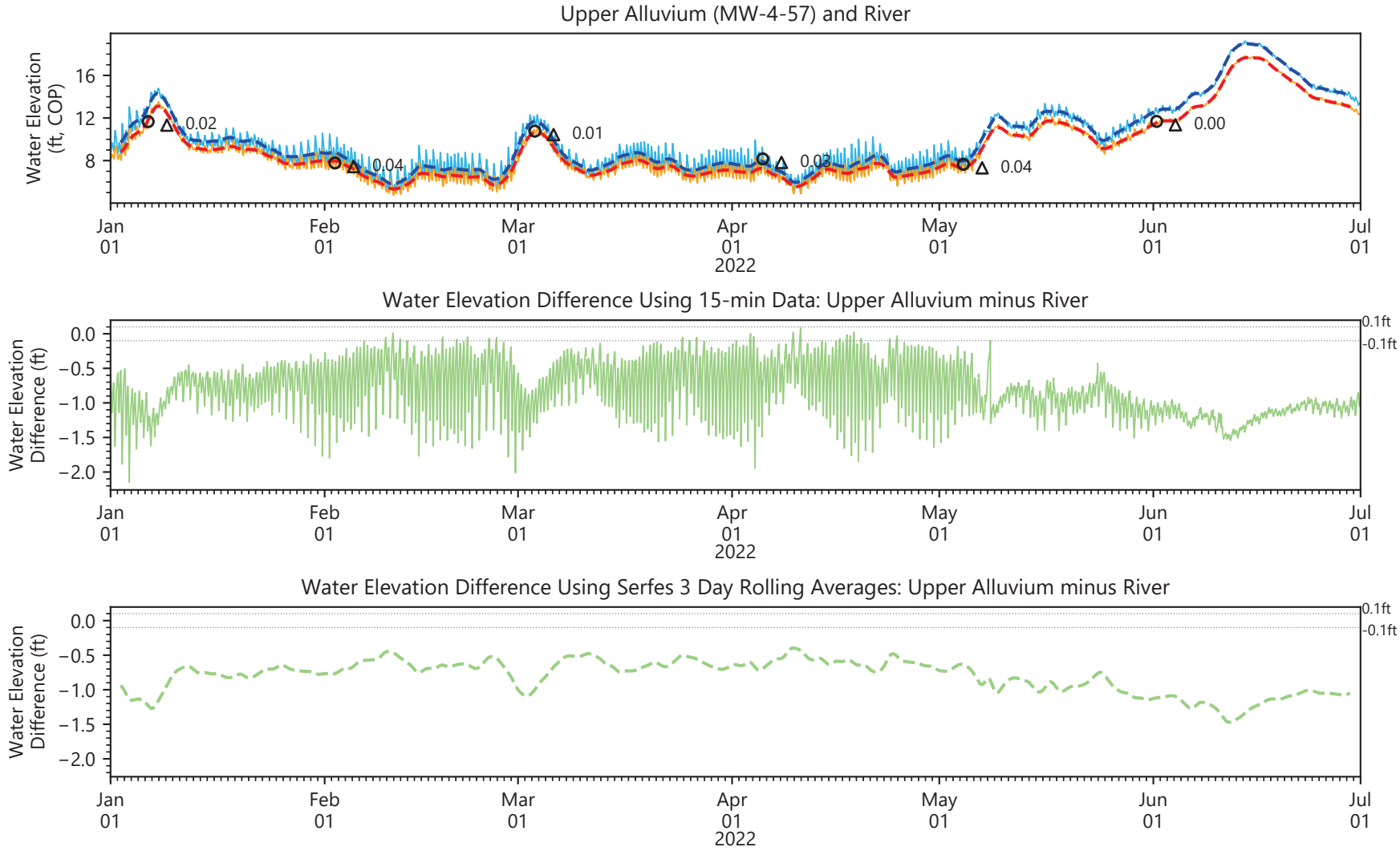
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.34
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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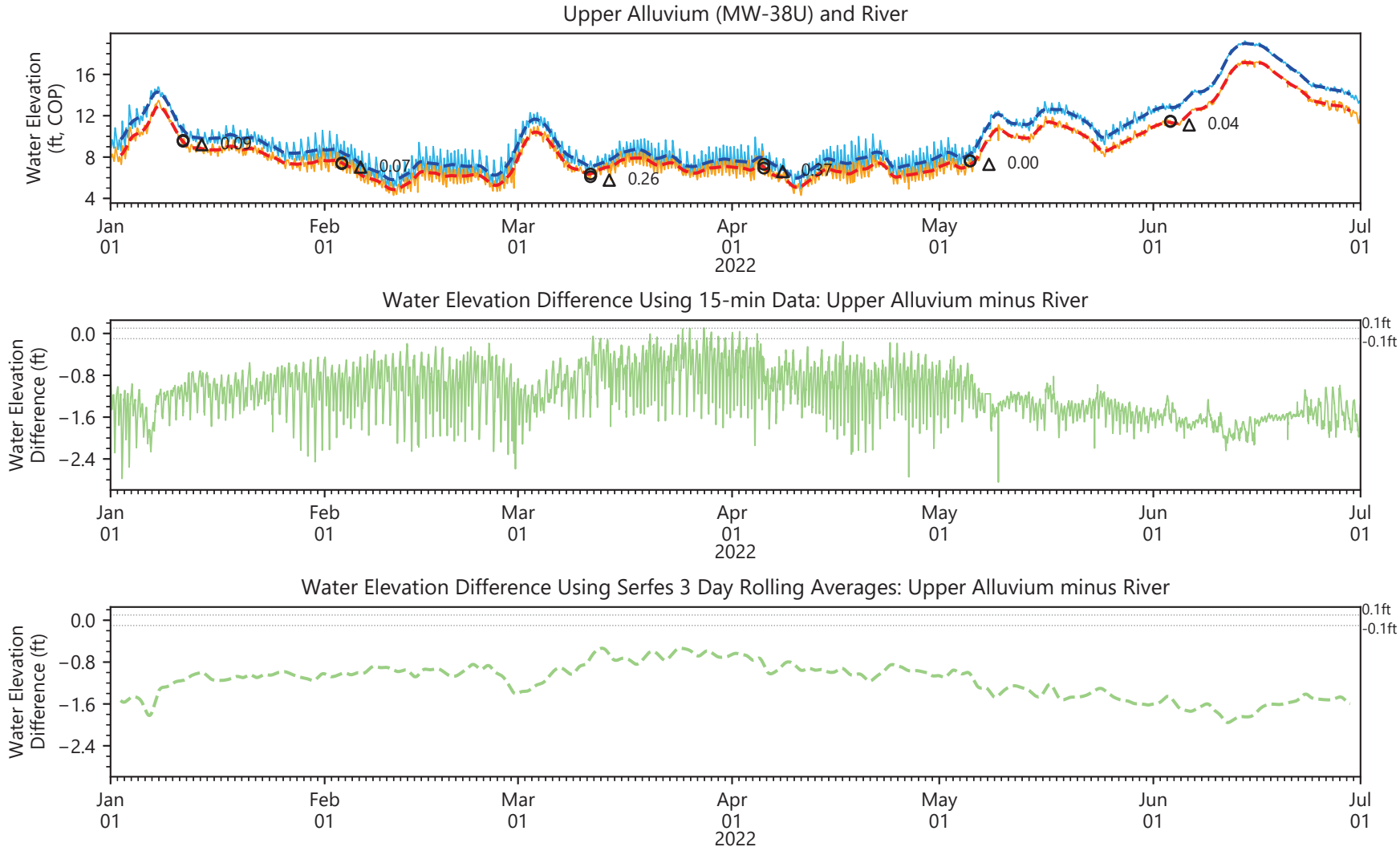
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.35
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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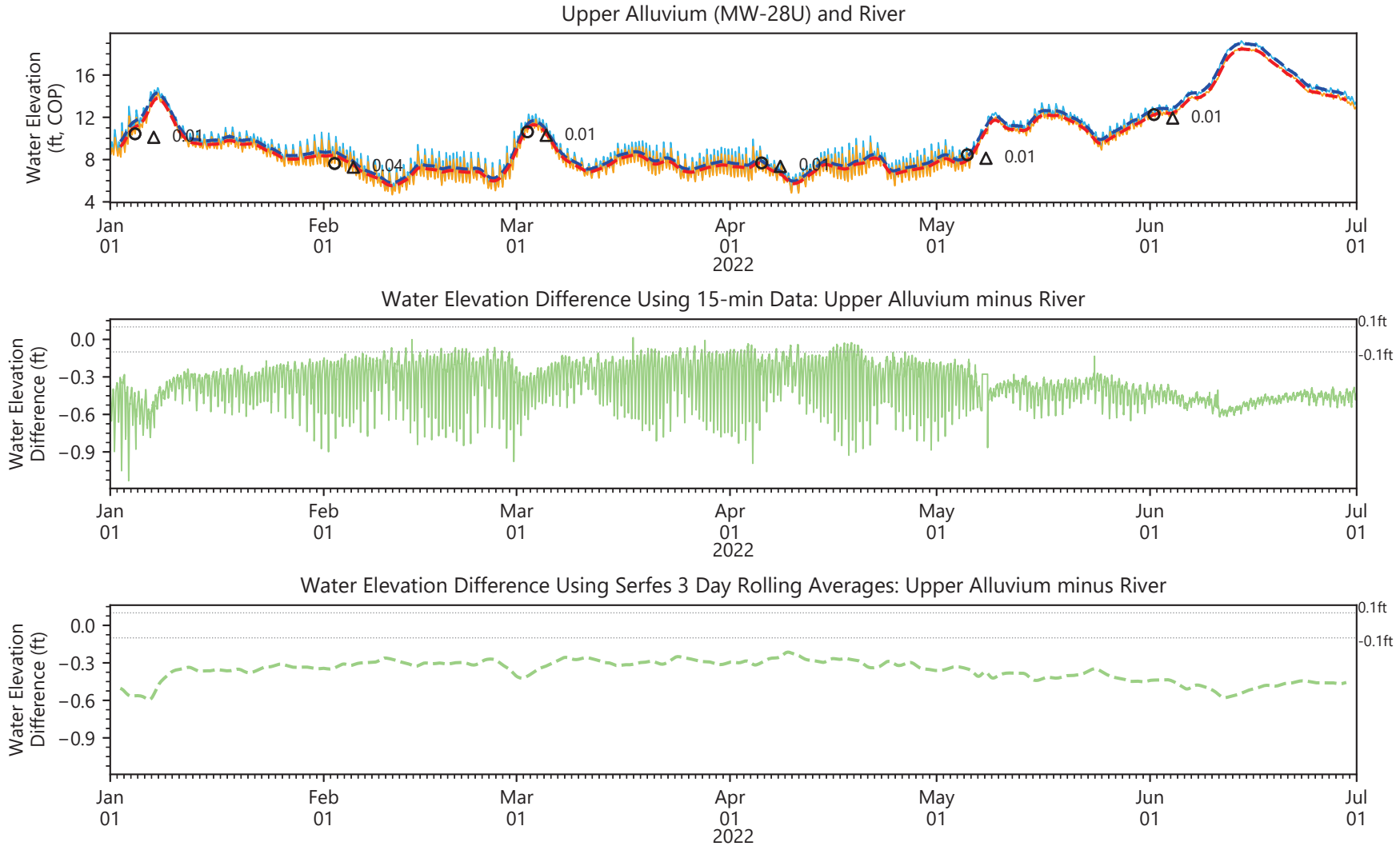
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.36
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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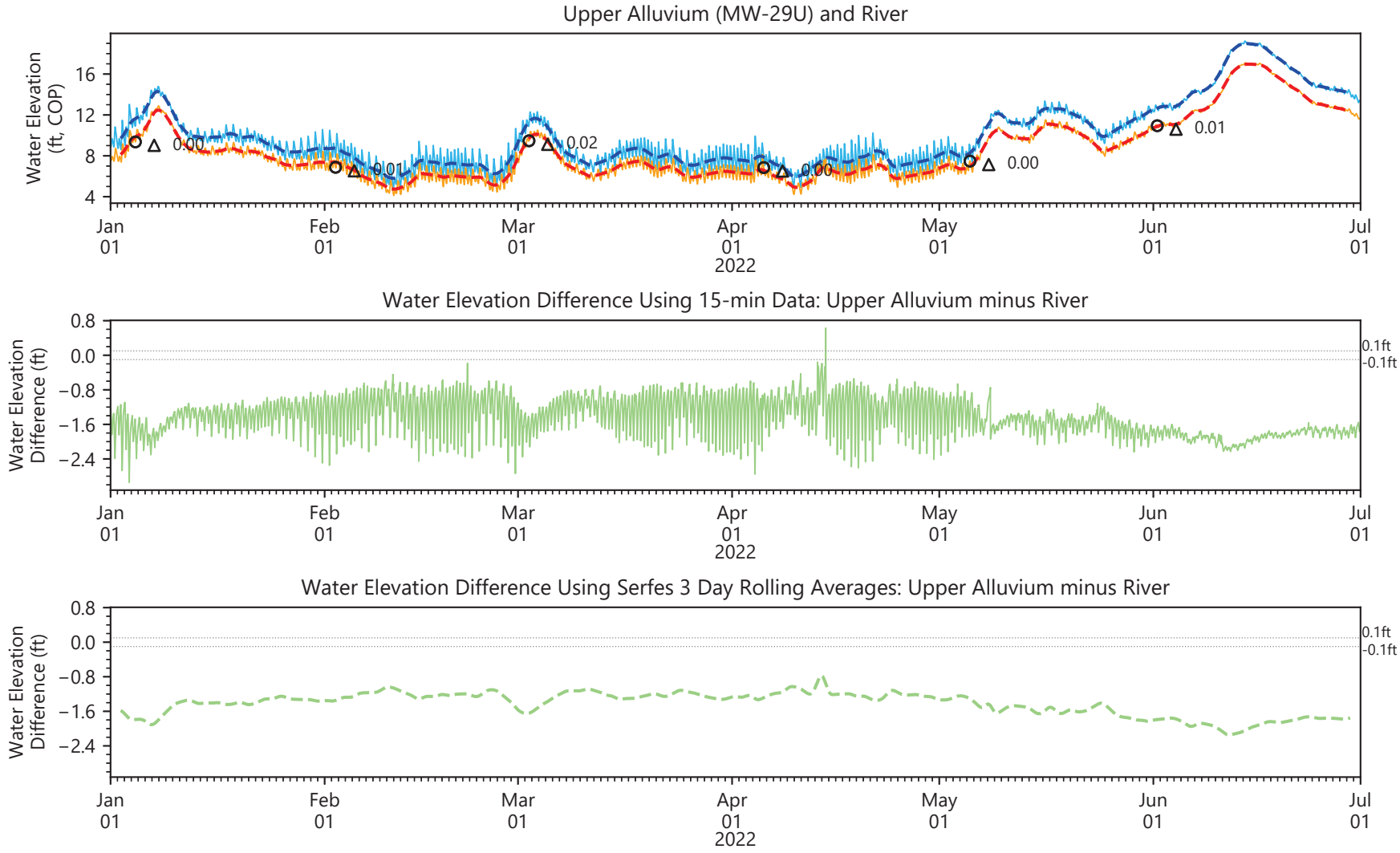
ANCHOR QEA

Figure 4.37
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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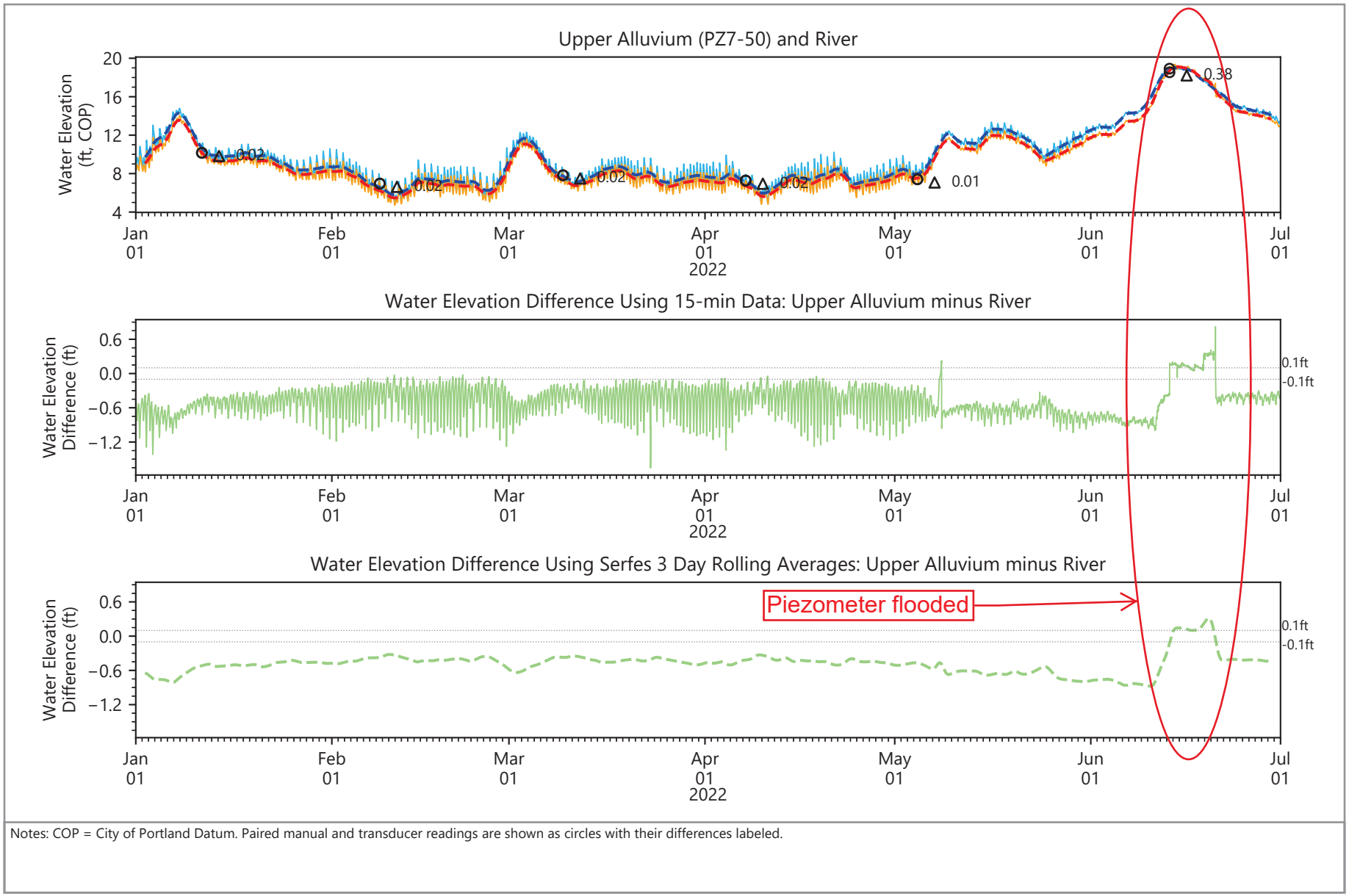
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.38
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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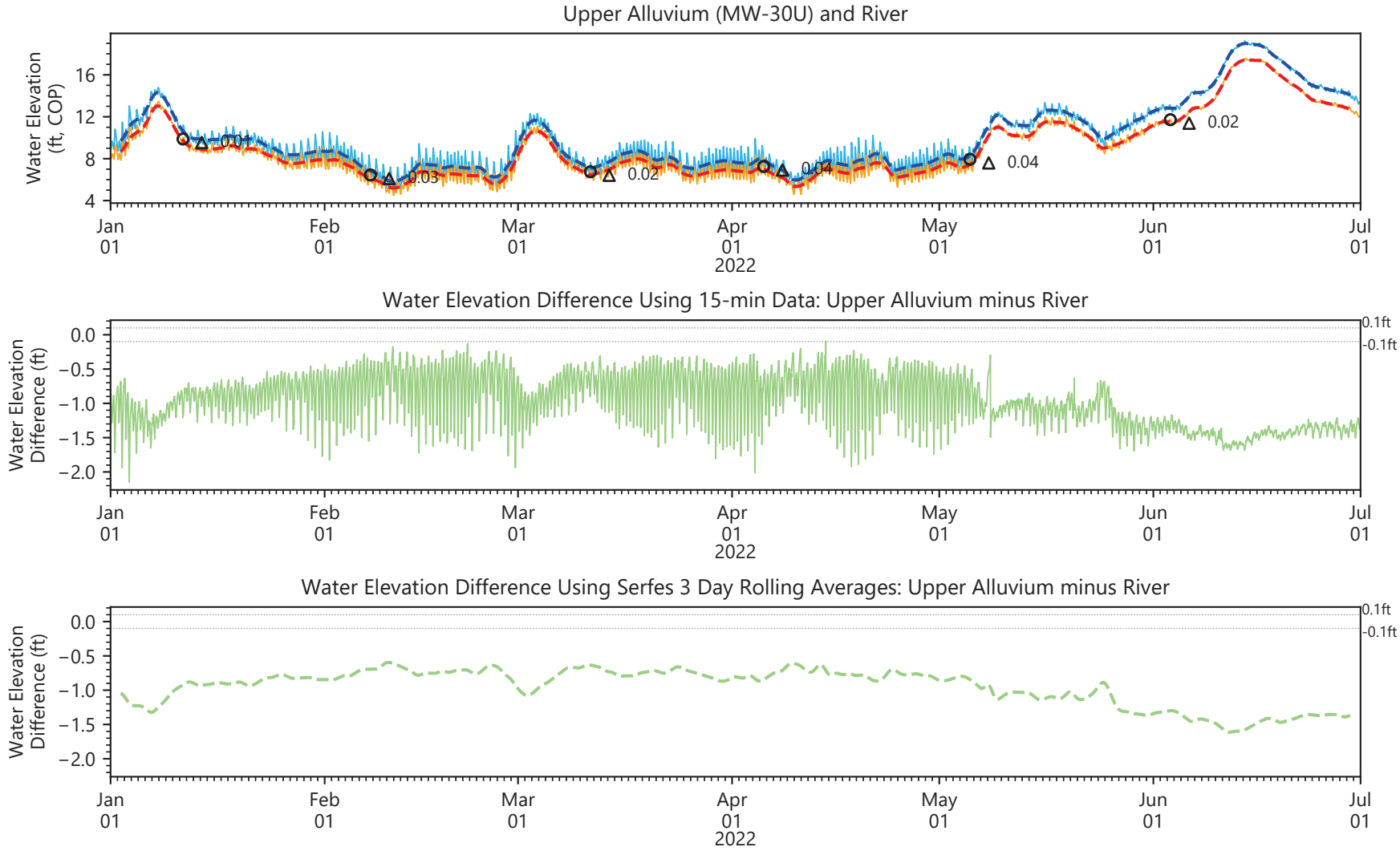
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.39
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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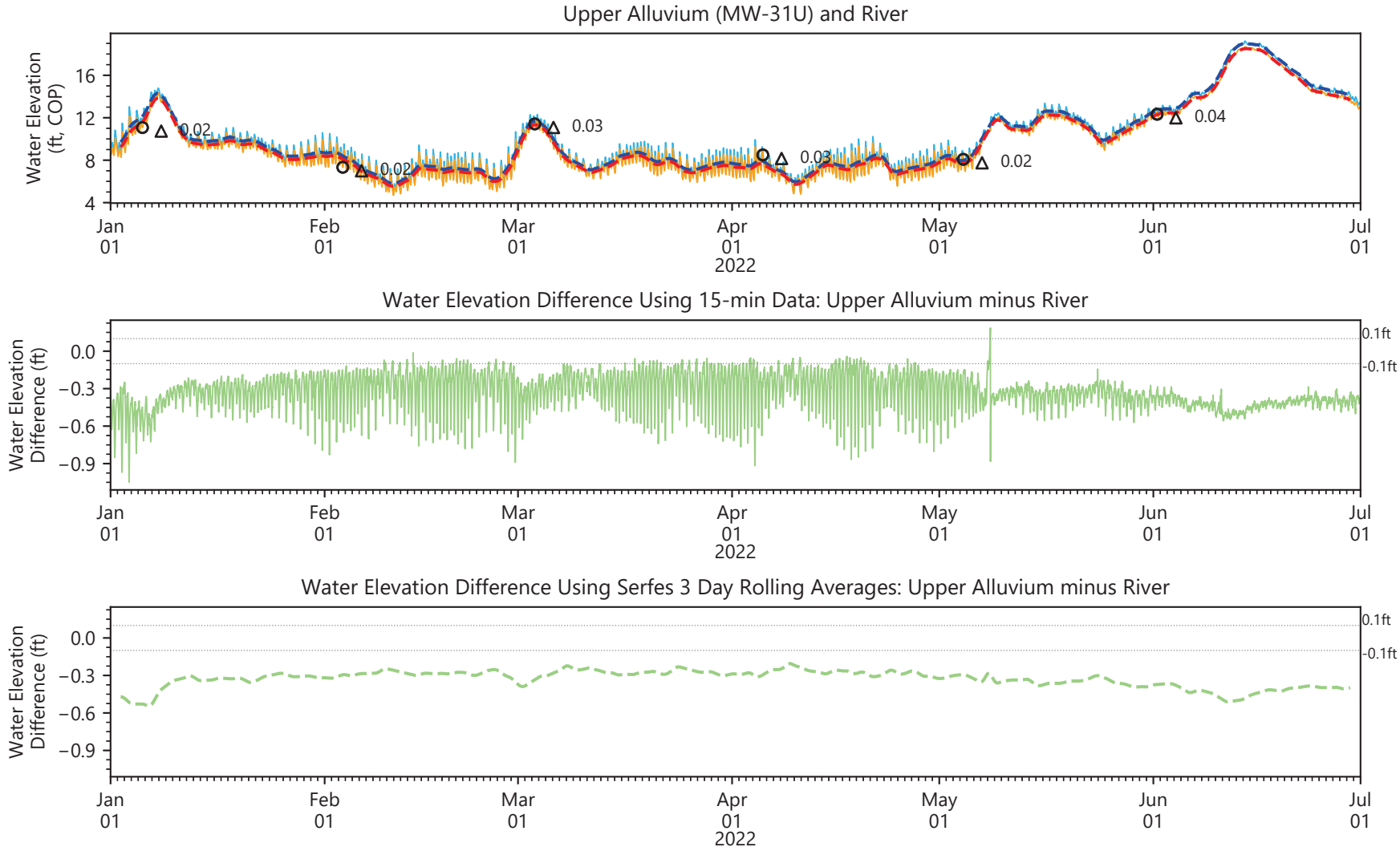
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.40
Groundwater Elevation Differences
NW Natural Gasco Site

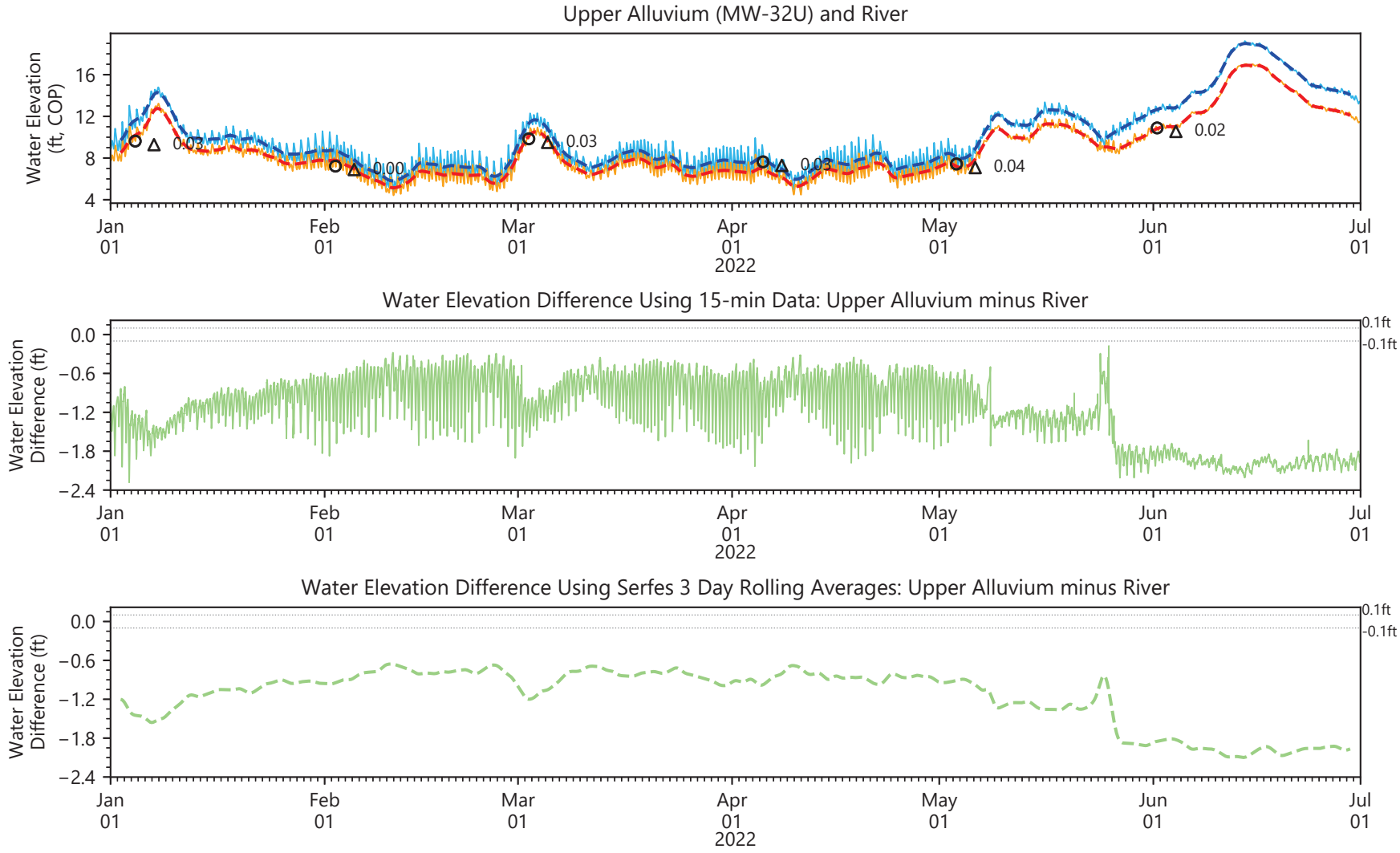


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.41
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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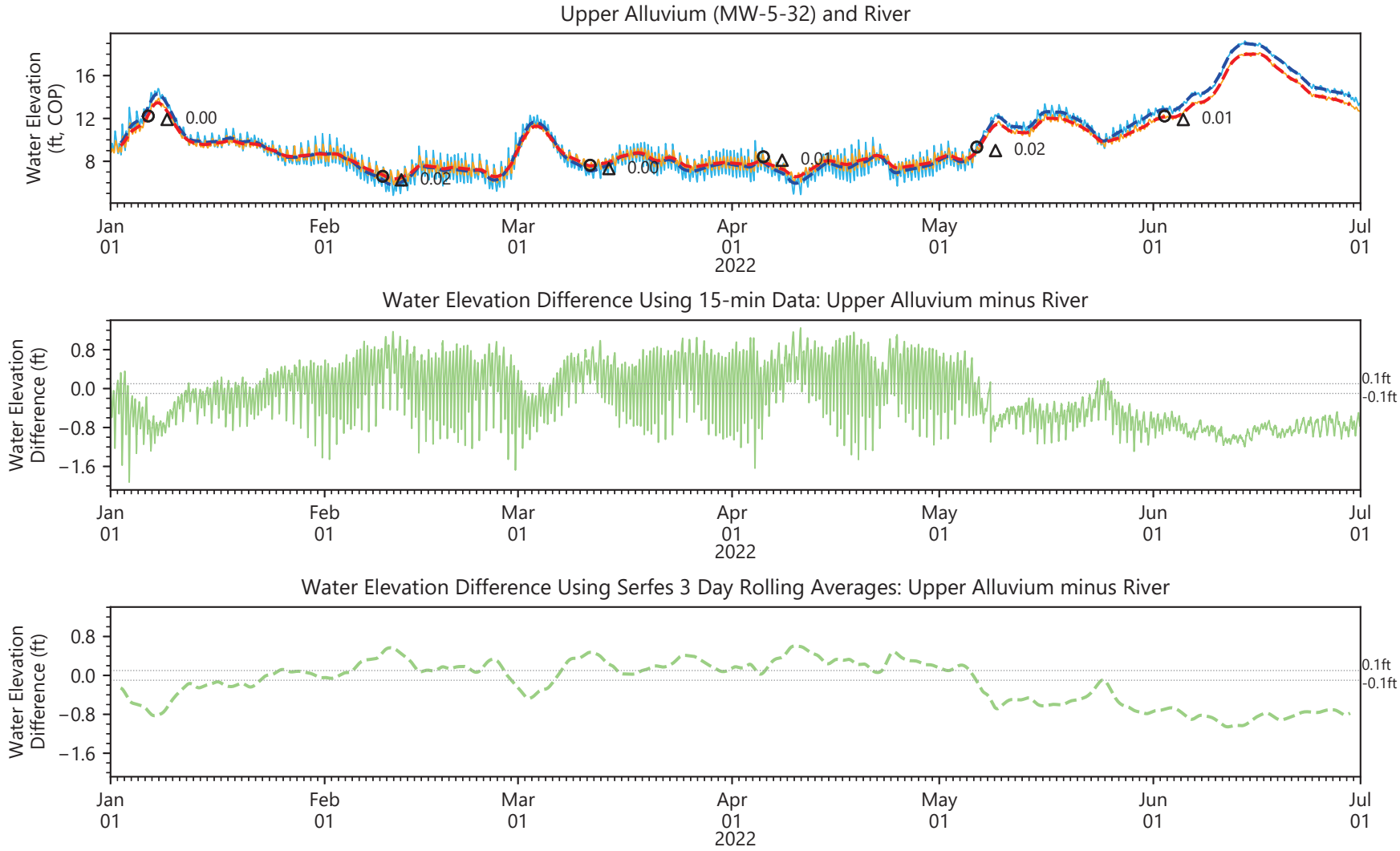
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.42
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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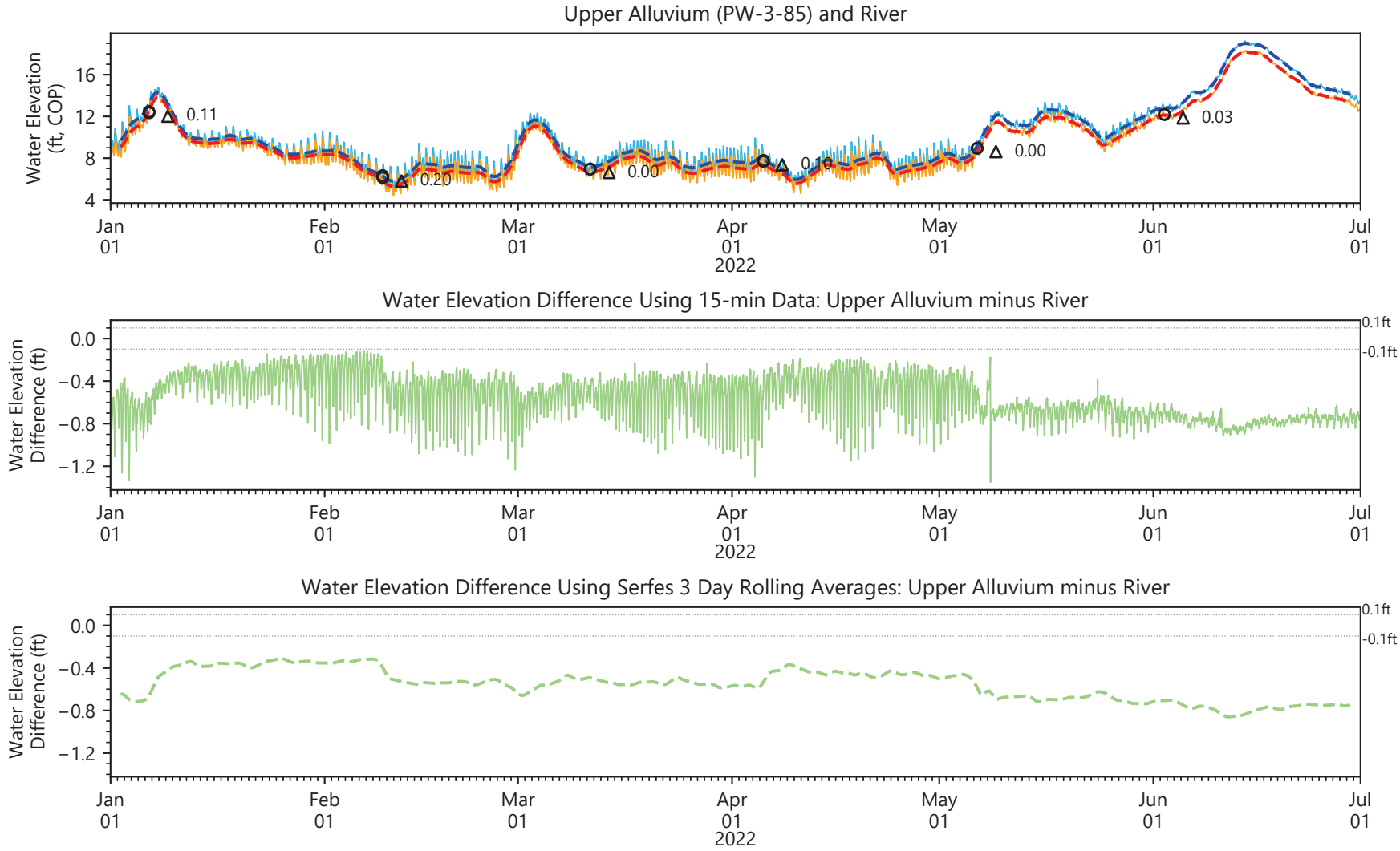
ANCHOR QEA

Figure 4.43
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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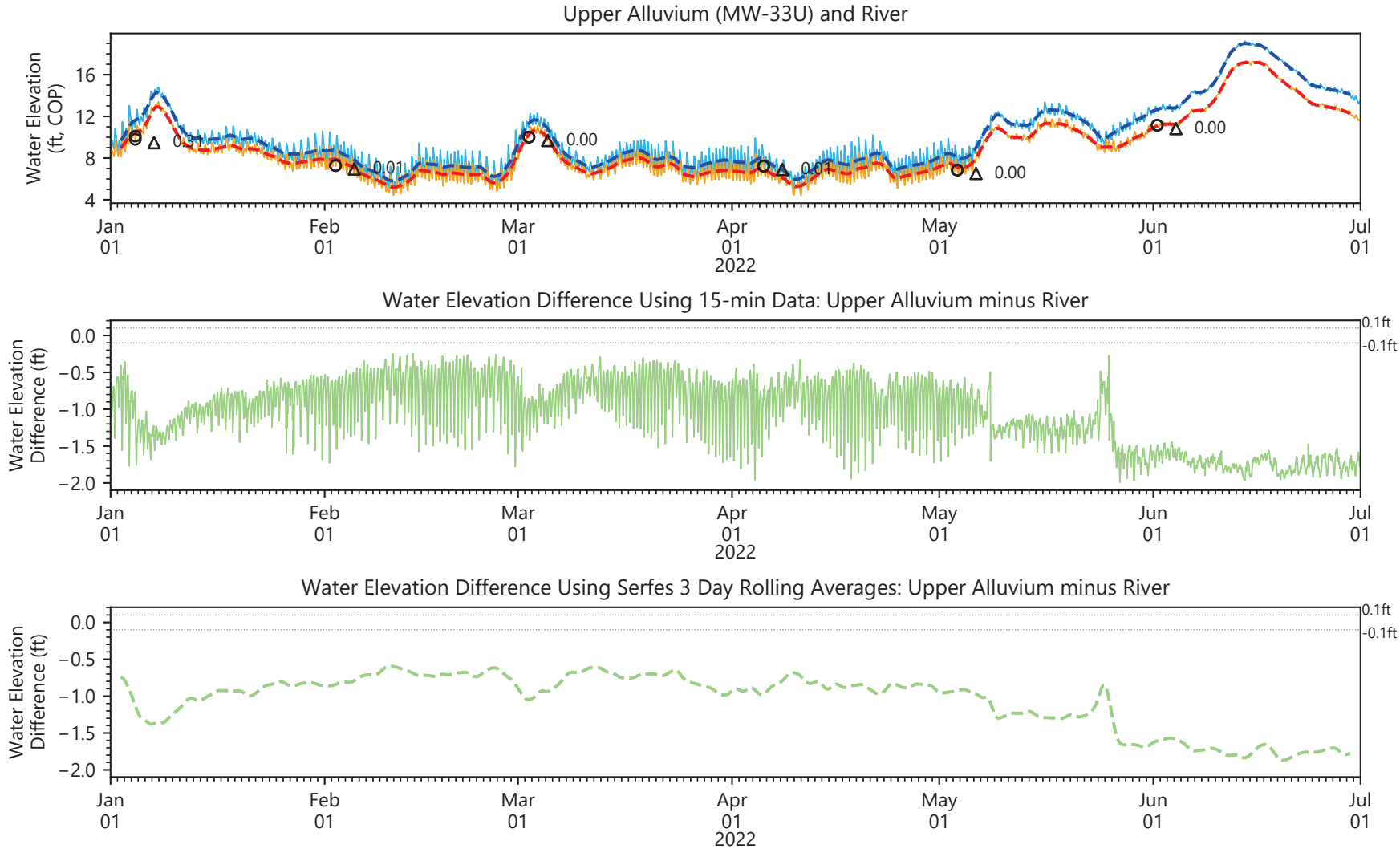
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.44
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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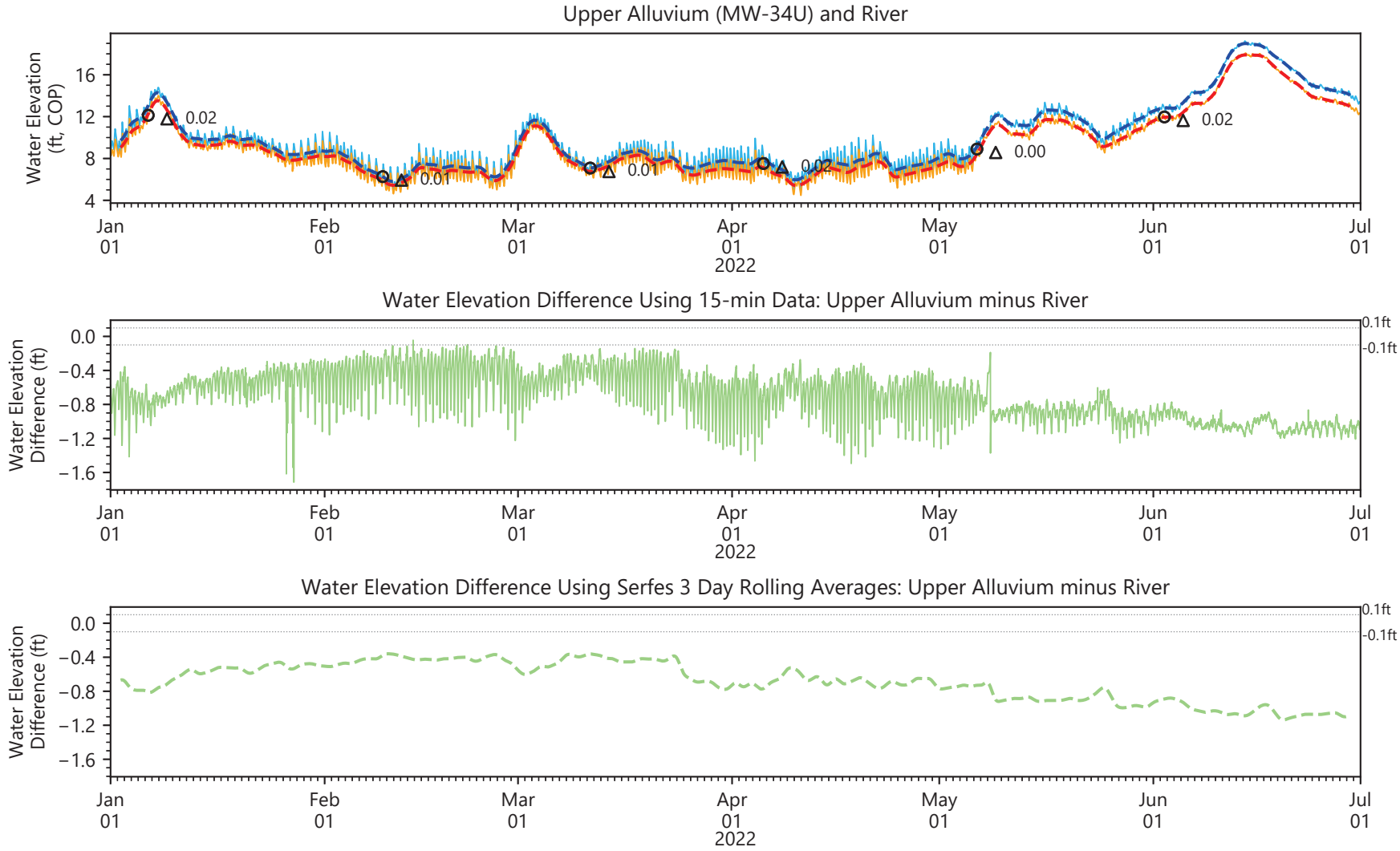
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.45
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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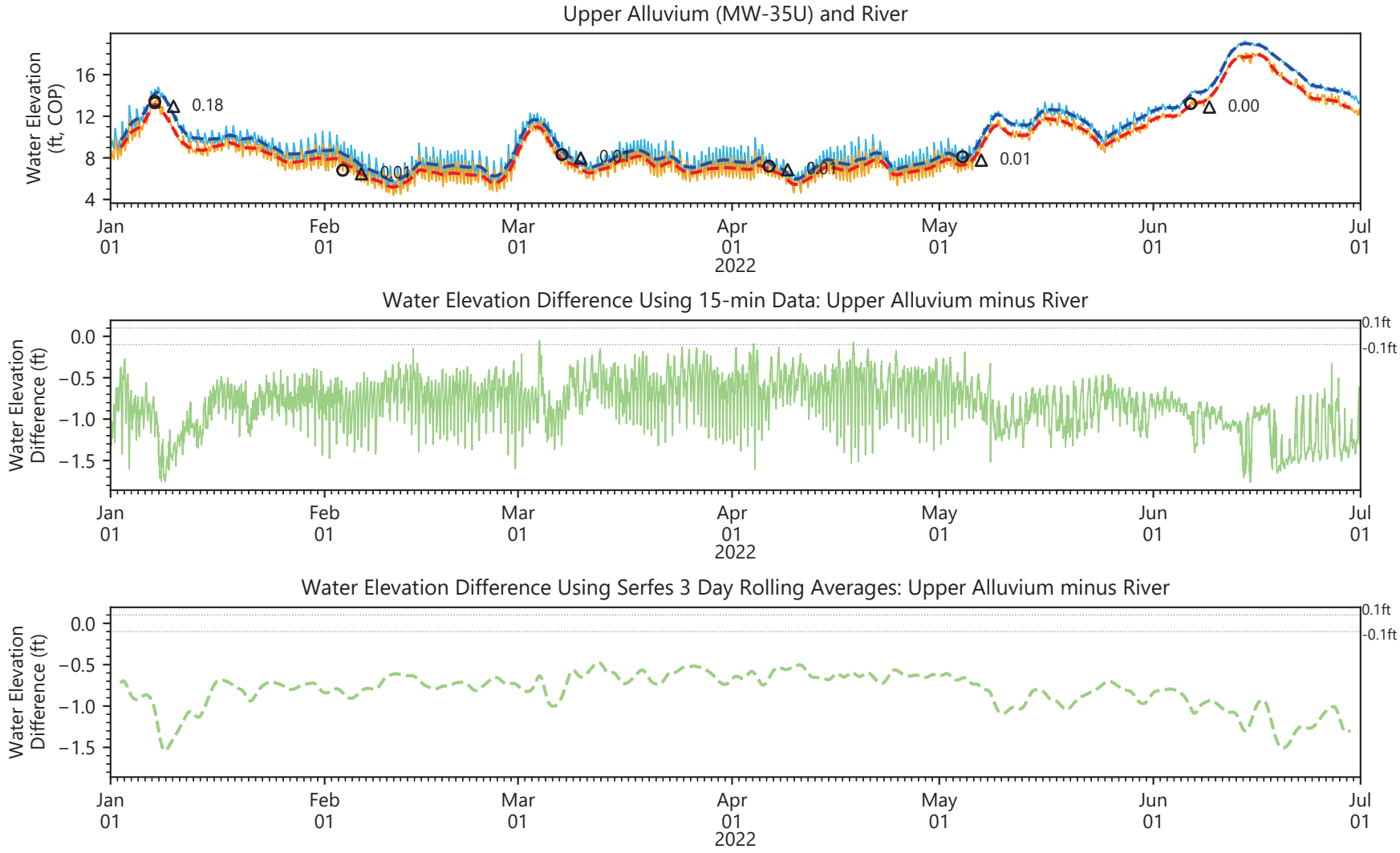
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.46
Groundwater Elevation Differences
NW Natural Gasco Site

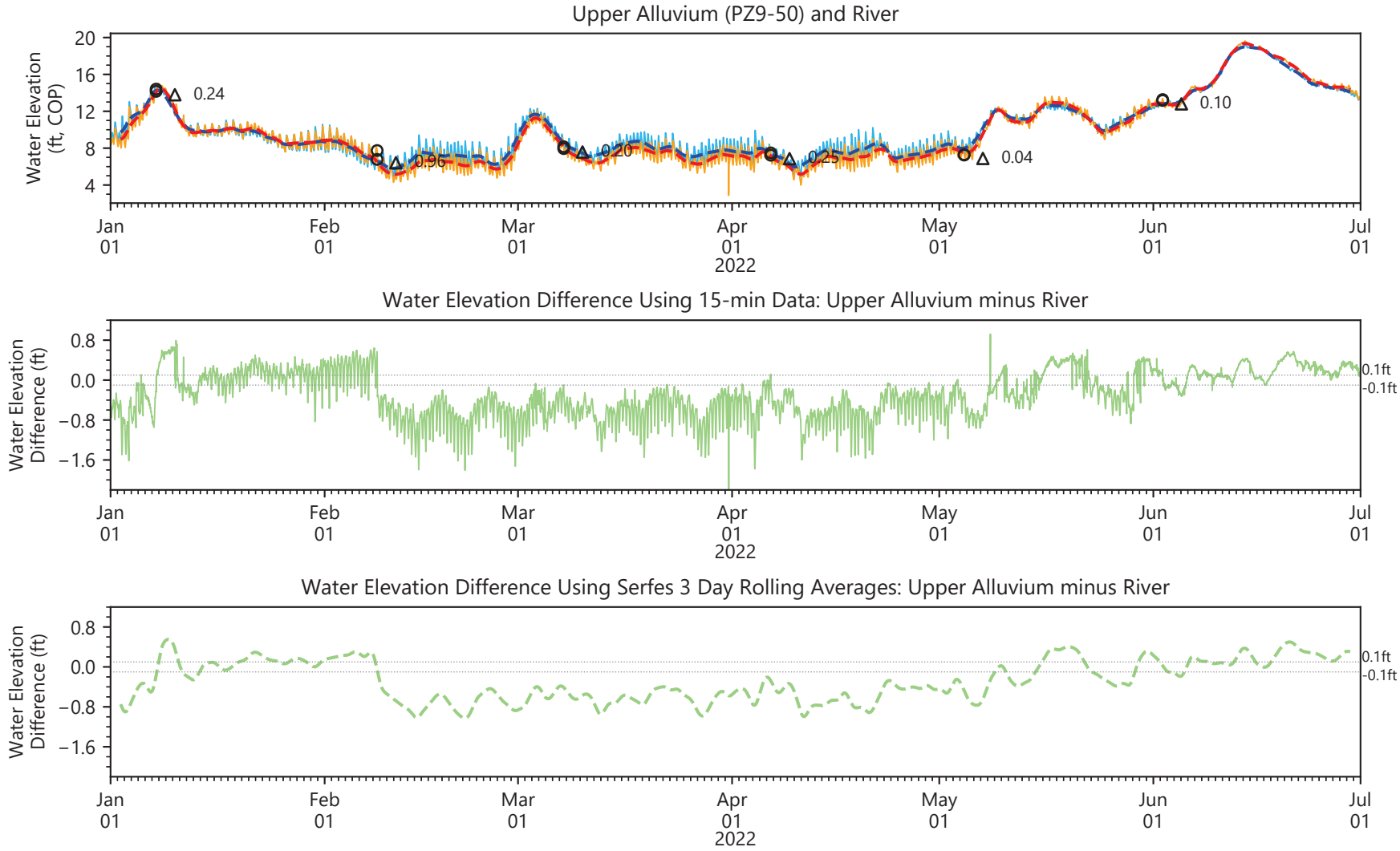


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.47
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
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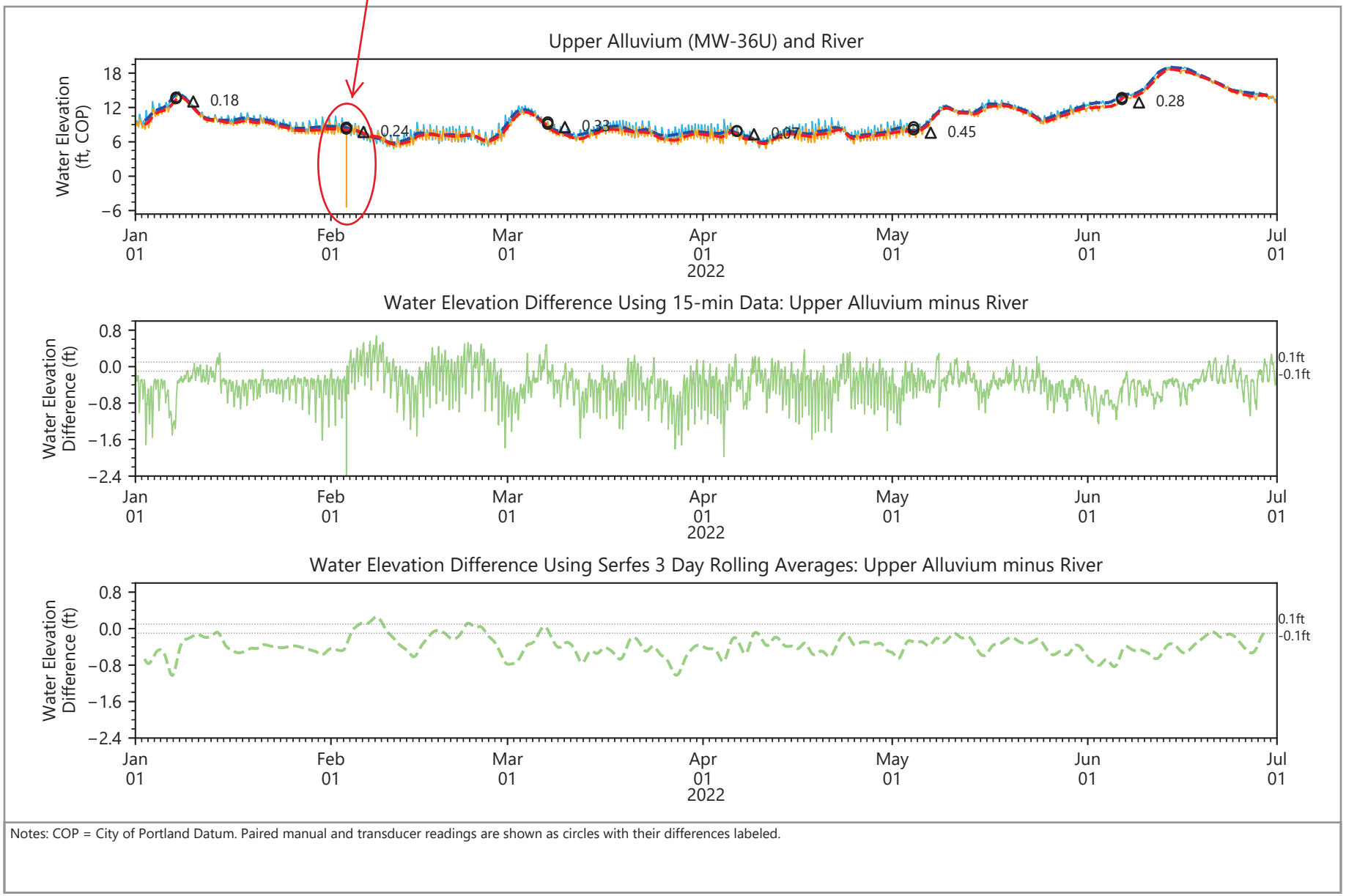
ANCHOR QEA

Figure 4.48
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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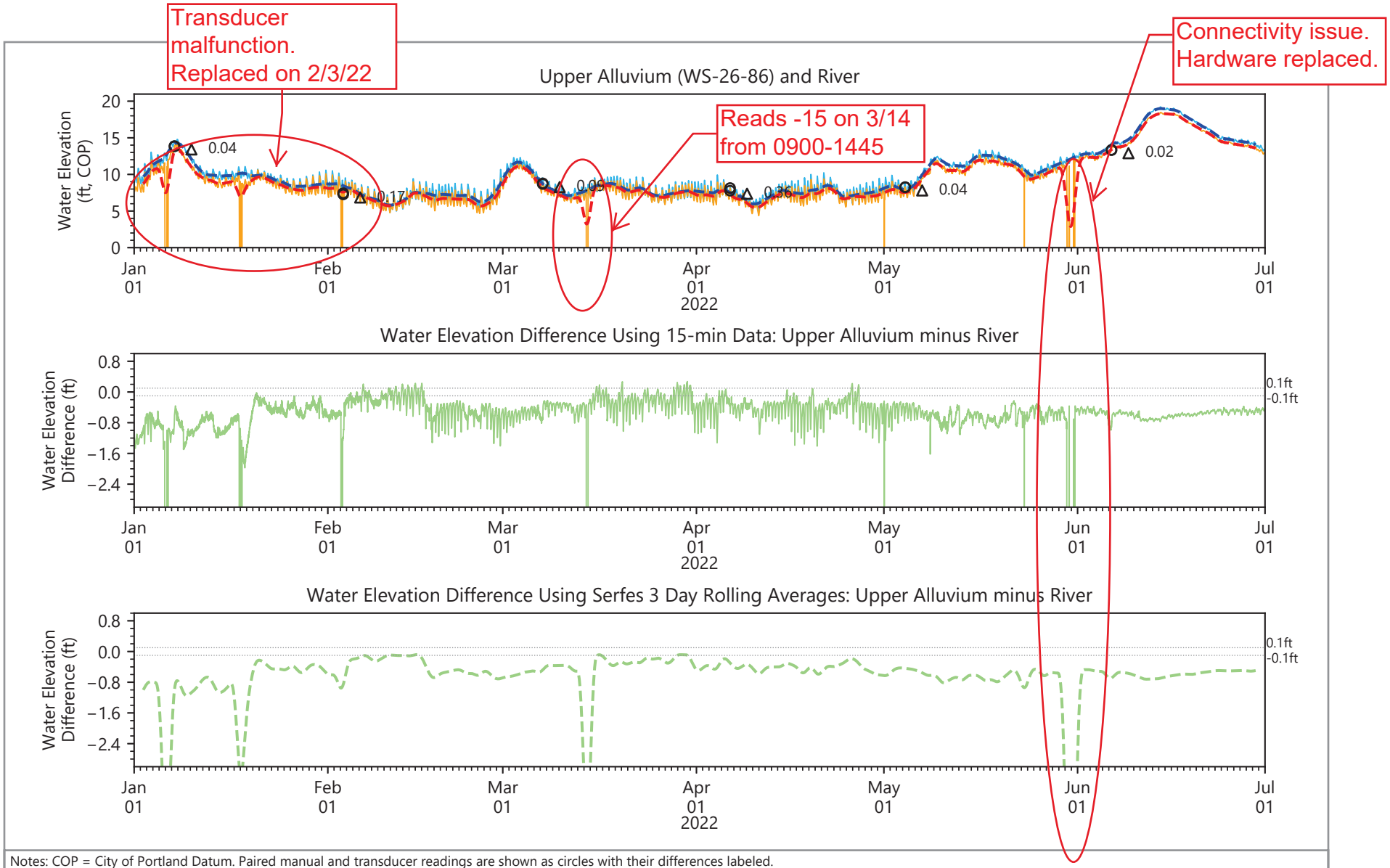
ANCHOR QEA

Figure 4.49
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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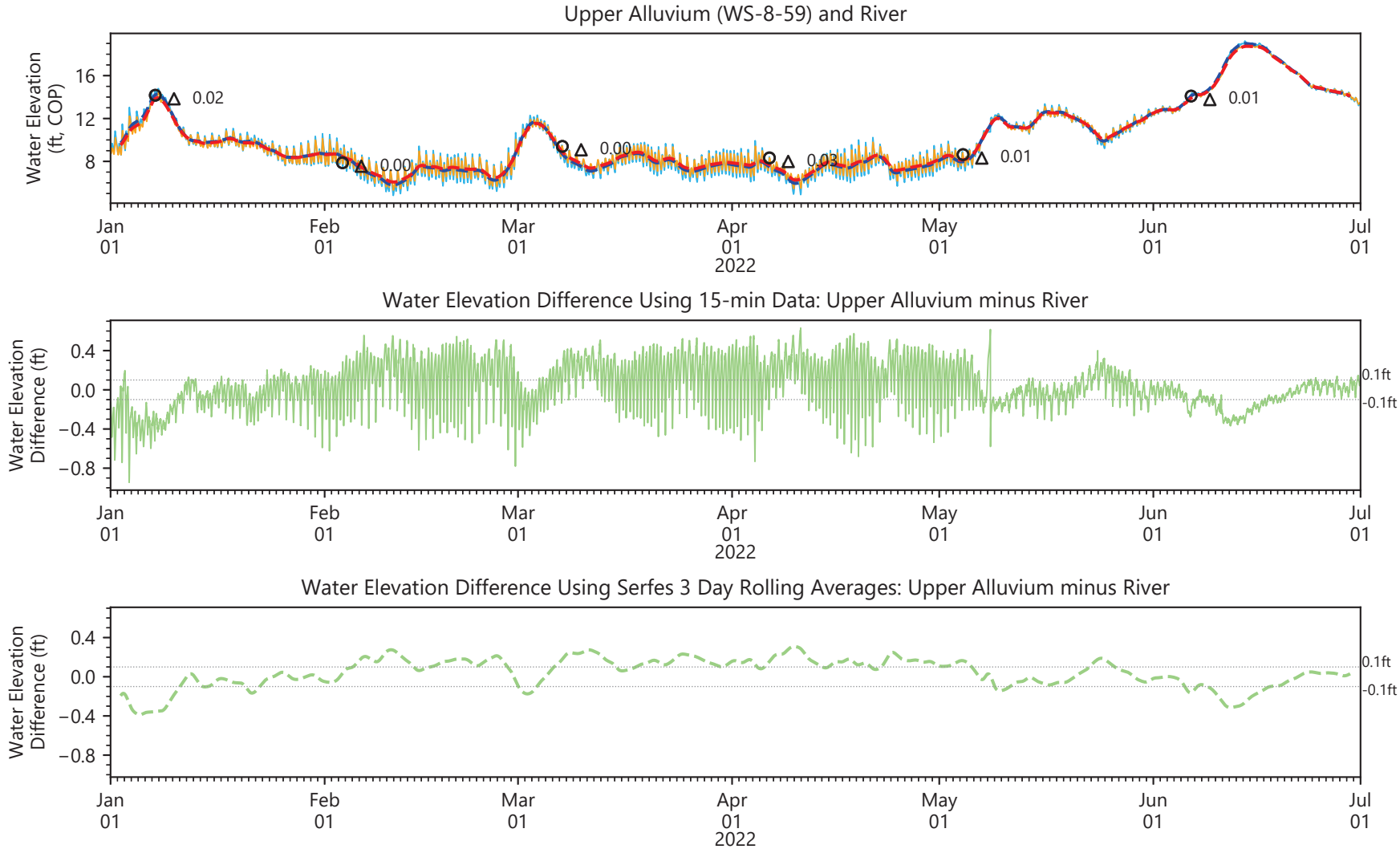
ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.50
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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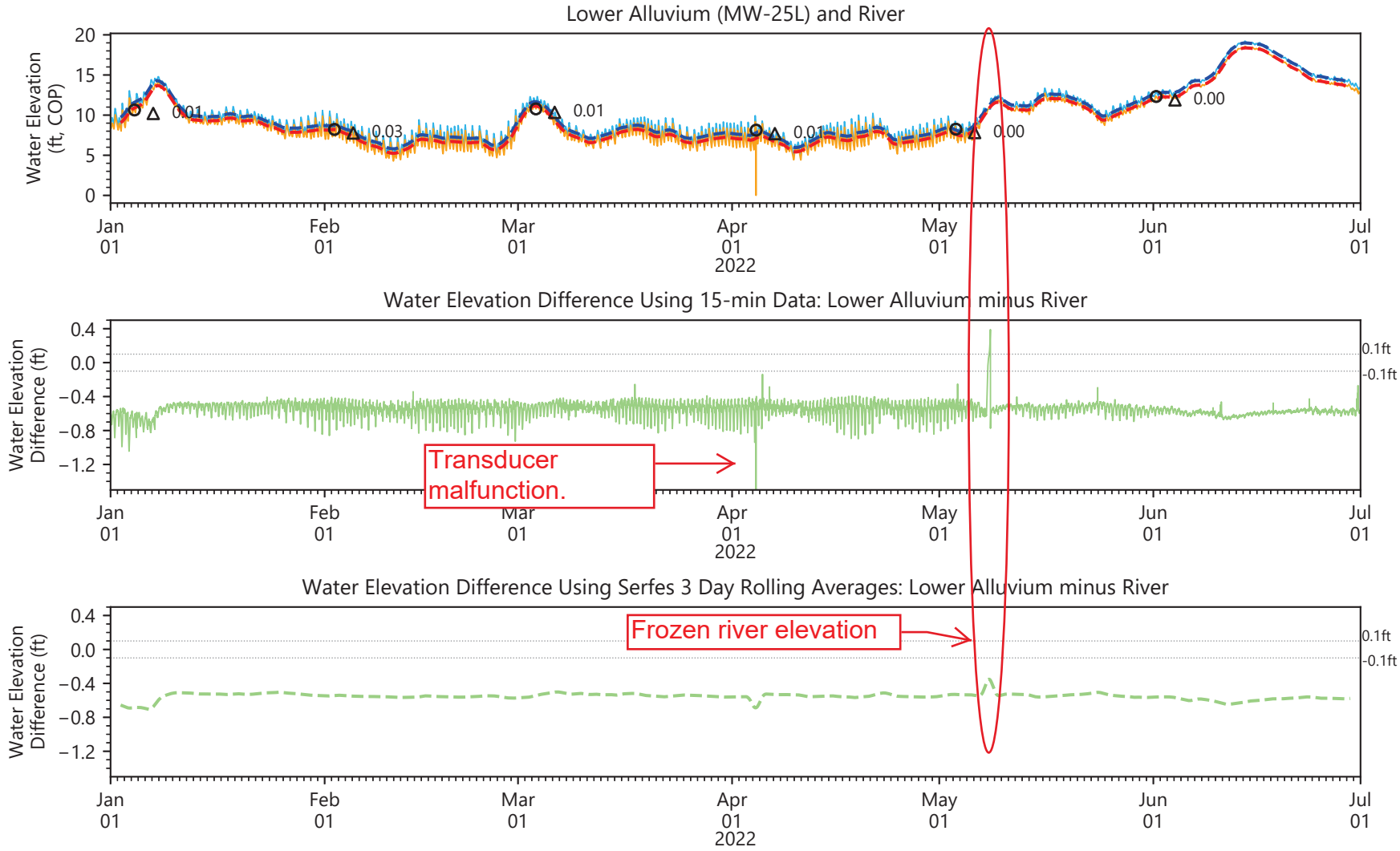
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.51
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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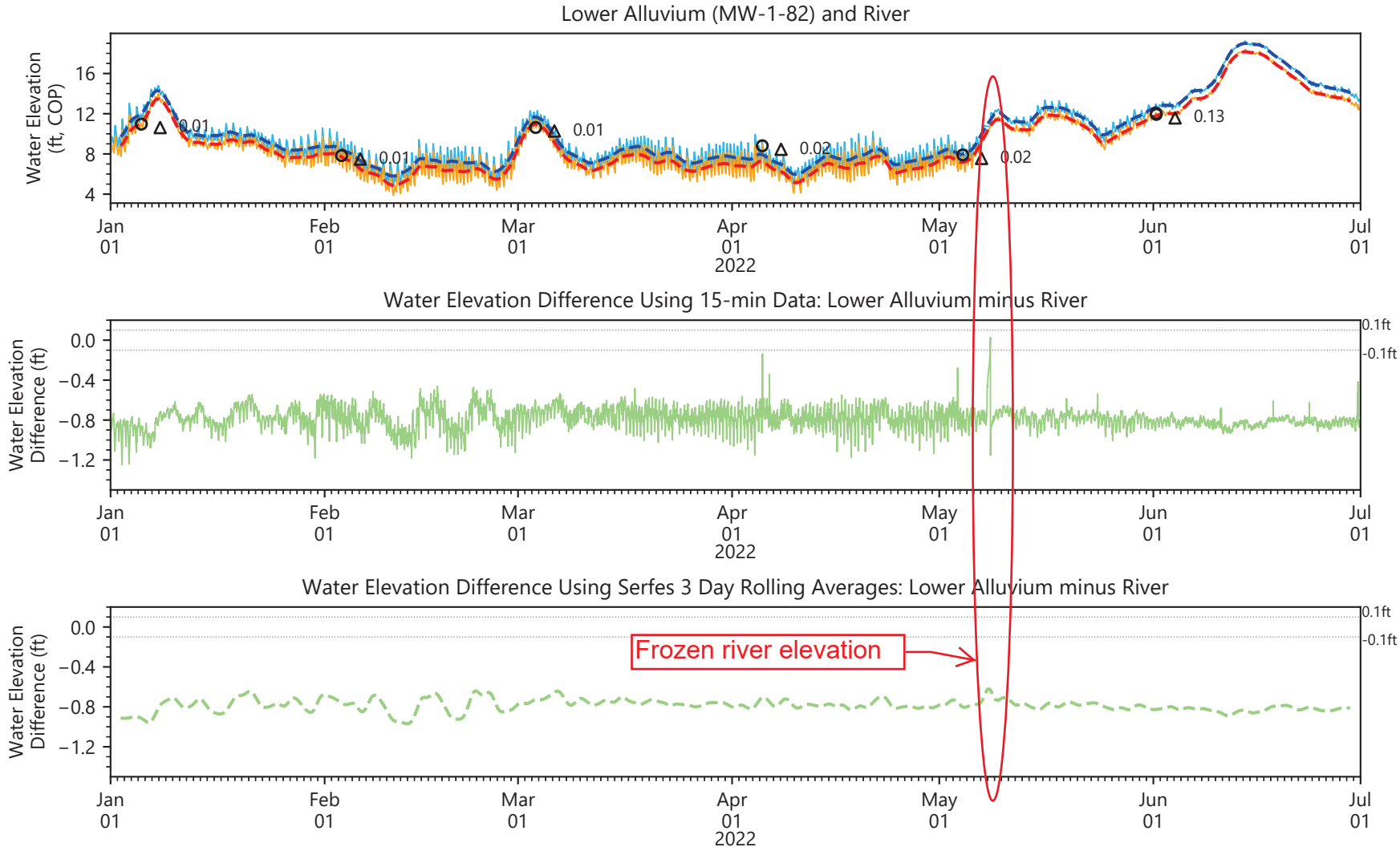
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.52
Groundwater Elevation Differences
NW Natural Gasco Site



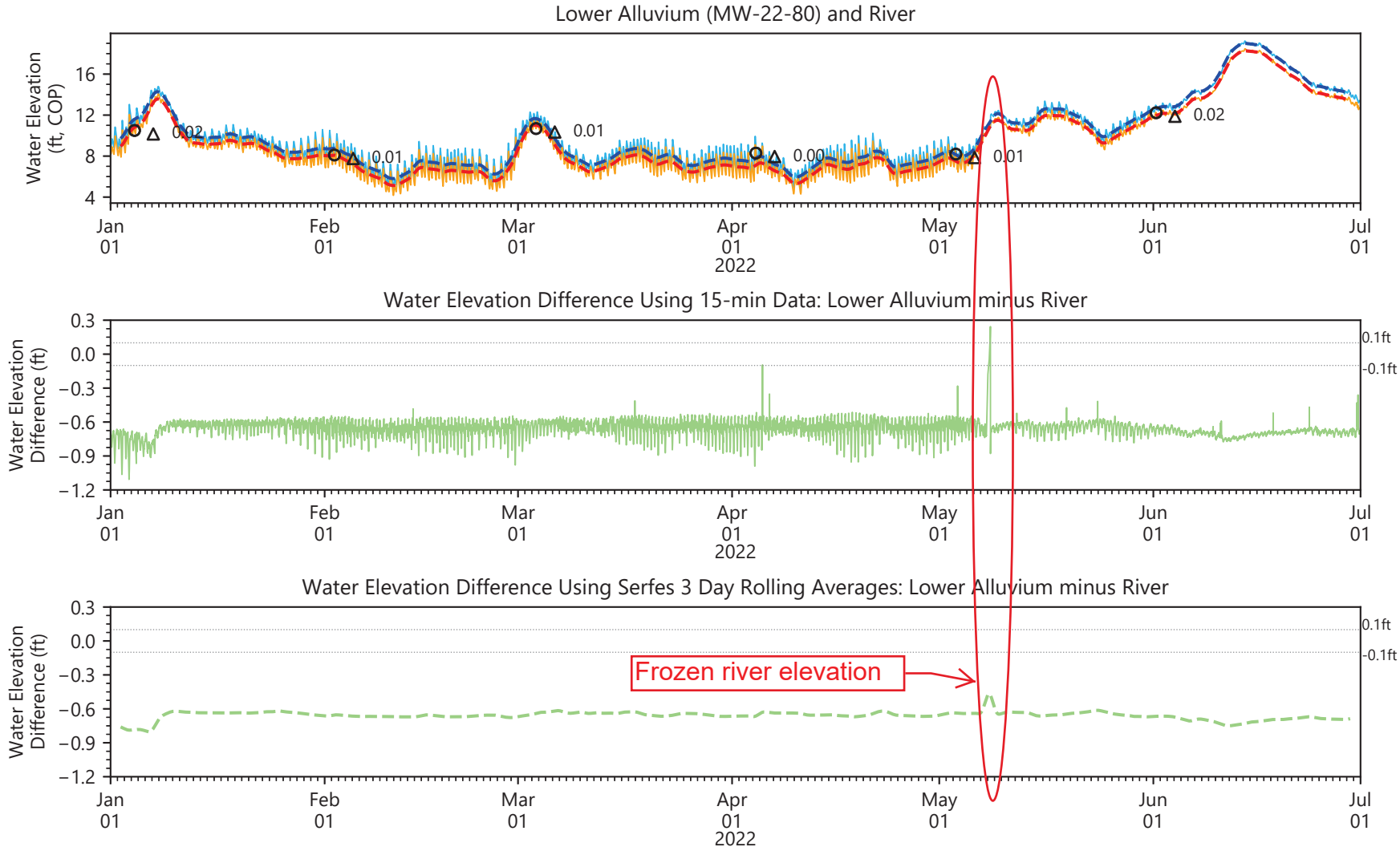
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.53
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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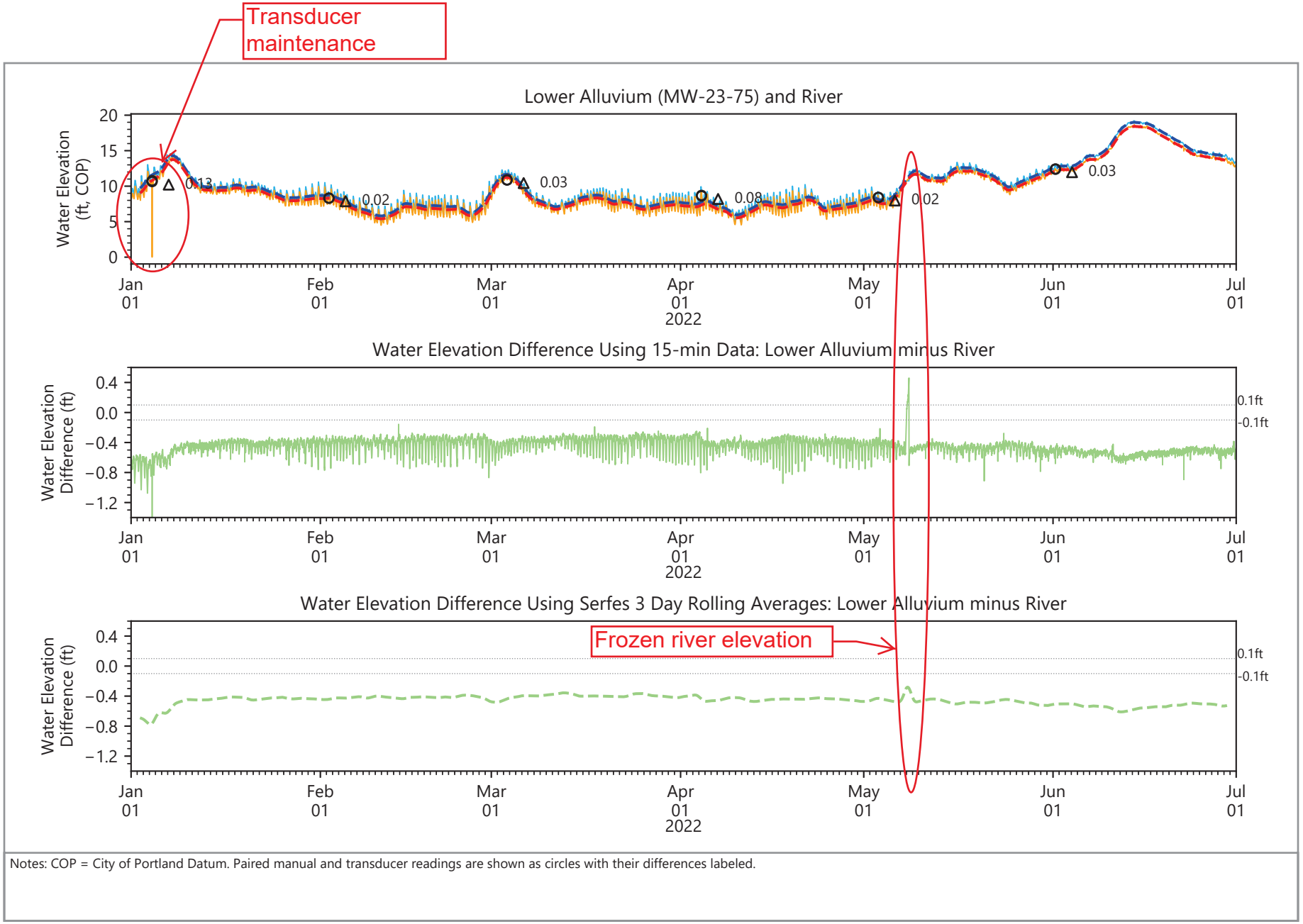
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.54
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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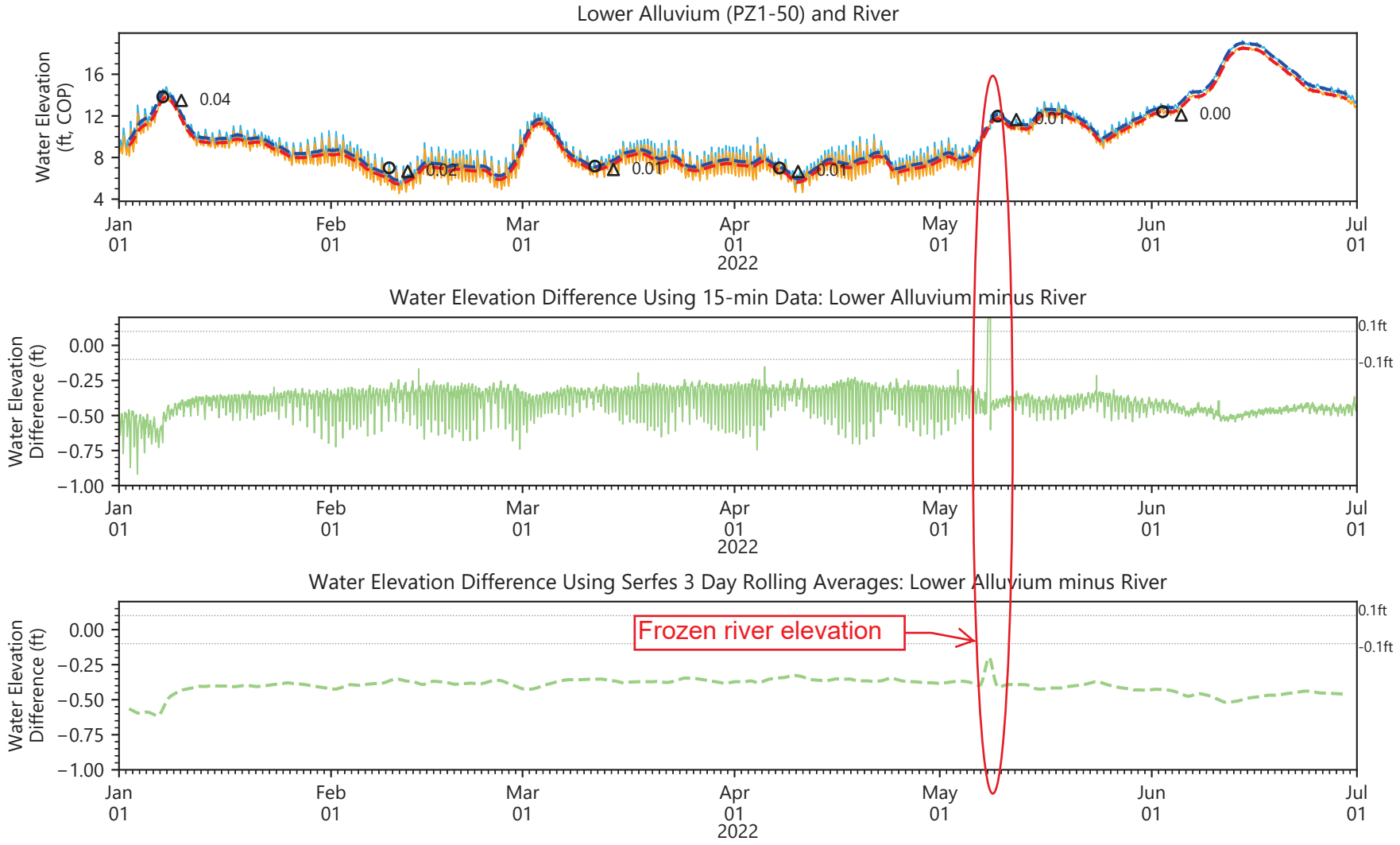
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.55
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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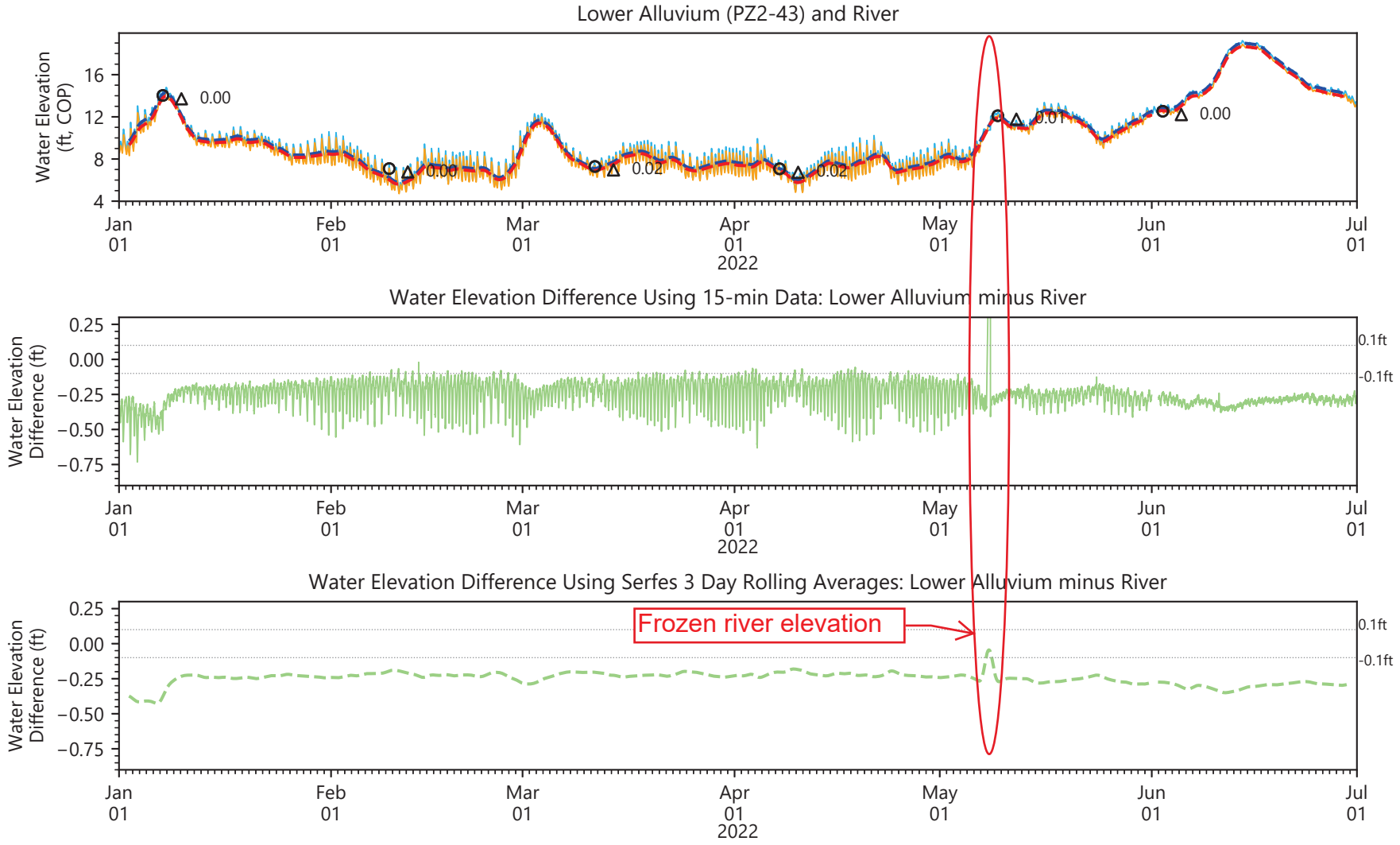
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.56
Groundwater Elevation Differences
NW Natural Gasco Site



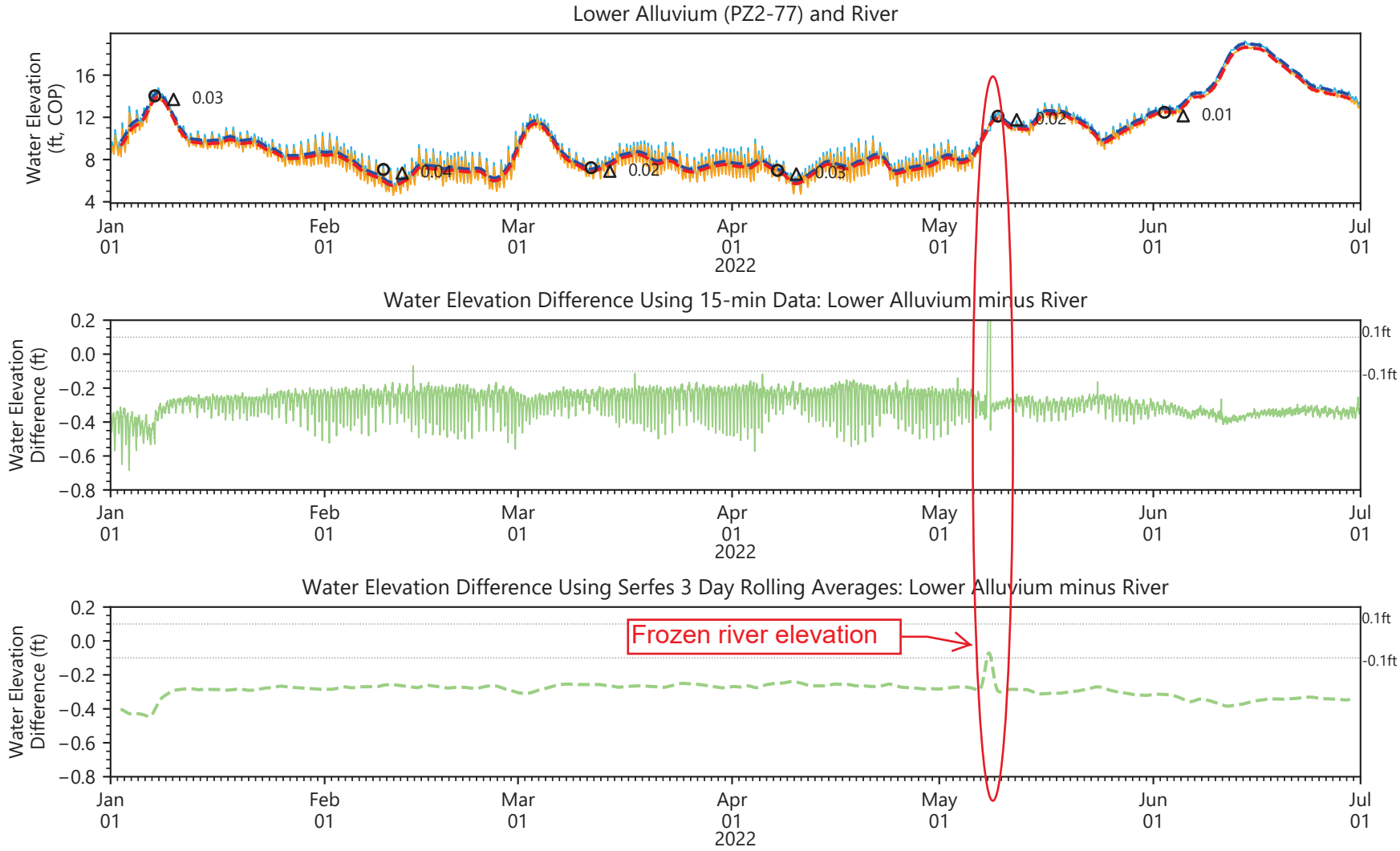
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 08/05/2022 15:16 PM | User: ZW
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.57
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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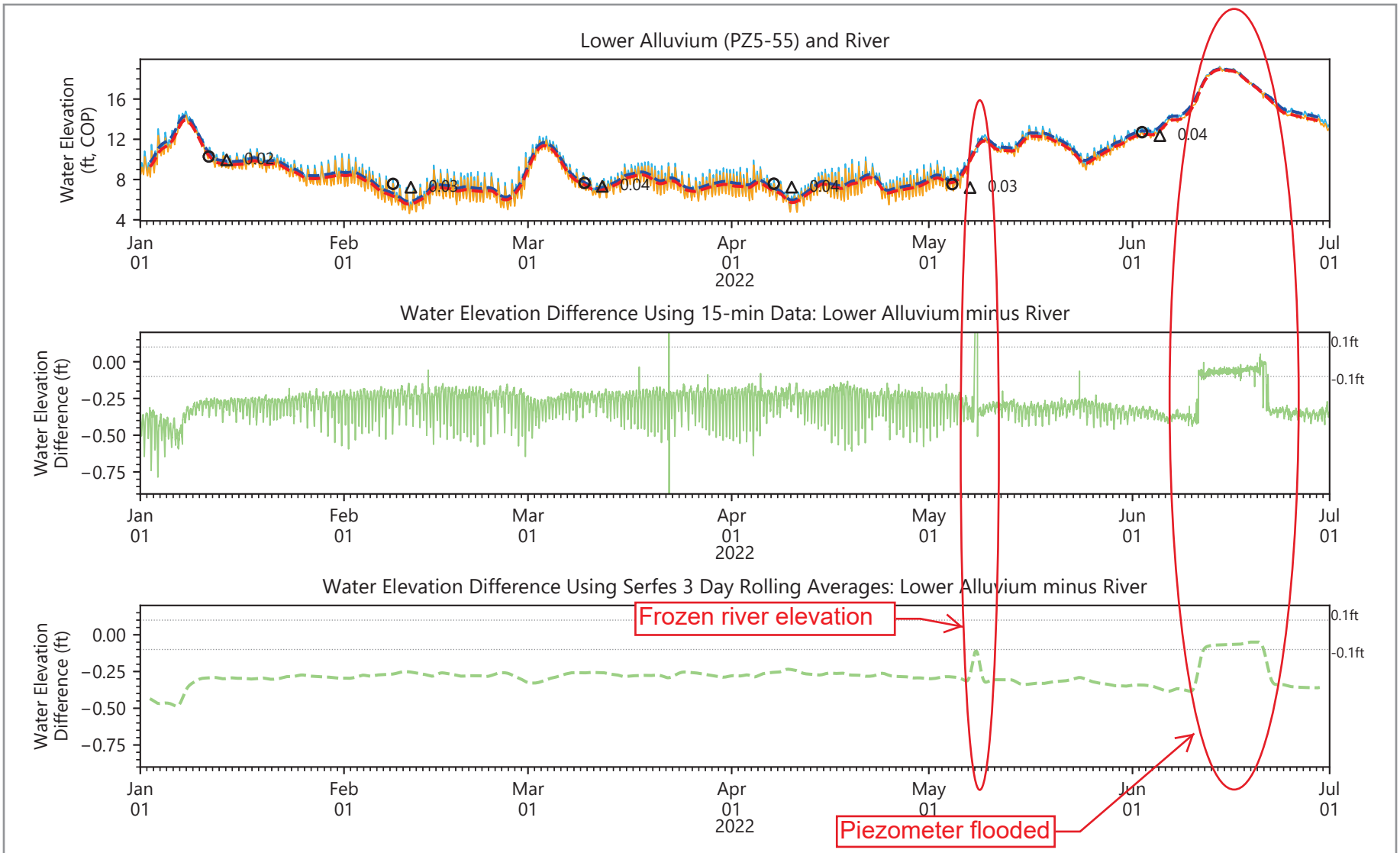
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.58
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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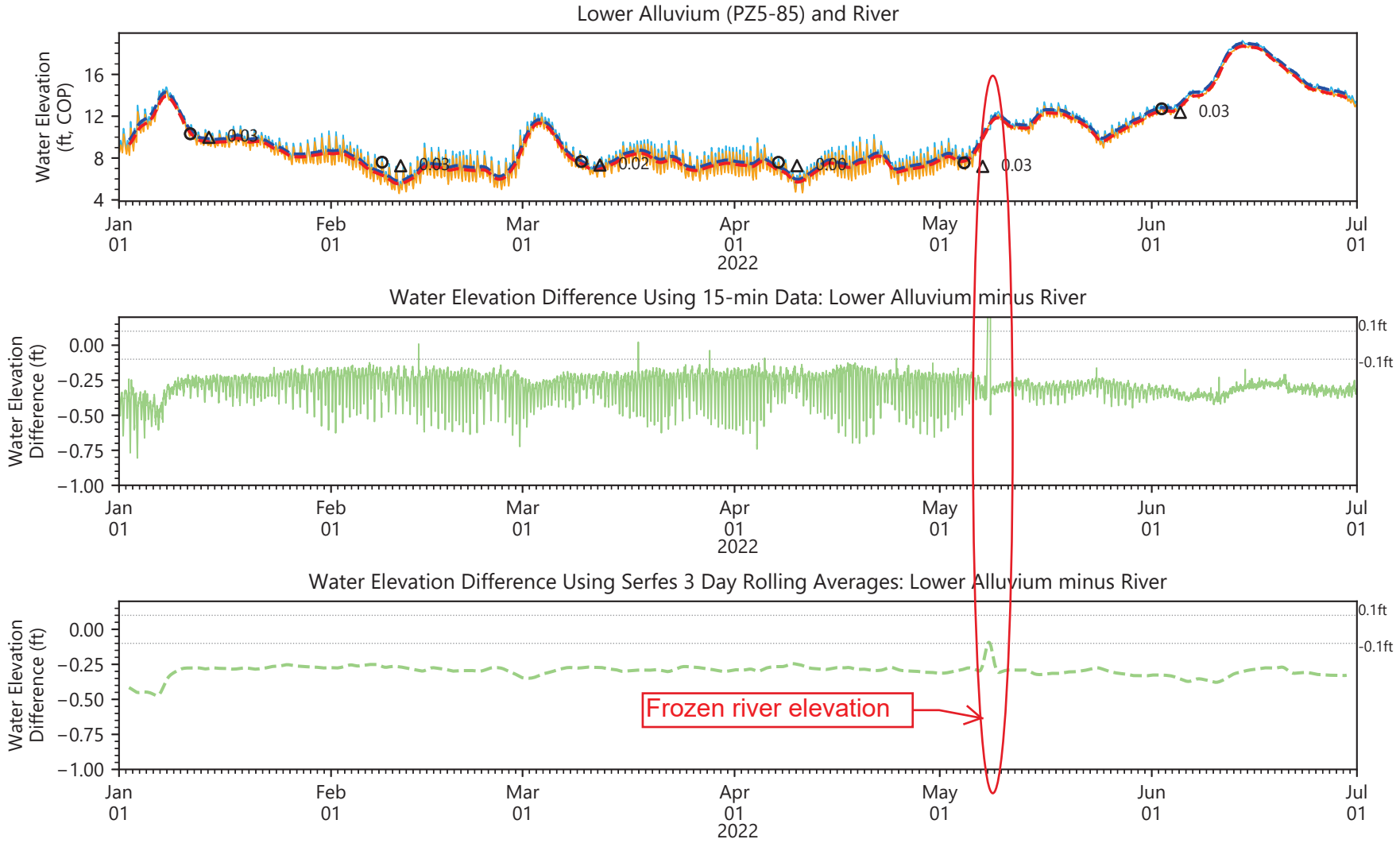
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.59
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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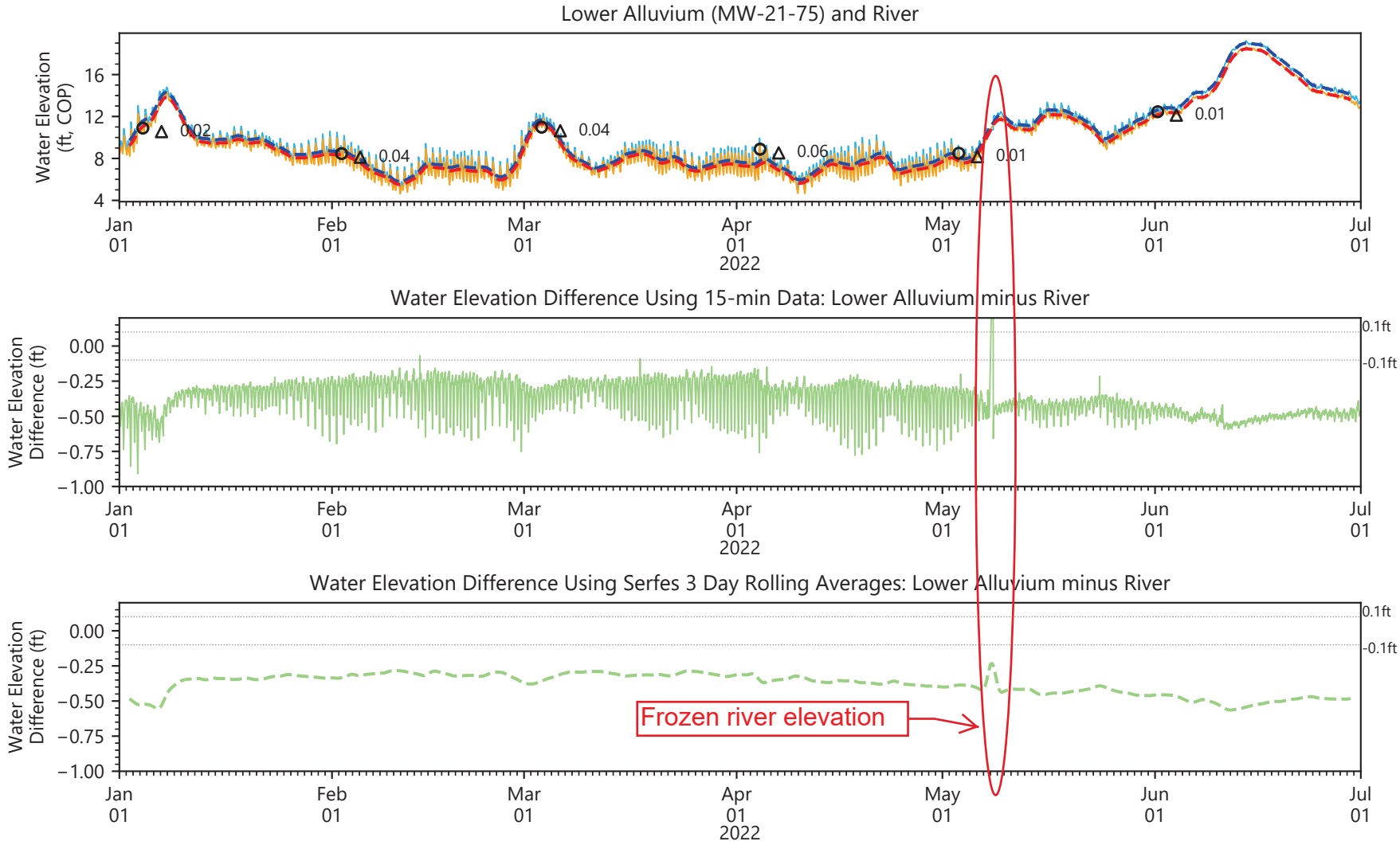
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.60
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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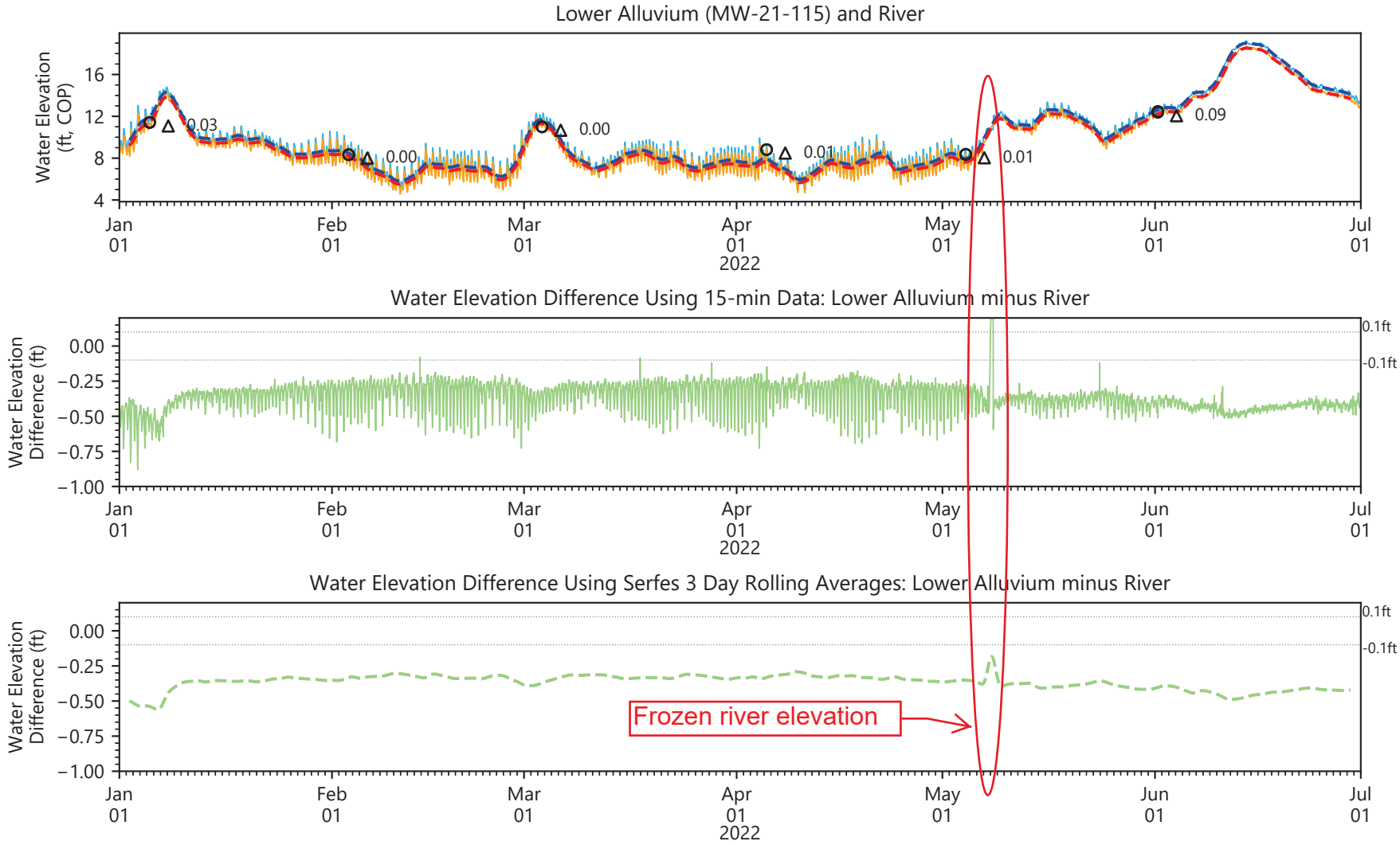
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.61
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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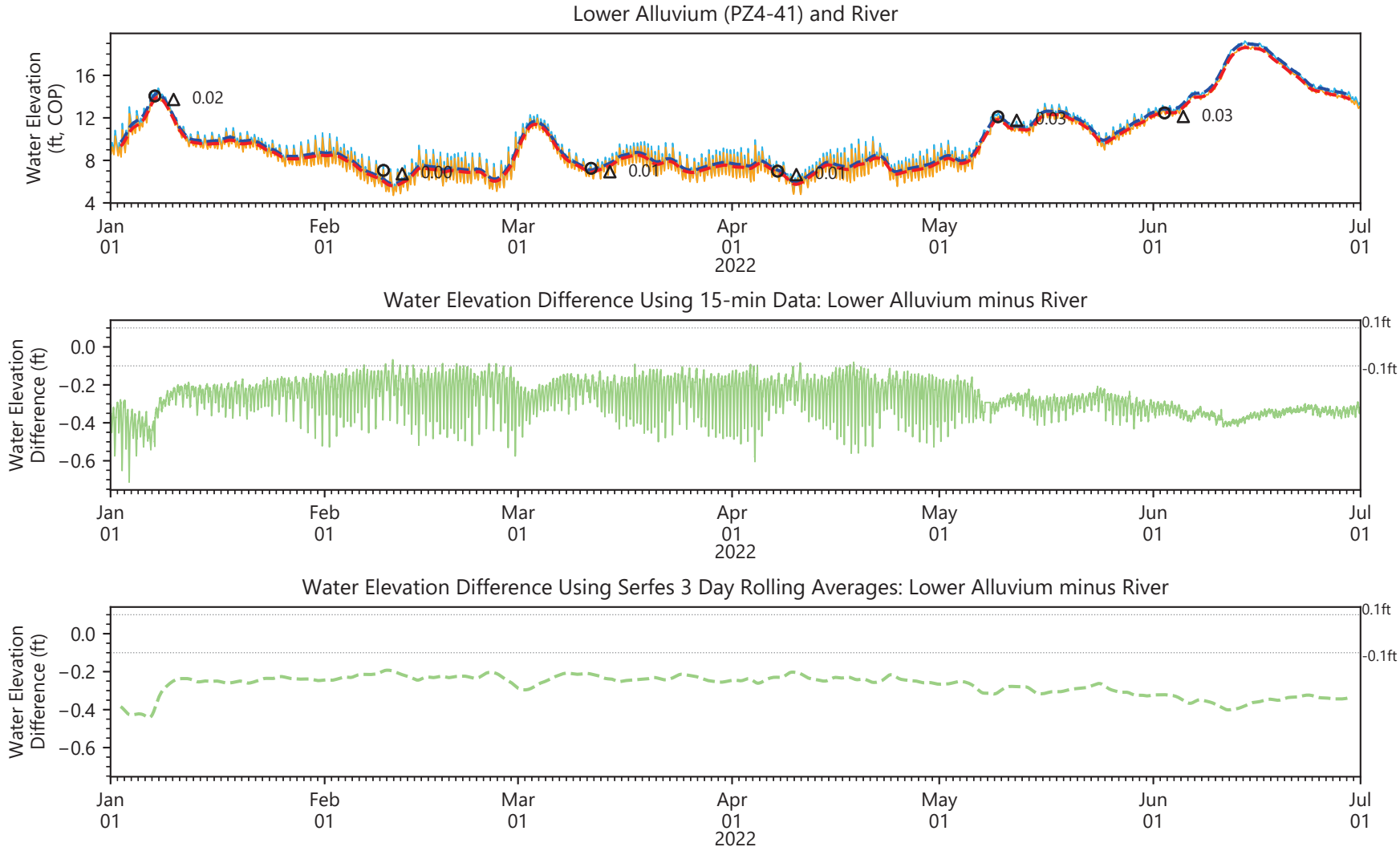
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.62
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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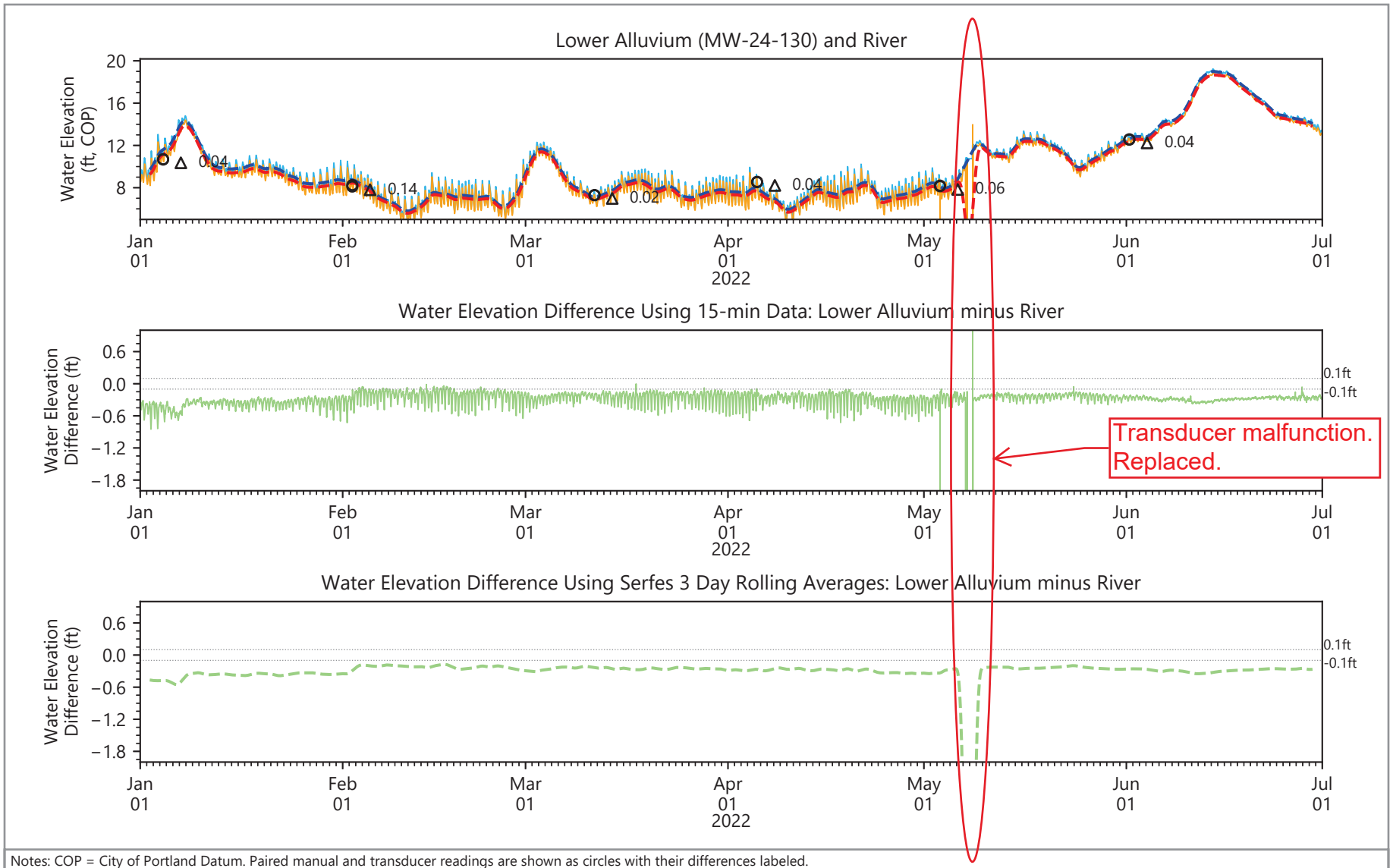
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.63
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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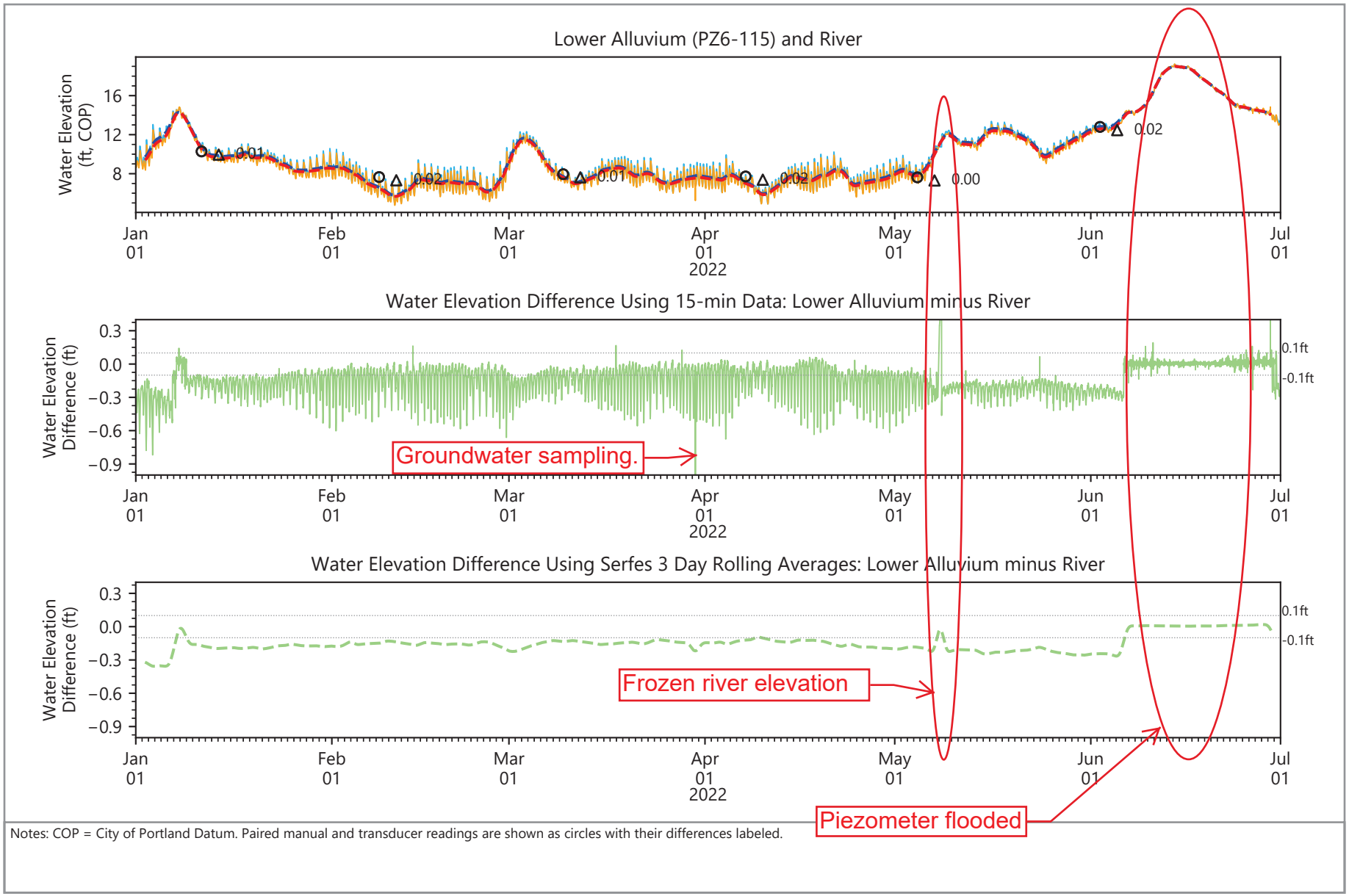
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.64
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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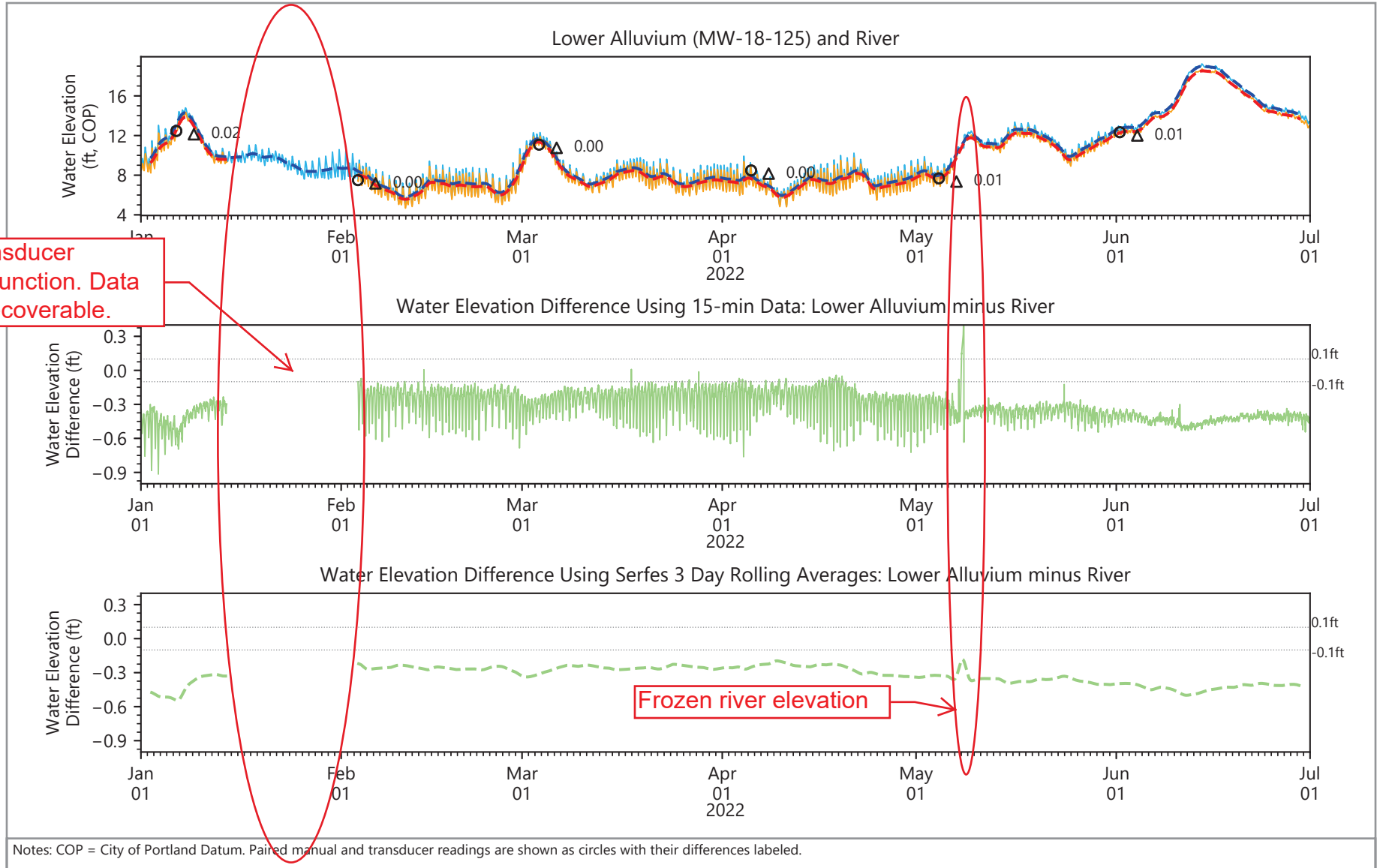
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.65
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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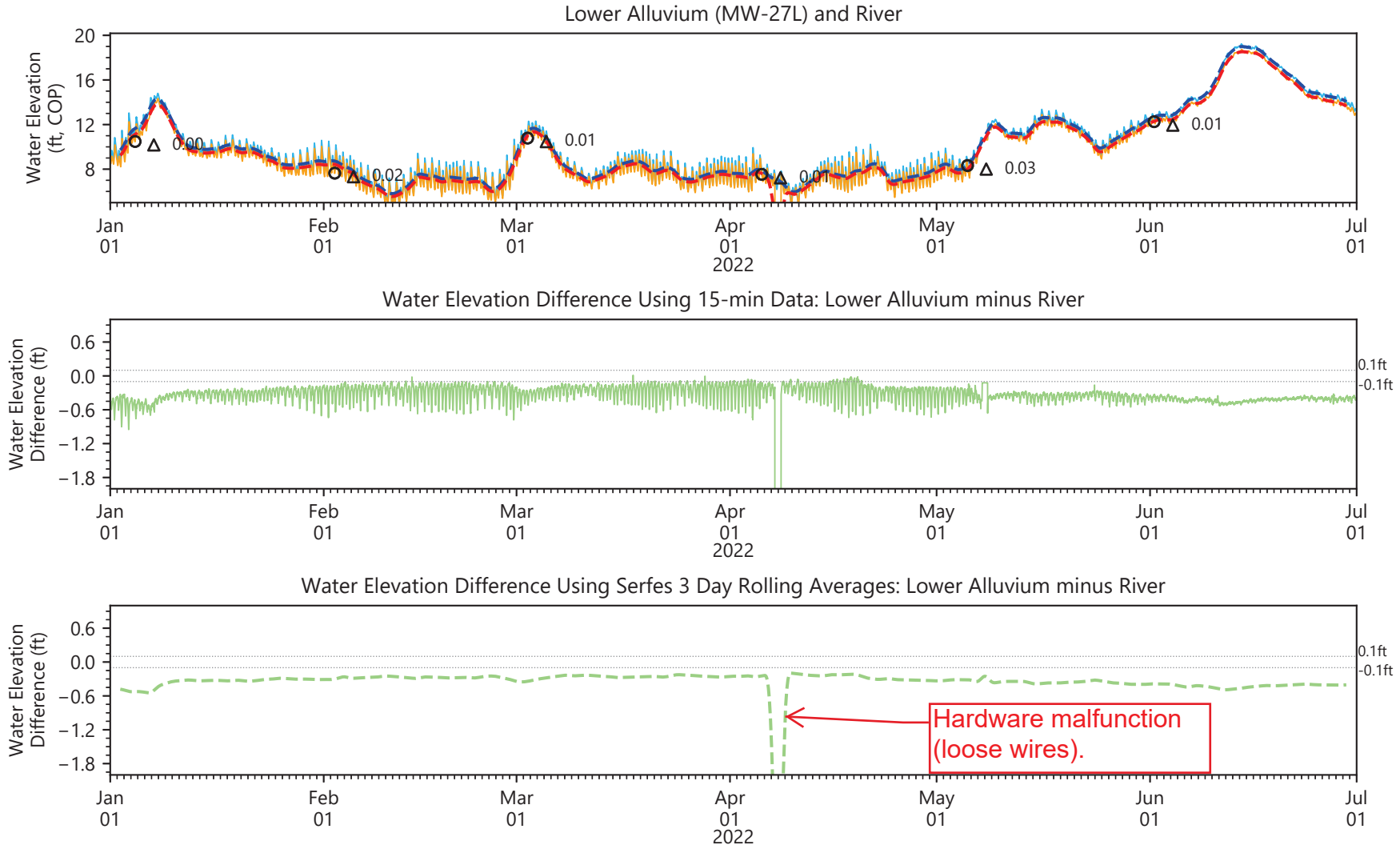
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.66
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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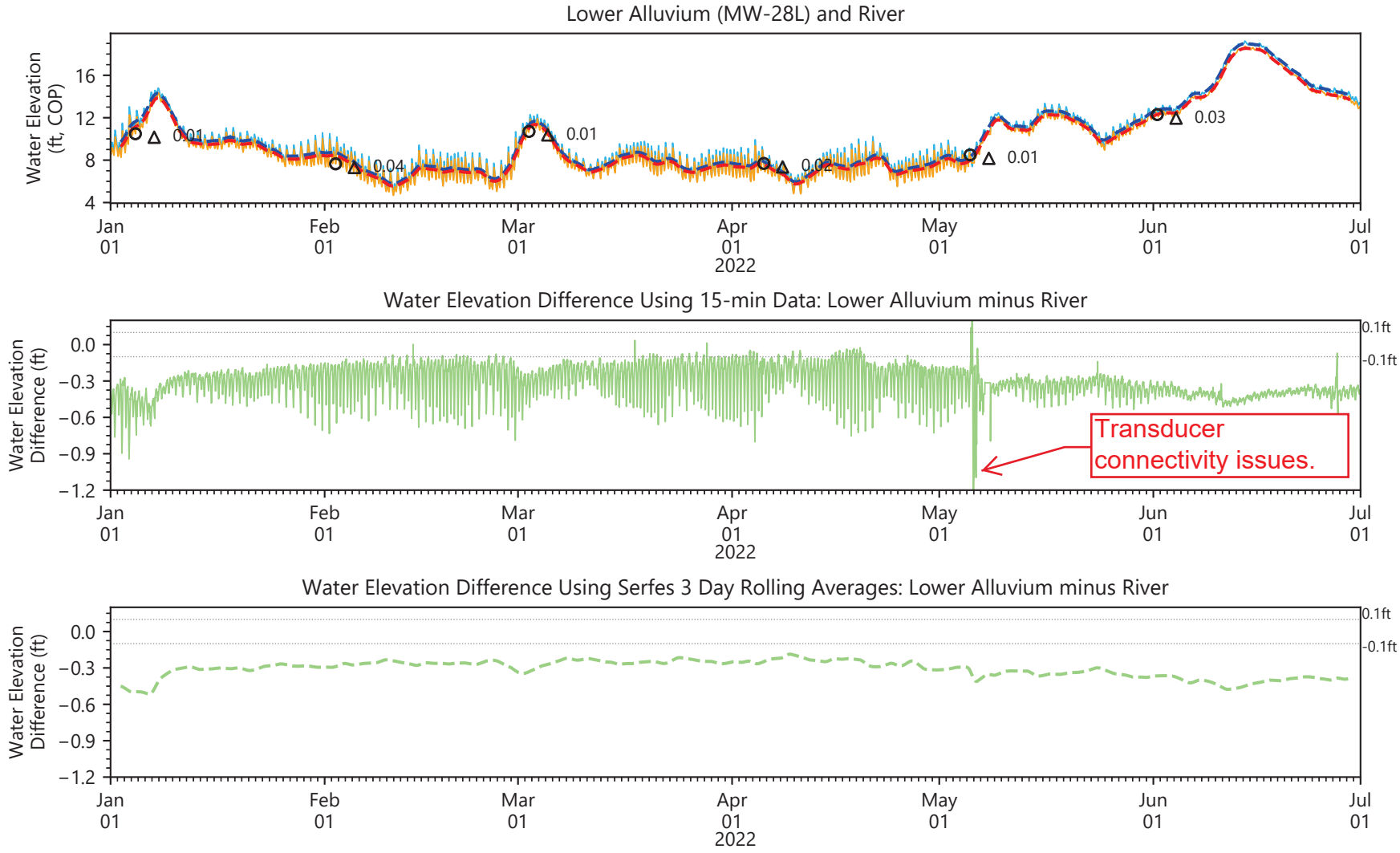
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.67
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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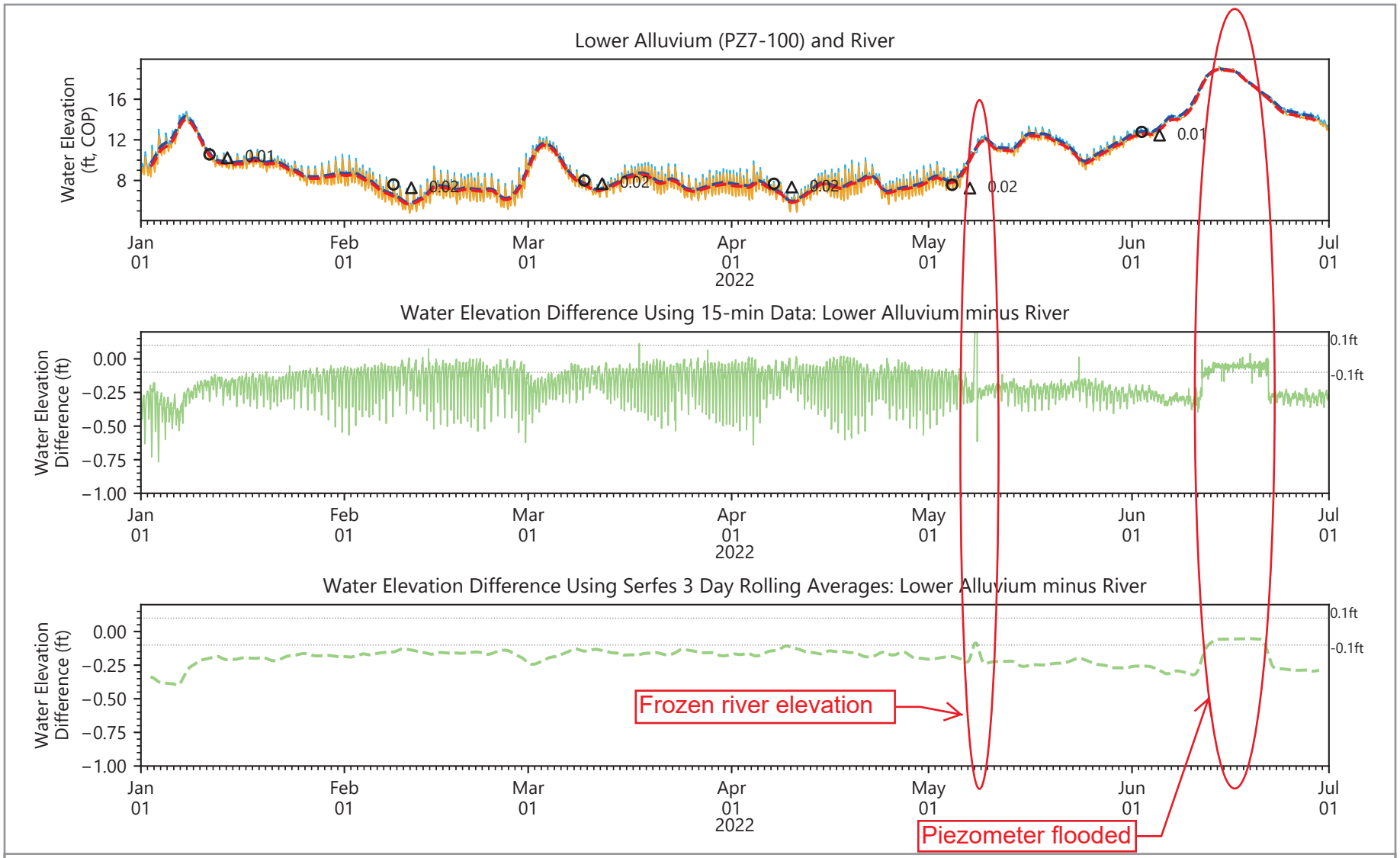
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.68
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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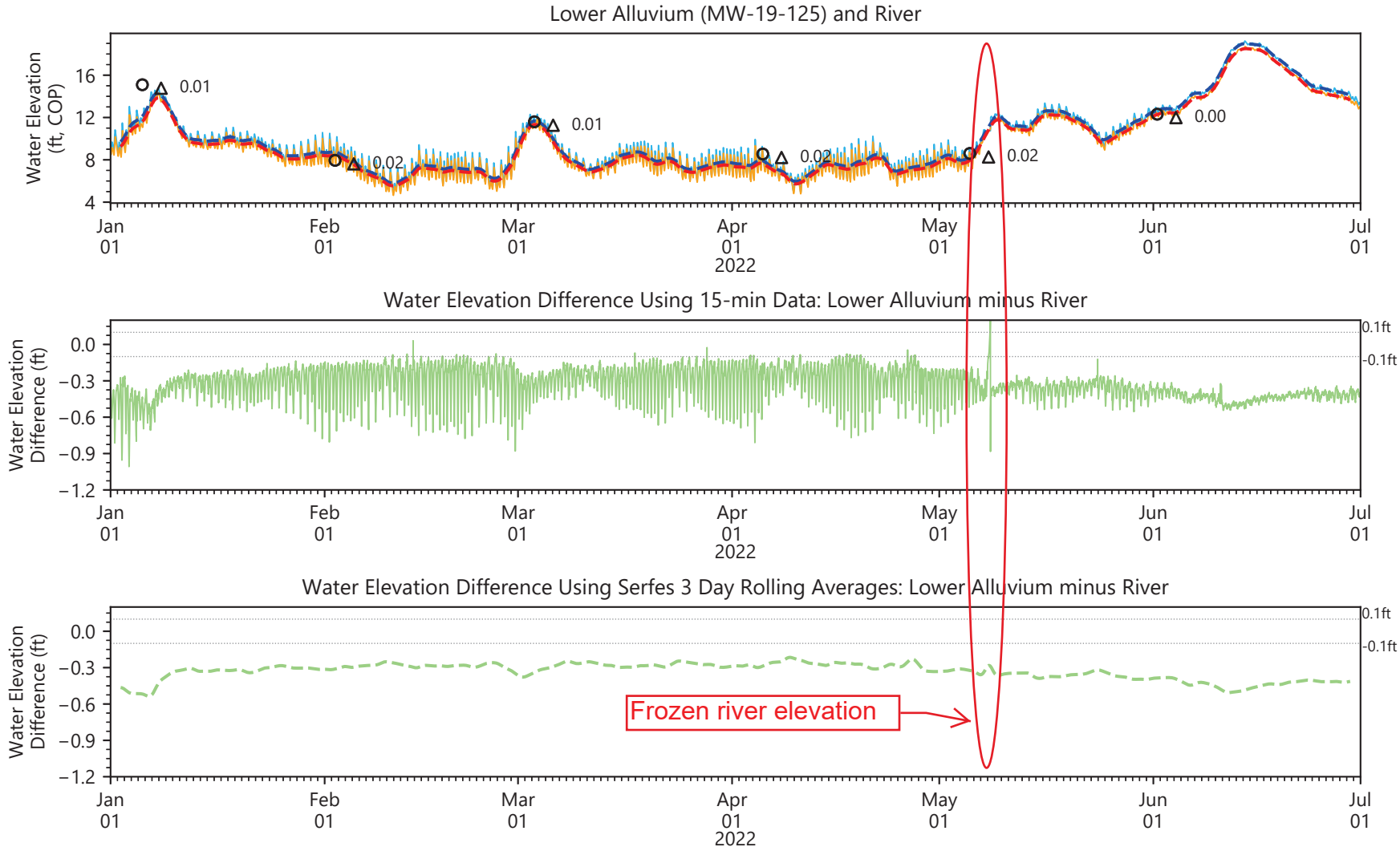
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.69
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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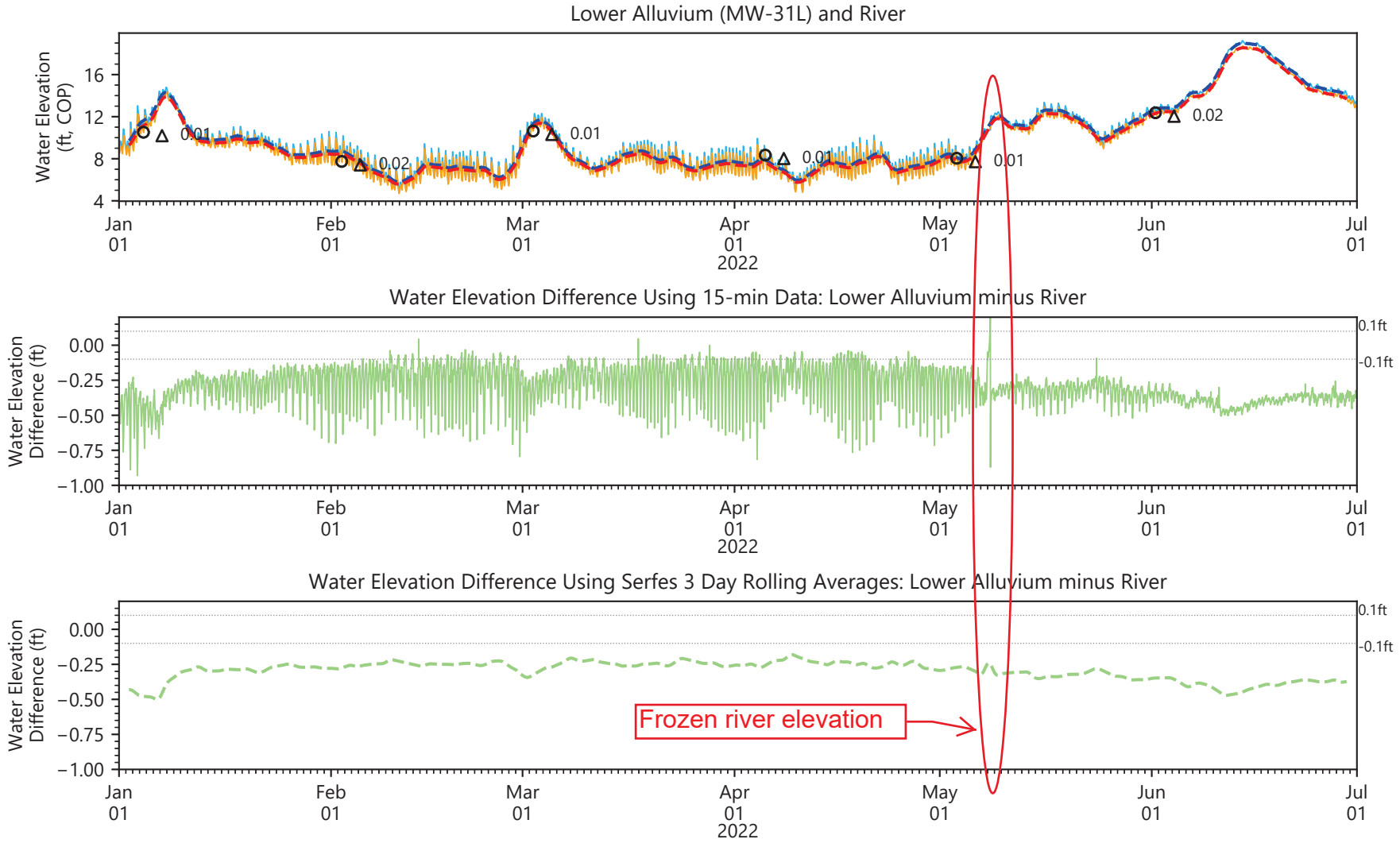
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.70
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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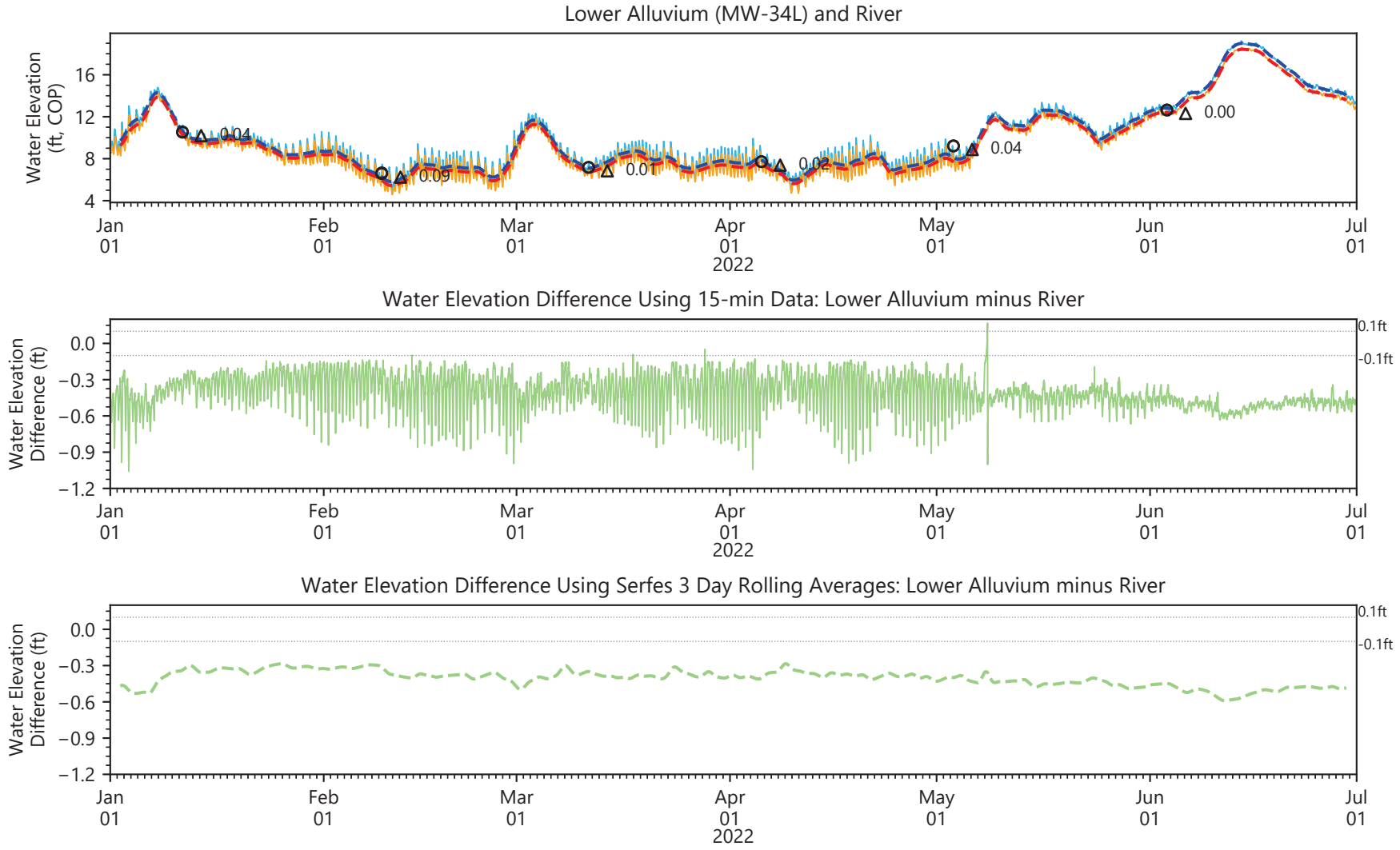
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.71
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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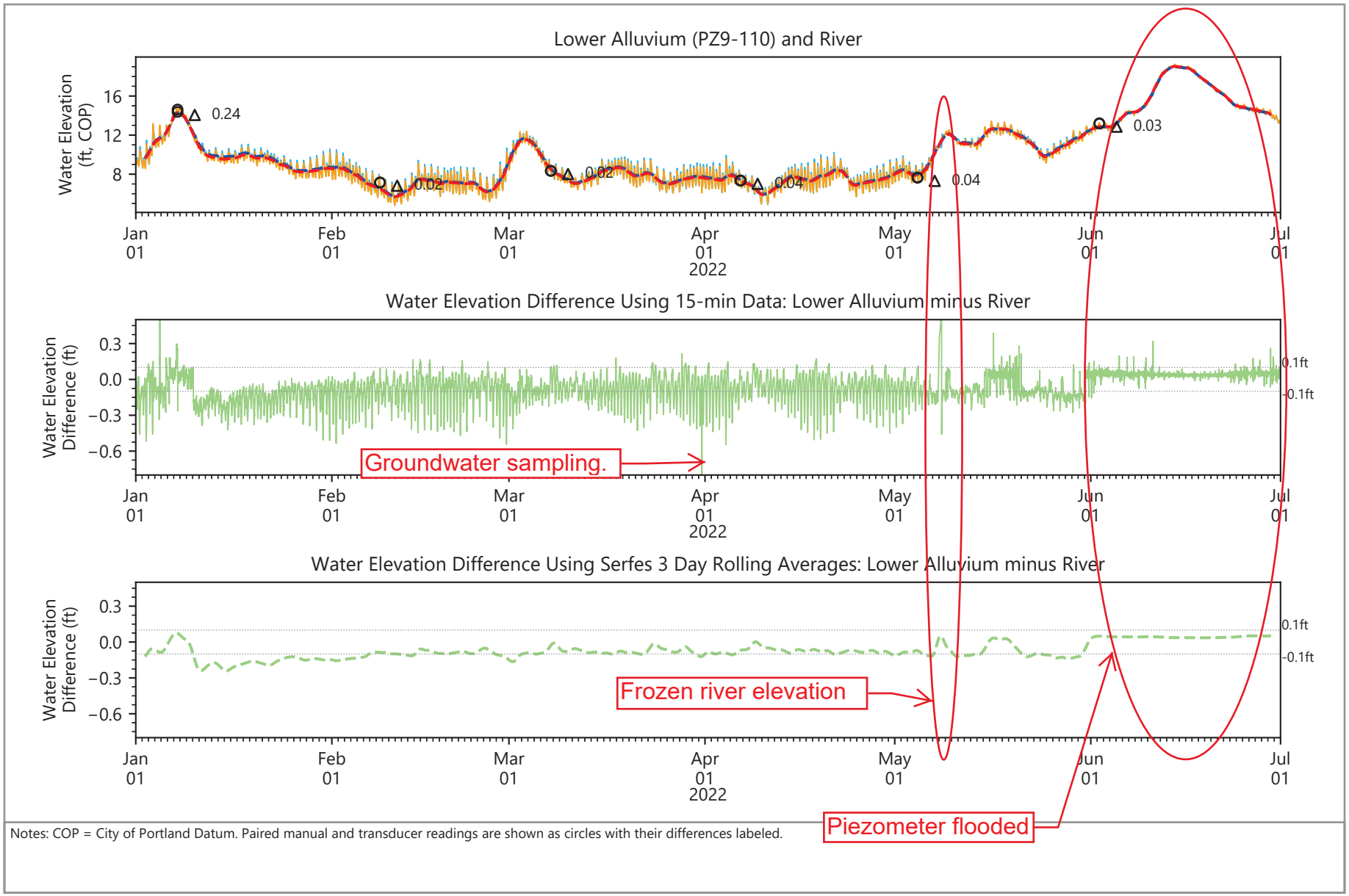
ANCHOR QEA

Figure 4.72
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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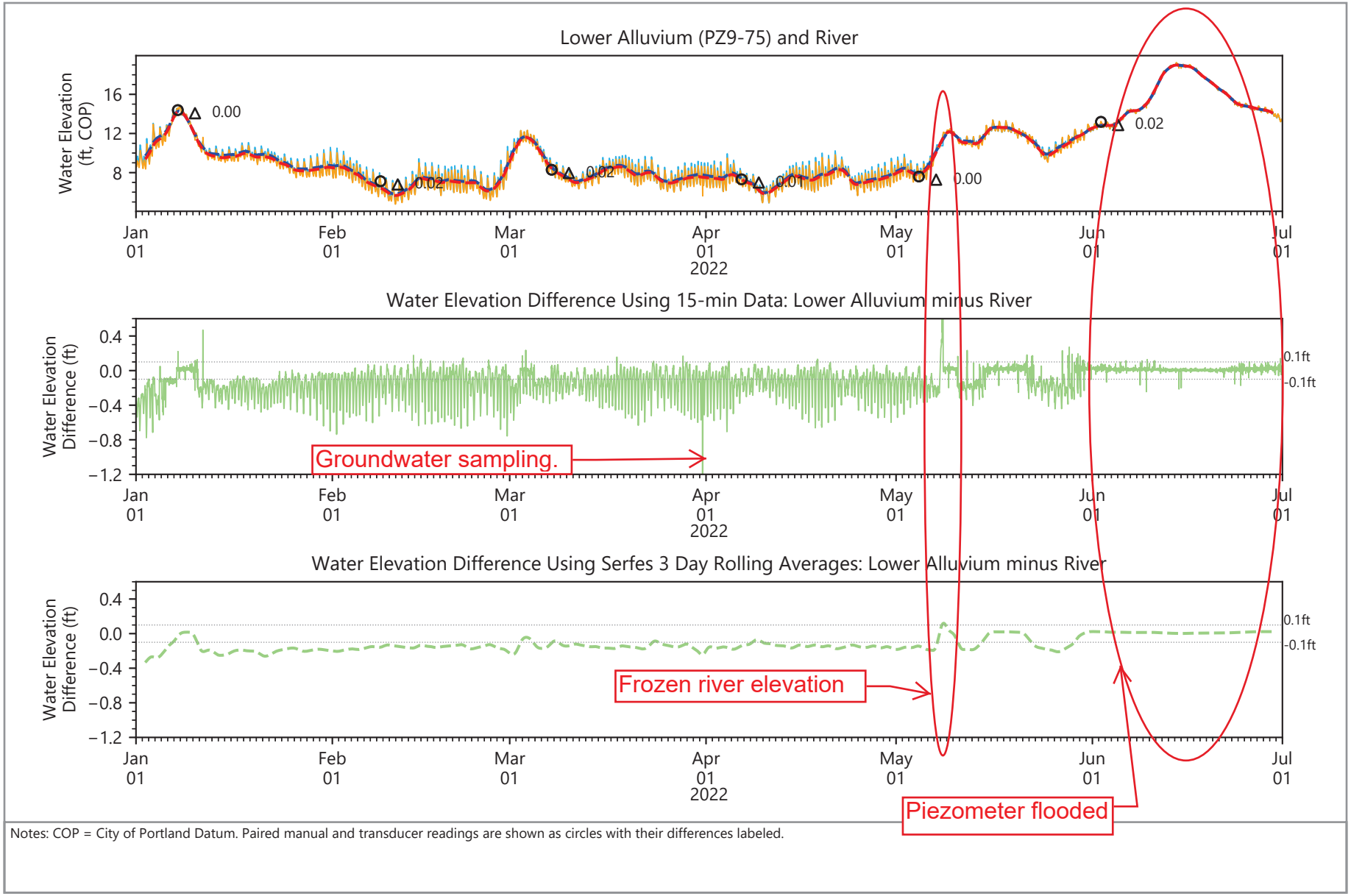
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.73
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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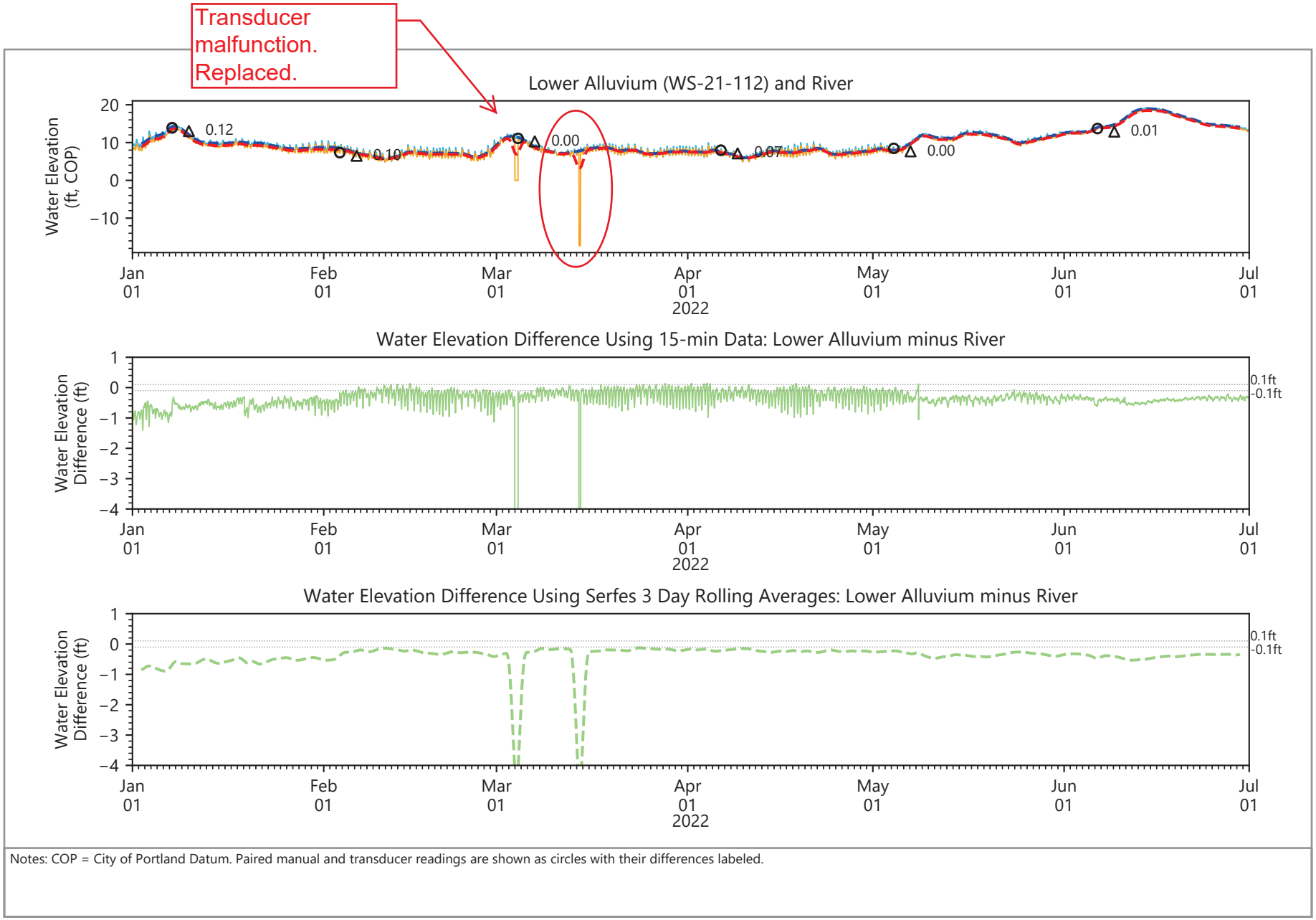
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.74
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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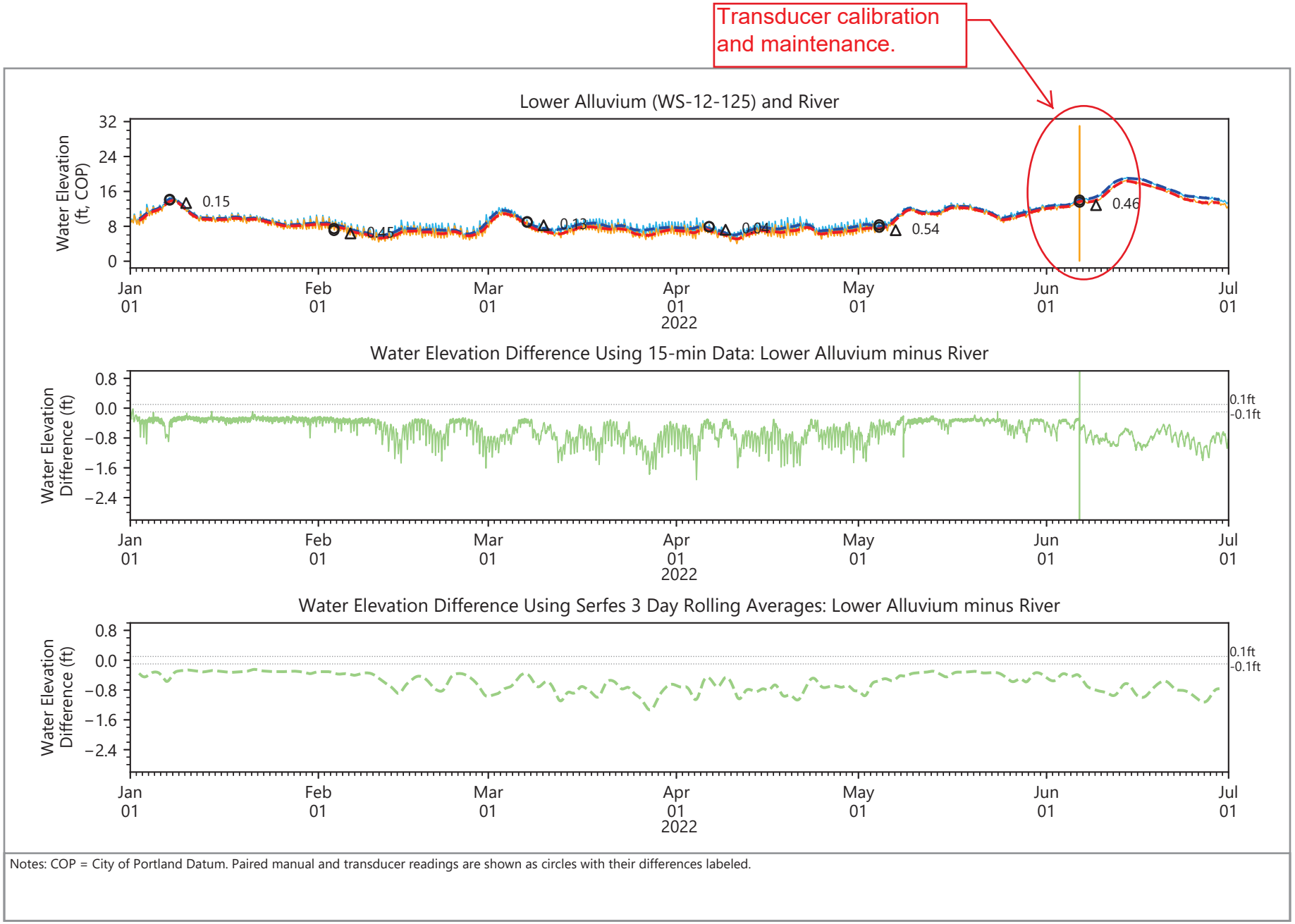
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.75
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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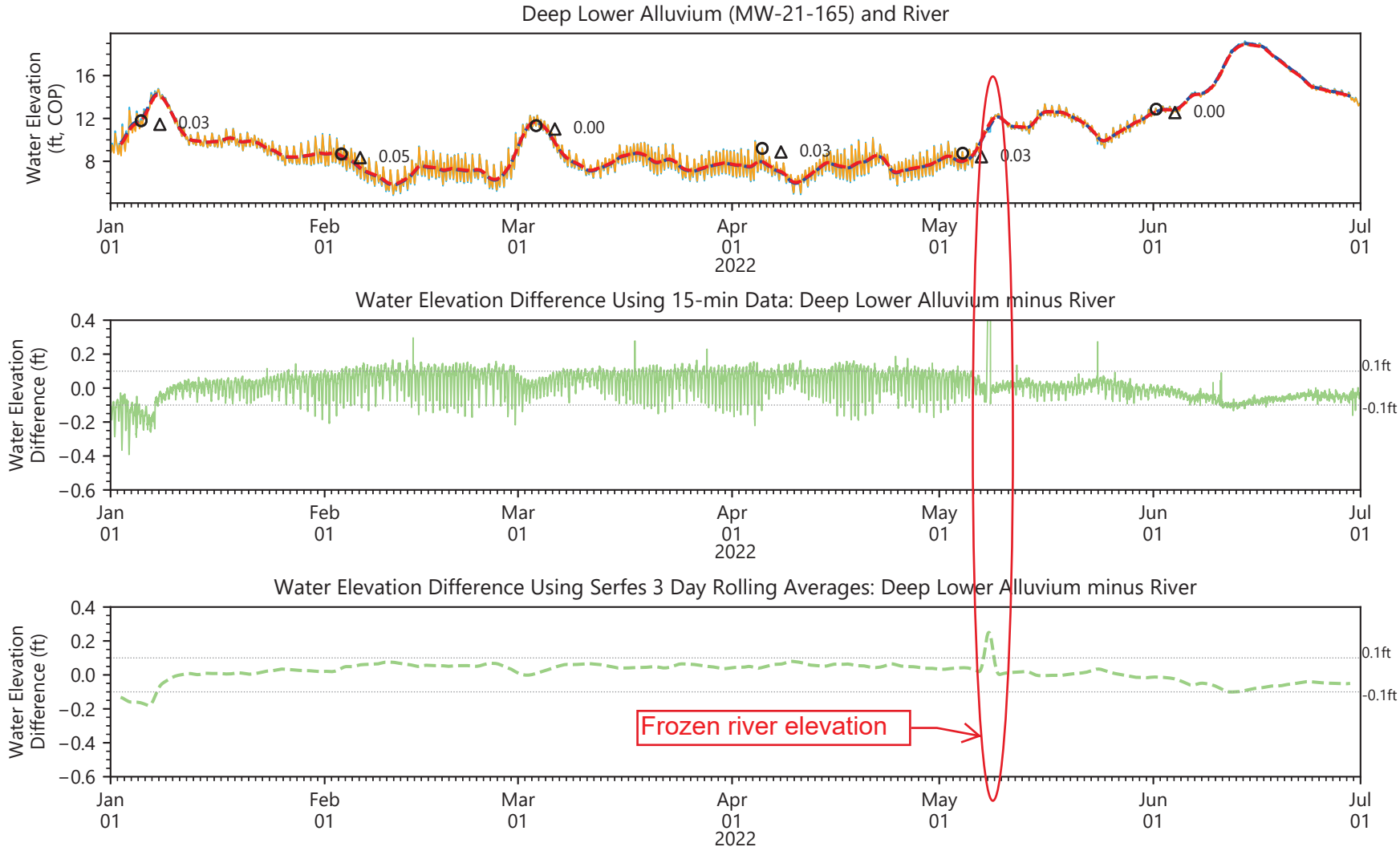
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.76
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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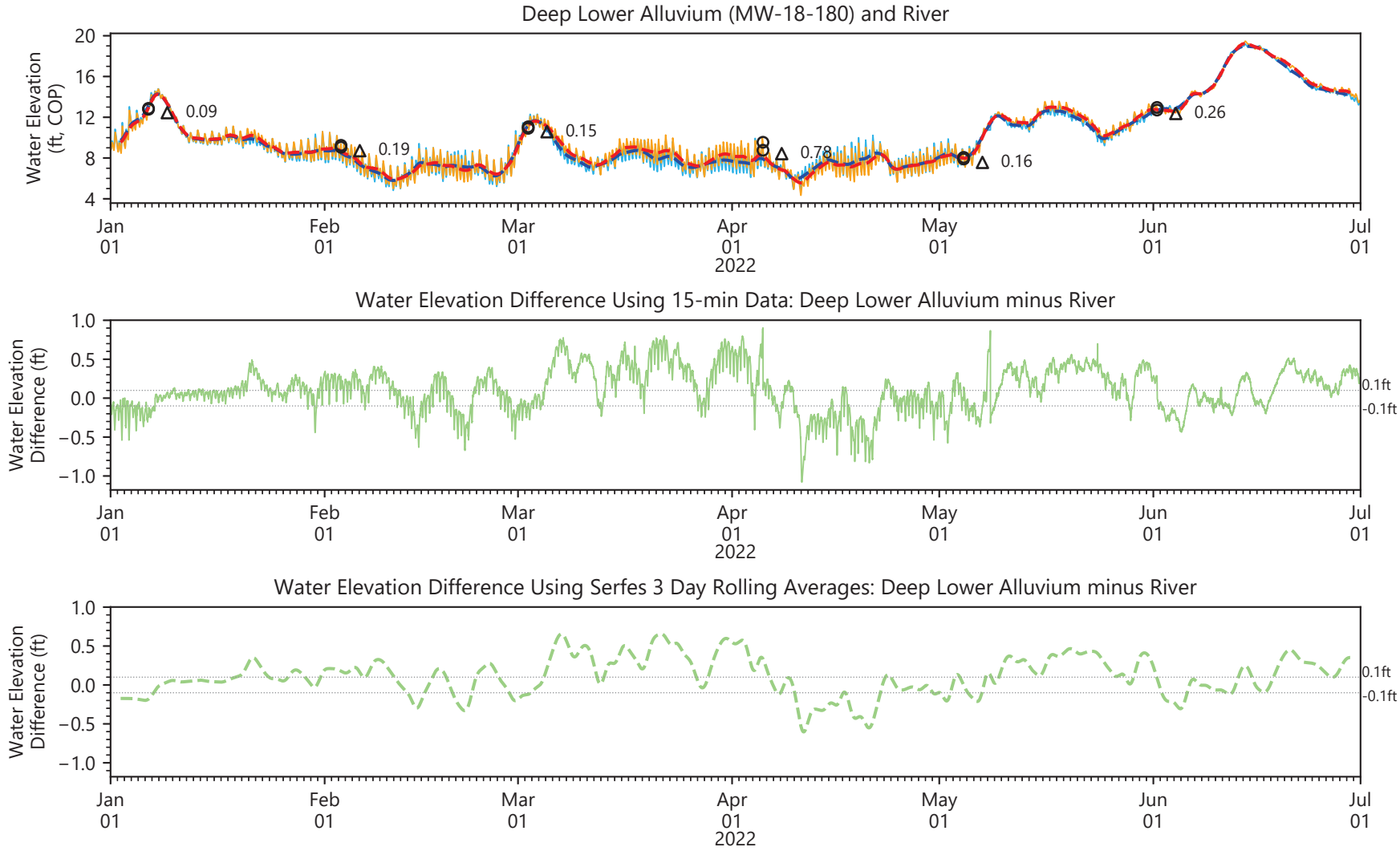
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium: 15-min Data
- Deep Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.77
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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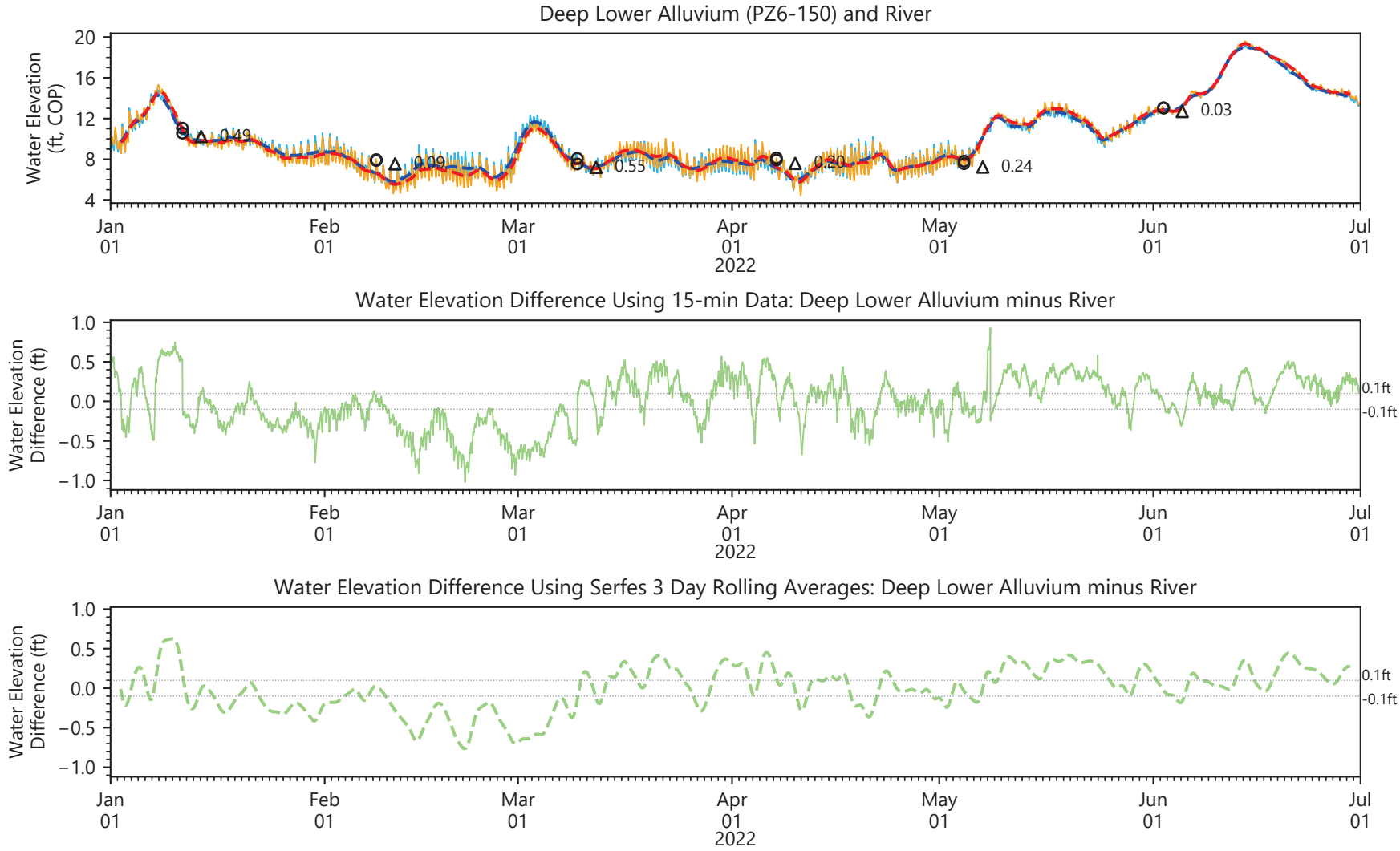
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.78
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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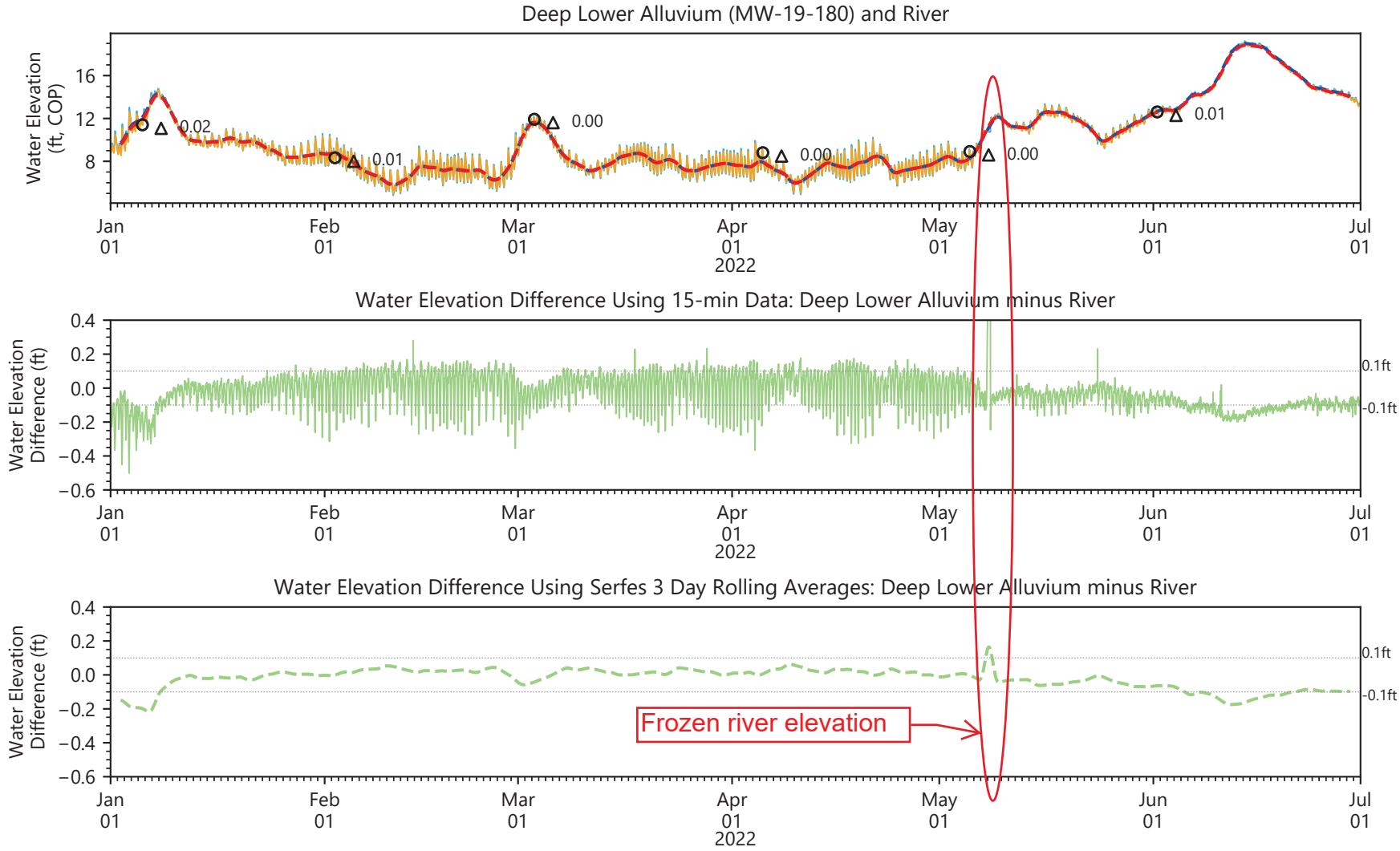
ANCHOR QEA

Figure 4.79
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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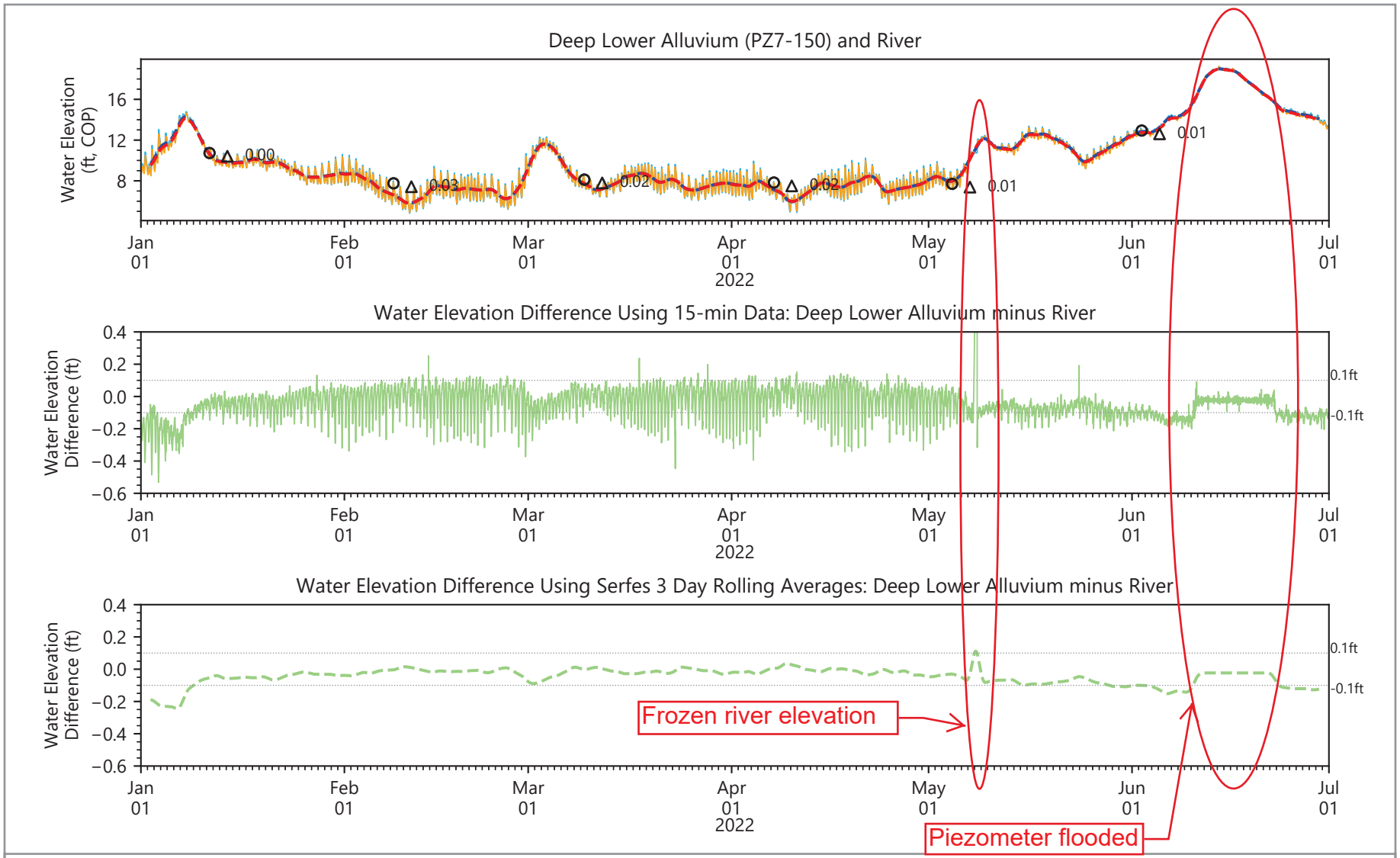
File Path: \\fuji\anchor\Data Management\Users\Albert\Python\Gasco\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium: 15-min Data
- Deep Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.80
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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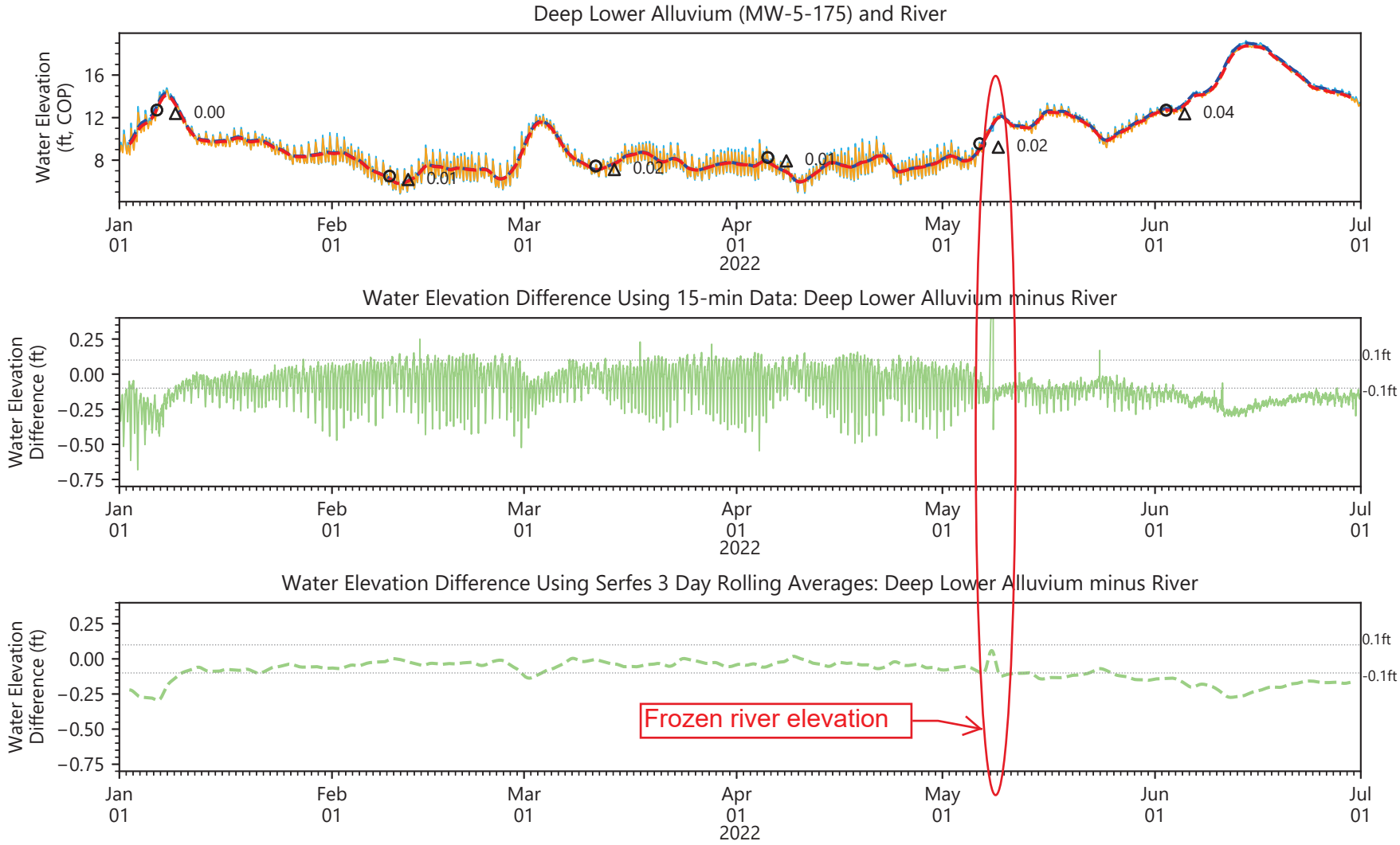
ANCHOR QEA

- Deep Lower Alluvium: 15-min Data
- Deep Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.81
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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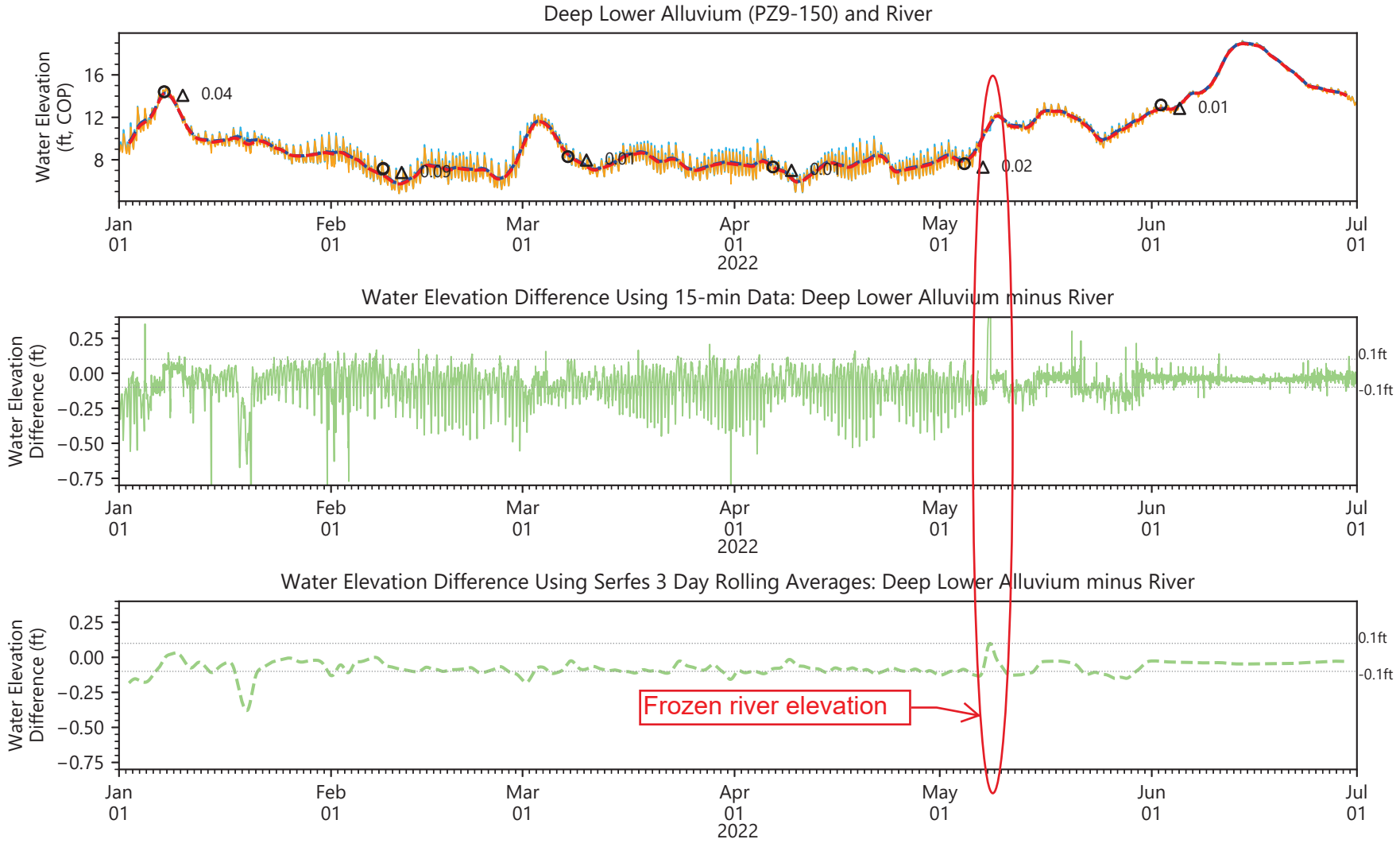
ANCHOR QEA

- Deep Lower Alluvium: 15-min Data
- Deep Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.82
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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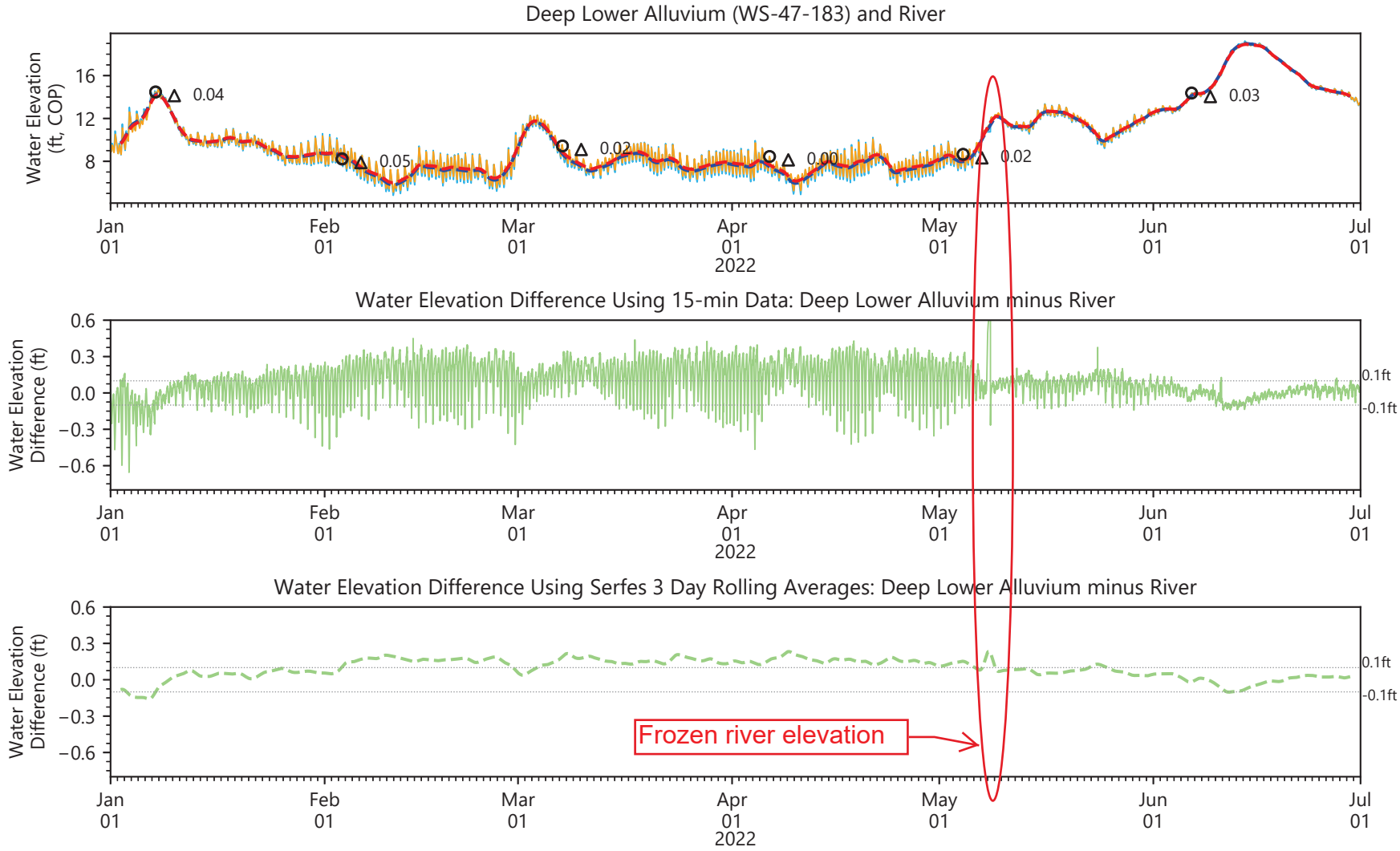
ANCHOR QEA

- Deep Lower Alluvium: 15-min Data
- Deep Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.83
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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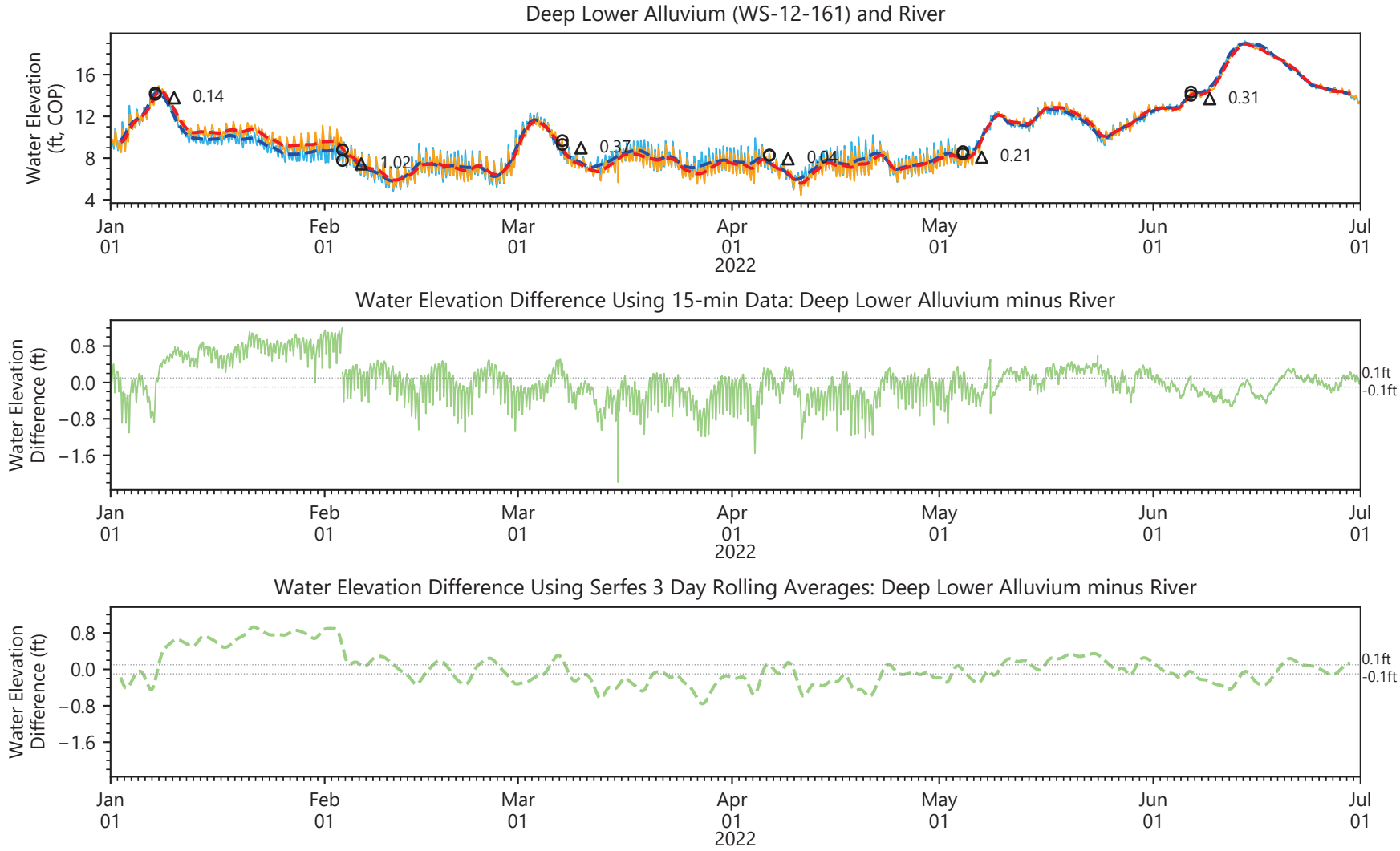
ANCHOR QEA

- Deep Lower Alluvium: 15-min Data
- Deep Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.84
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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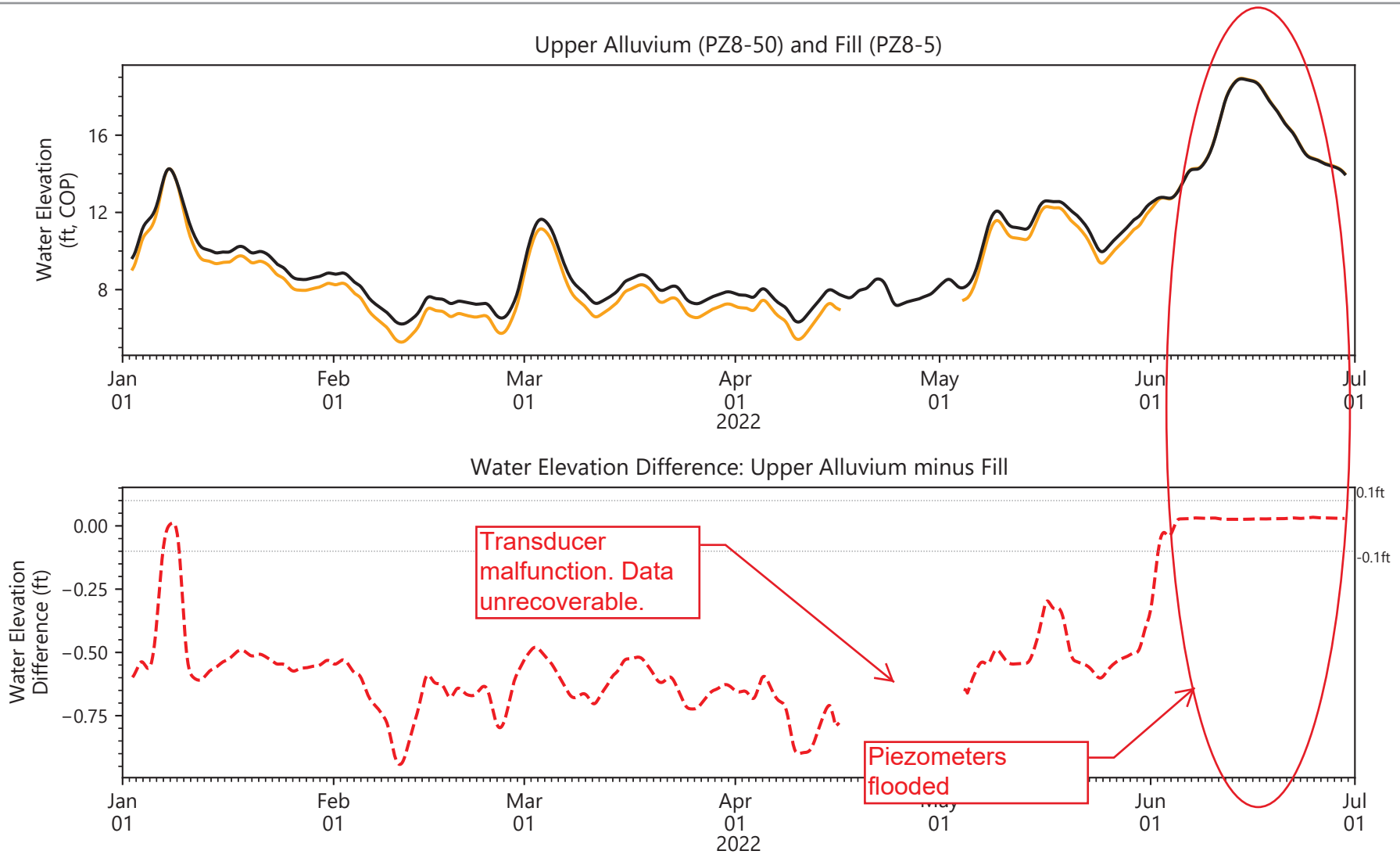
ANCHOR QEA

Figure 4.85
Groundwater Elevation Differences
NW Natural Gasco Site



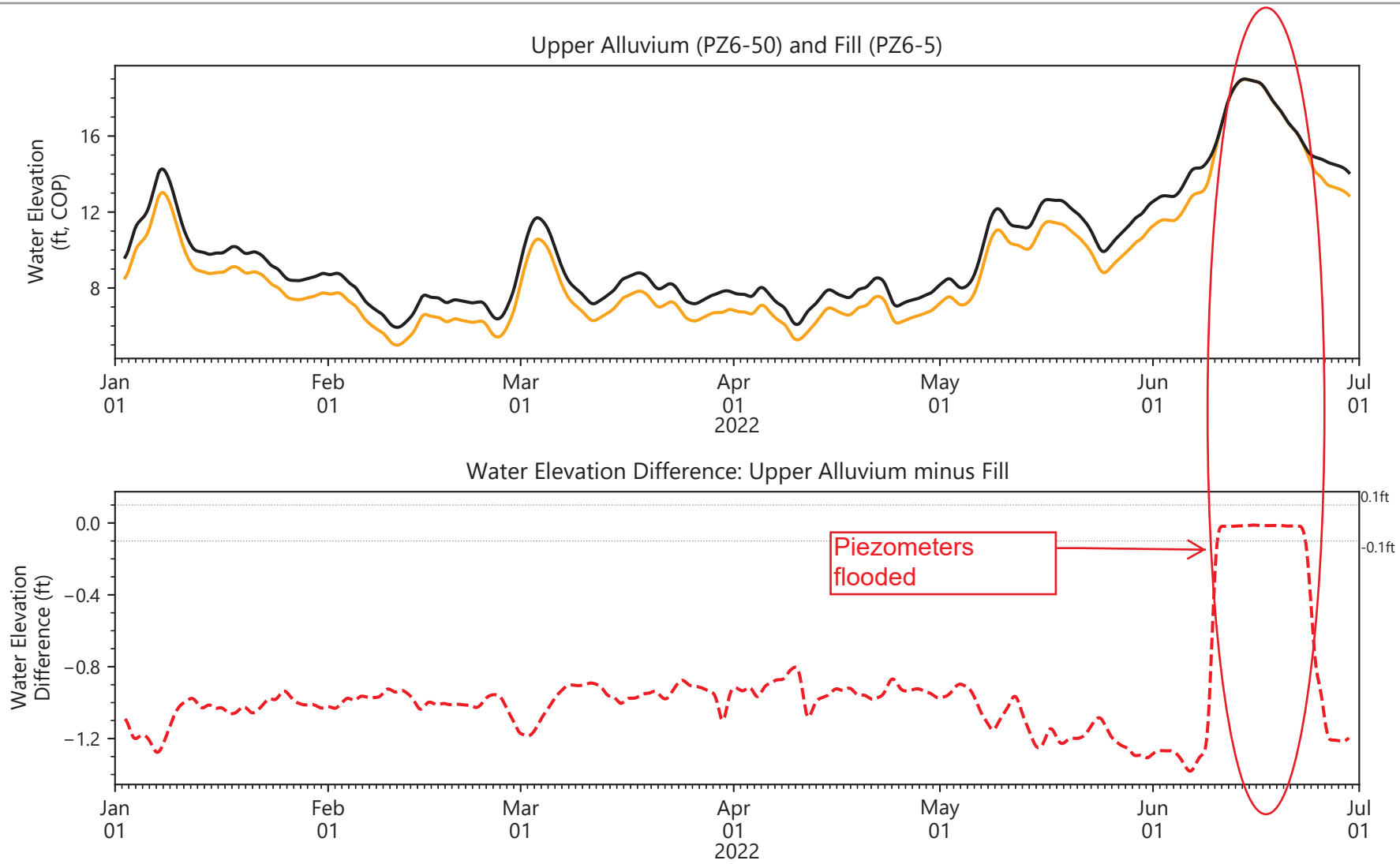
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:58 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Upper Alluvium
Fill
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.1
Groundwater Elevation Differences
NW Natural Gasco Site



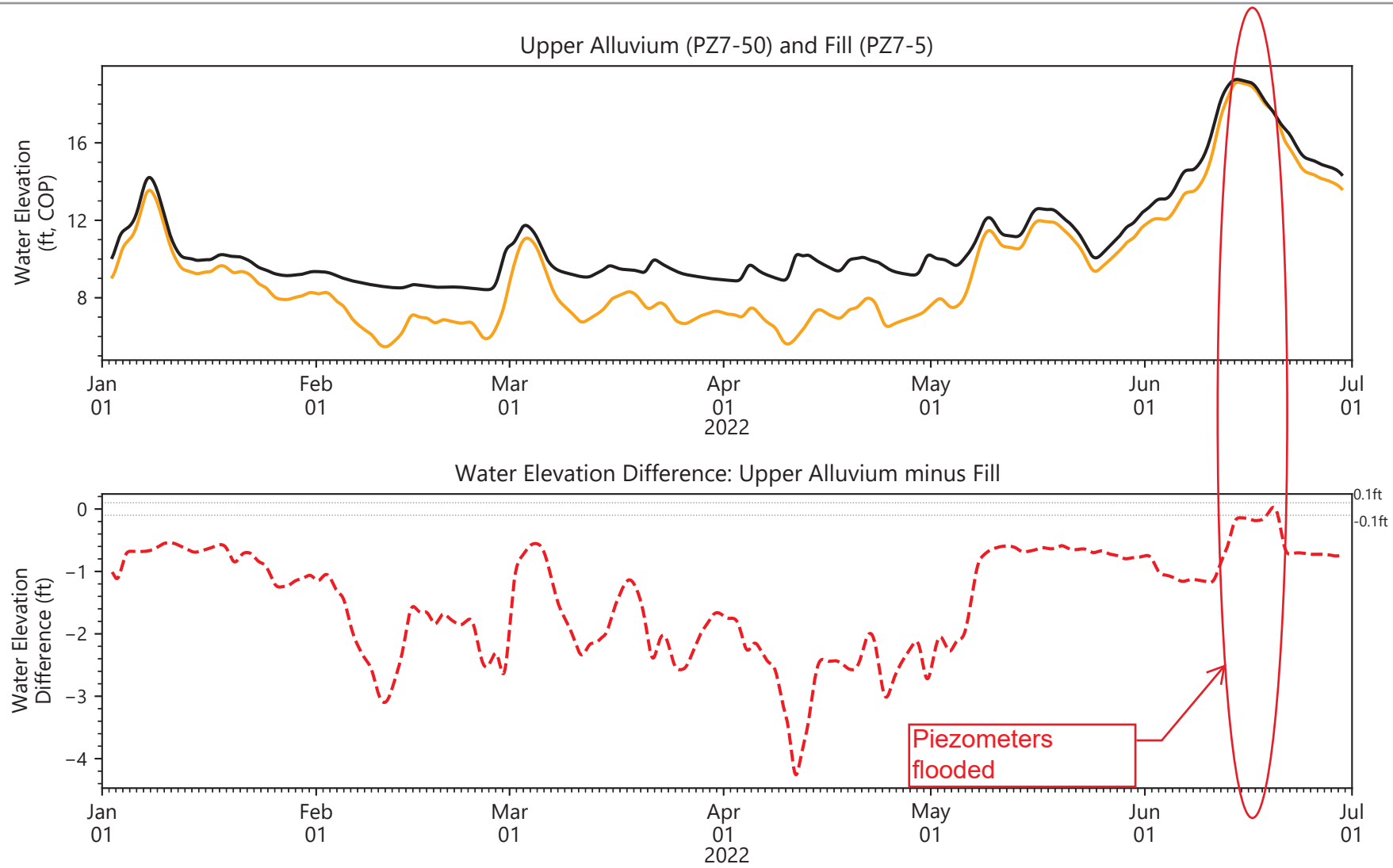
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:58 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Upper Alluvium
Fill
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.2
Groundwater Elevation Differences
NW Natural Gasco Site



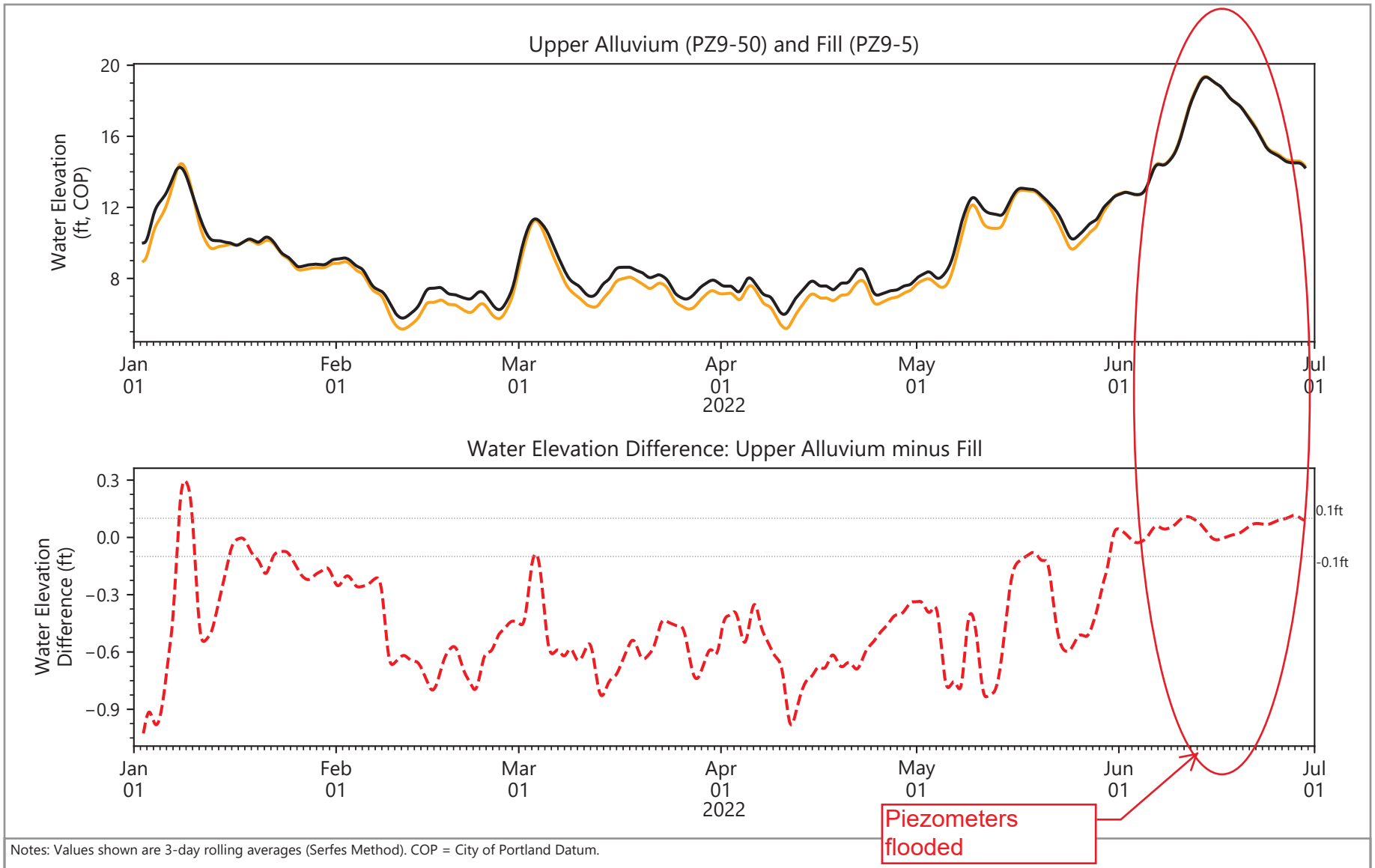
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:58 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Upper Alluvium
Fill
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.3
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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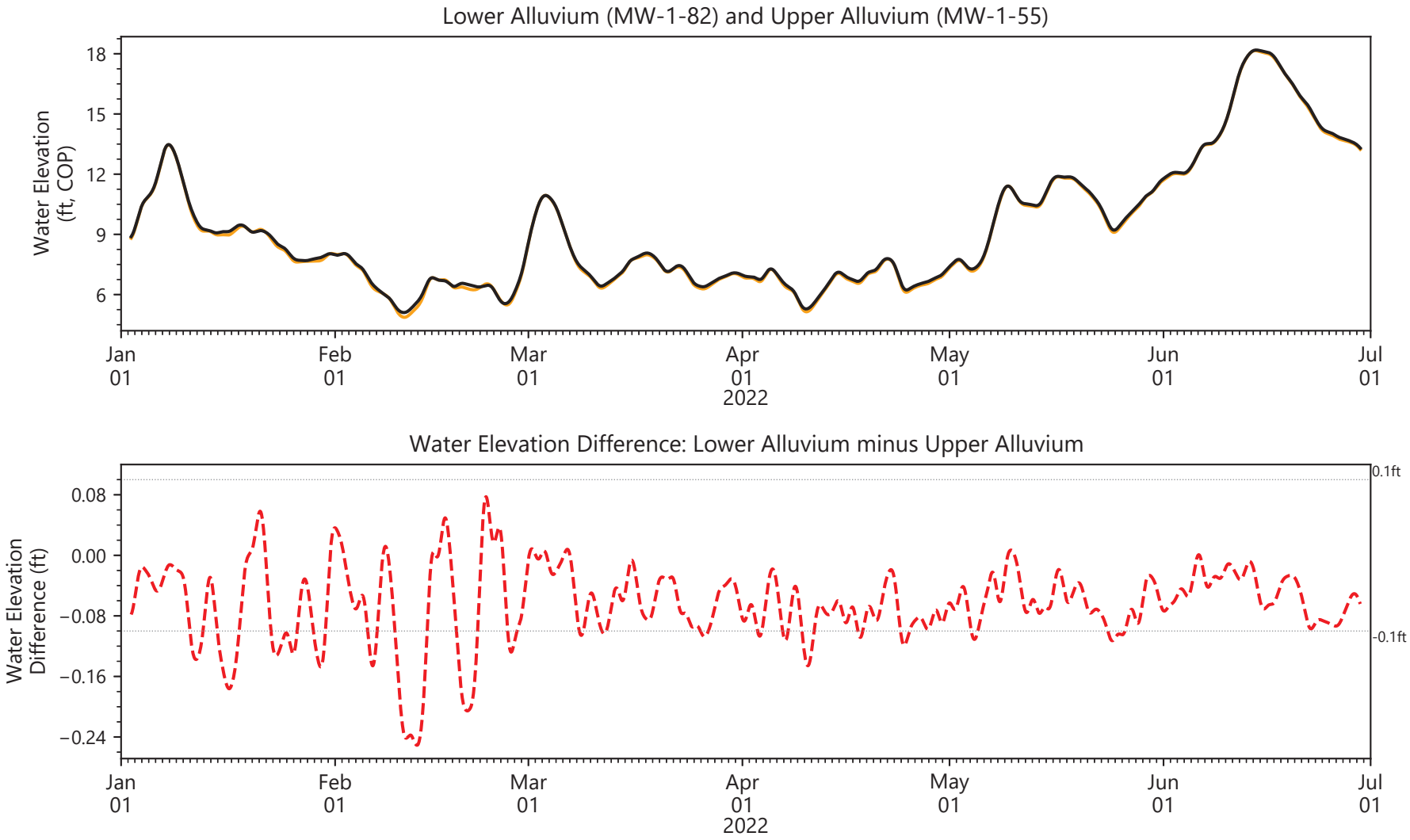
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Upper Alluvium
Fill
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.4
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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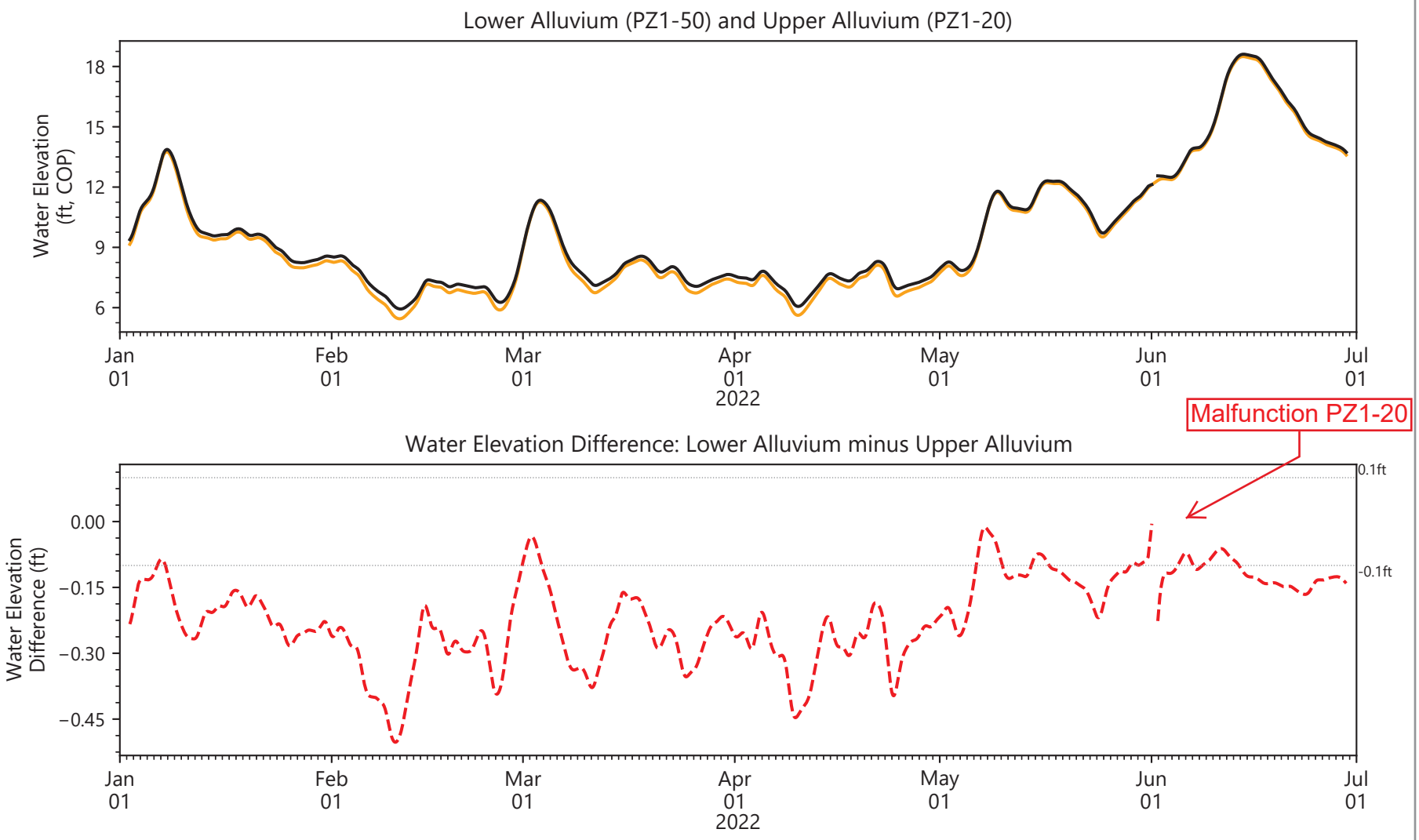
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.5
Groundwater Elevation Differences
NW Natural Gasco Site



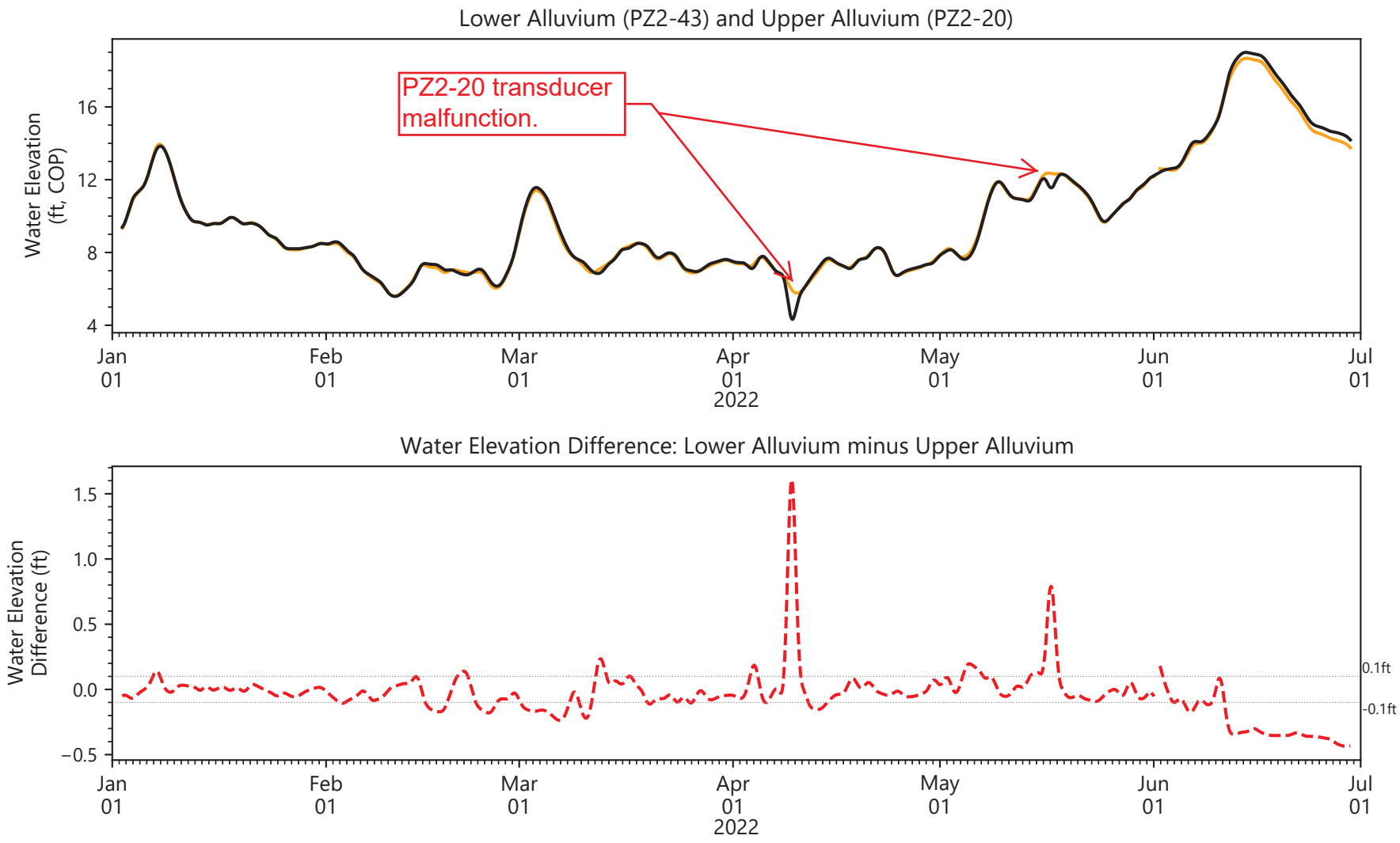
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:58 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.6
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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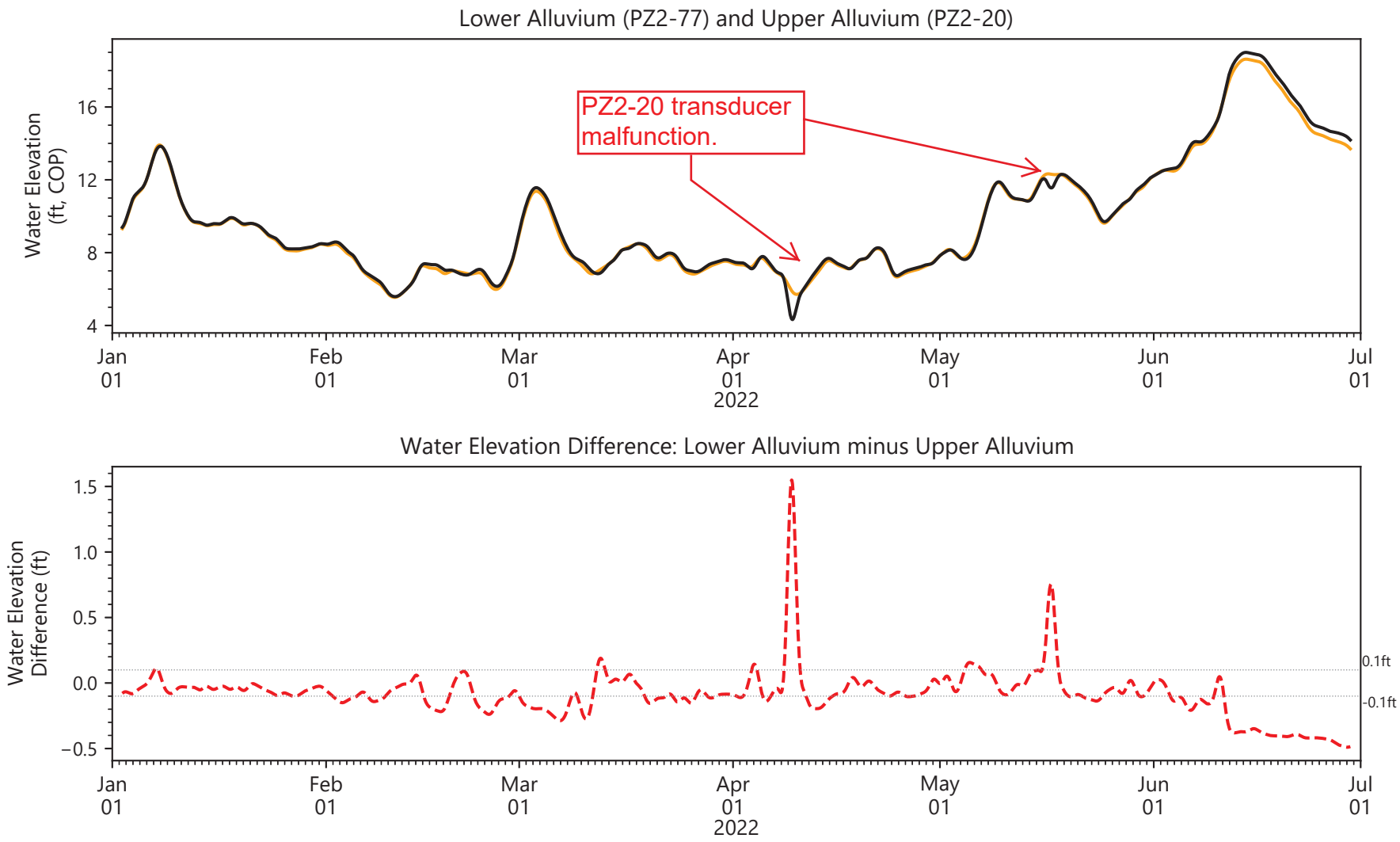
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.7
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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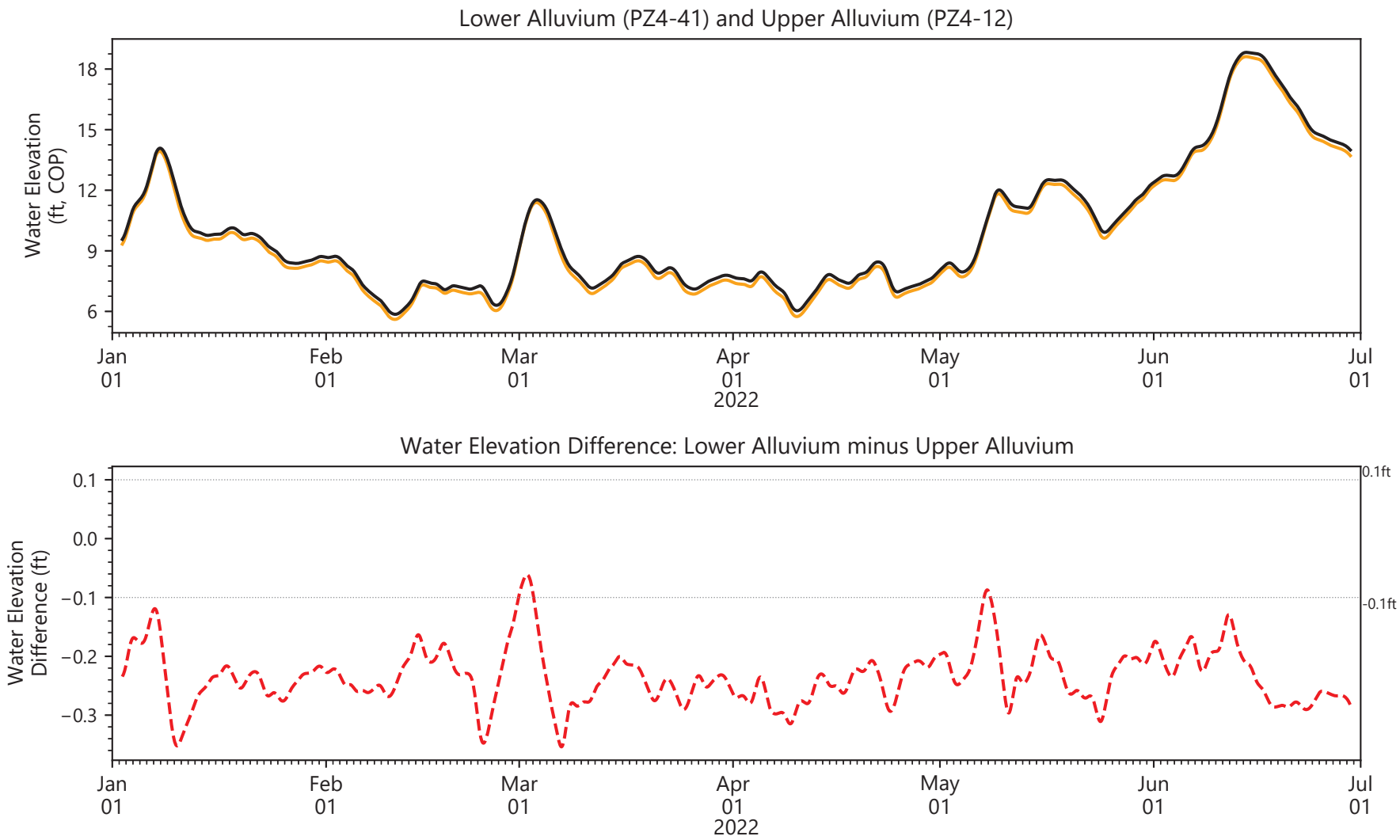
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.8
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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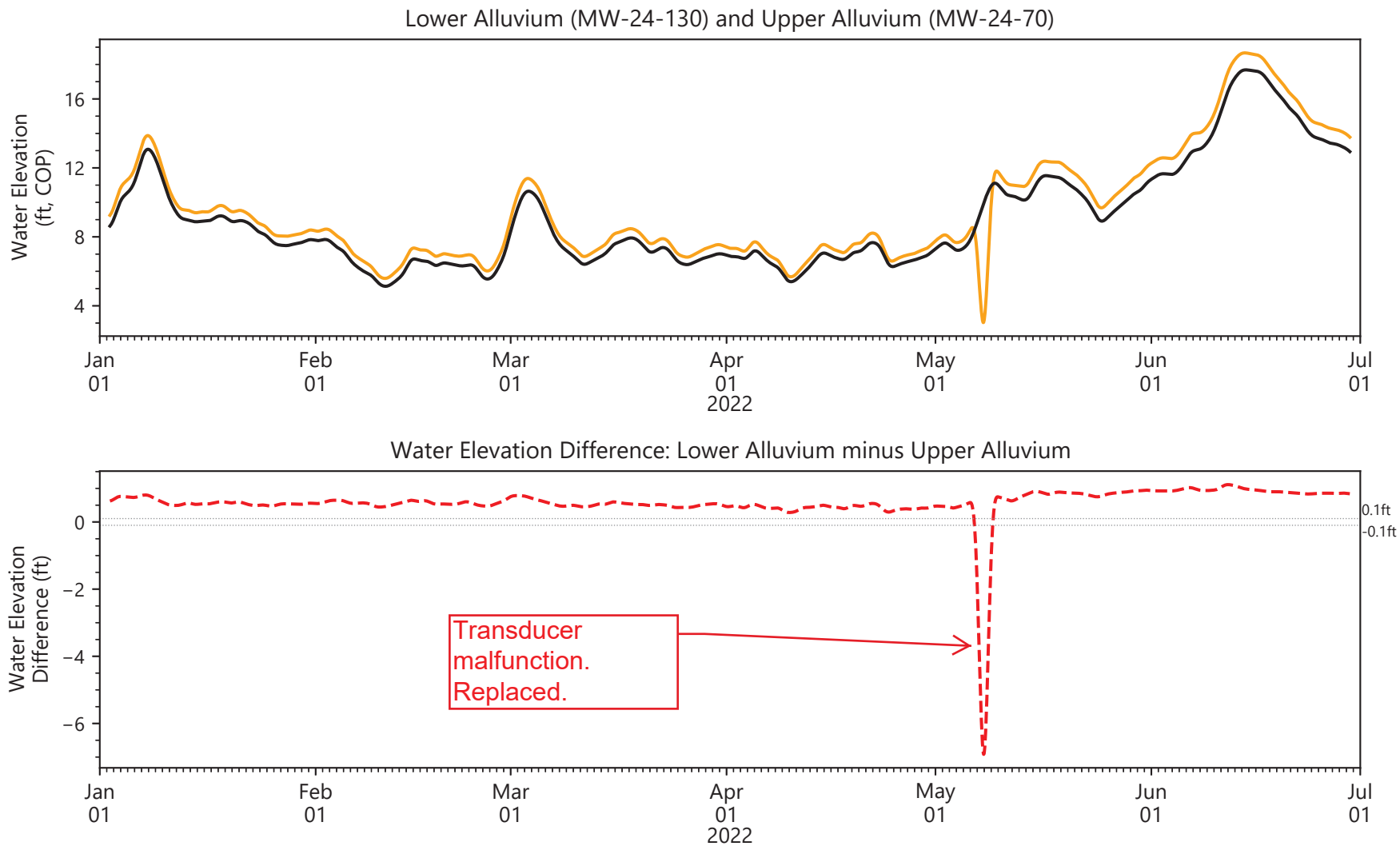
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.9
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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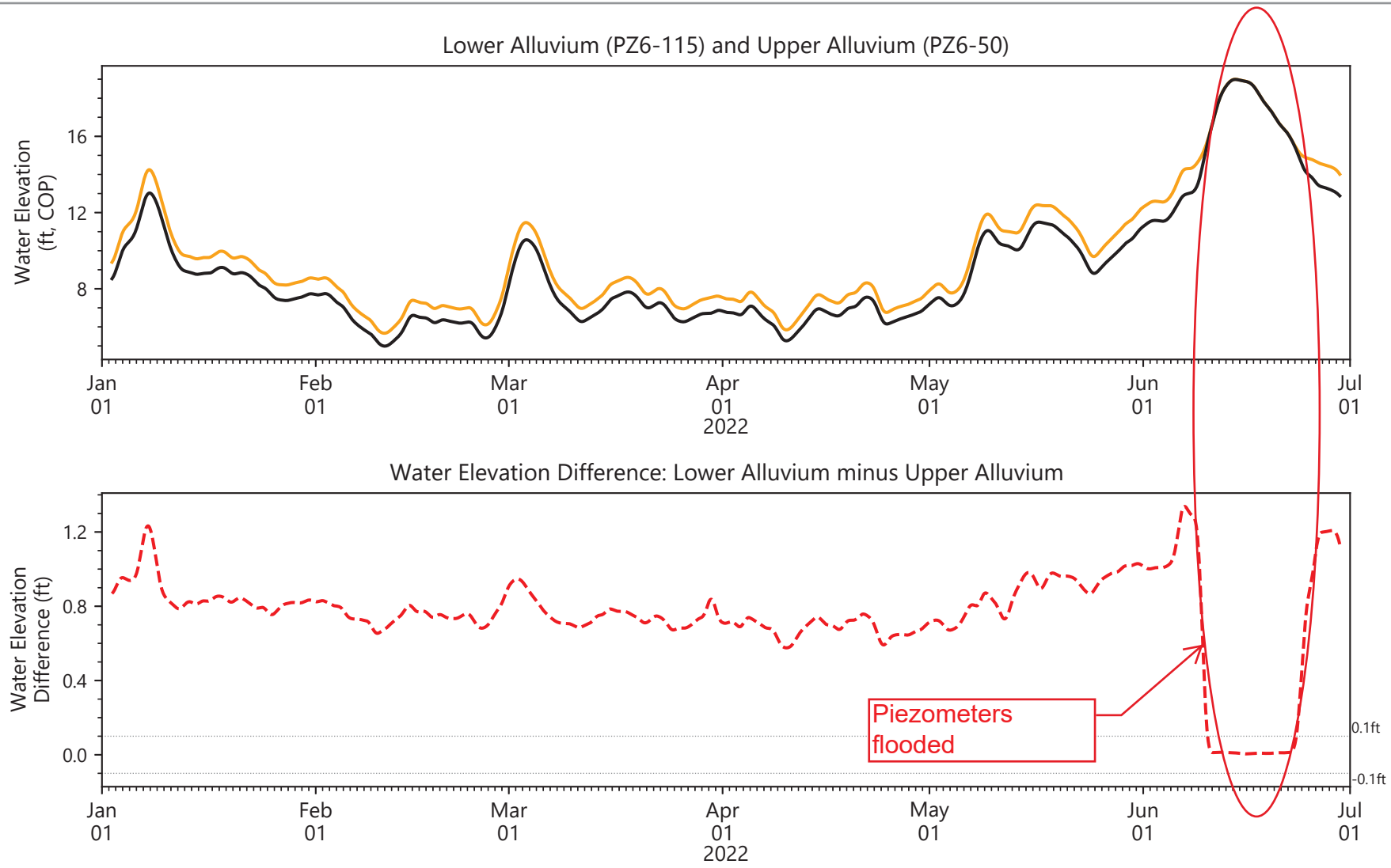
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.10
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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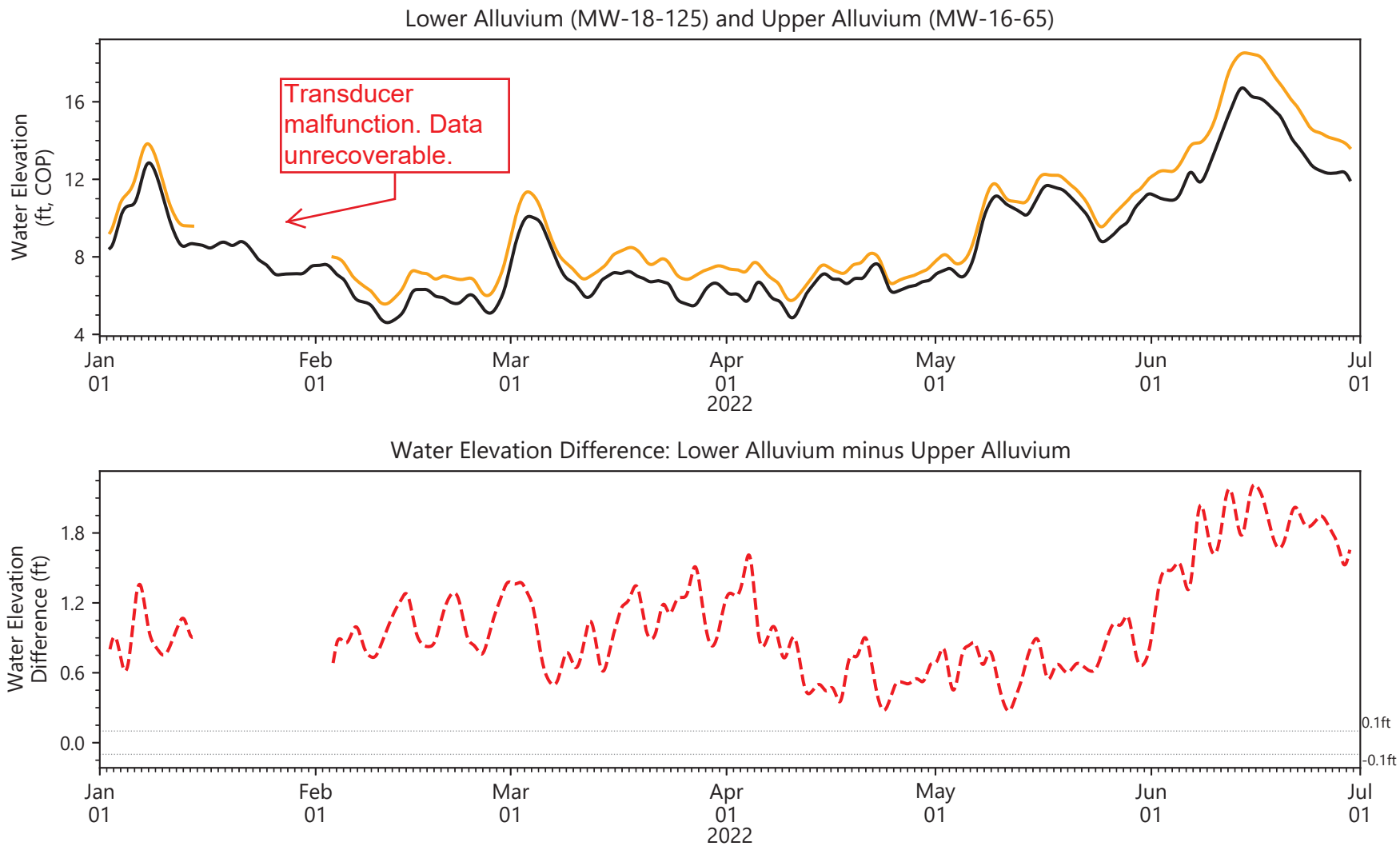
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.11
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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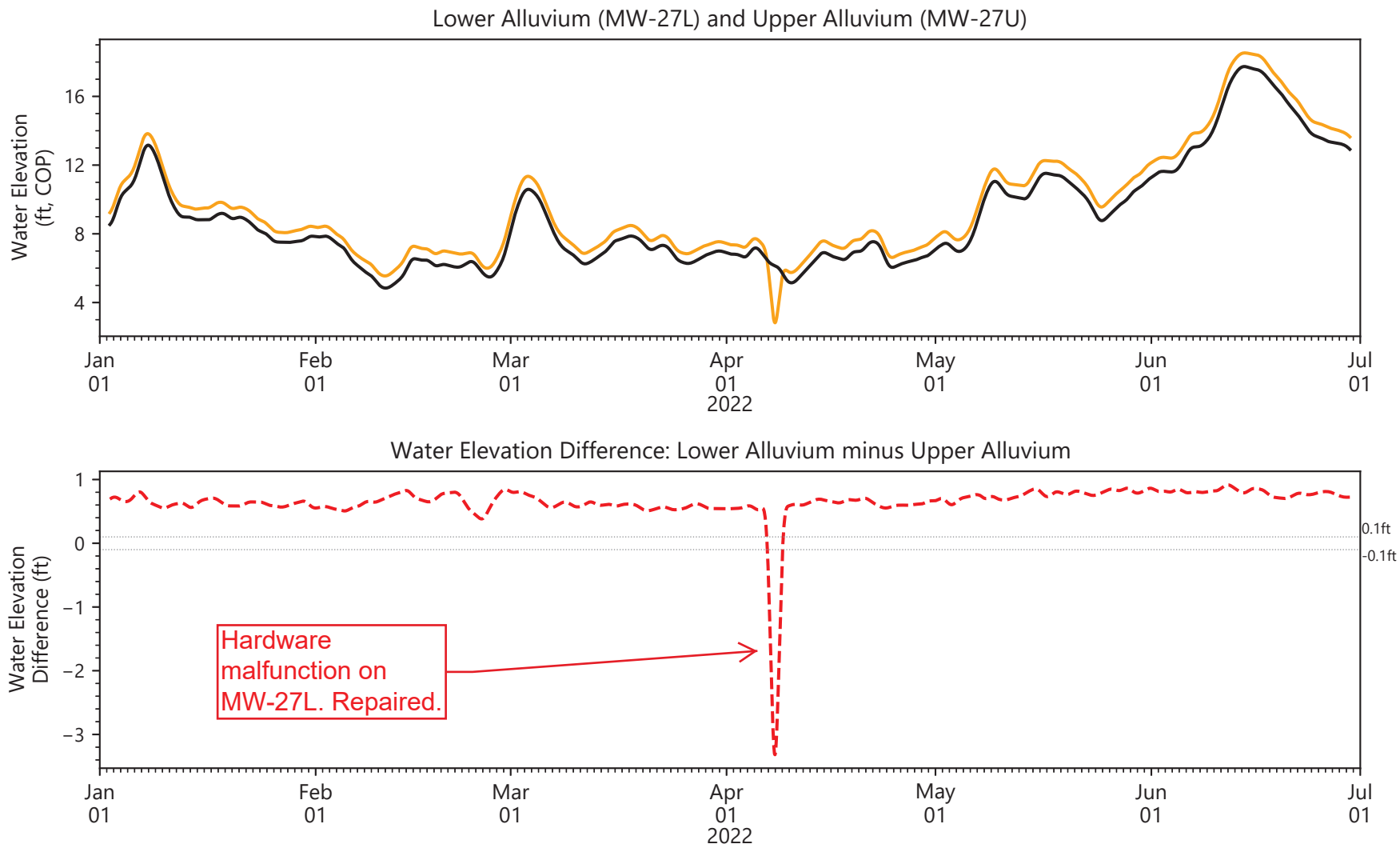
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.12
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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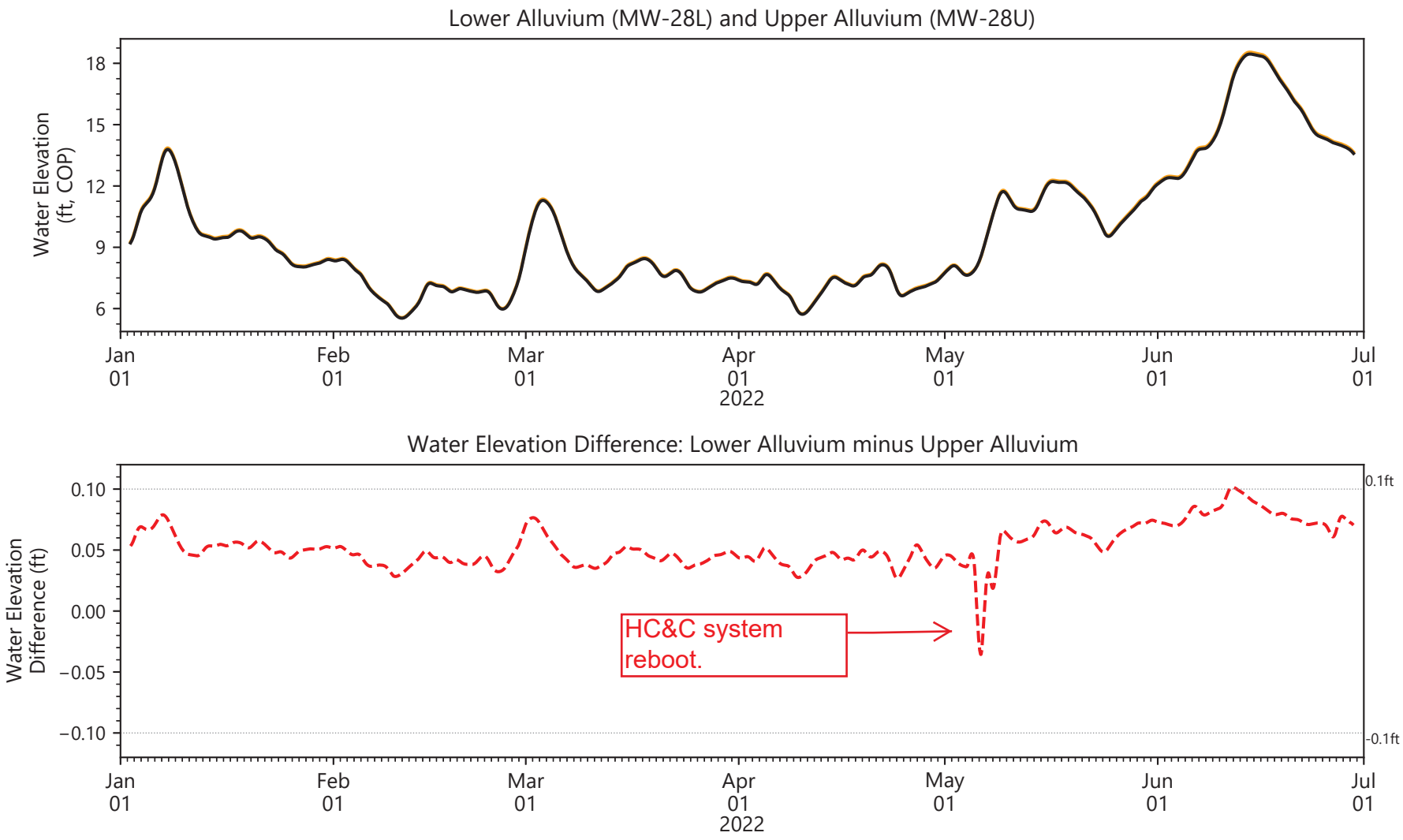
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.13
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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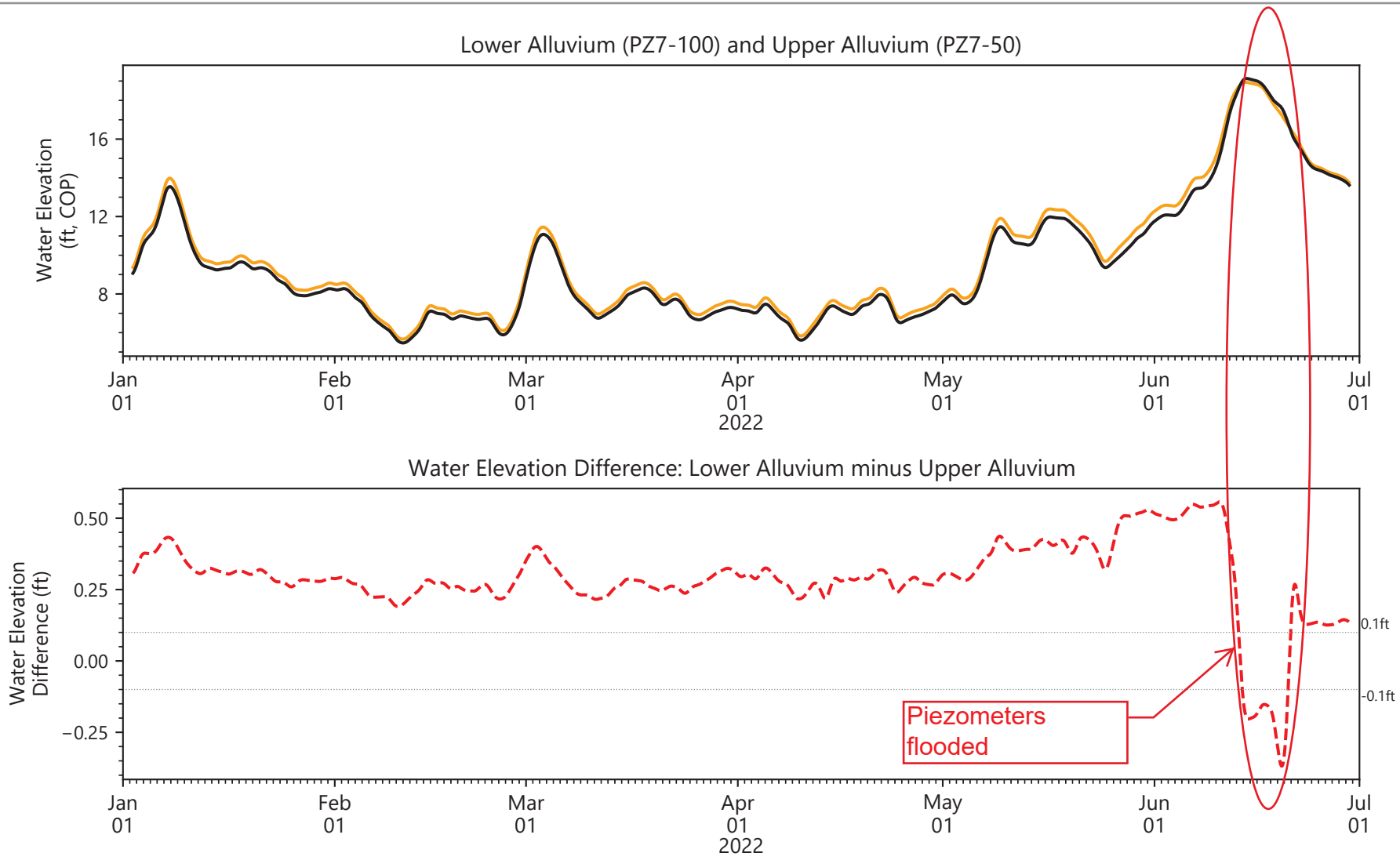
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.14
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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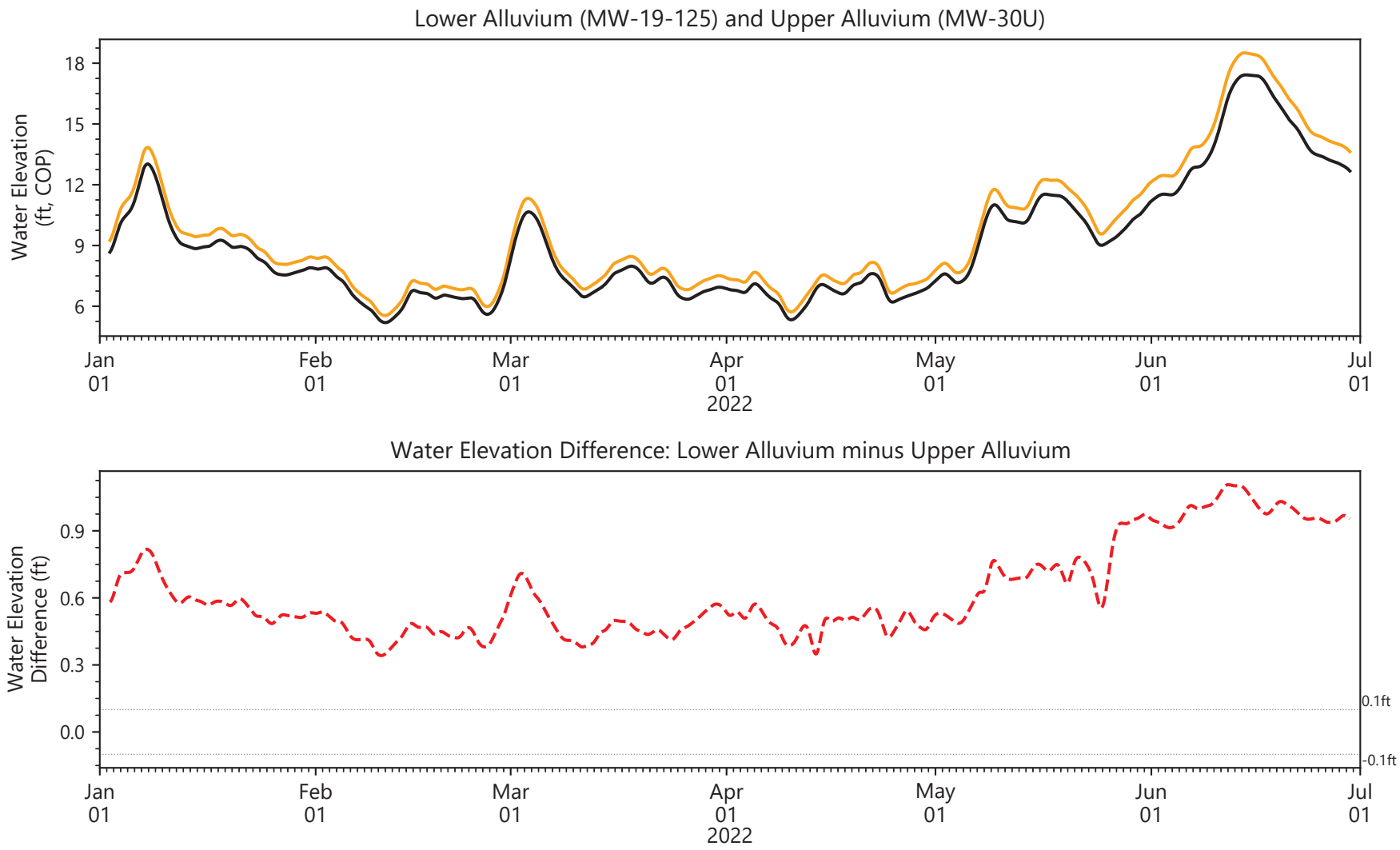
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.15
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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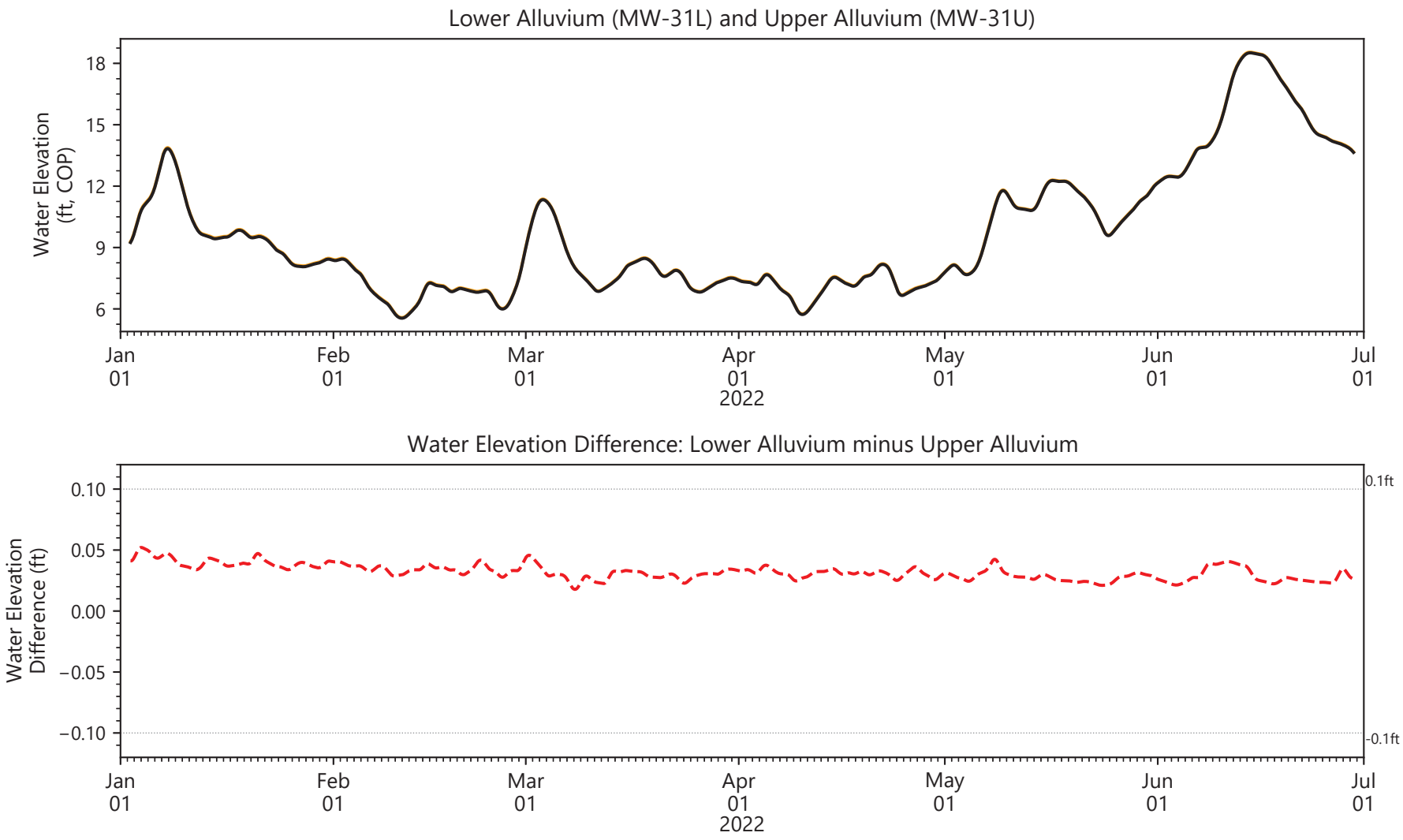
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.16
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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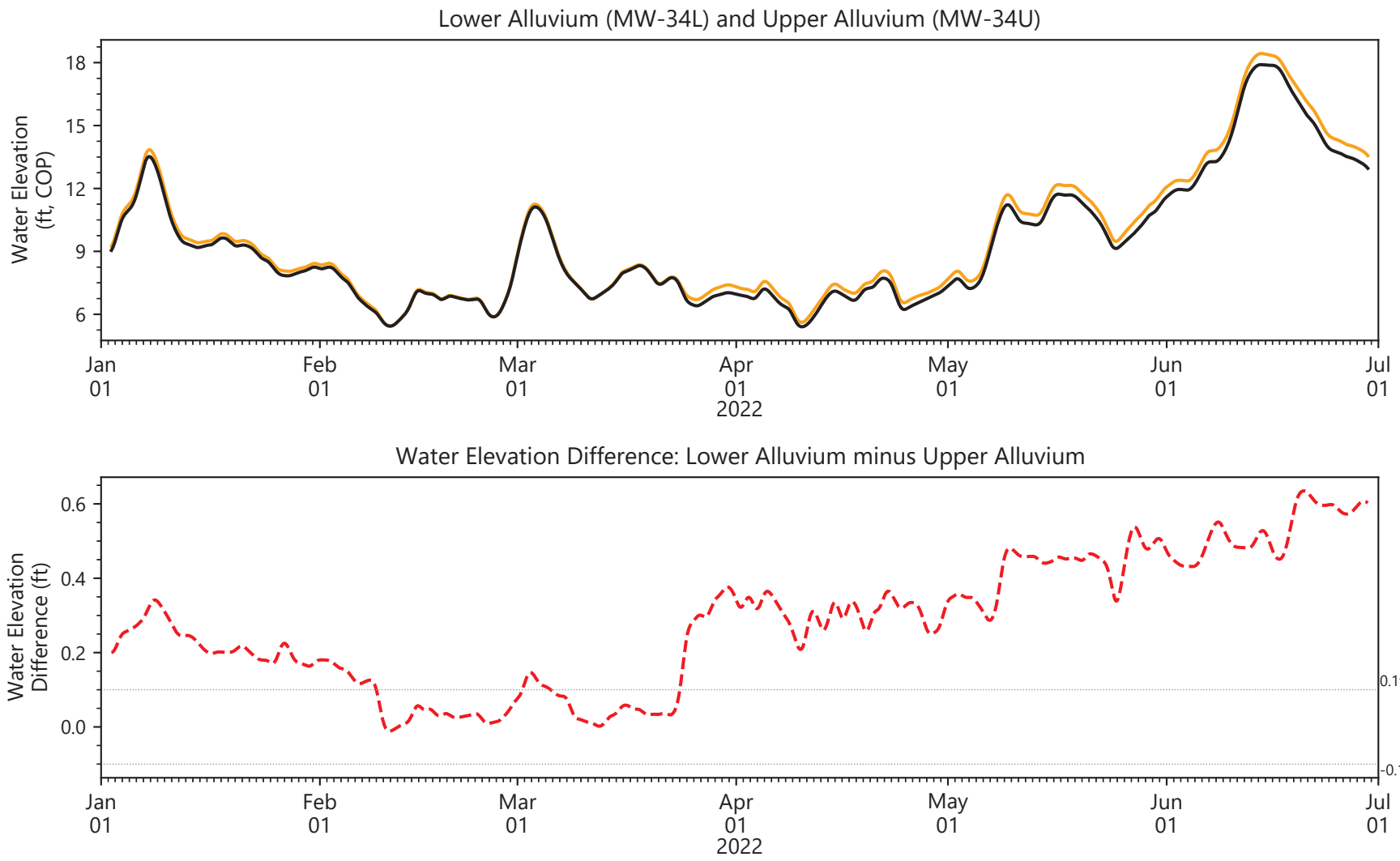
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.17
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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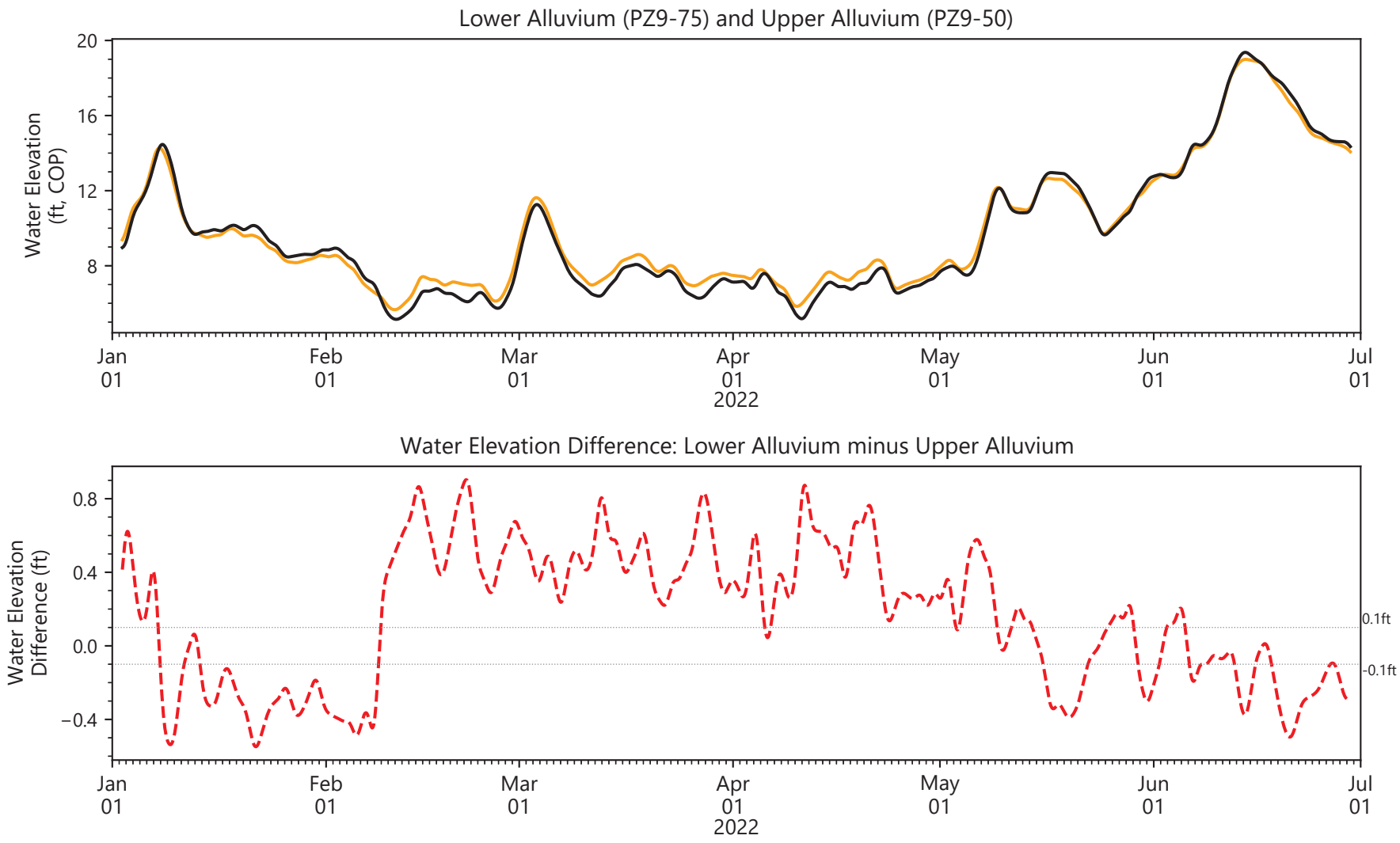
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.18
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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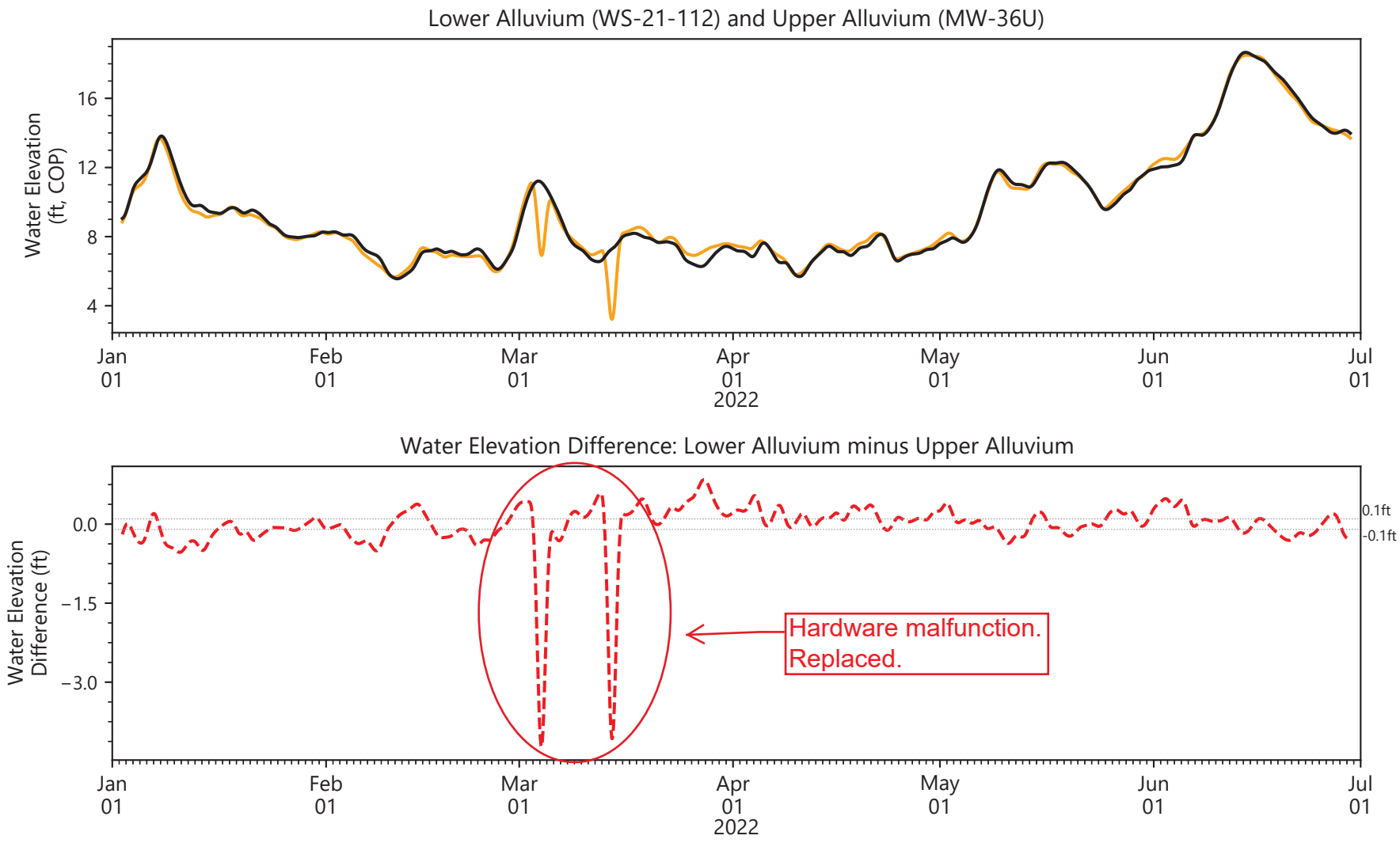
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.19
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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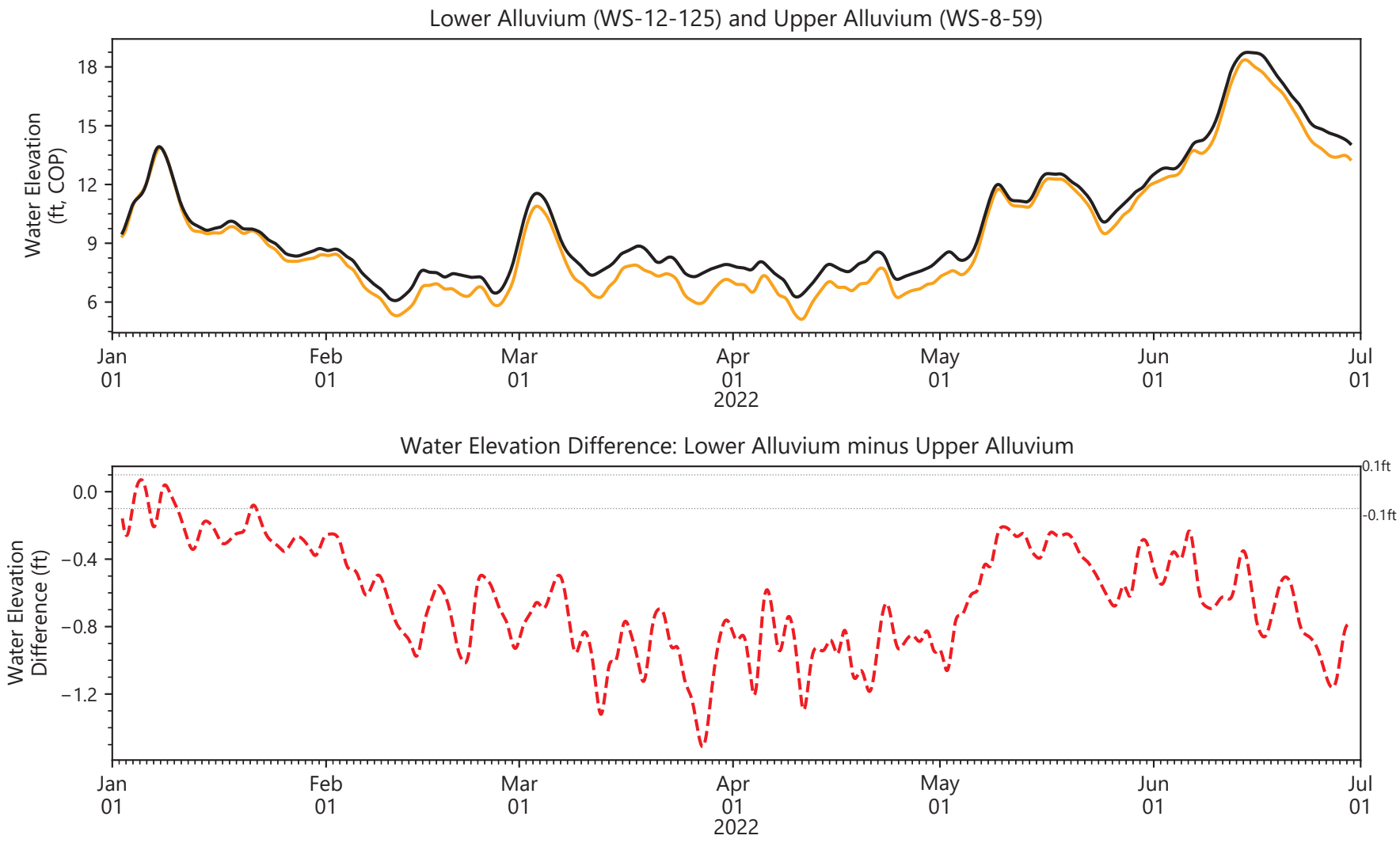
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.20
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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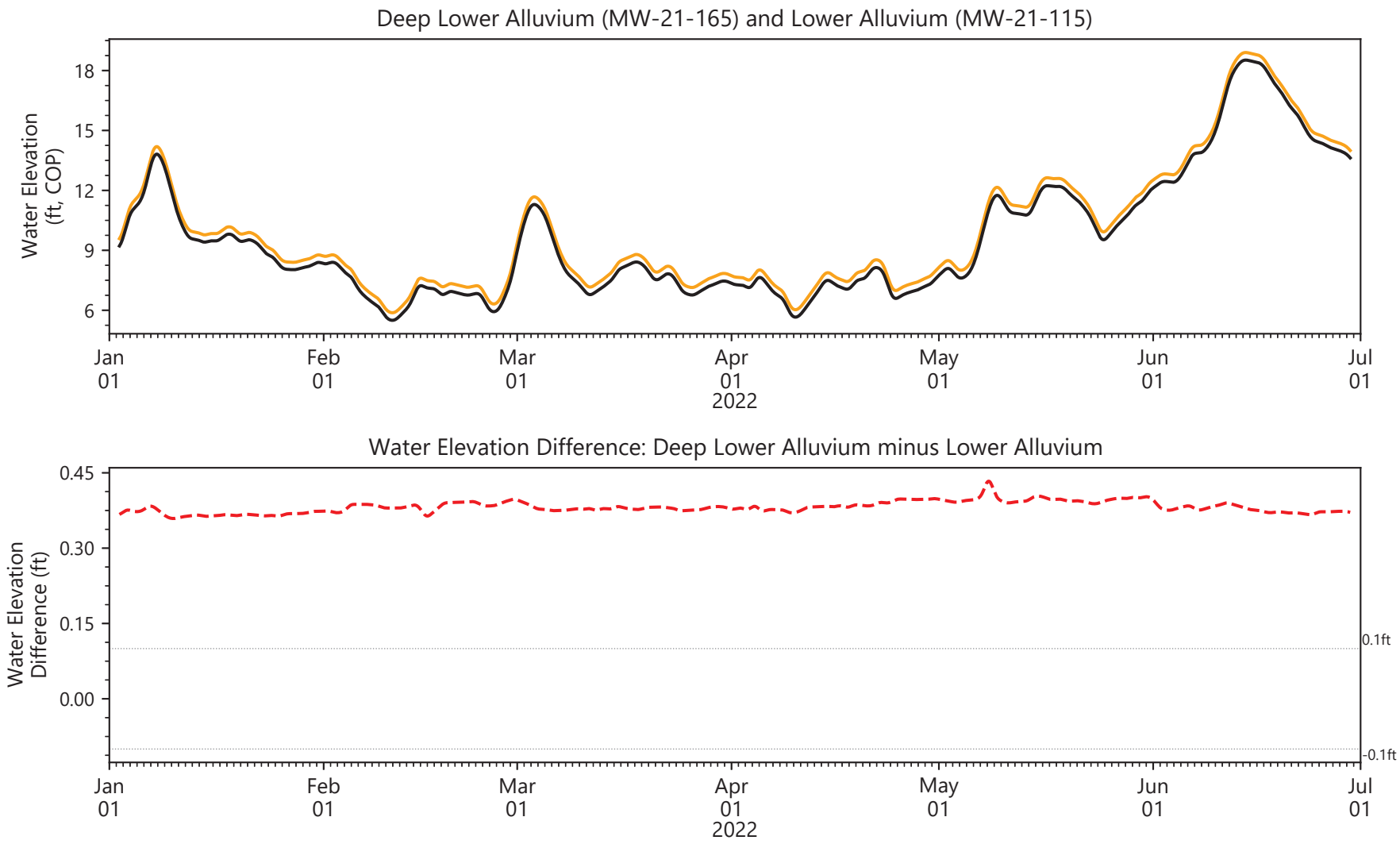
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.21
Groundwater Elevation Differences
NW Natural Gasco Site



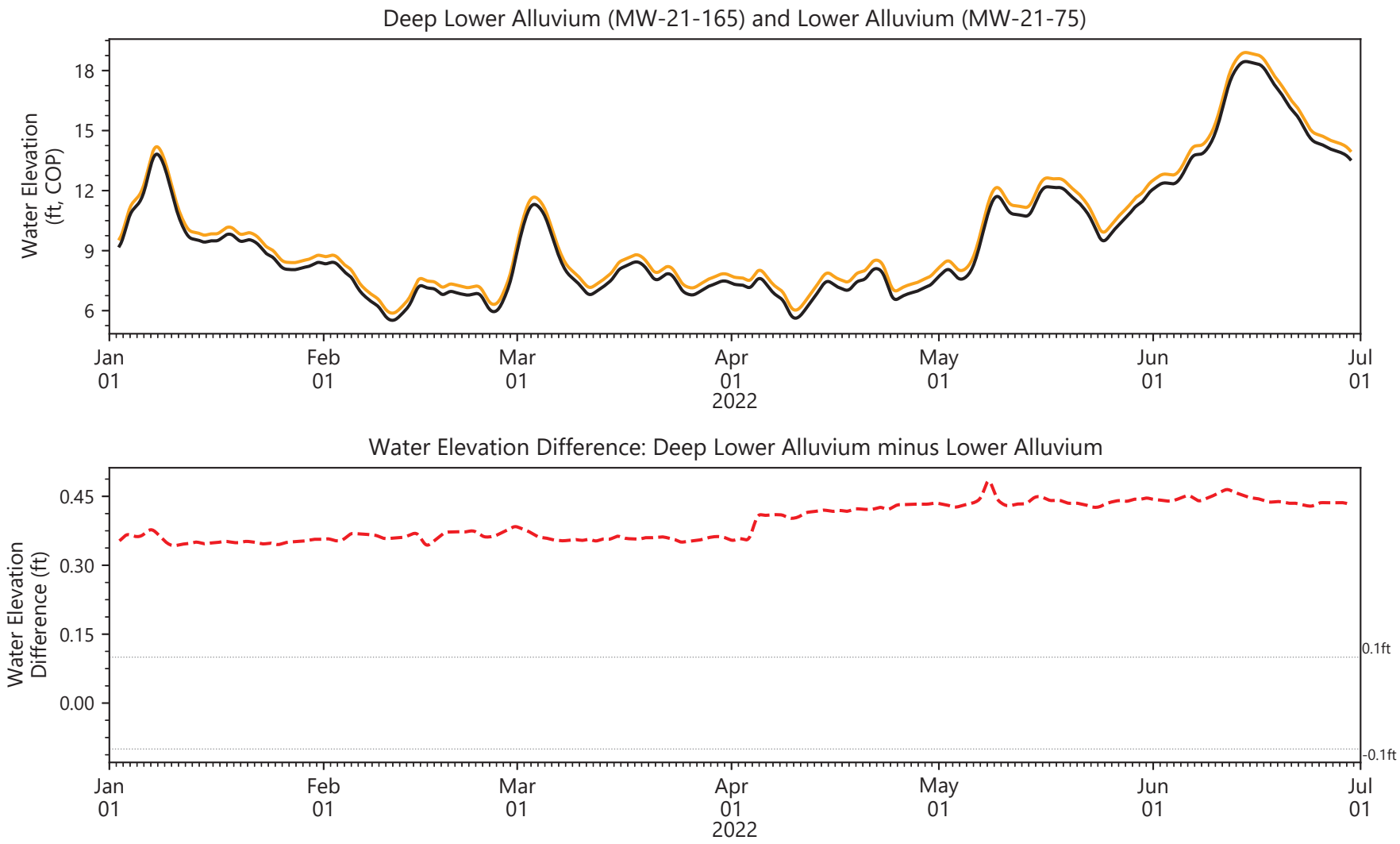
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.22
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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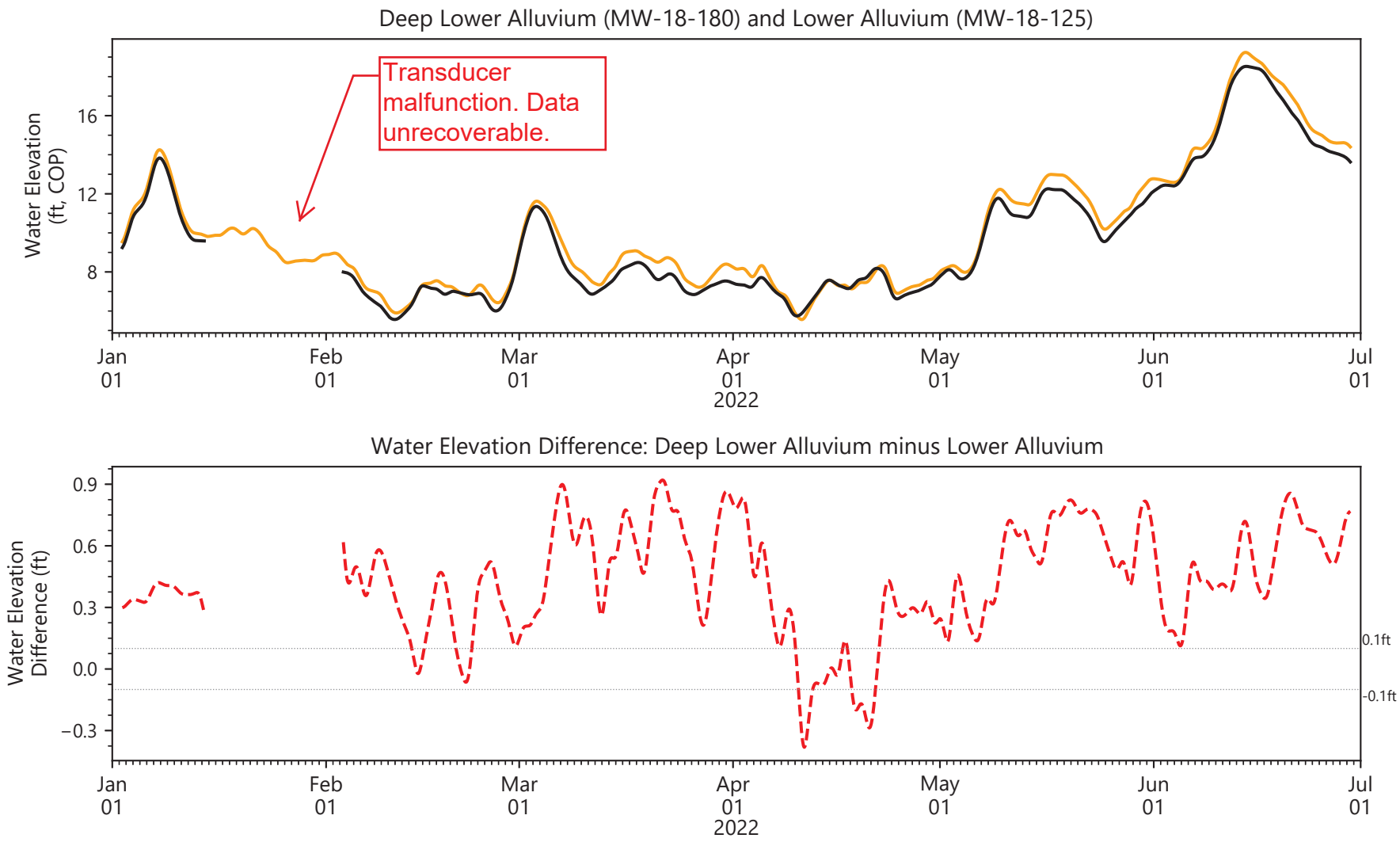
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.23
Groundwater Elevation Differences
NW Natural Gasco Site



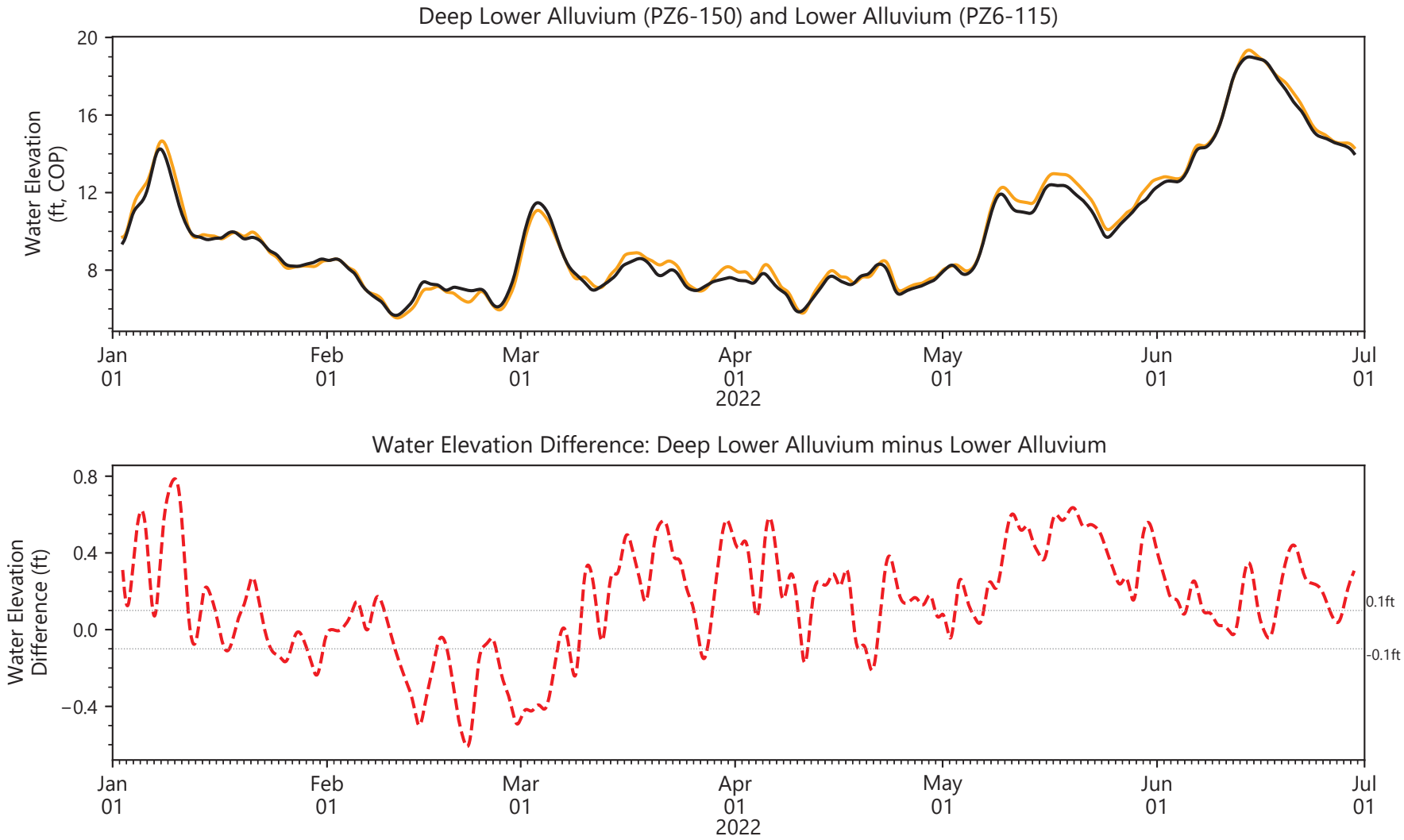
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Deep Lower Alluvium
Lower Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.24
Groundwater Elevation Differences
NW Natural Gasco Site



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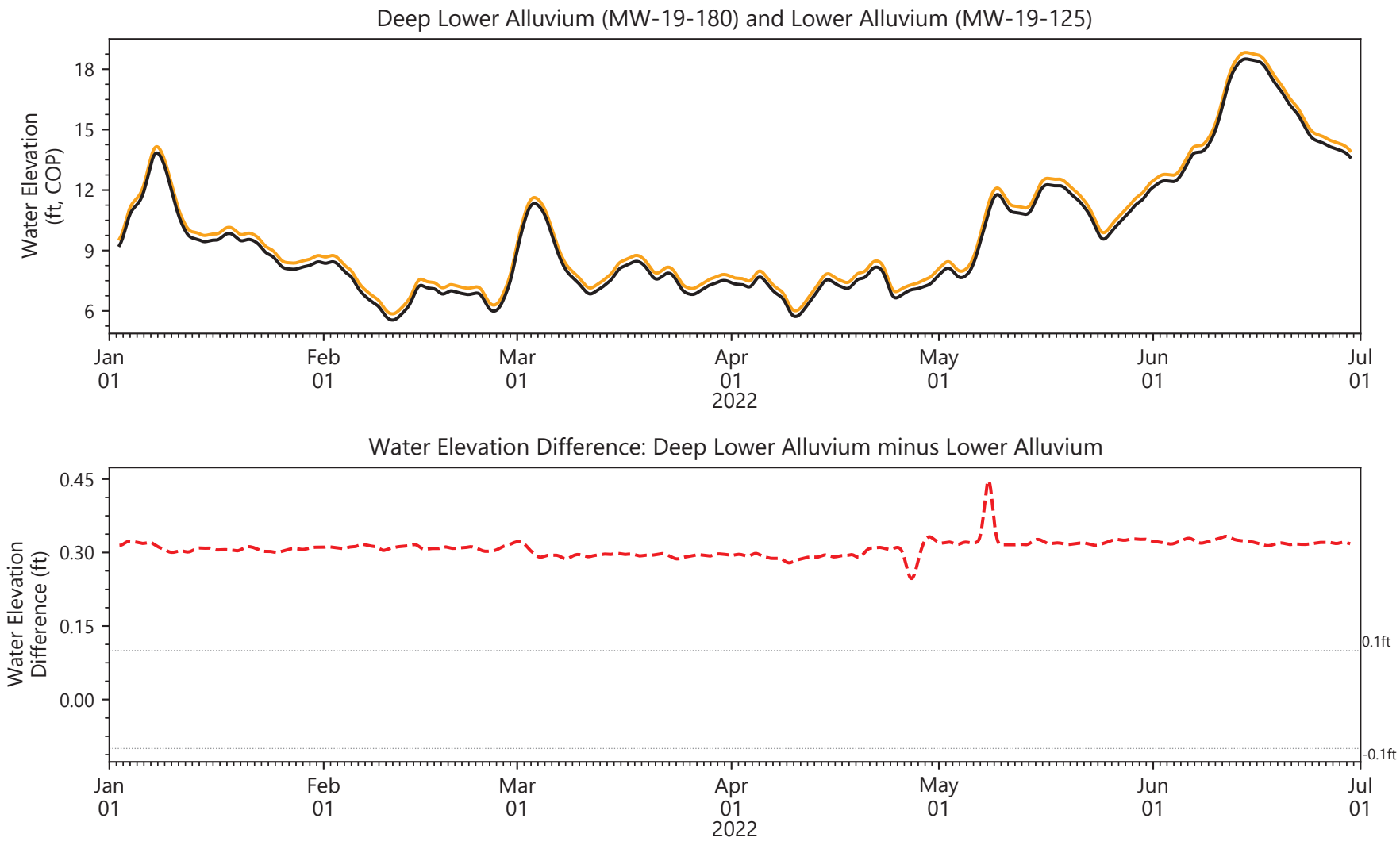
Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Deep Lower Alluvium
Lower Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.25
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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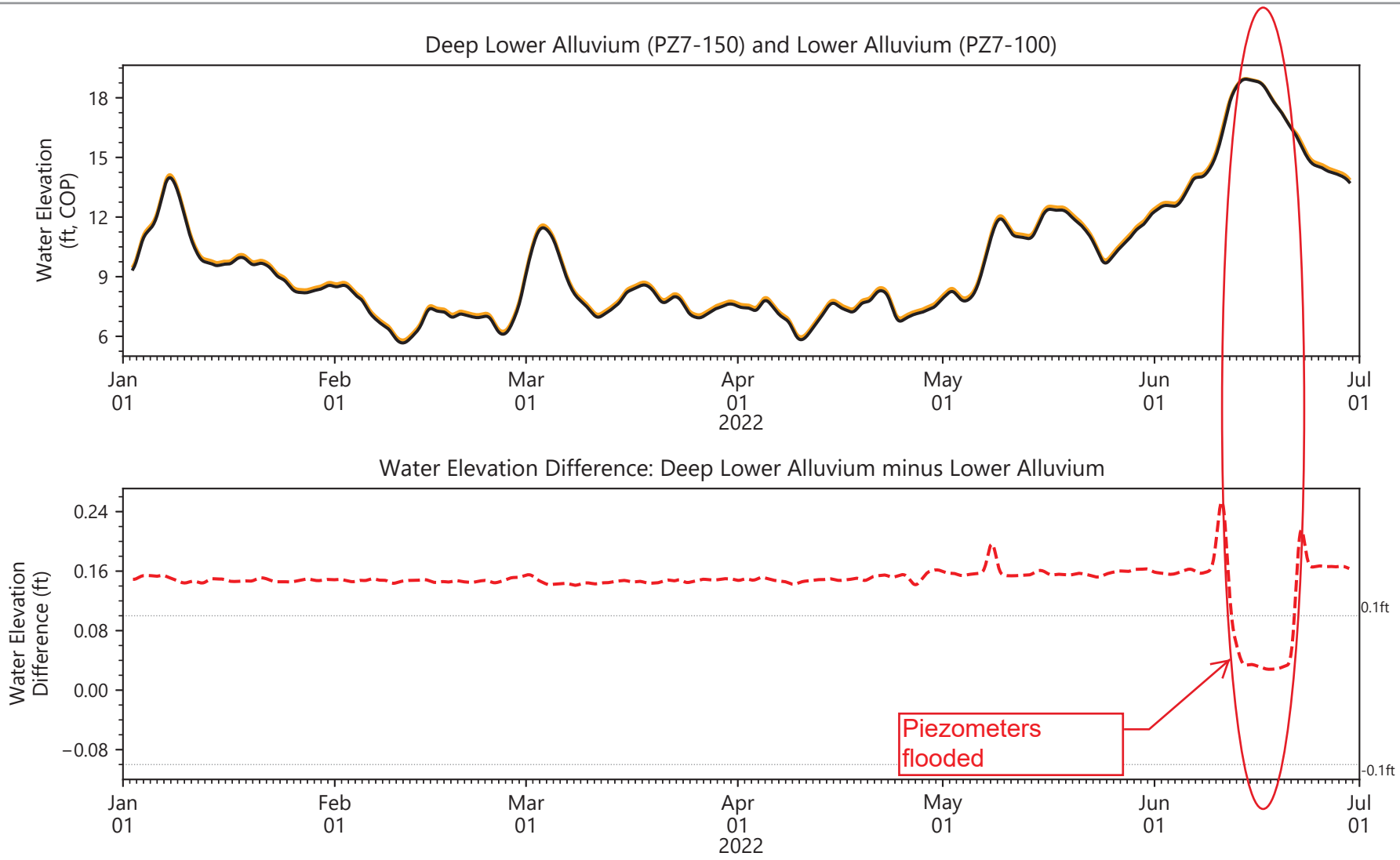
ANCHOR QEA

Deep Lower Alluvium
Lower Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.26
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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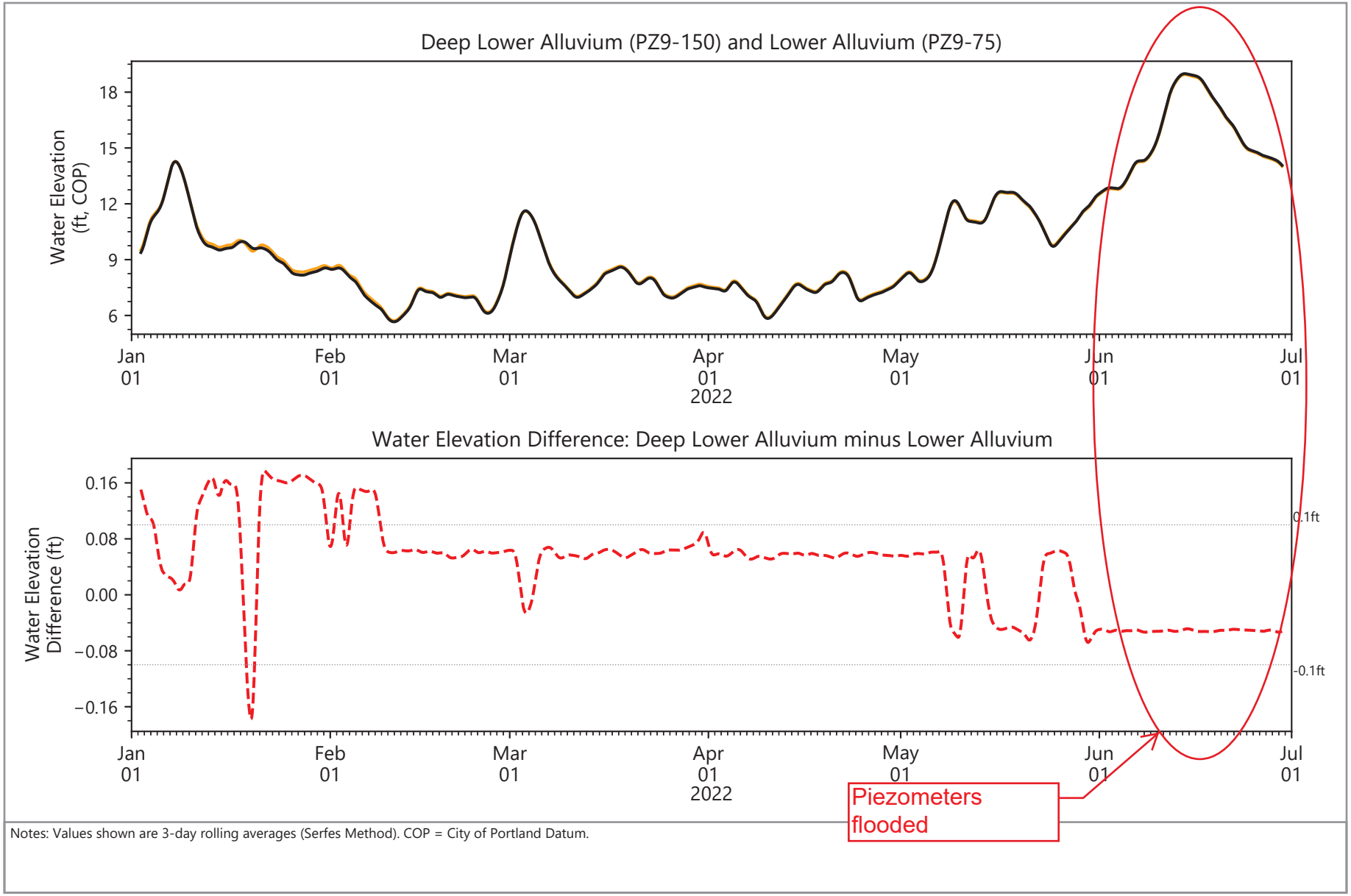
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.27
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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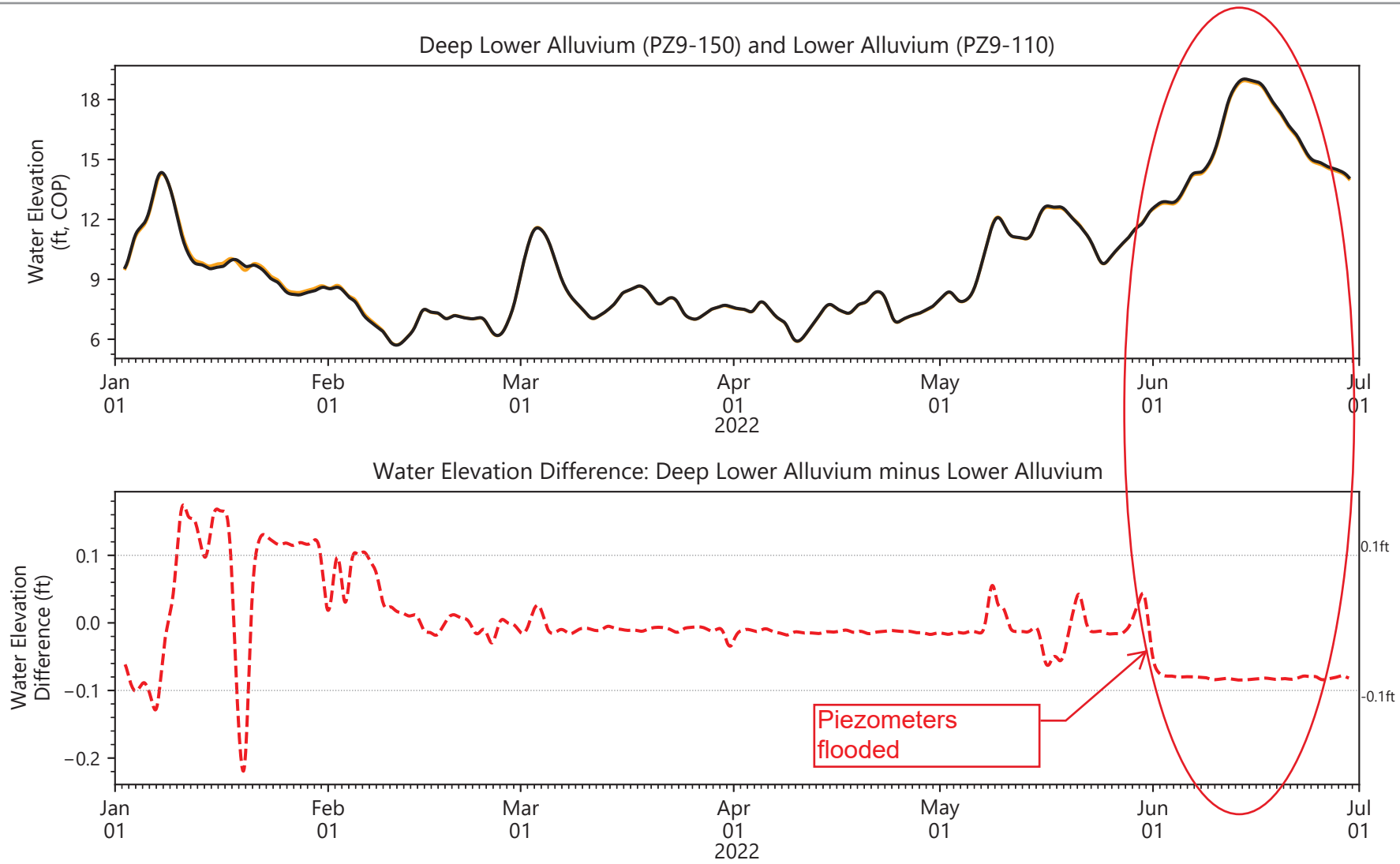
ANCHOR QEA

Deep Lower Alluvium
Lower Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.28
Groundwater Elevation Differences
NW Natural Gasco Site



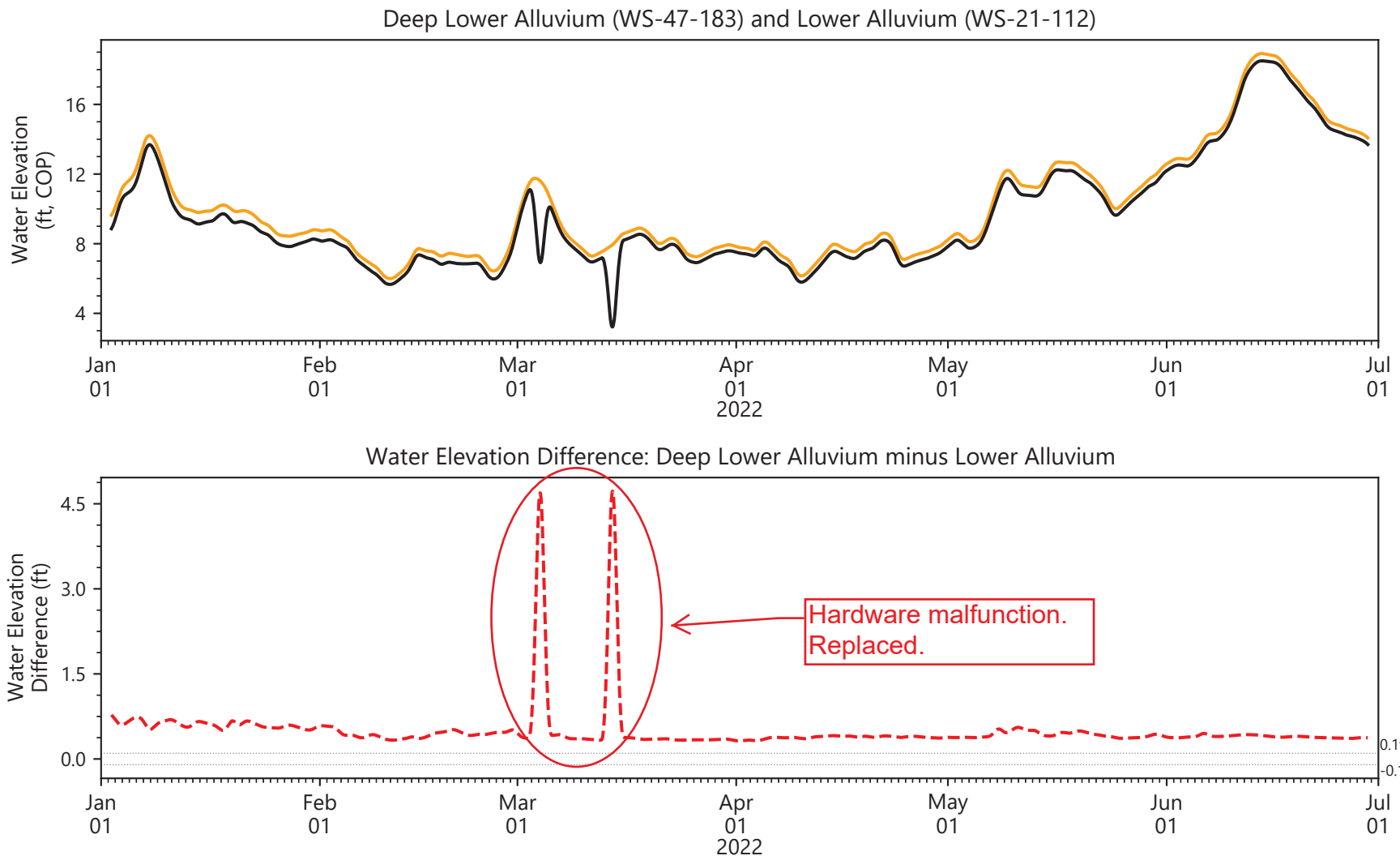
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Deep Lower Alluvium
Lower Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.29
Groundwater Elevation Differences
NW Natural Gasco Site



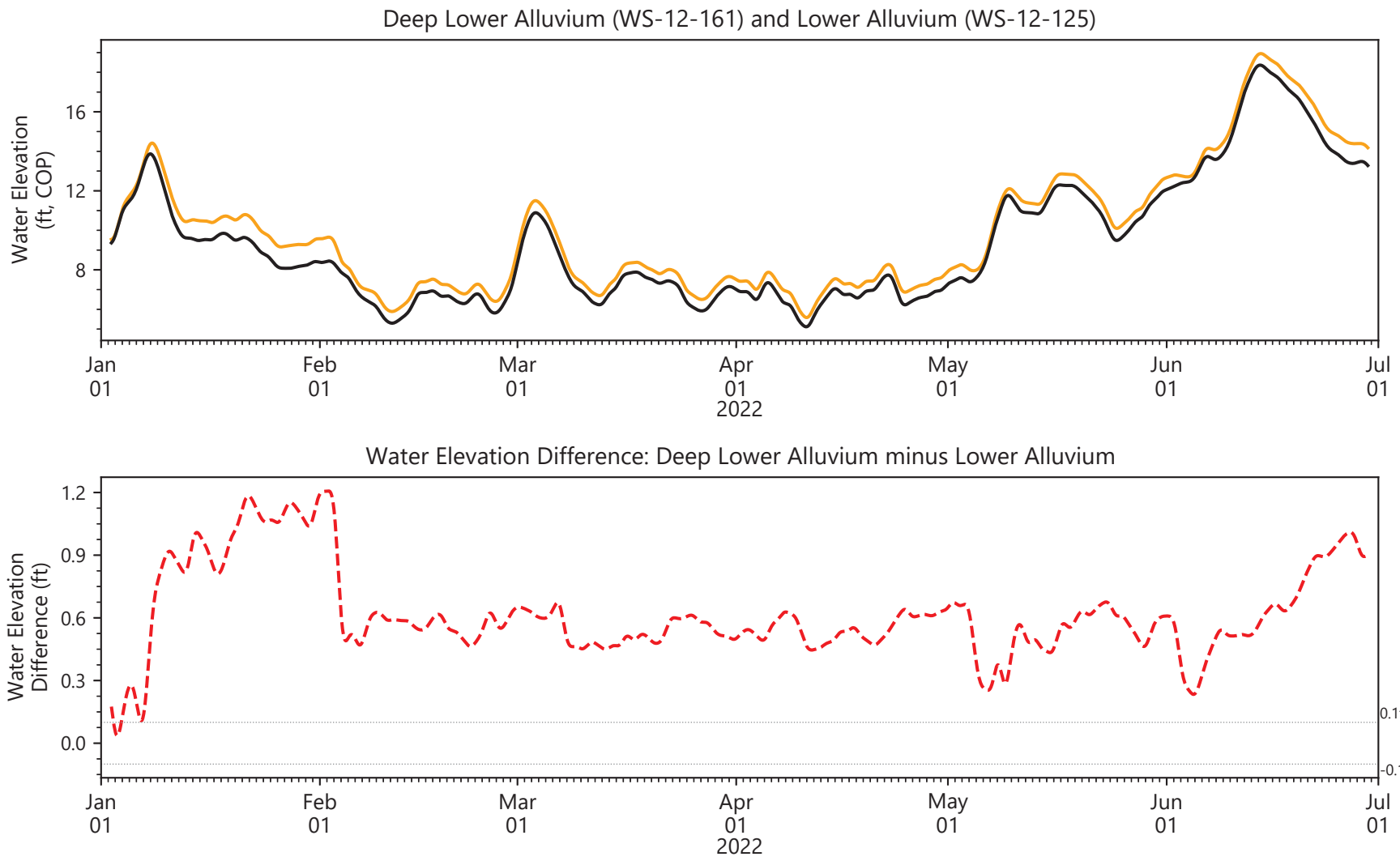
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.30
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.31
Groundwater Elevation Differences
NW Natural Gasco Site

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/02/28, 10:57 AM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\01 January\Figure_6.1_GW_Elev_Delta_LA_Minus_UA_2022_01_11_13.mxd

ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 1/11/2022-1/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/03/01, 10:26 AM | User: cgardner
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ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 1/24/2022-1/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/03/23, 3:34 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\02 February\Figure_6.1_GW_Elev_Delta_LA_Minus_UA_2022_02_11_13.mxd

ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 2/11/2022-2/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/03, 2:05 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\02 February\later\Figure_6.2_GW_Elev_Delta_LA_Minus_UA_2022_02_24_26.mxd

ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 2/24/2022-2/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/06, 9:45 PM | User: cgardner
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ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 3/11/2022-3/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/10, 4:22 PM | User: cgardner
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ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 3/24/2022-3/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/06/14, 5:33 PM | User: cgardner
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ANCHOR QEA

Figure 6.1

Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 4/11/2022-4/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/17, 10:44 AM | User: cgardner
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ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 4/24/2022-4/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

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2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2022/06/28, 4:06 PM | User: cgardner
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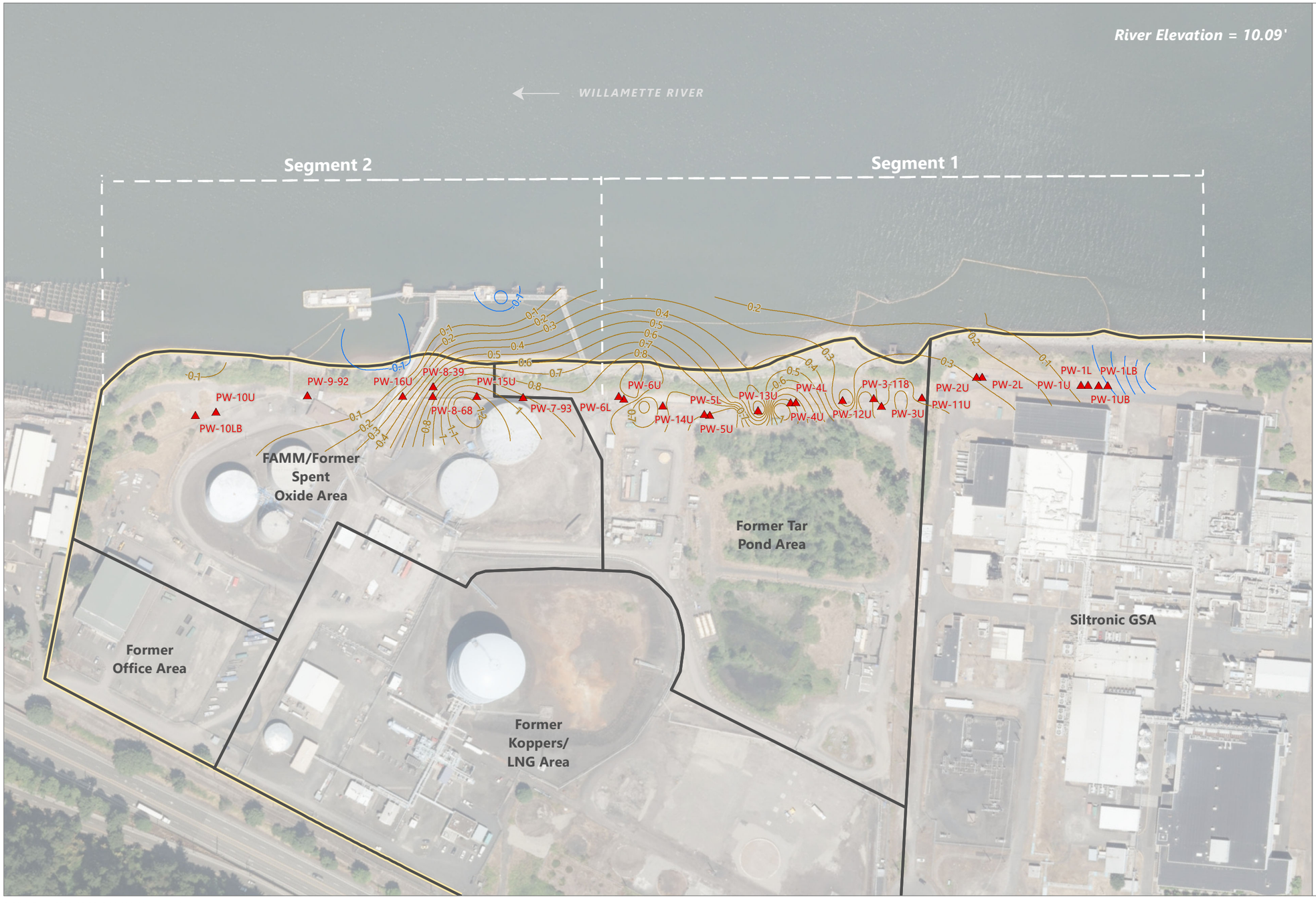
ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 5/11/2022-5/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

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3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/06/30, 9:41 AM | User: cgardner
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ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 5/24/2022-5/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

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3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/08/17, 6:02 PM | User: cgardner
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ANCHOR QEA

Figure 6.1

Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 6/11/2022-6/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2022/08/17, 6:02 PM | User: cgardner
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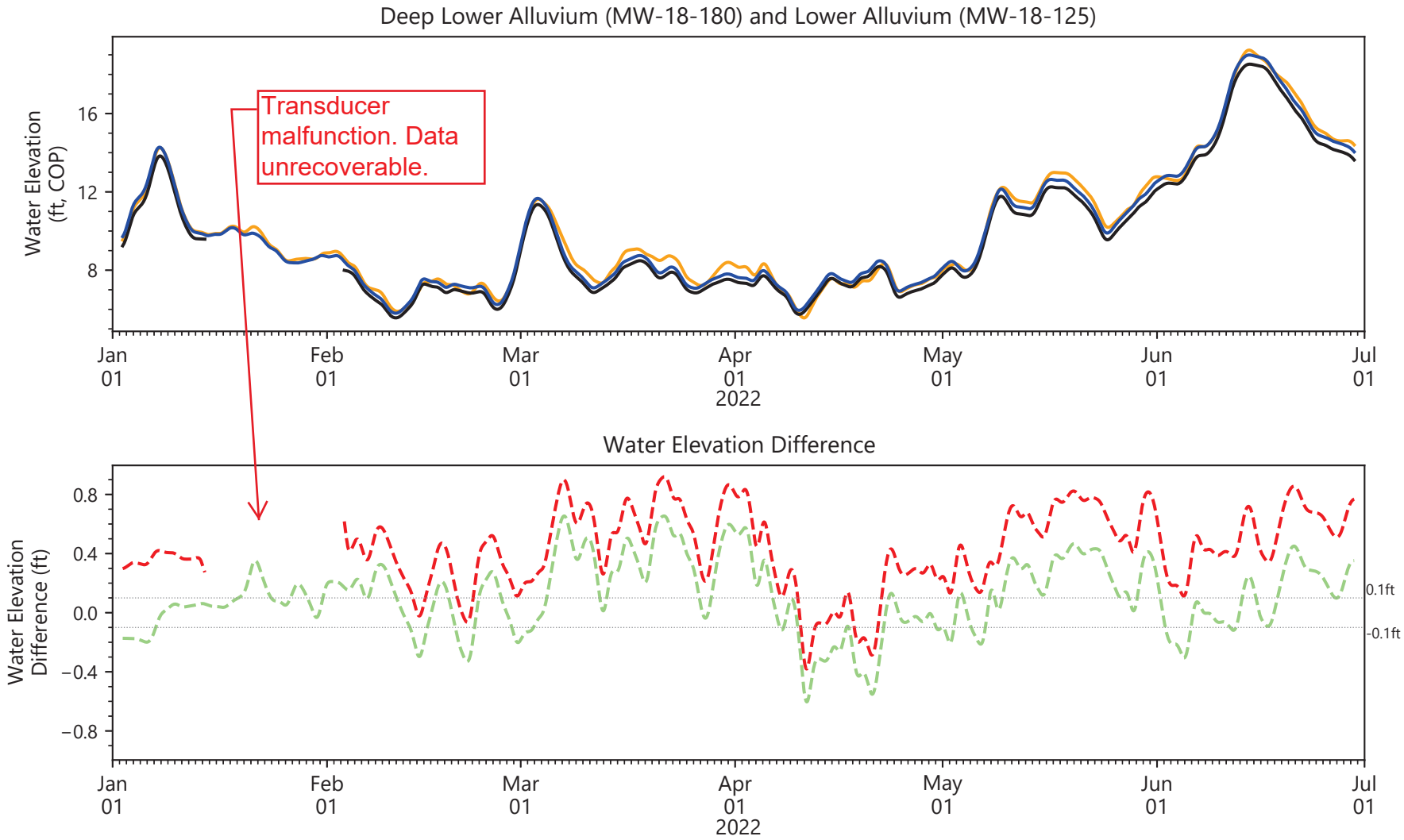
ANCHOR QEA

Figure 6.2

Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 6/24/2022-6/26/2022

NWN Gasco Site
Portland, Oregon



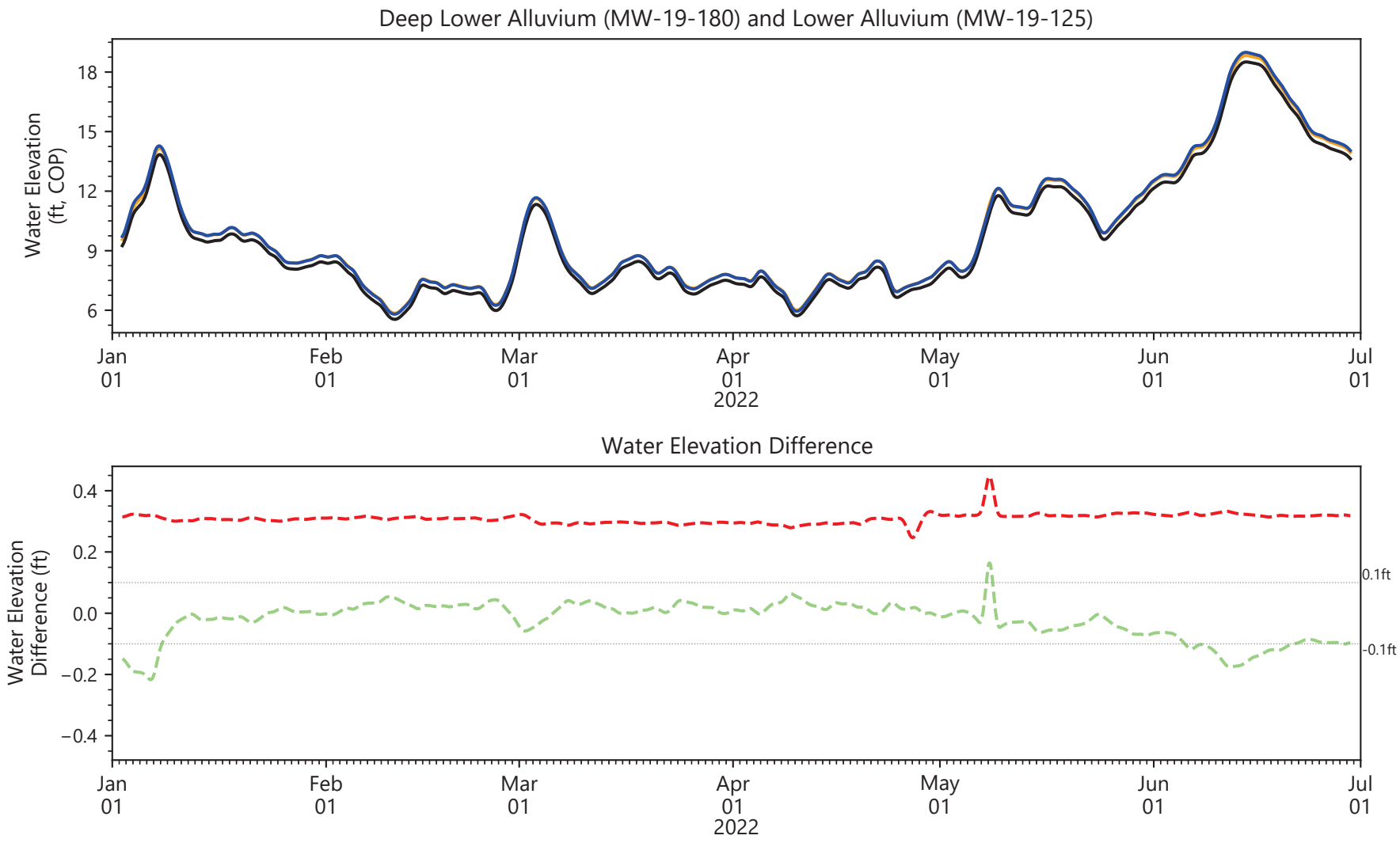
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.1
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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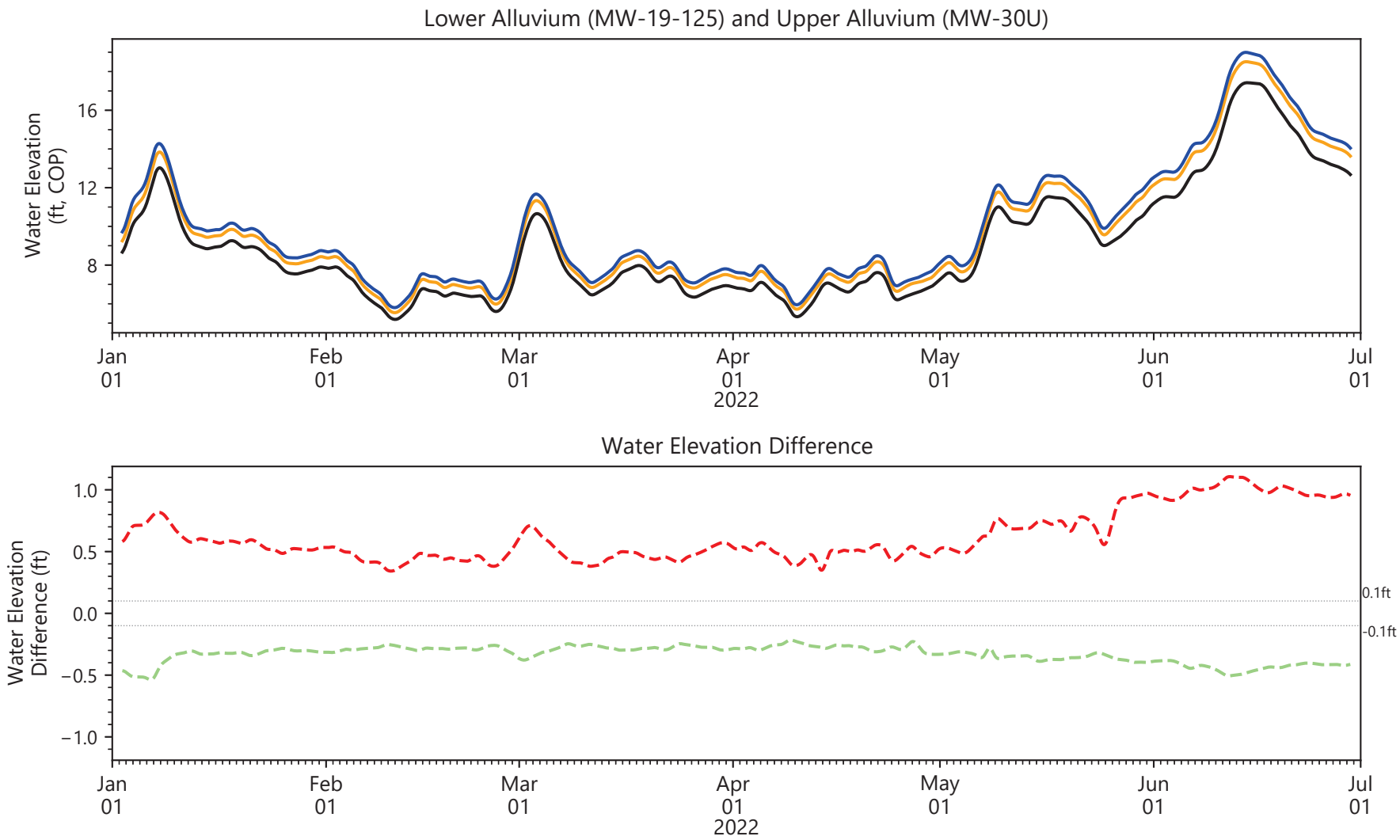
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.2
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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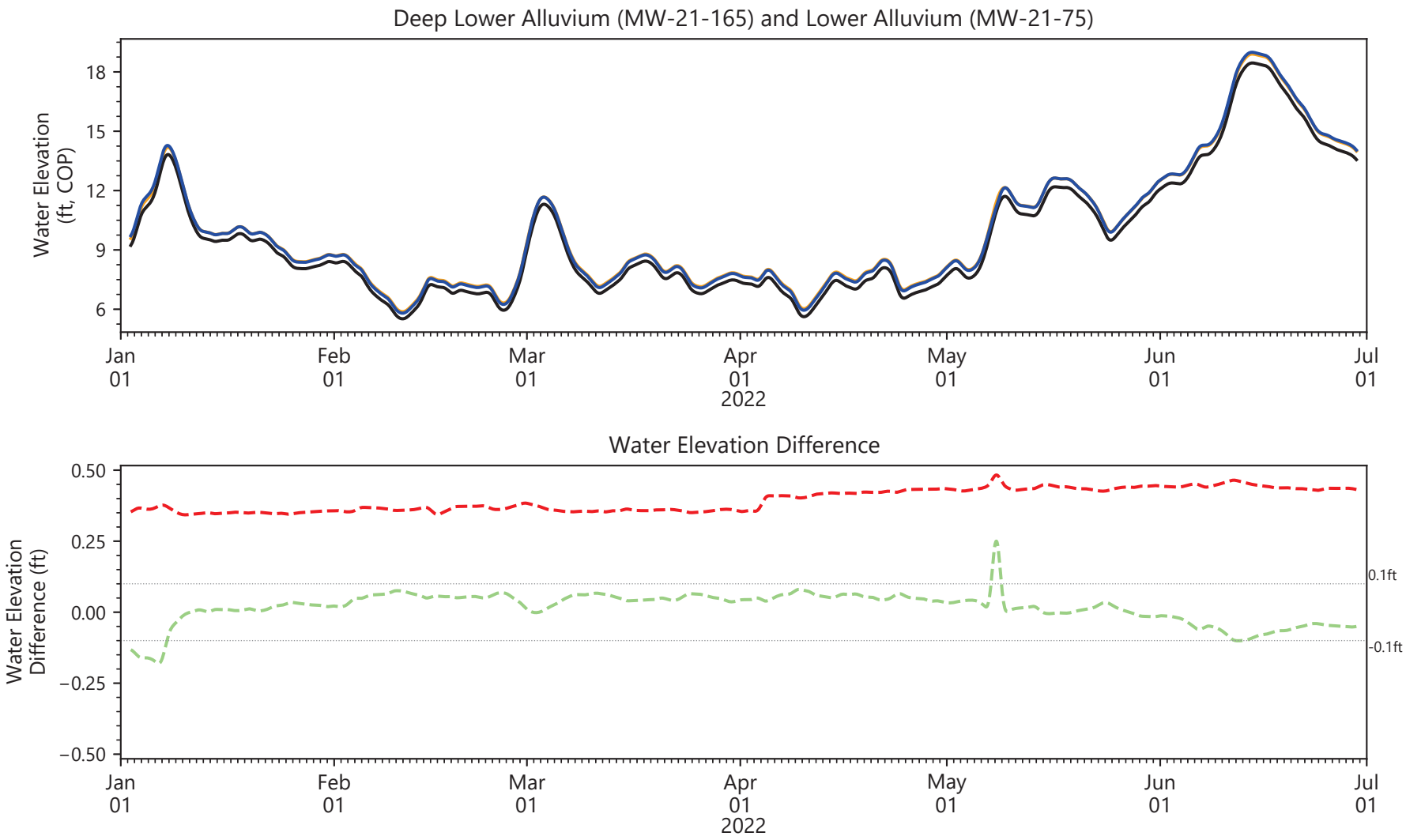
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.3
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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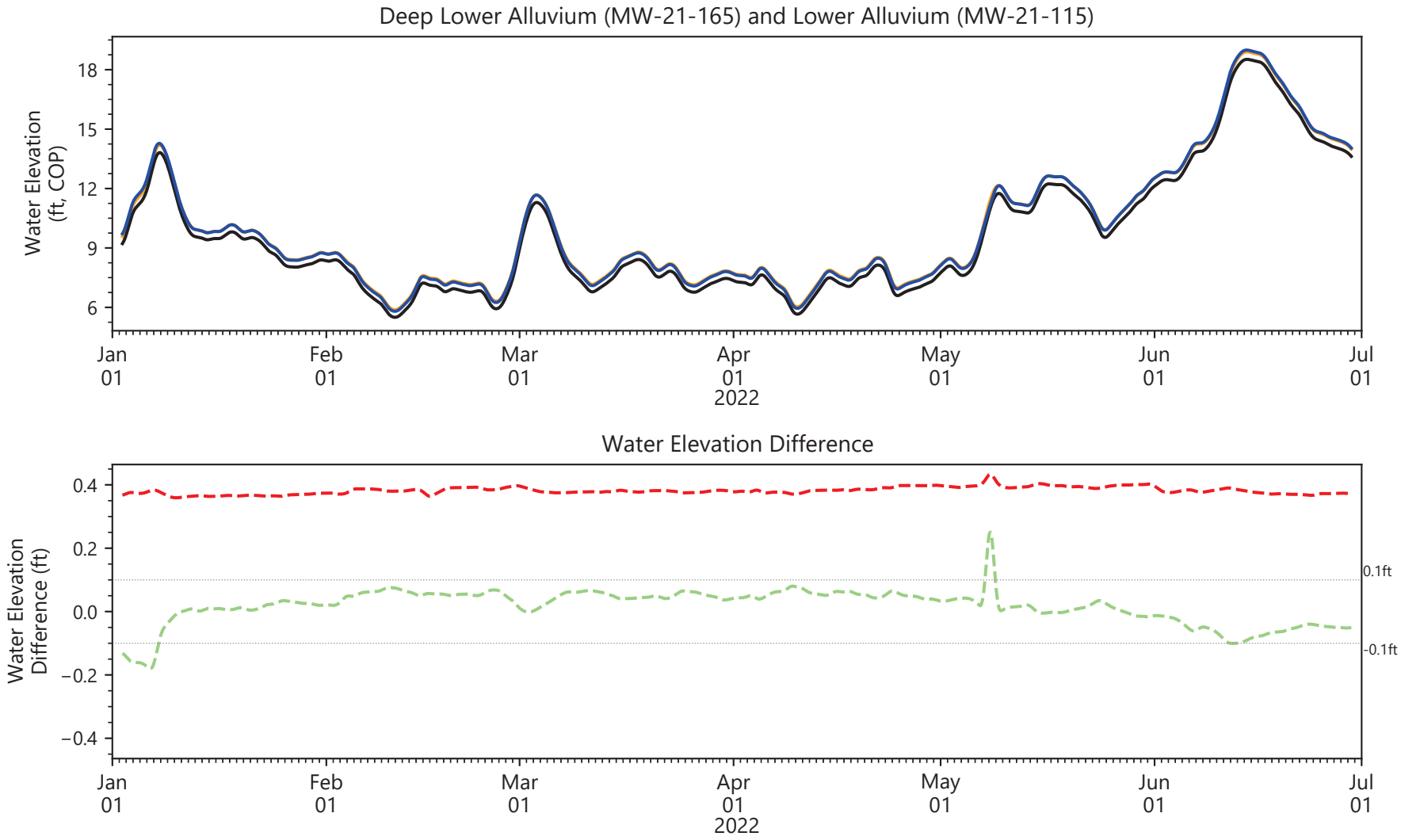
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.4
Groundwater Elevation Differences
NW Natural Gasco Site



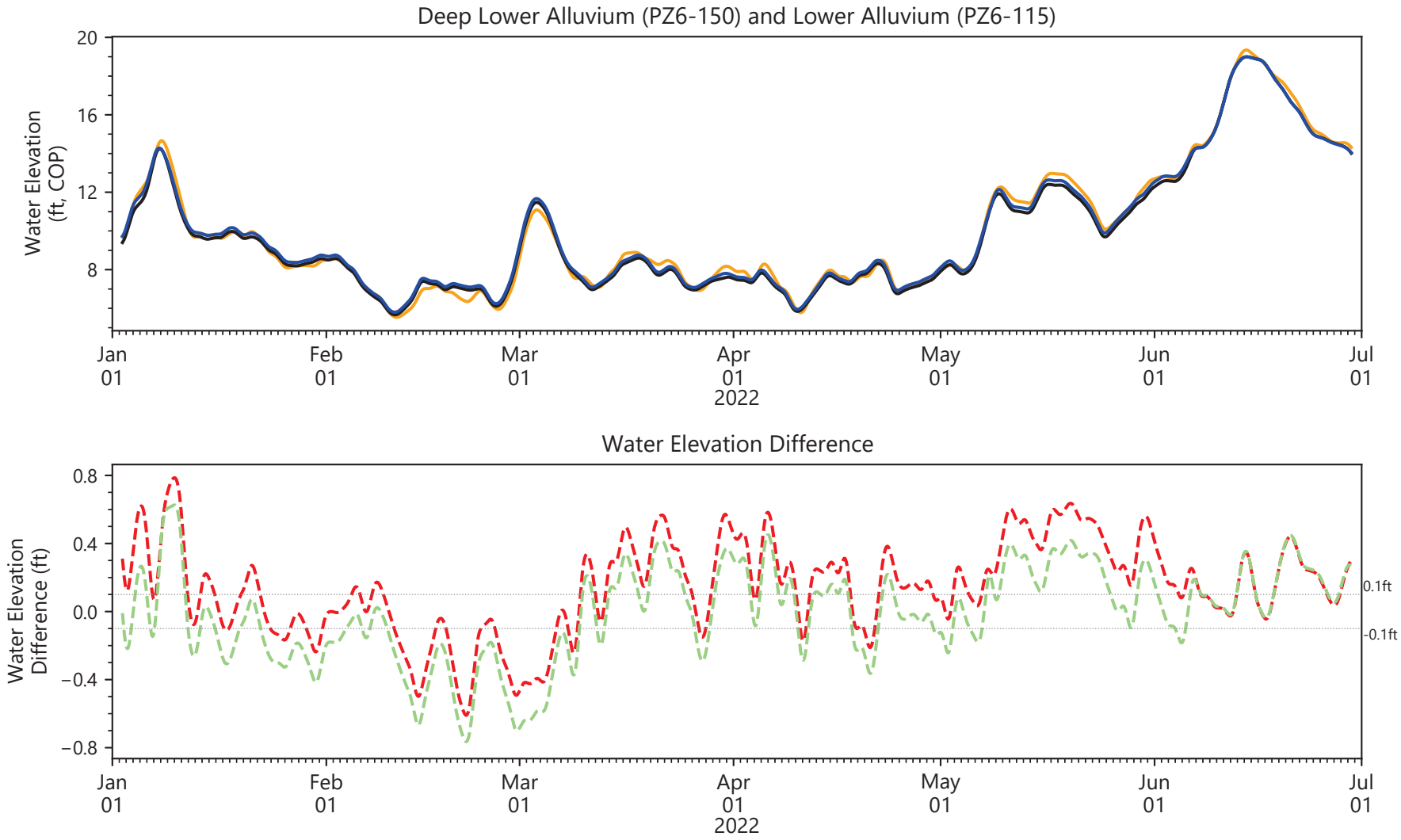
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.5
Groundwater Elevation Differences
NW Natural Gasco Site



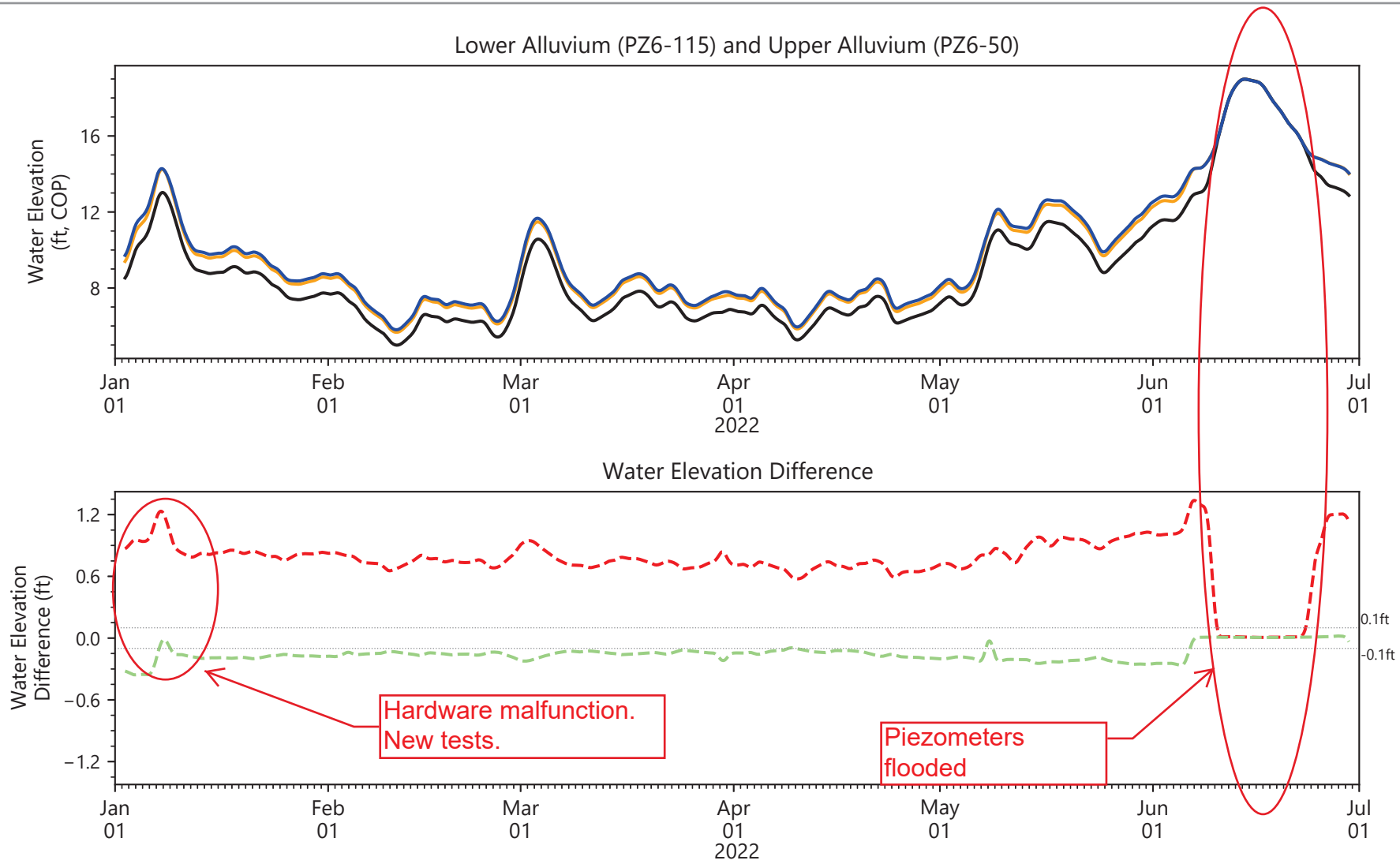
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.6
Groundwater Elevation Differences
NW Natural Gasco Site



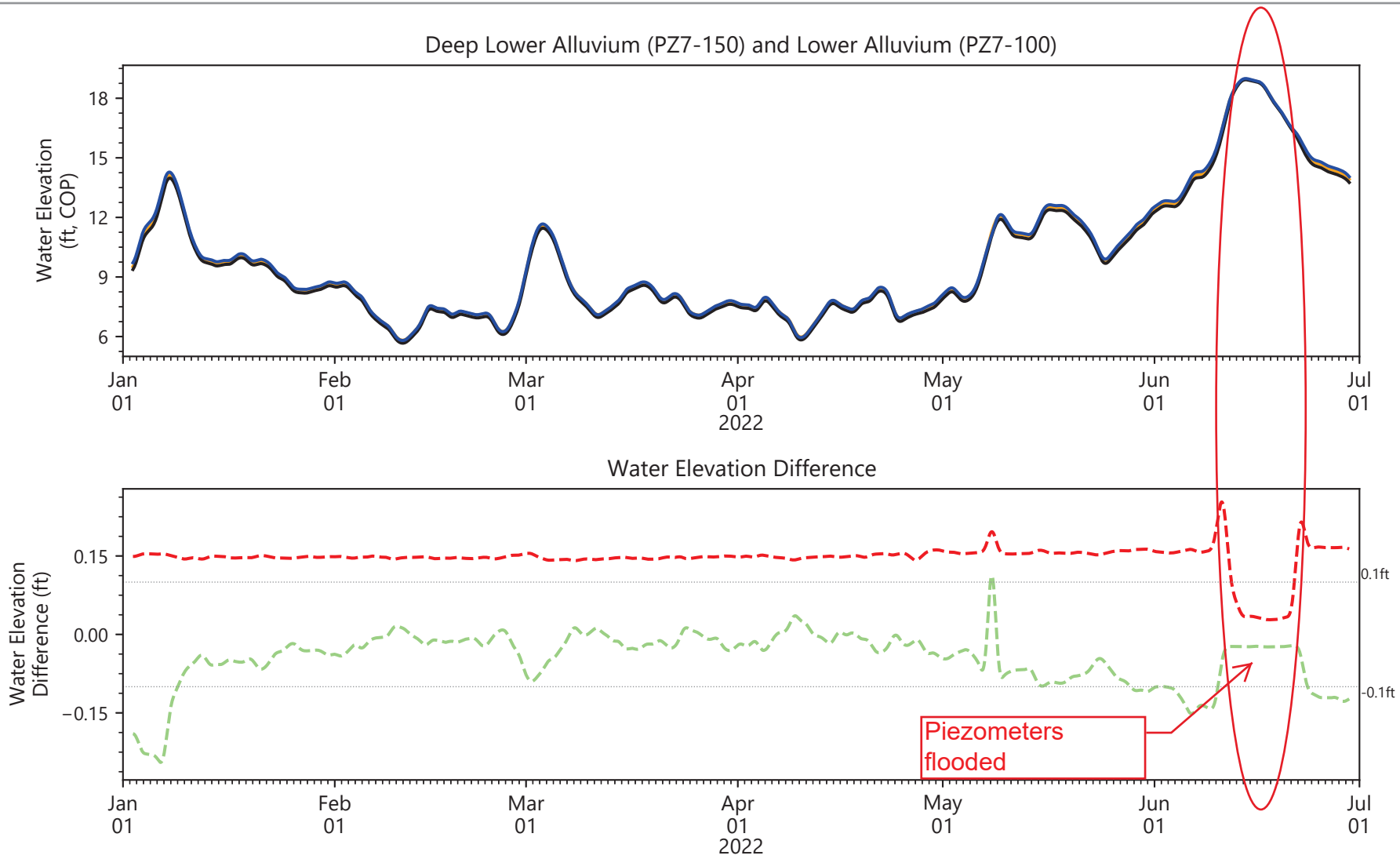
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 13:59 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.7
Groundwater Elevation Differences
NW Natural Gasco Site



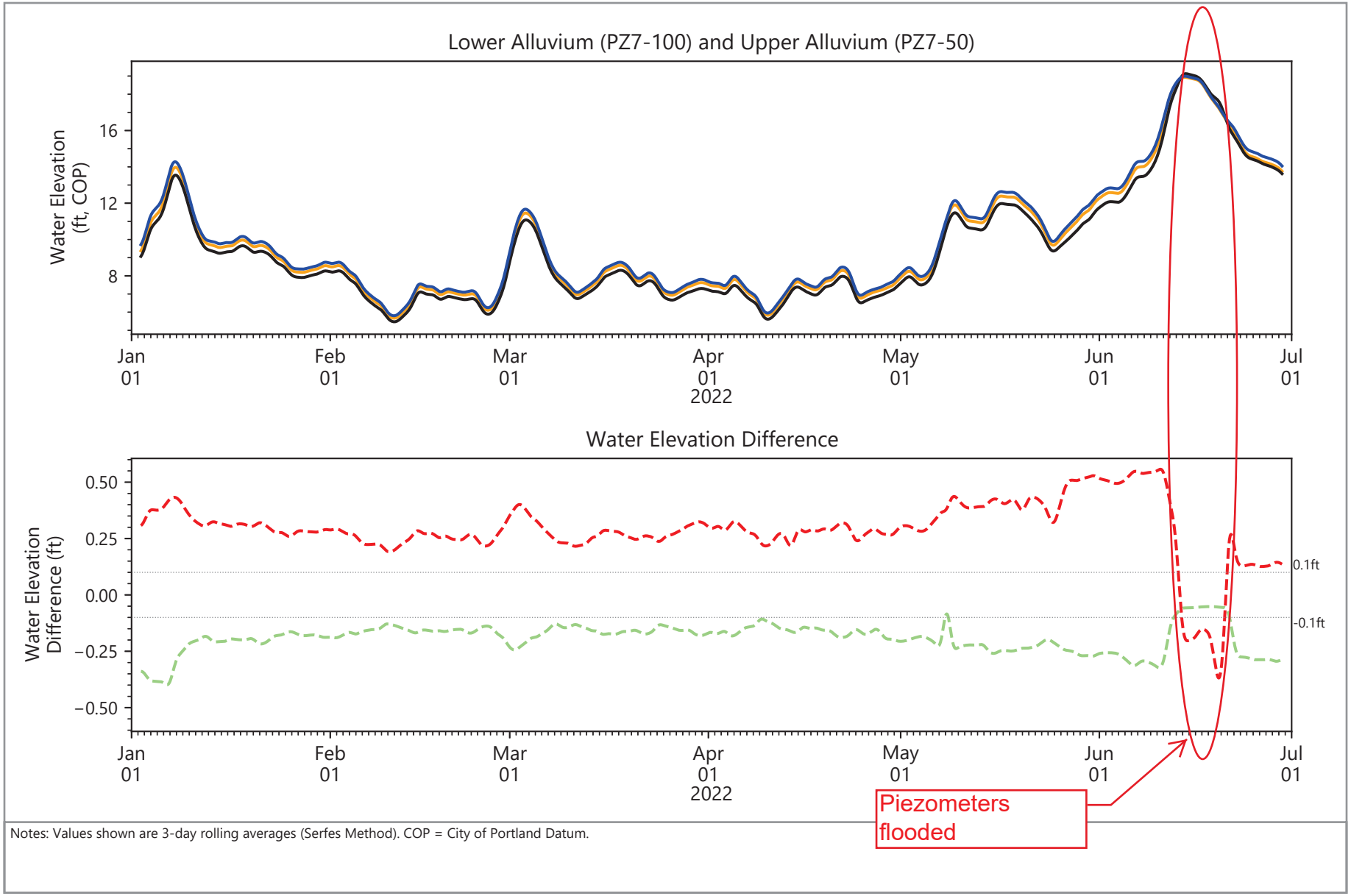
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 07/18/2022 14:00 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.8
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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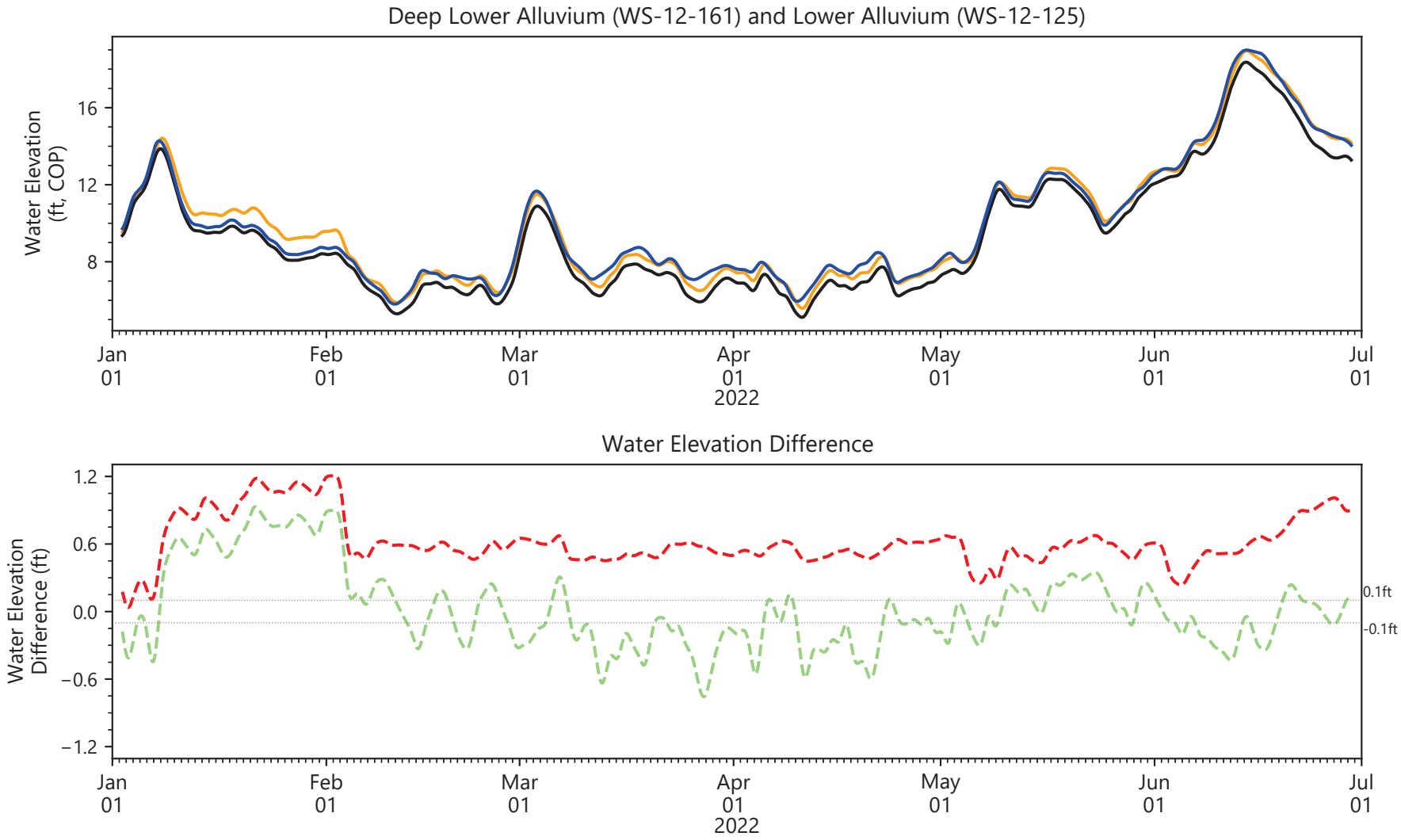
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.9
Groundwater Elevation Differences
NW Natural Gasco Site



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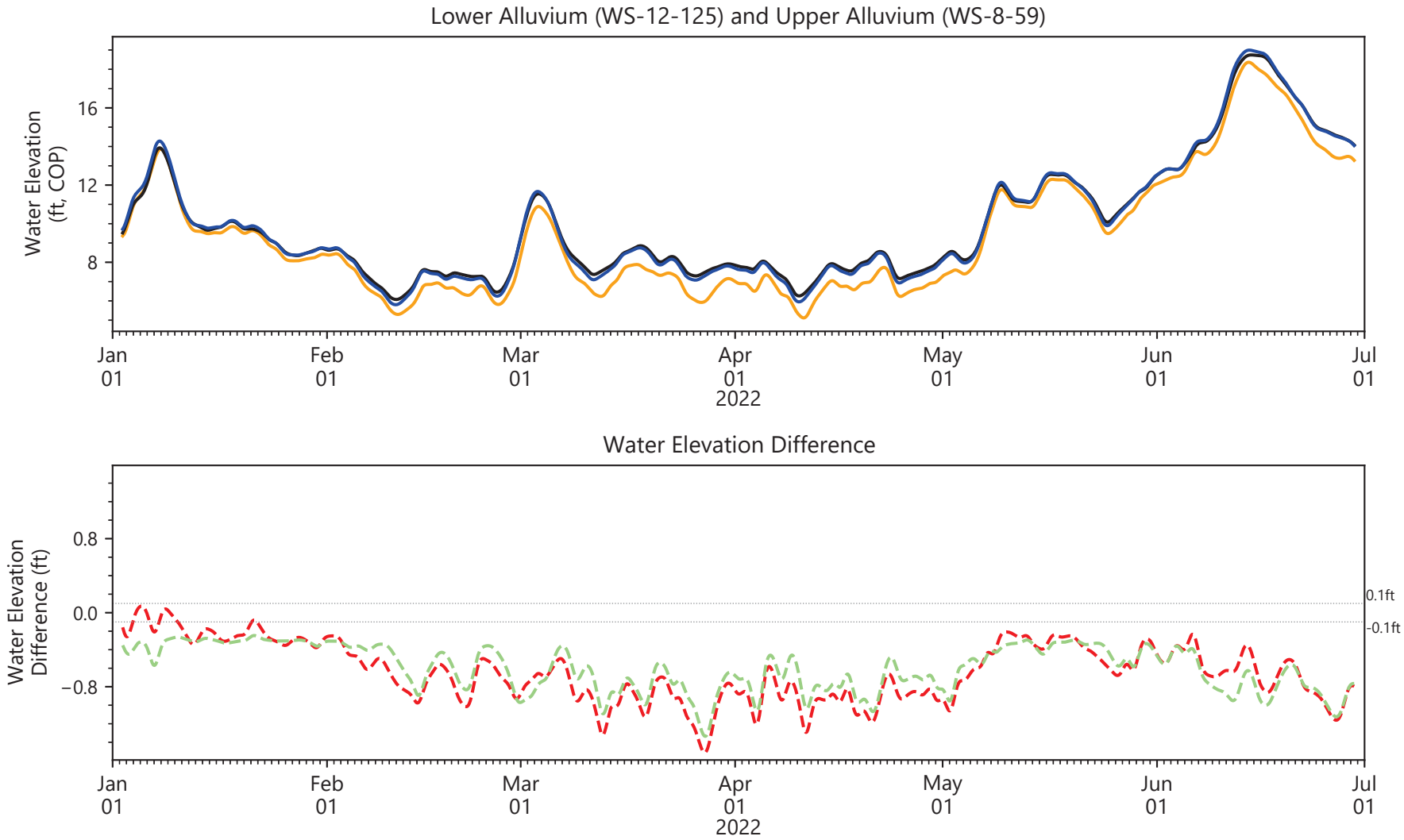
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.10
Groundwater Elevation Differences
NW Natural Gasco Site



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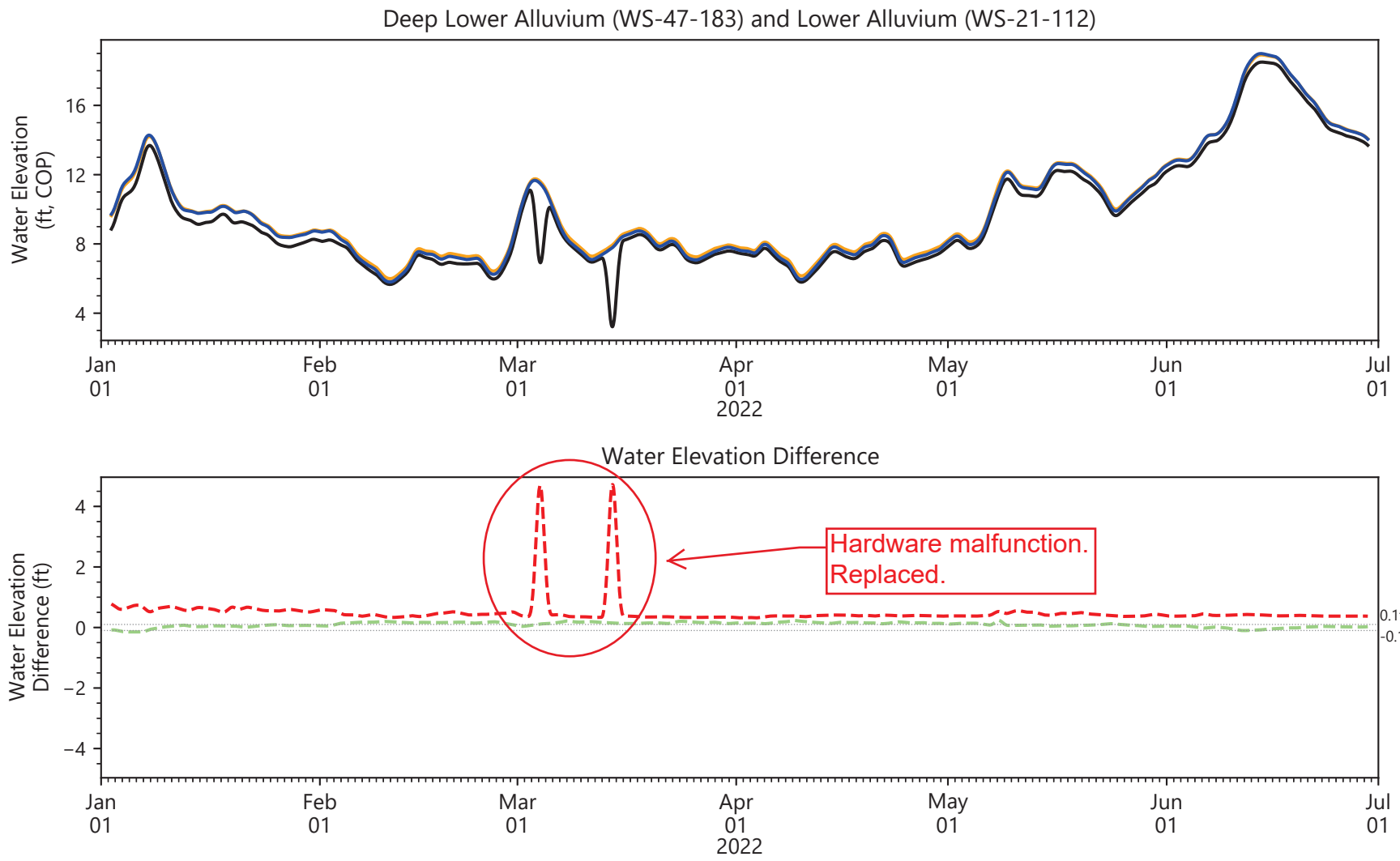
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.11
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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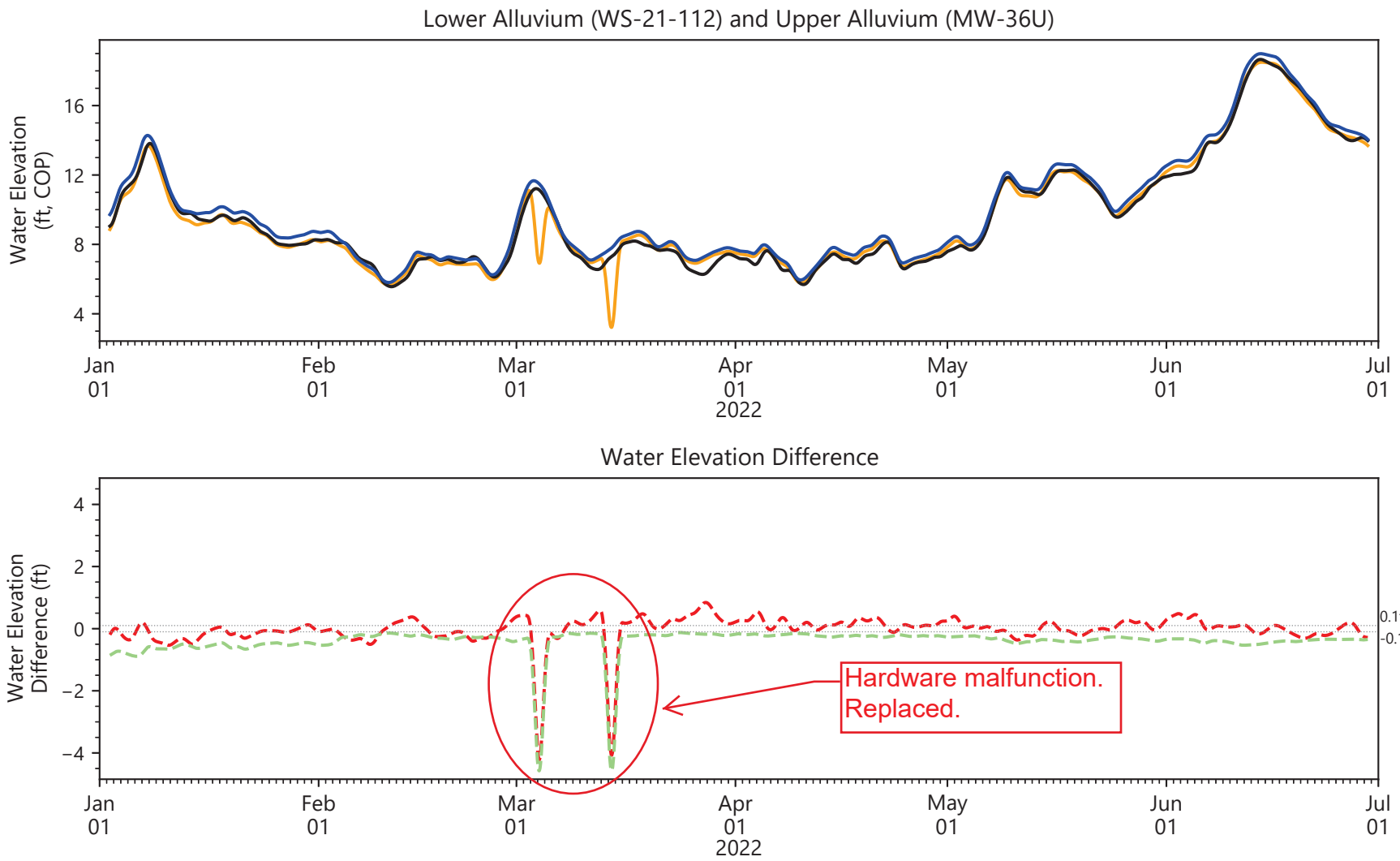
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.12
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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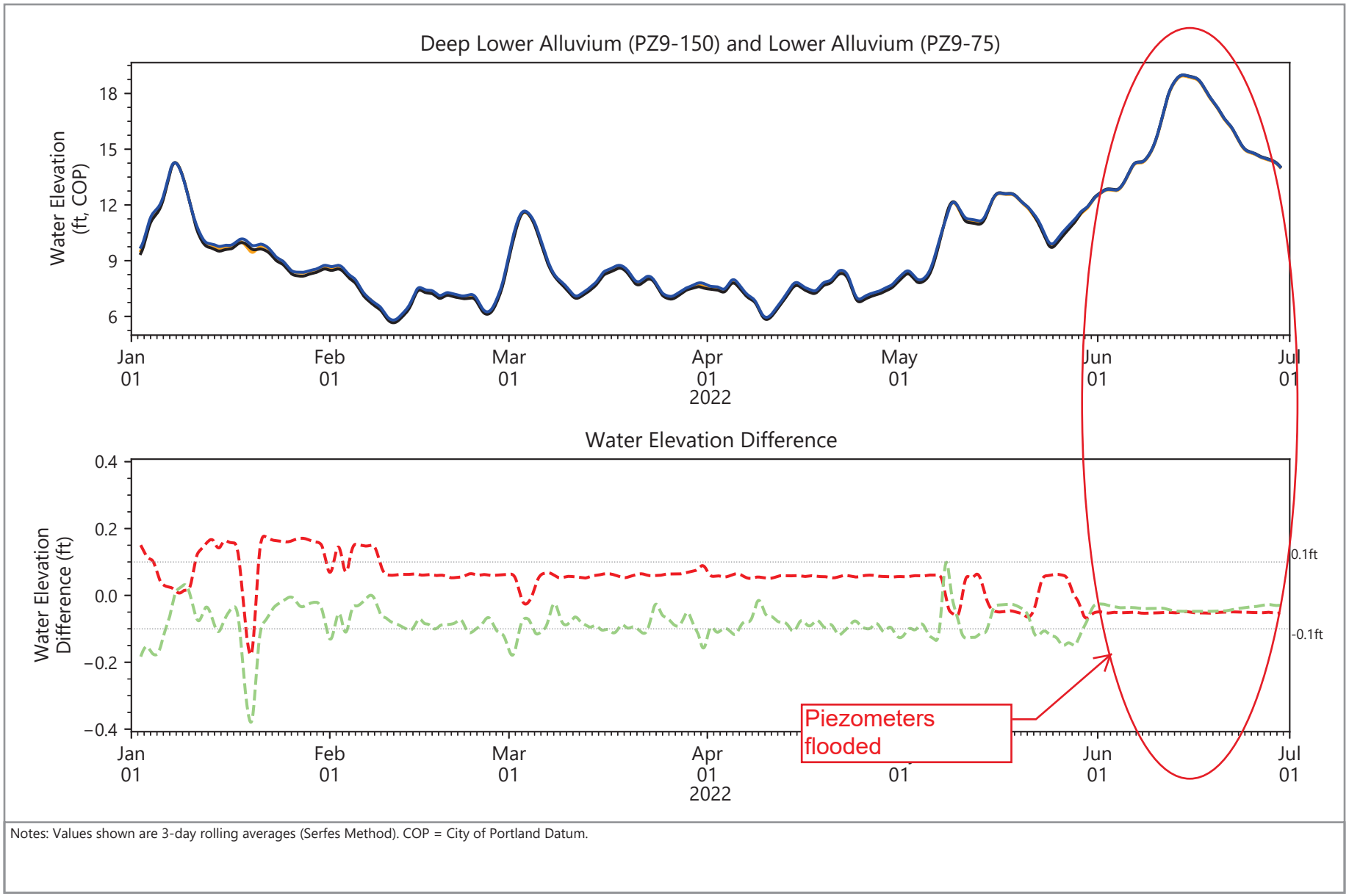
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.13
Groundwater Elevation Differences
NW Natural Gasco Site



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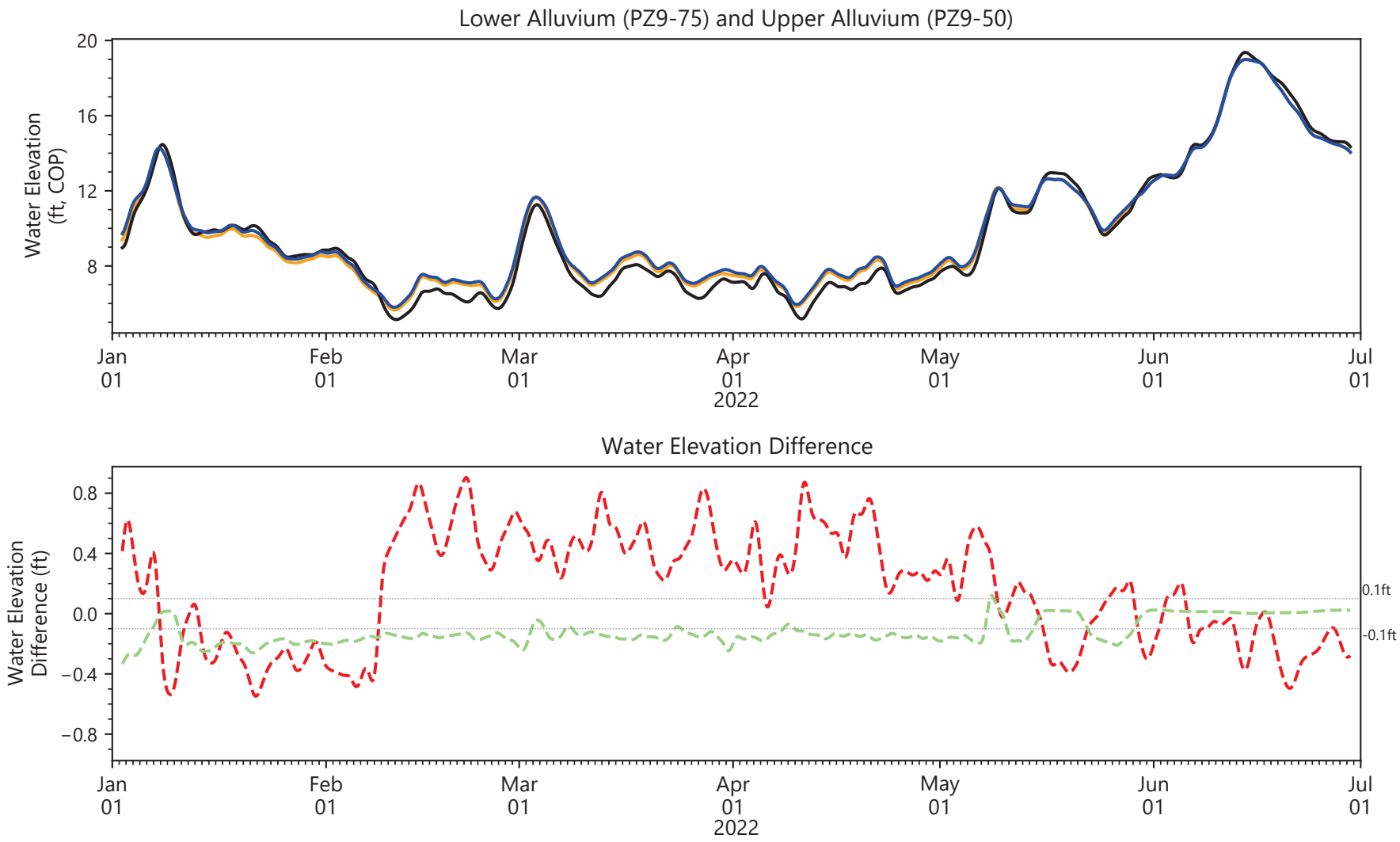
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.14
Groundwater Elevation Differences
NW Natural Gasco Site



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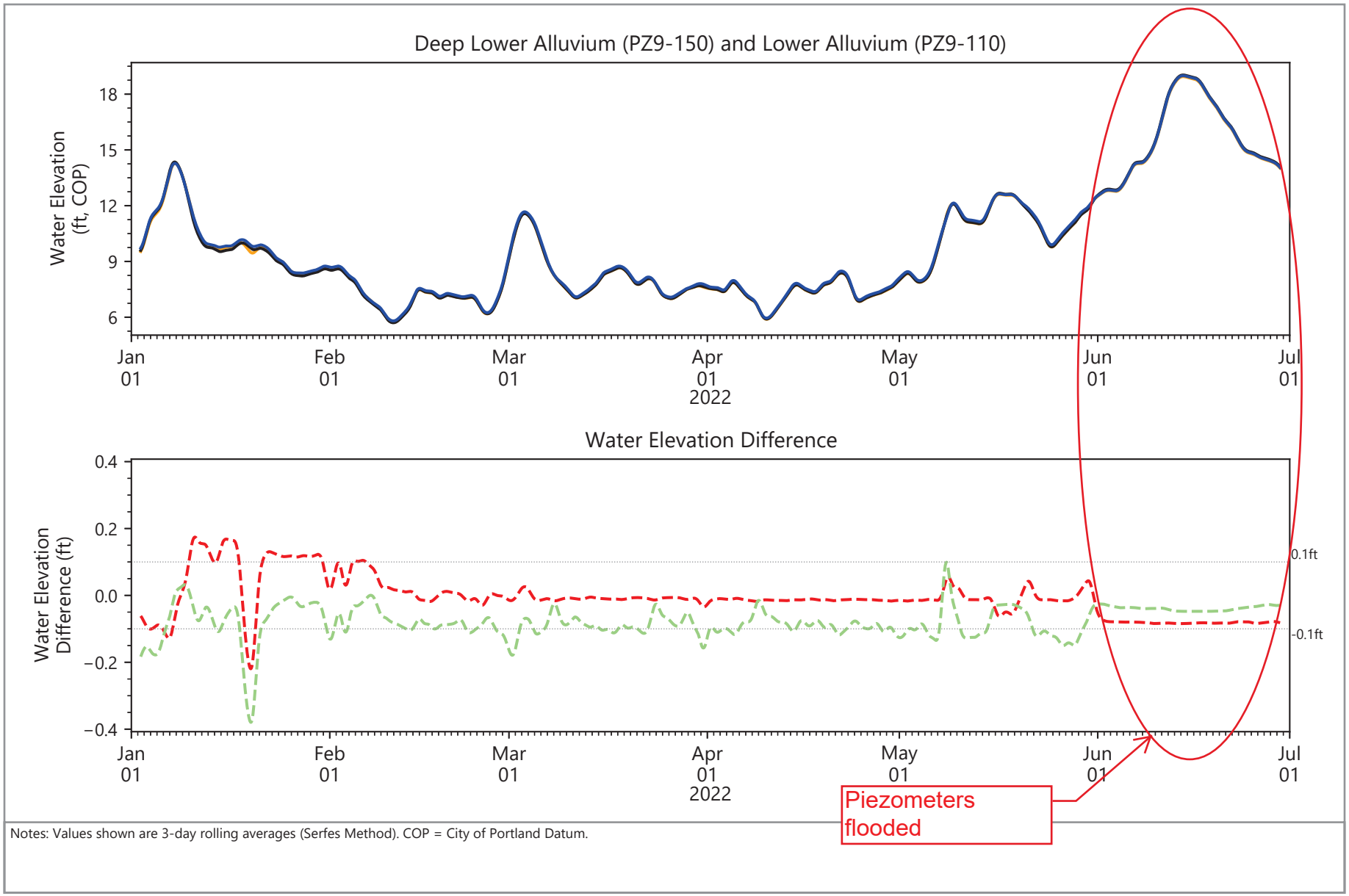
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.15
Groundwater Elevation Differences
NW Natural Gasco Site



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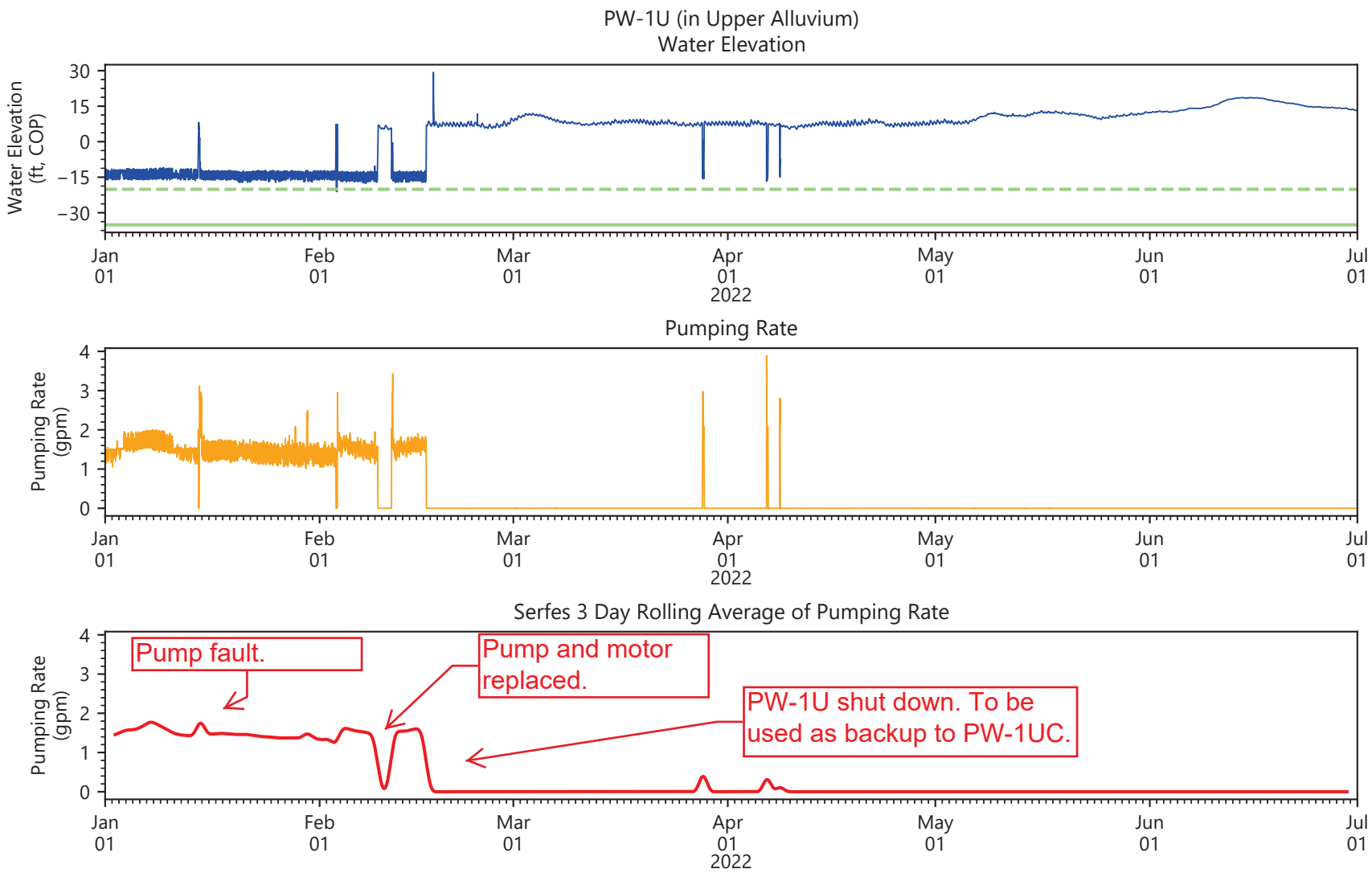
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.16
Groundwater Elevation Differences
NW Natural Gasco Site



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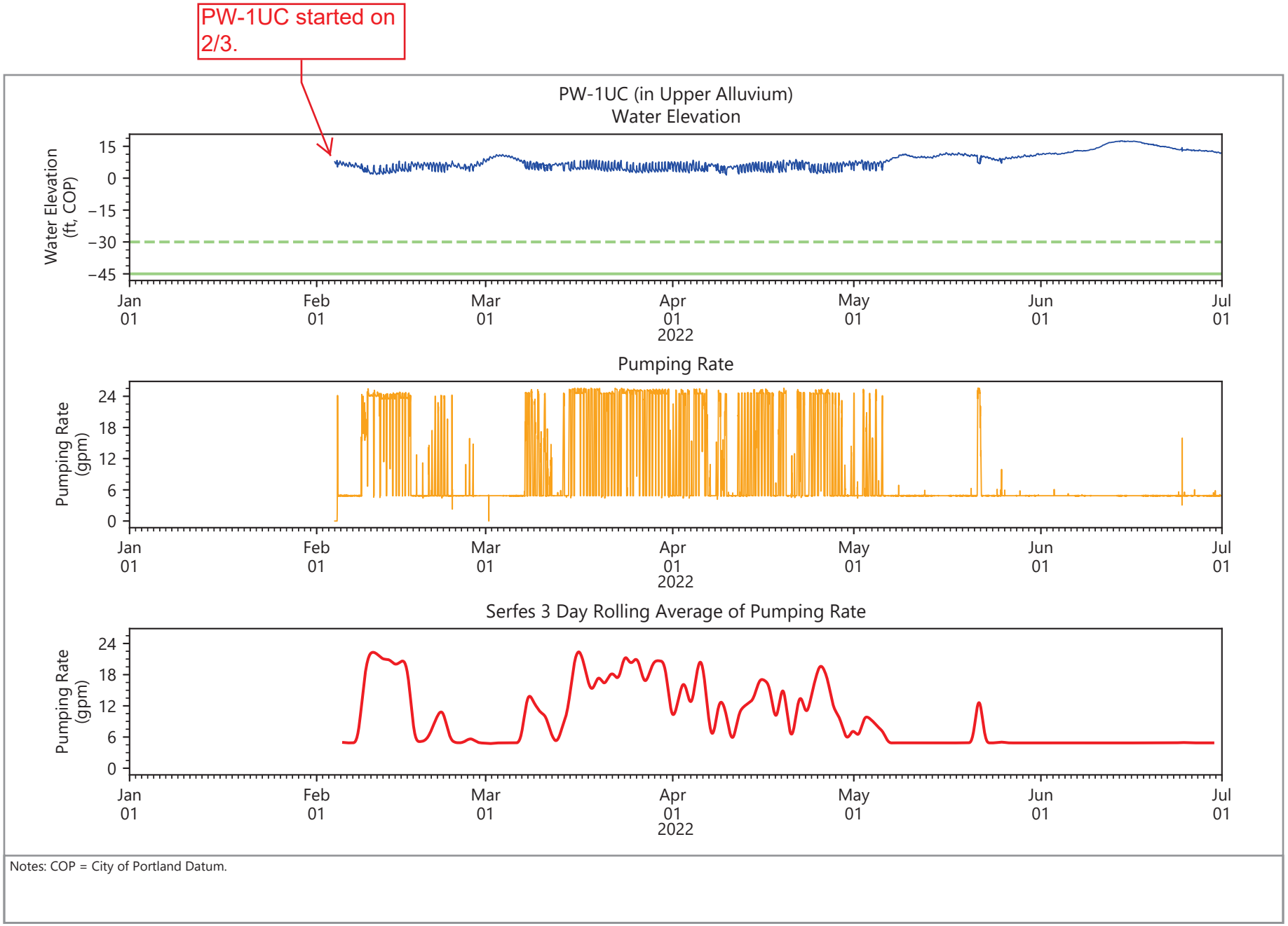
Publish Date: 07/18/2022 14:04 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.1
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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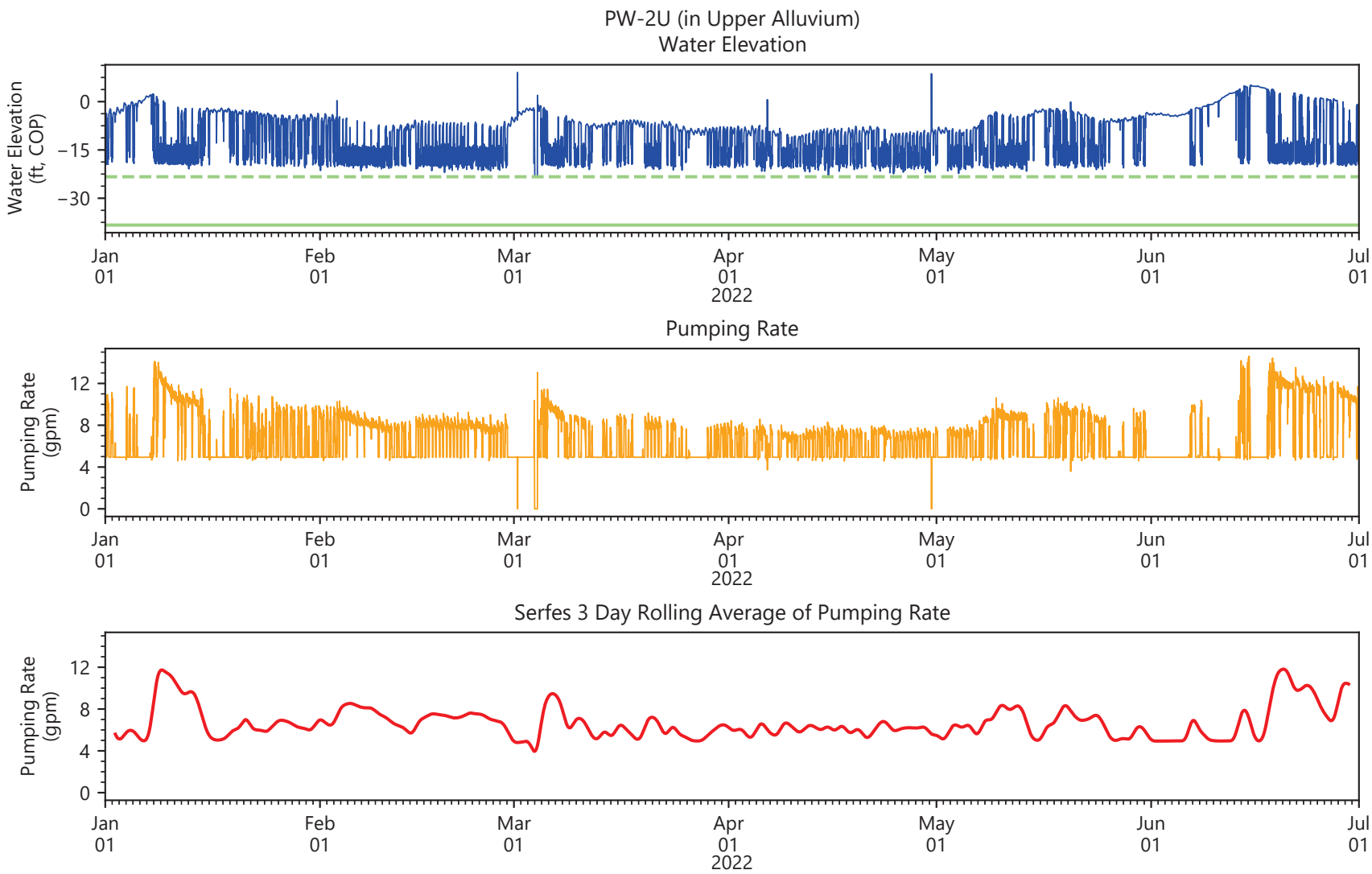
ANCHOR QEA

Figure 8.2
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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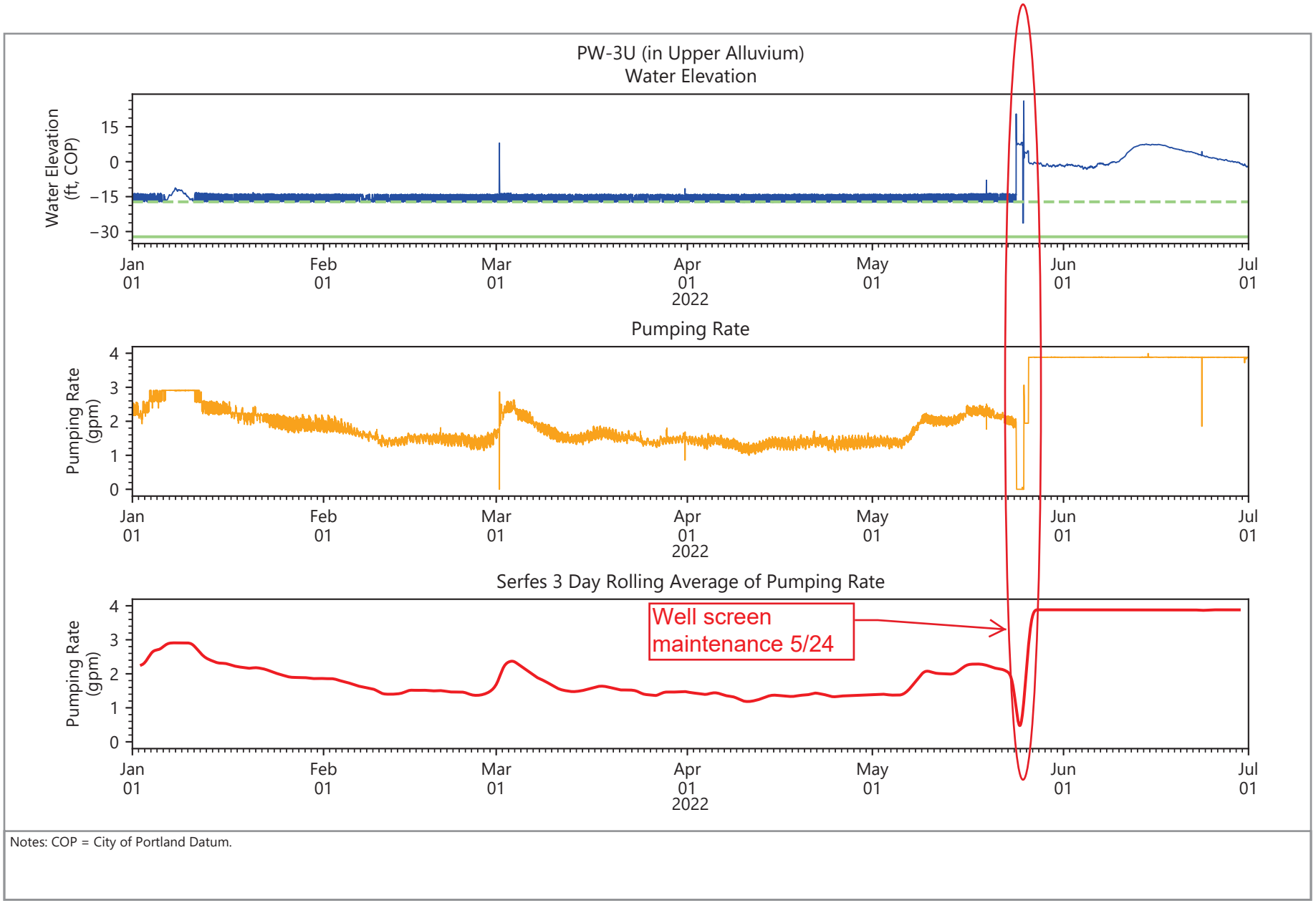
ANCHOR QEA

Figure 8.3
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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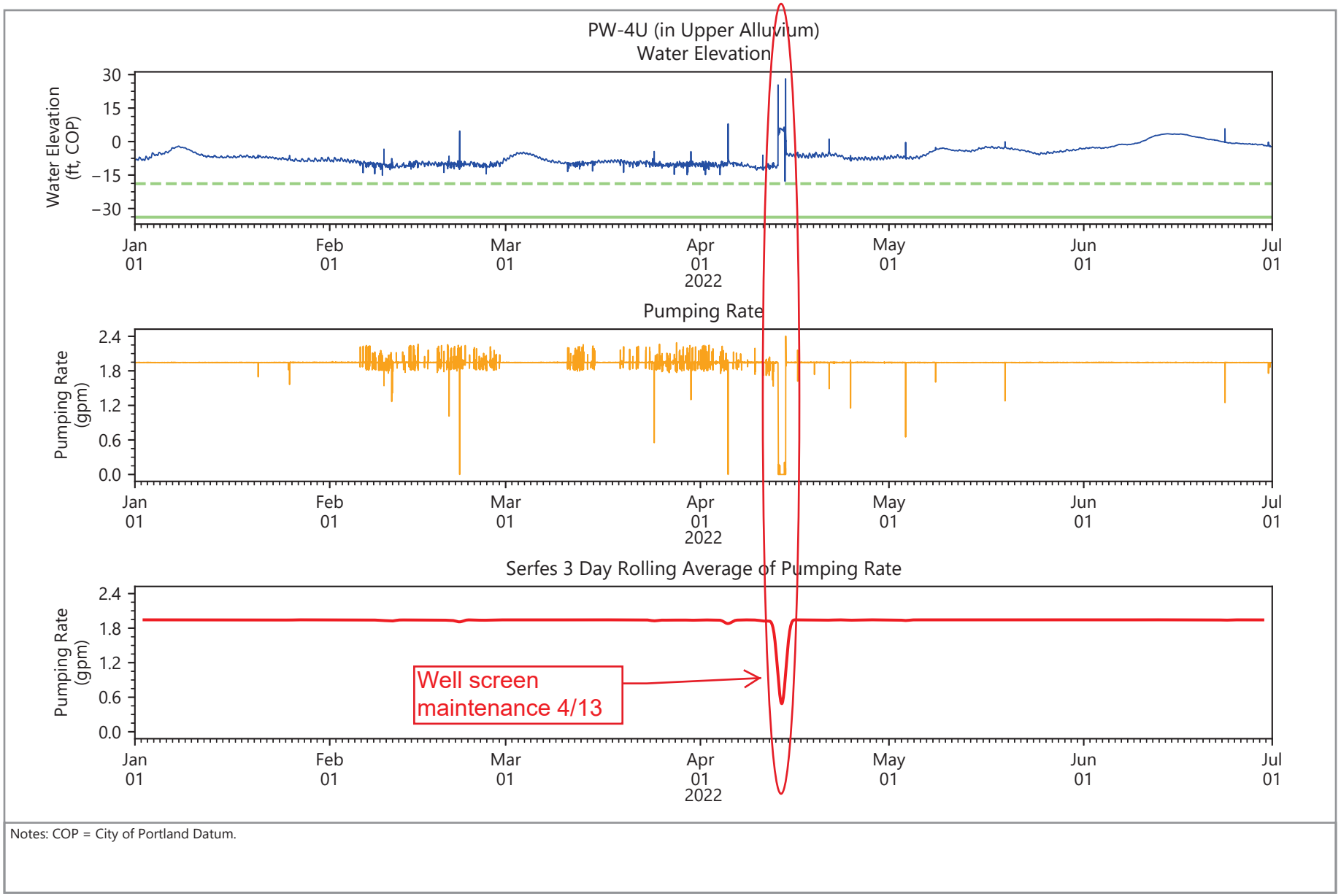
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.4
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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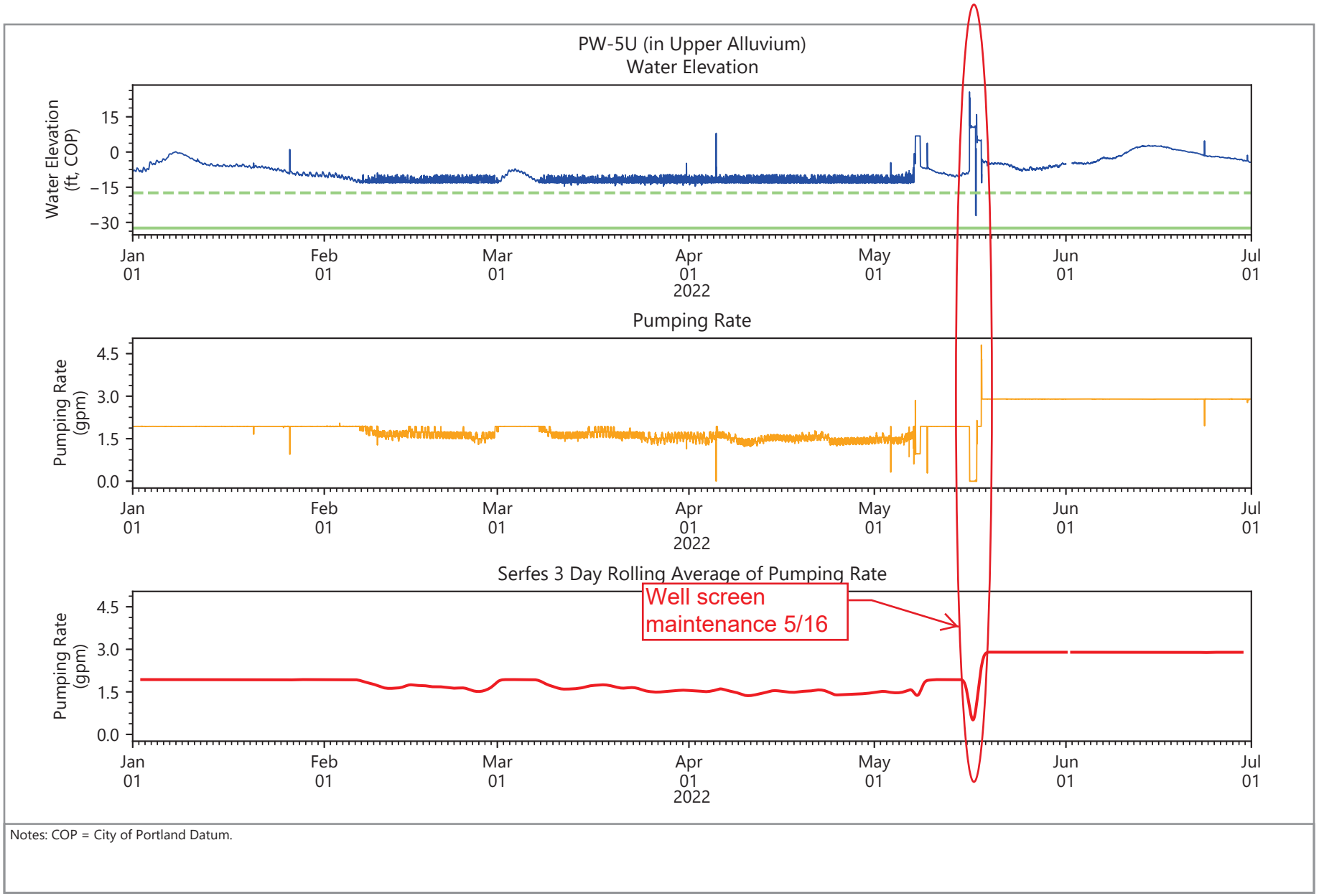
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.5
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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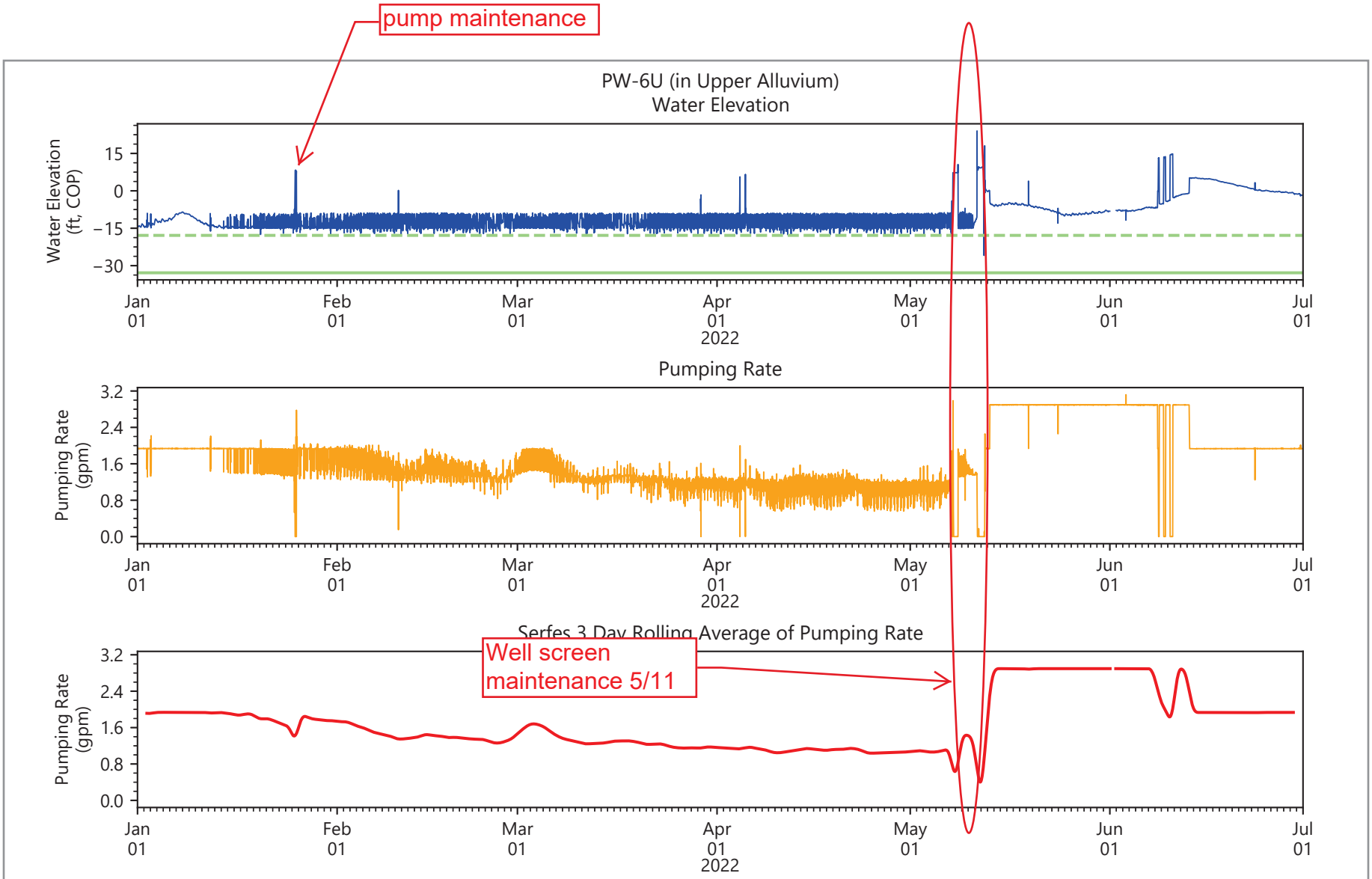
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.6
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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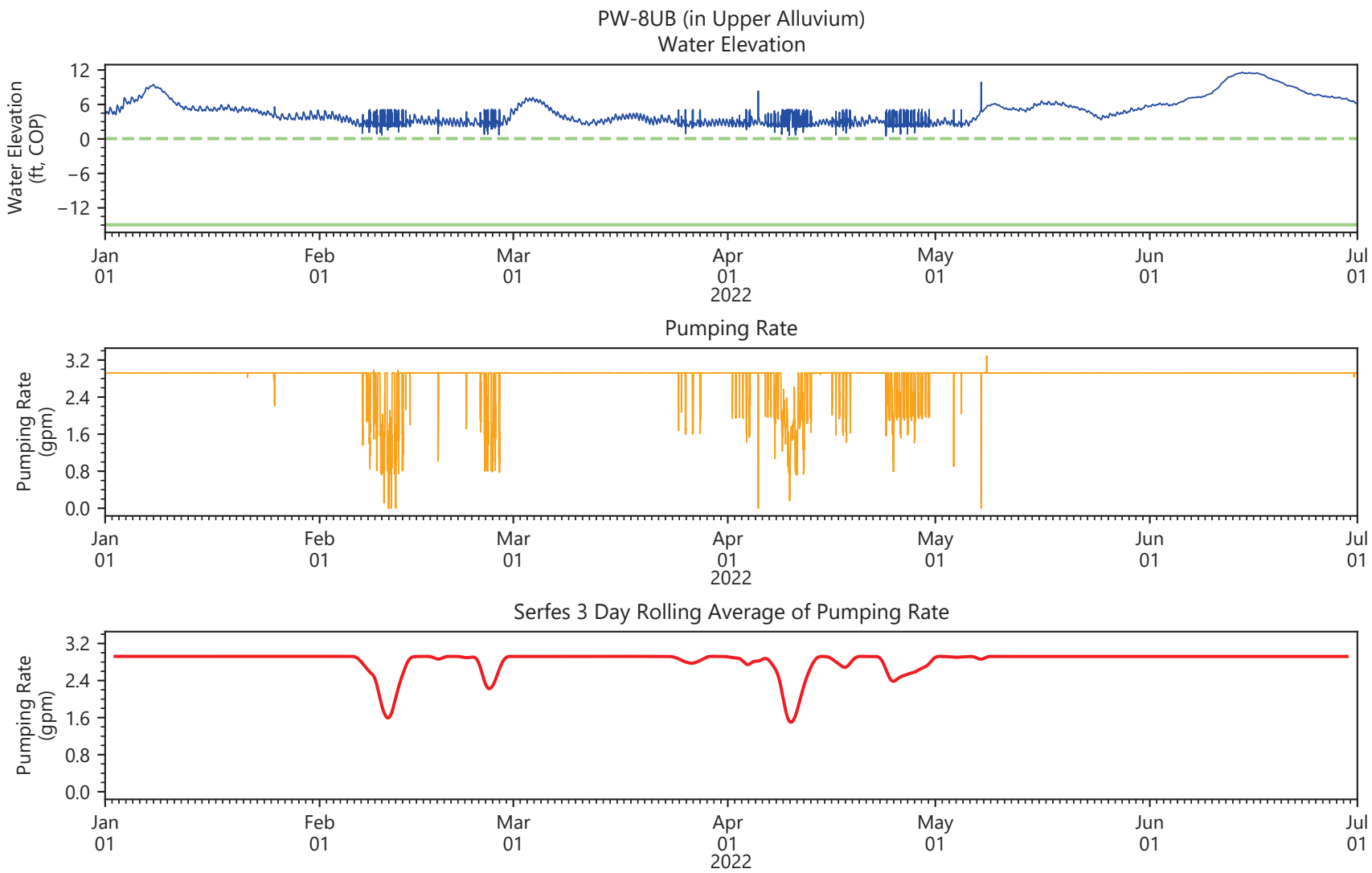
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.7
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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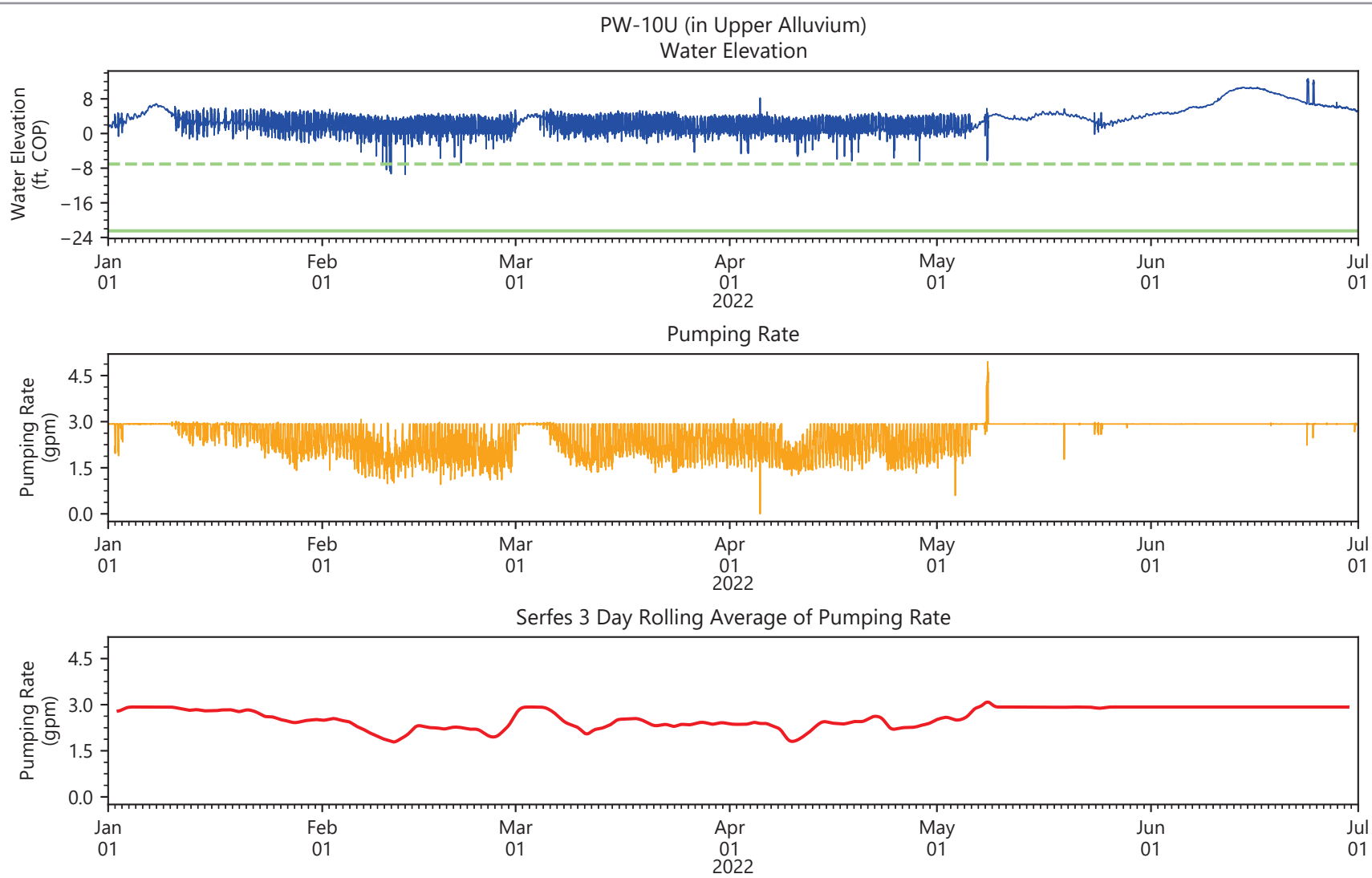
ANCHOR QEA

Figure 8.8
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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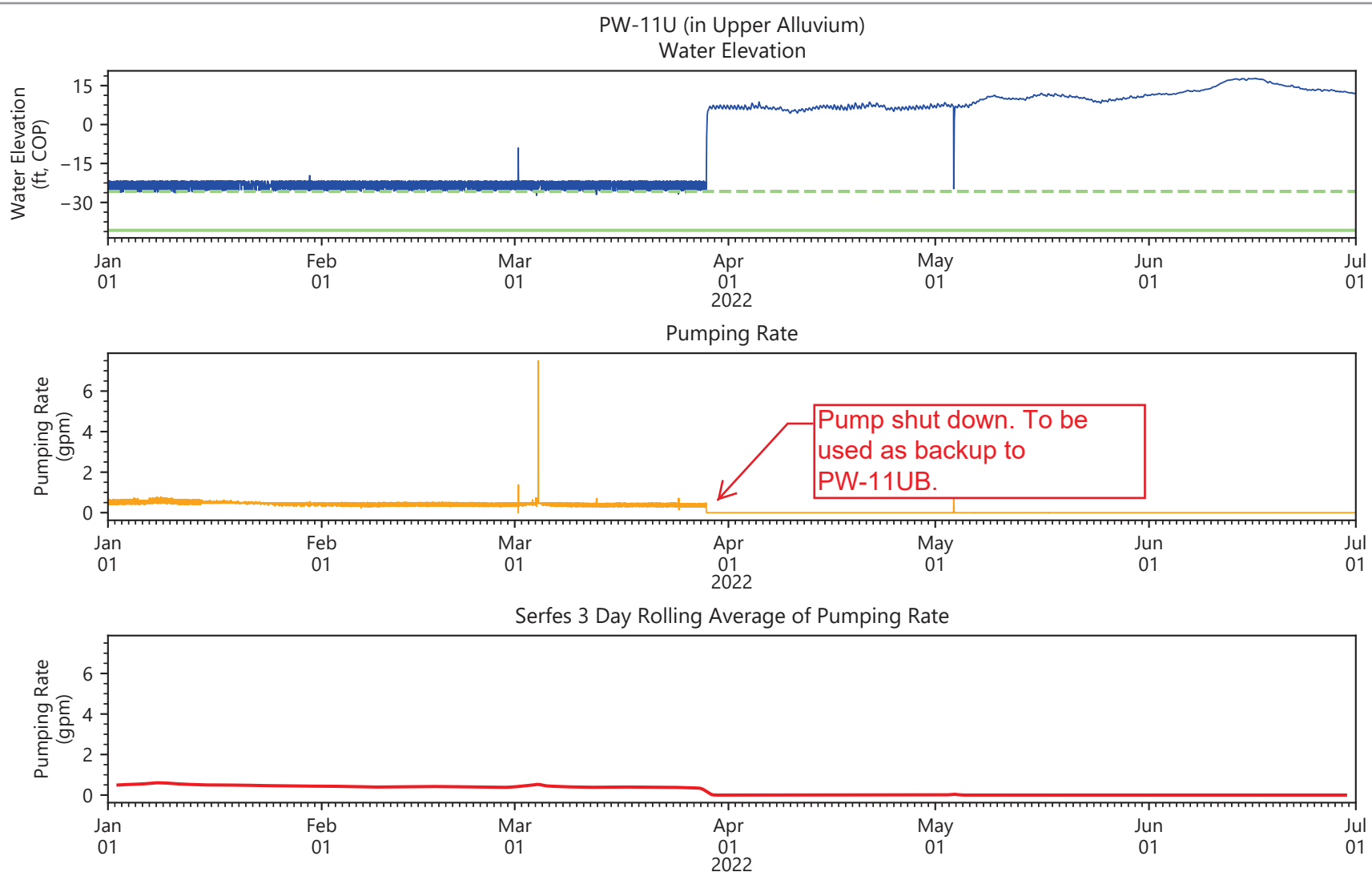
ANCHOR QEA

Figure 8.9
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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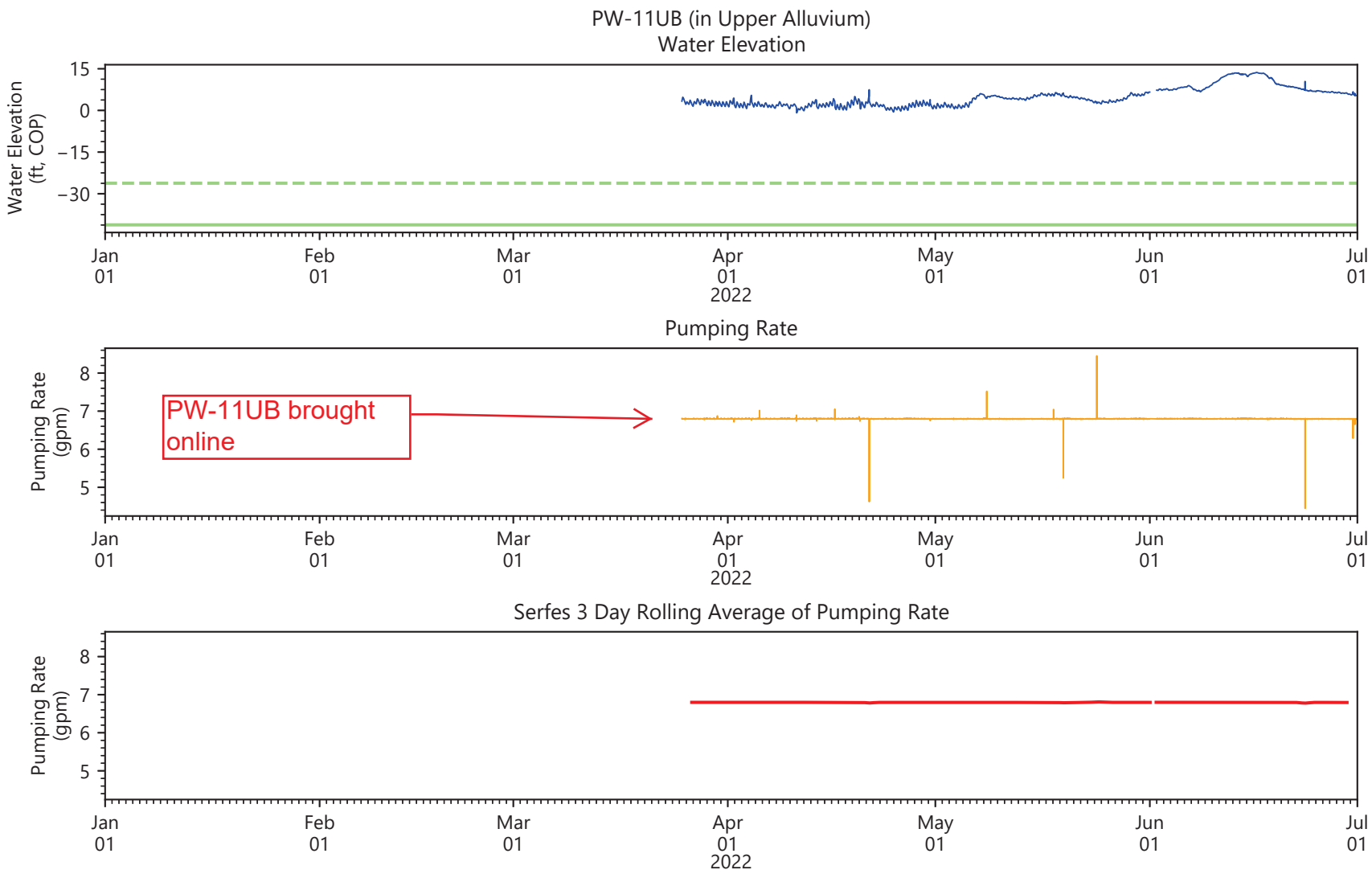
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.10
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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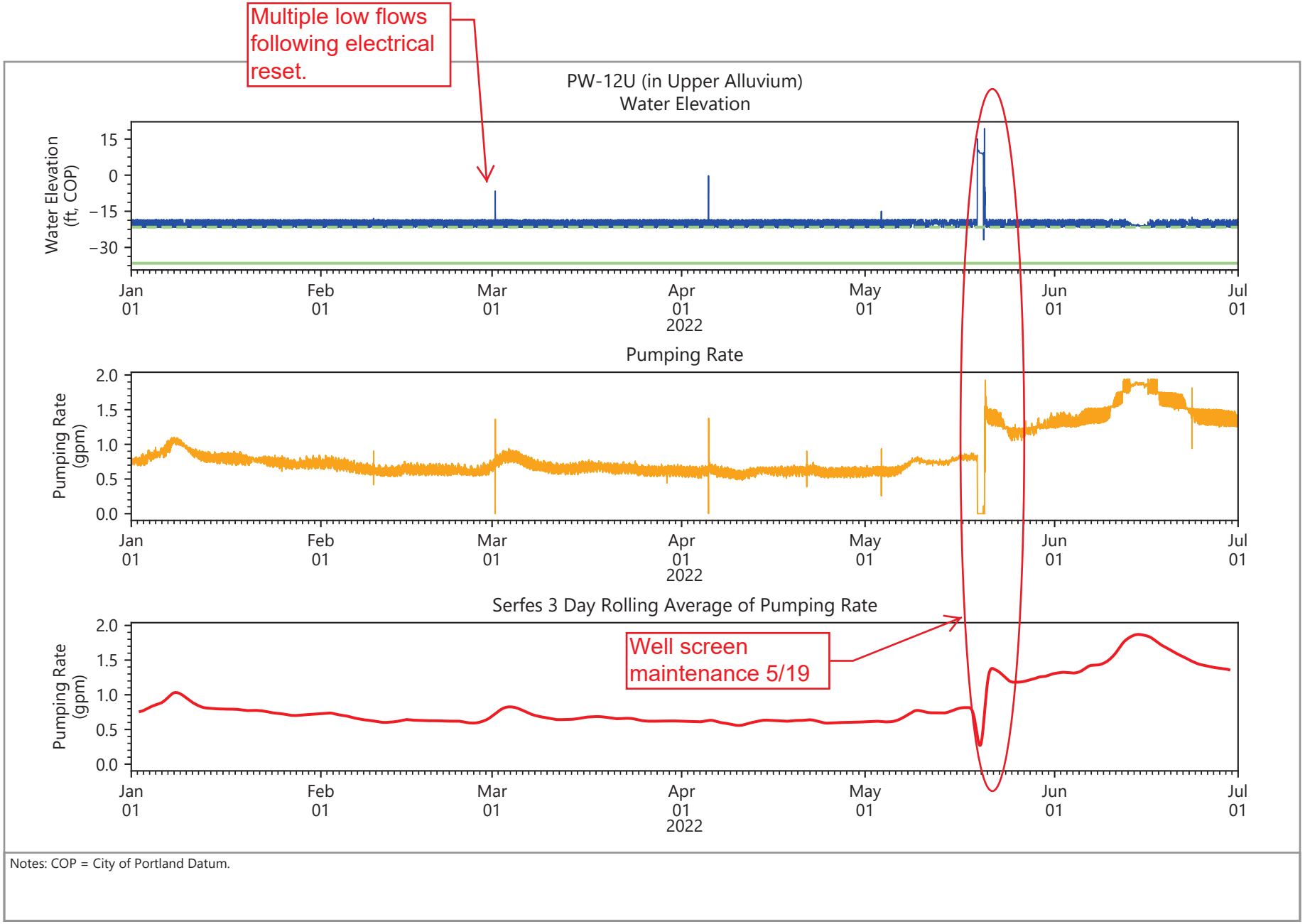
ANCHOR QEA

Figure 8.11
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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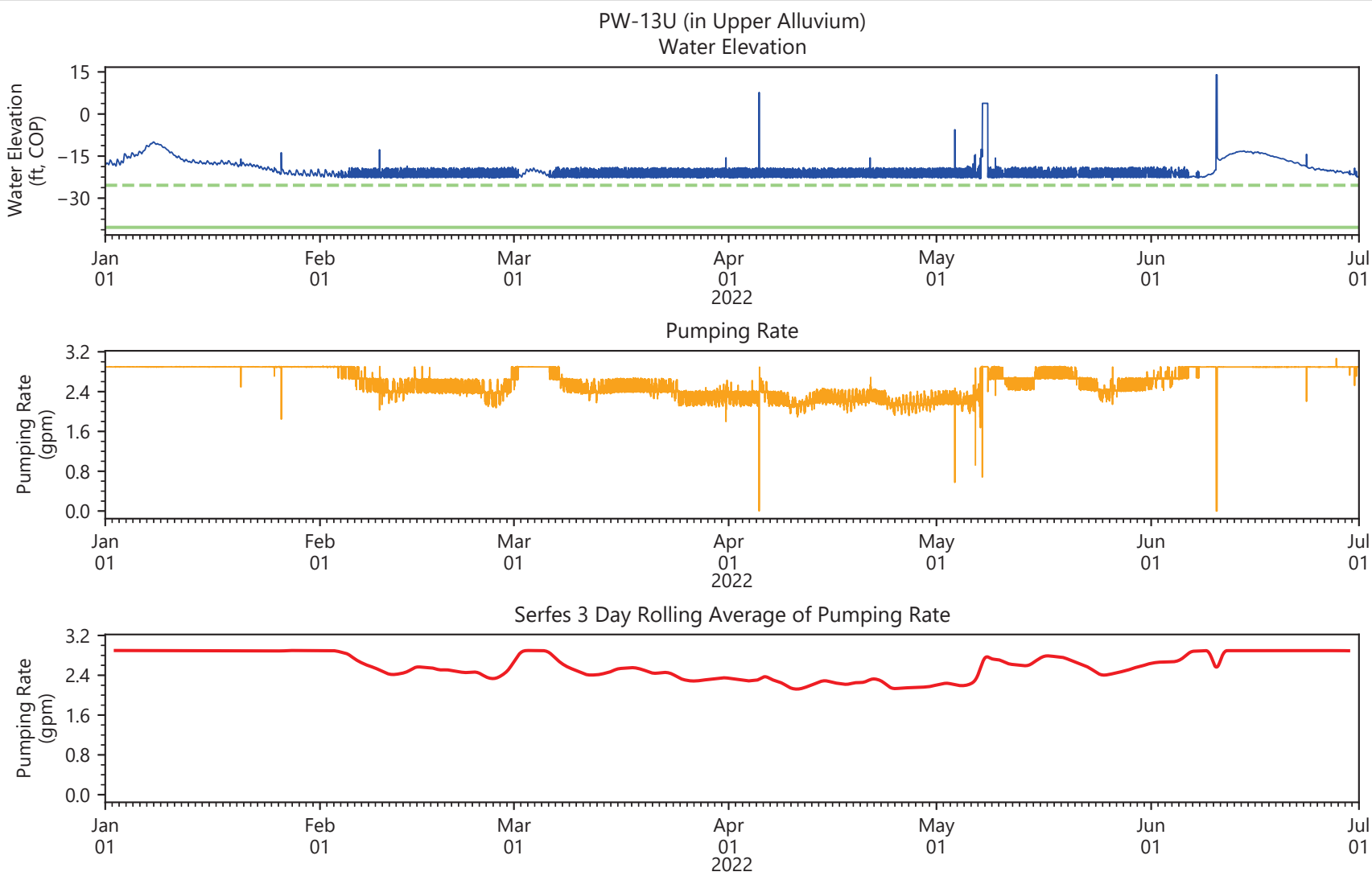
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.12
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

Figure 8.13
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

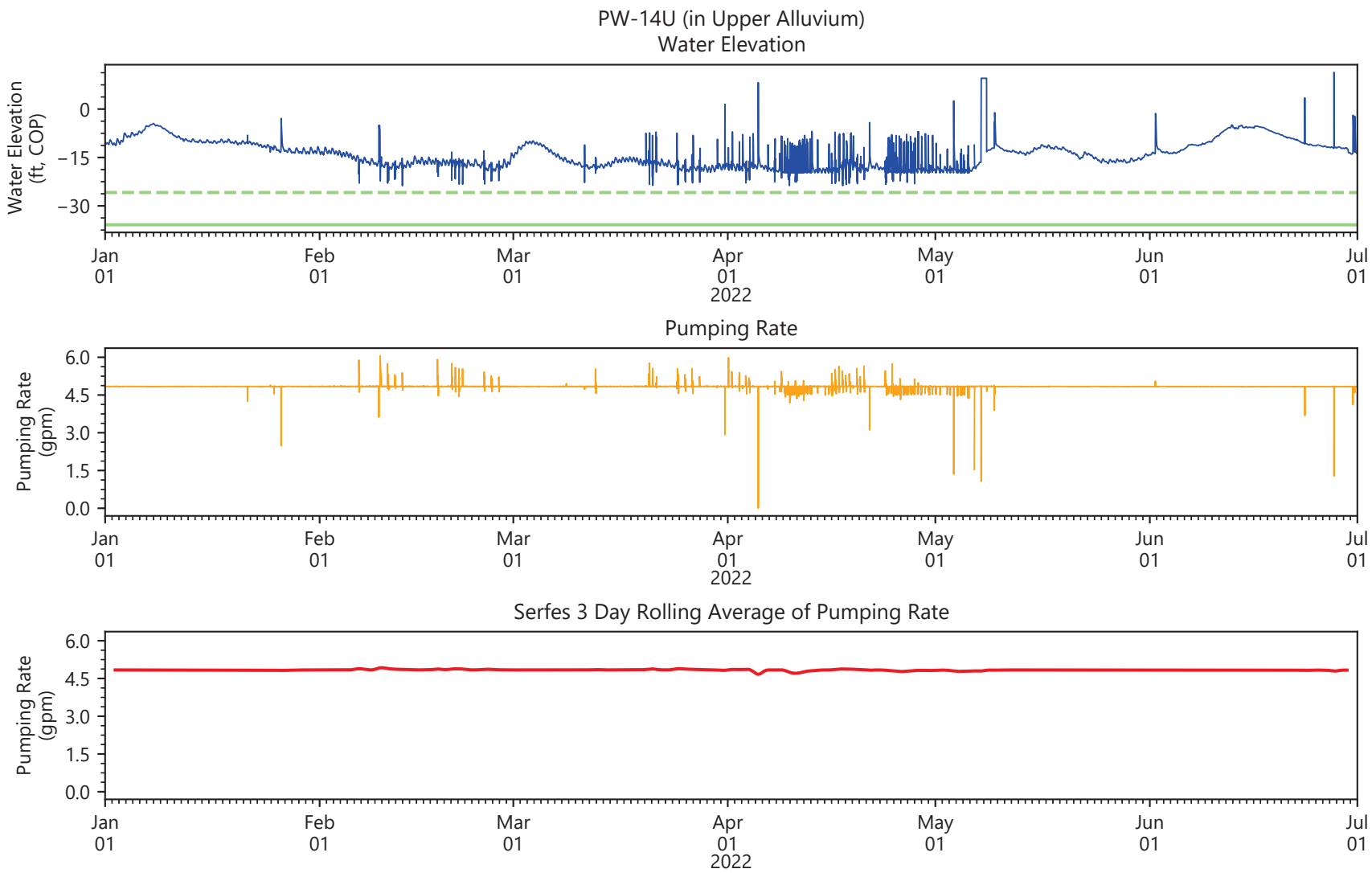

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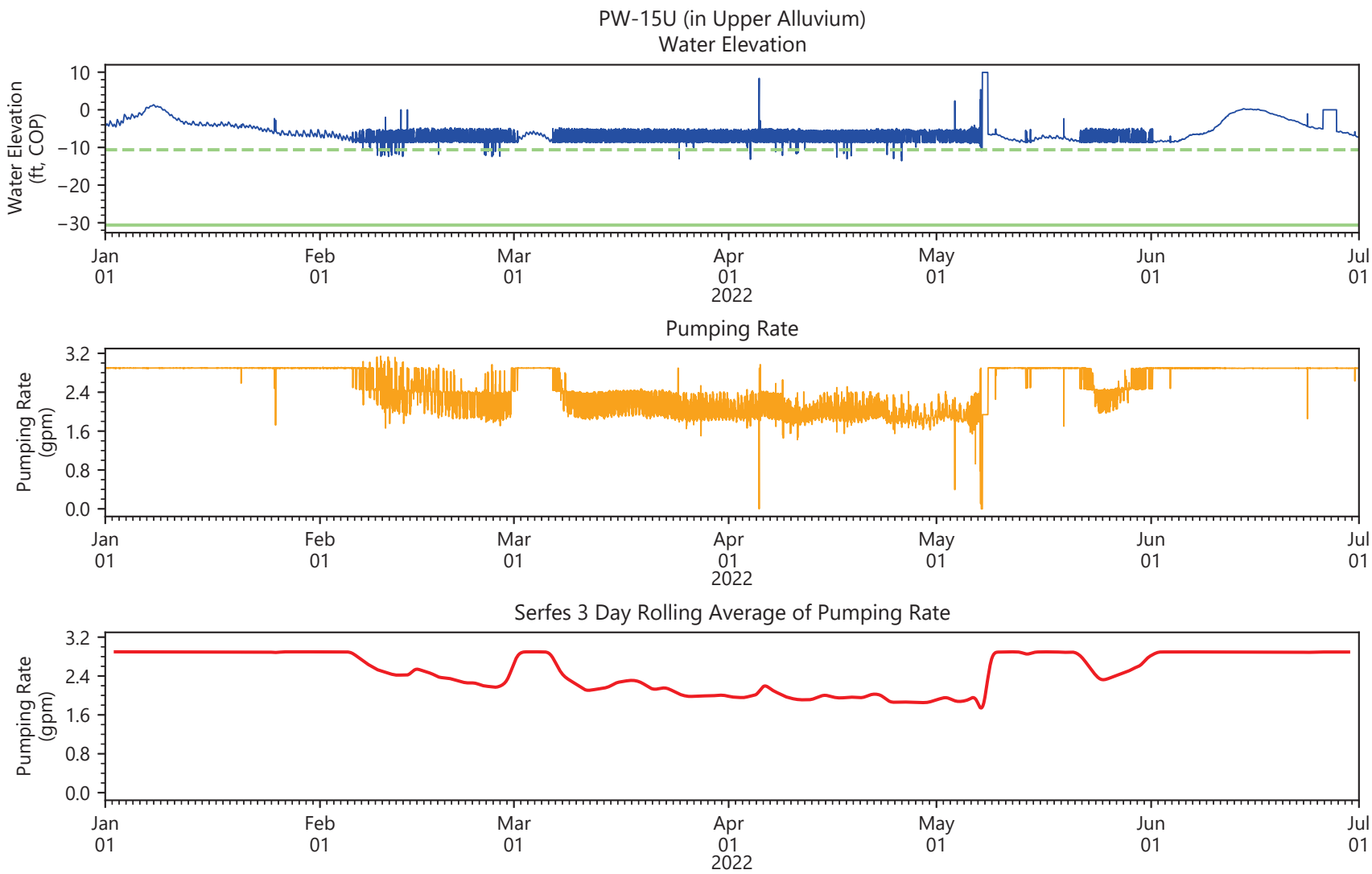
Figure 8.14
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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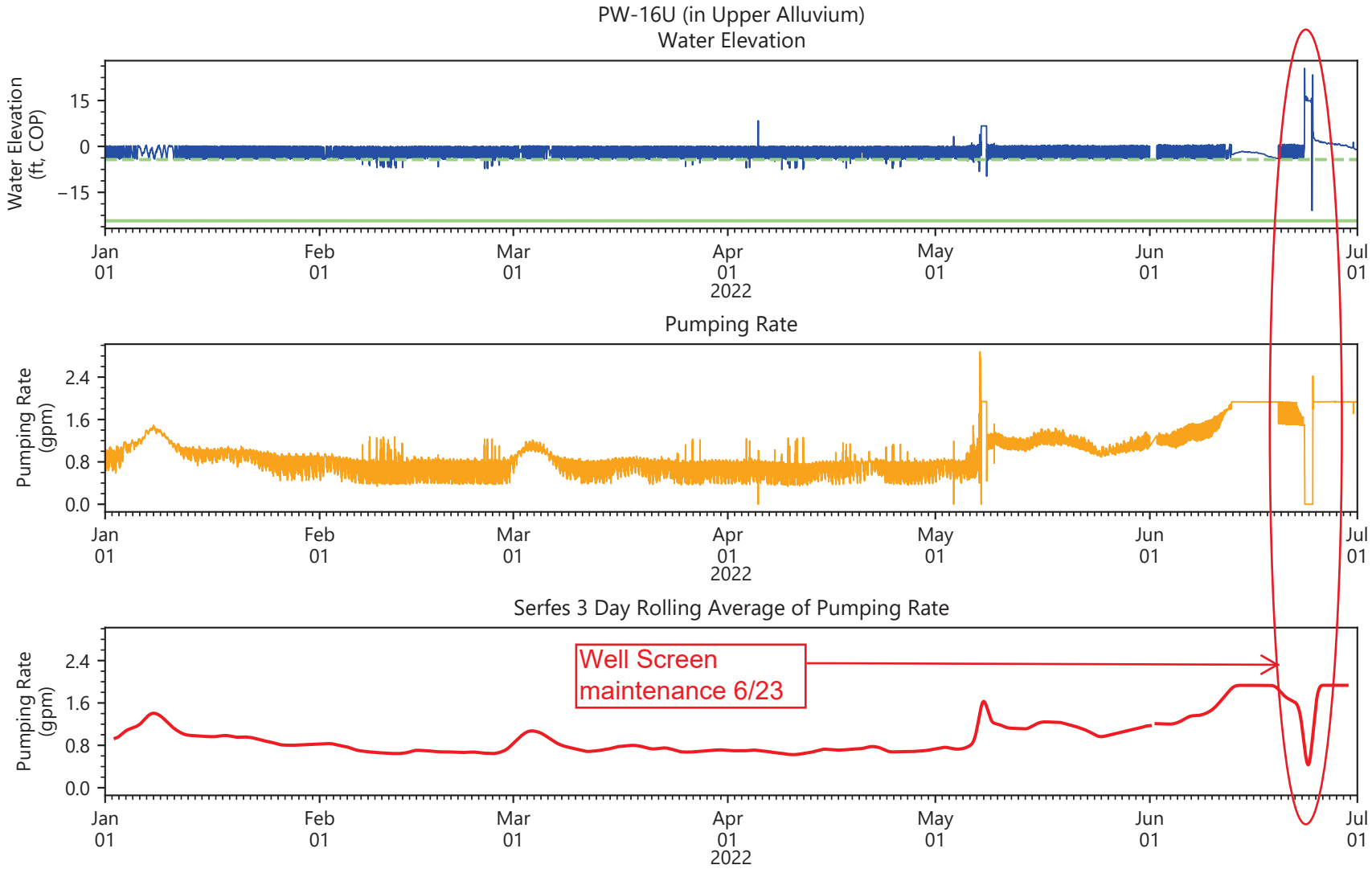
ANCHOR QEA

Figure 8.15
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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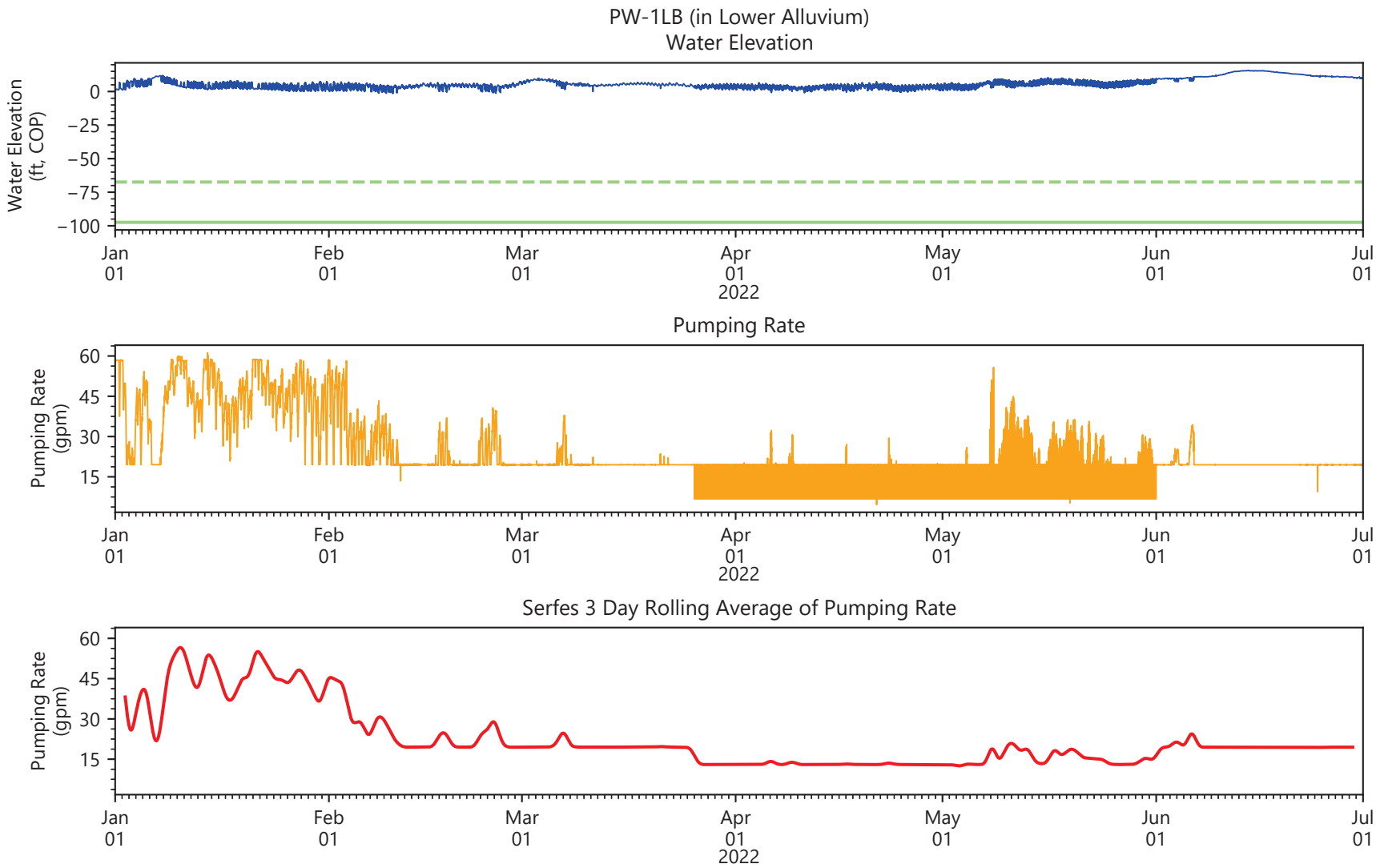
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.16
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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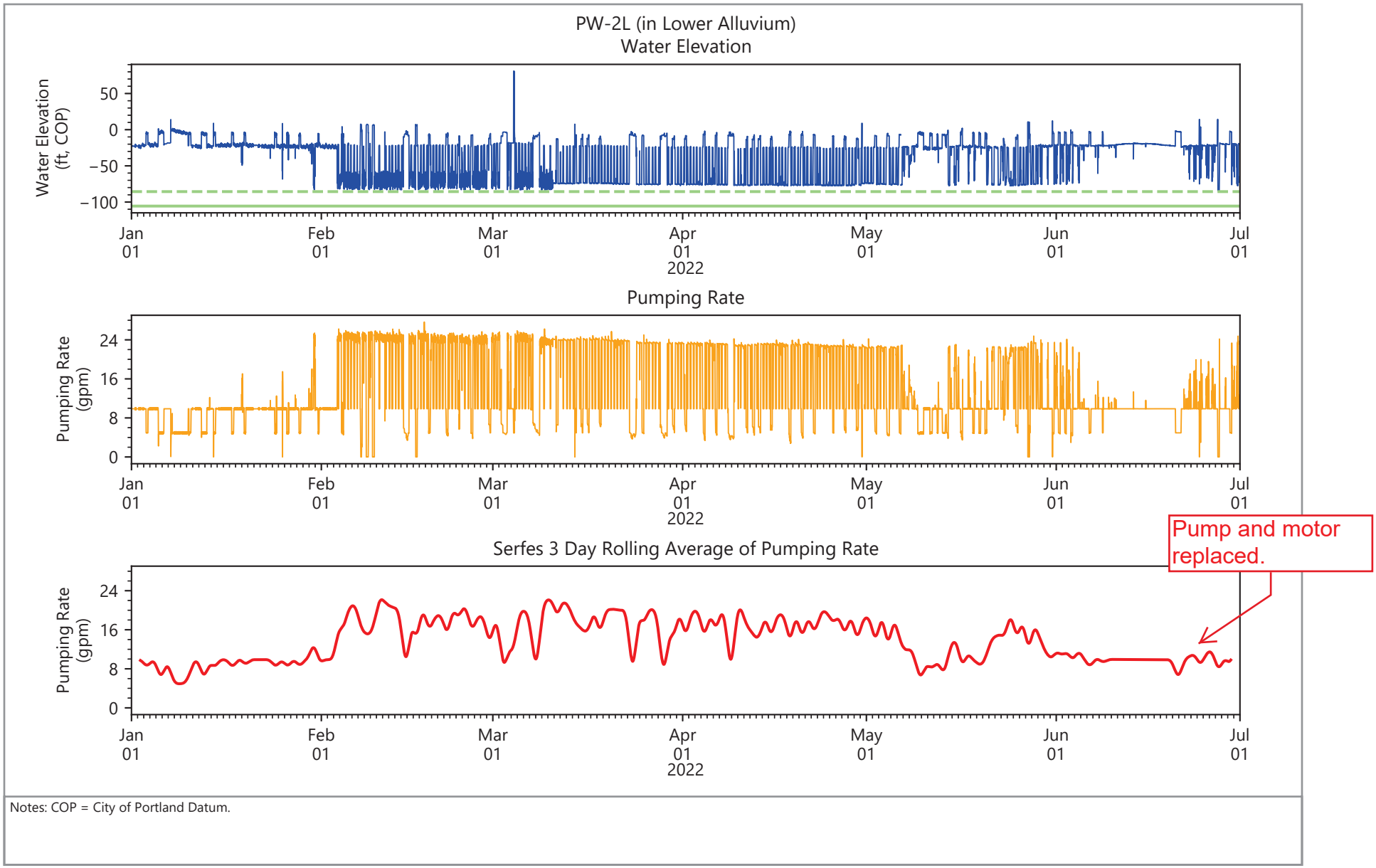
ANCHOR QEA

Figure 8.17
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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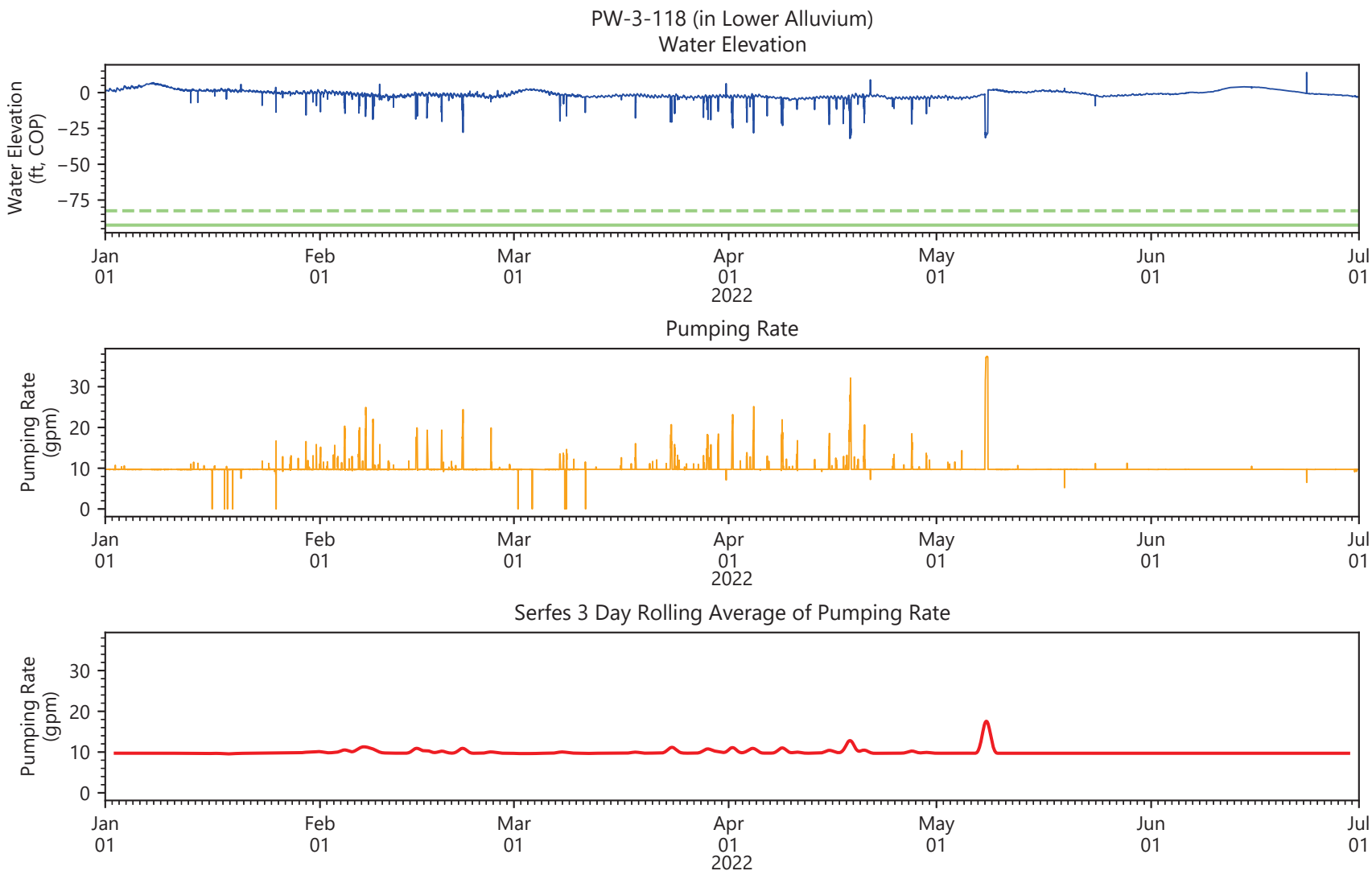
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.18
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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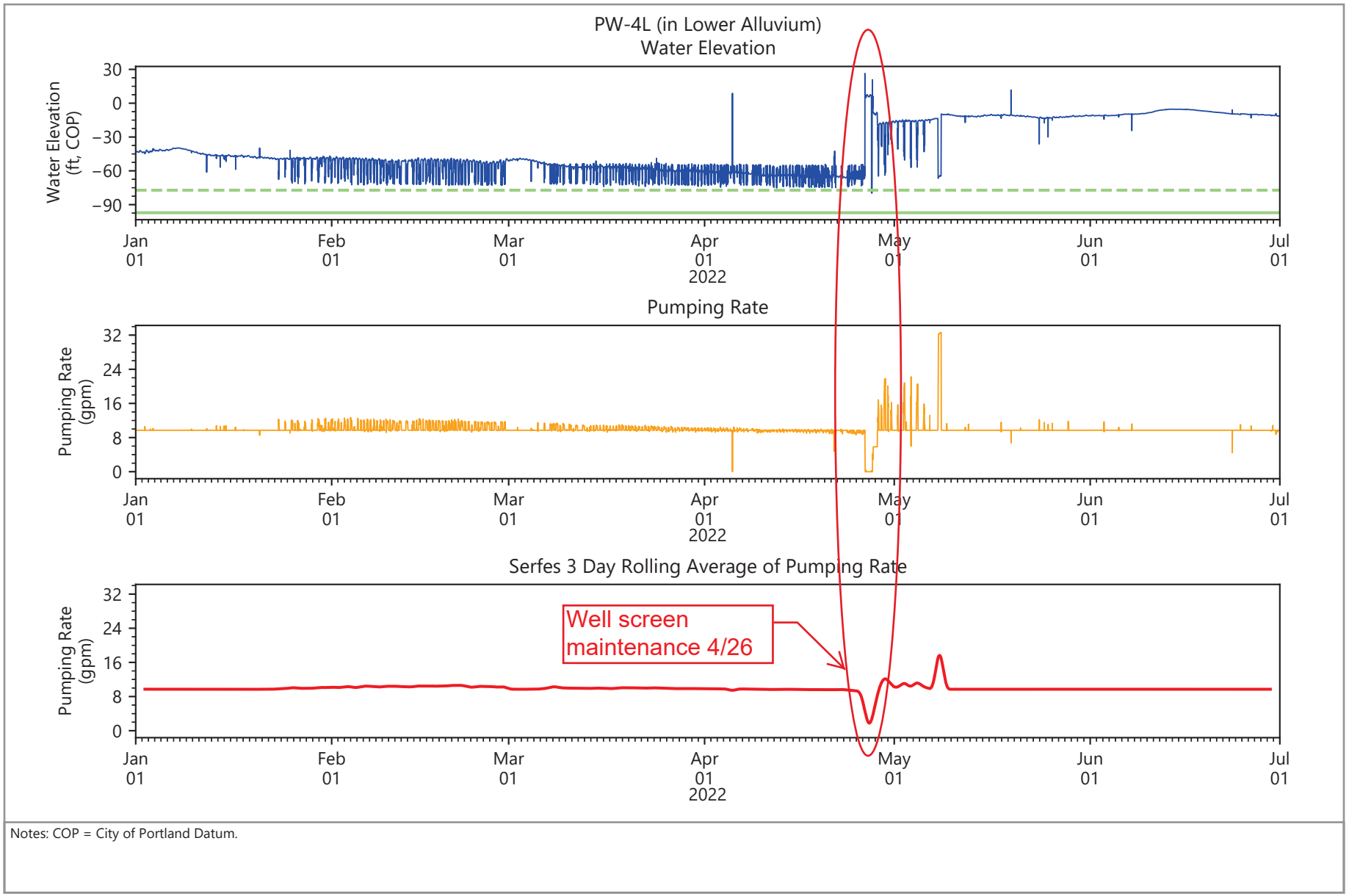
ANCHOR QEA

Figure 8.19
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



Notes: COP = City of Portland Datum.

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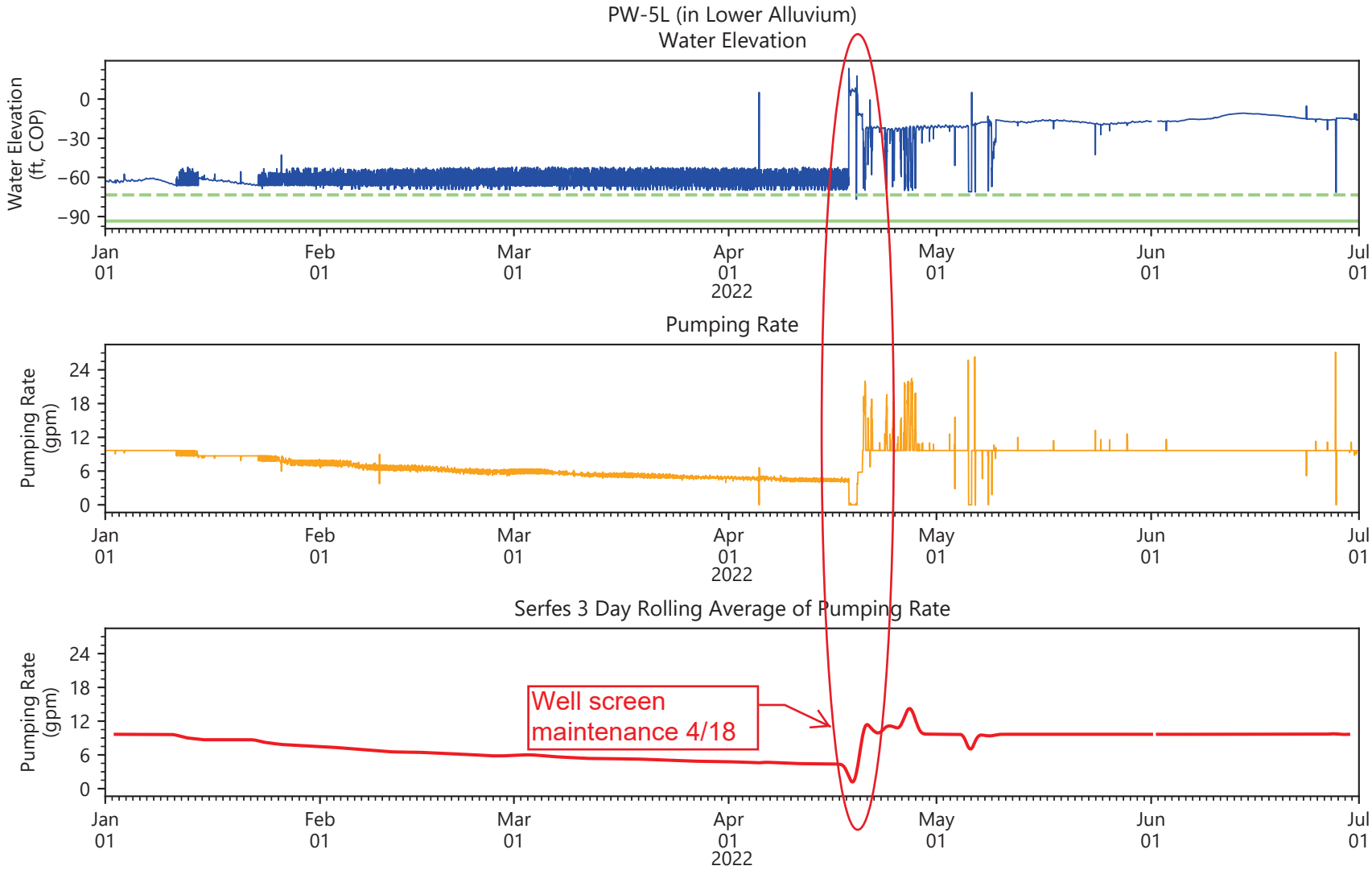
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.20
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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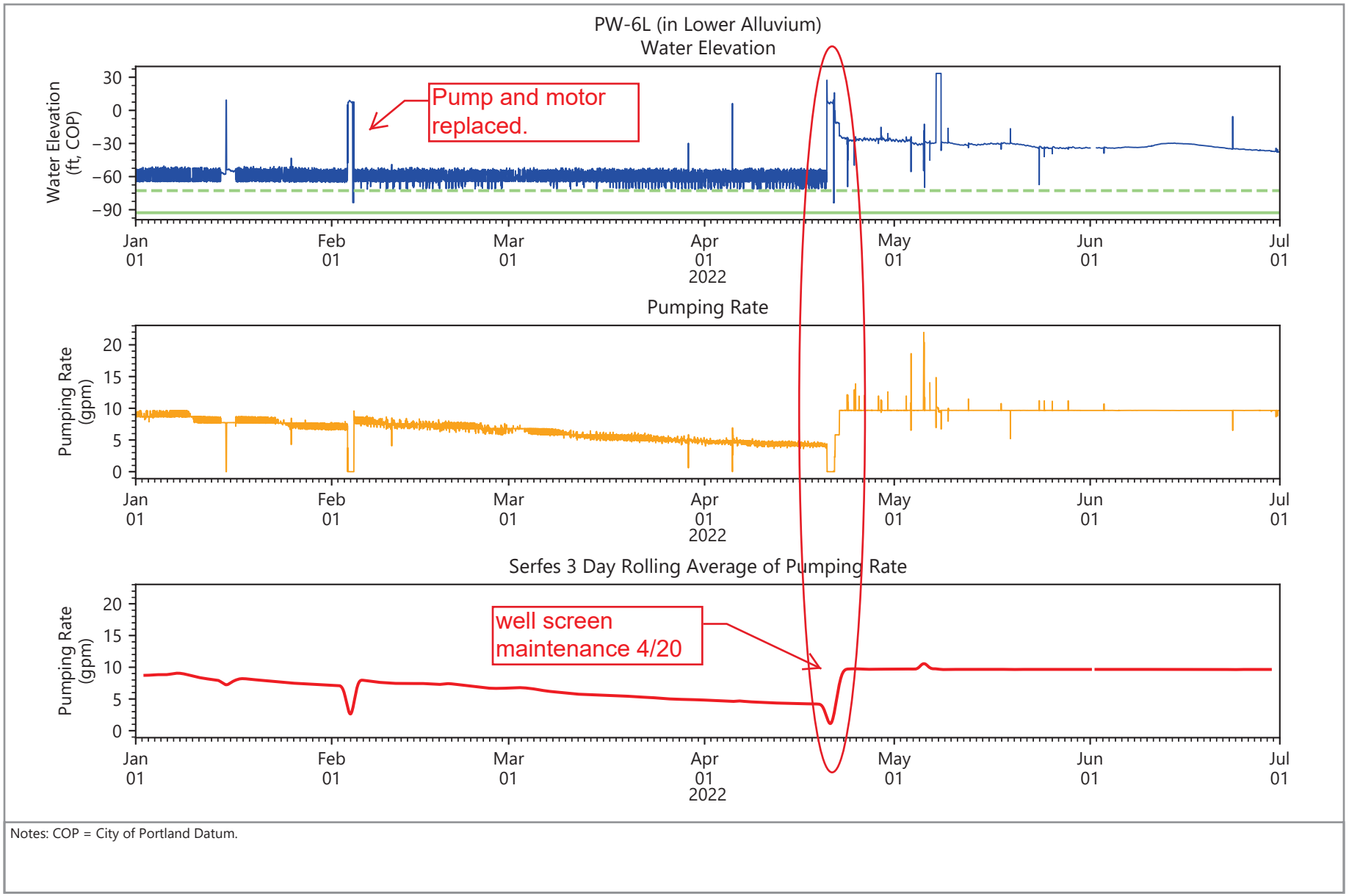
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.21
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



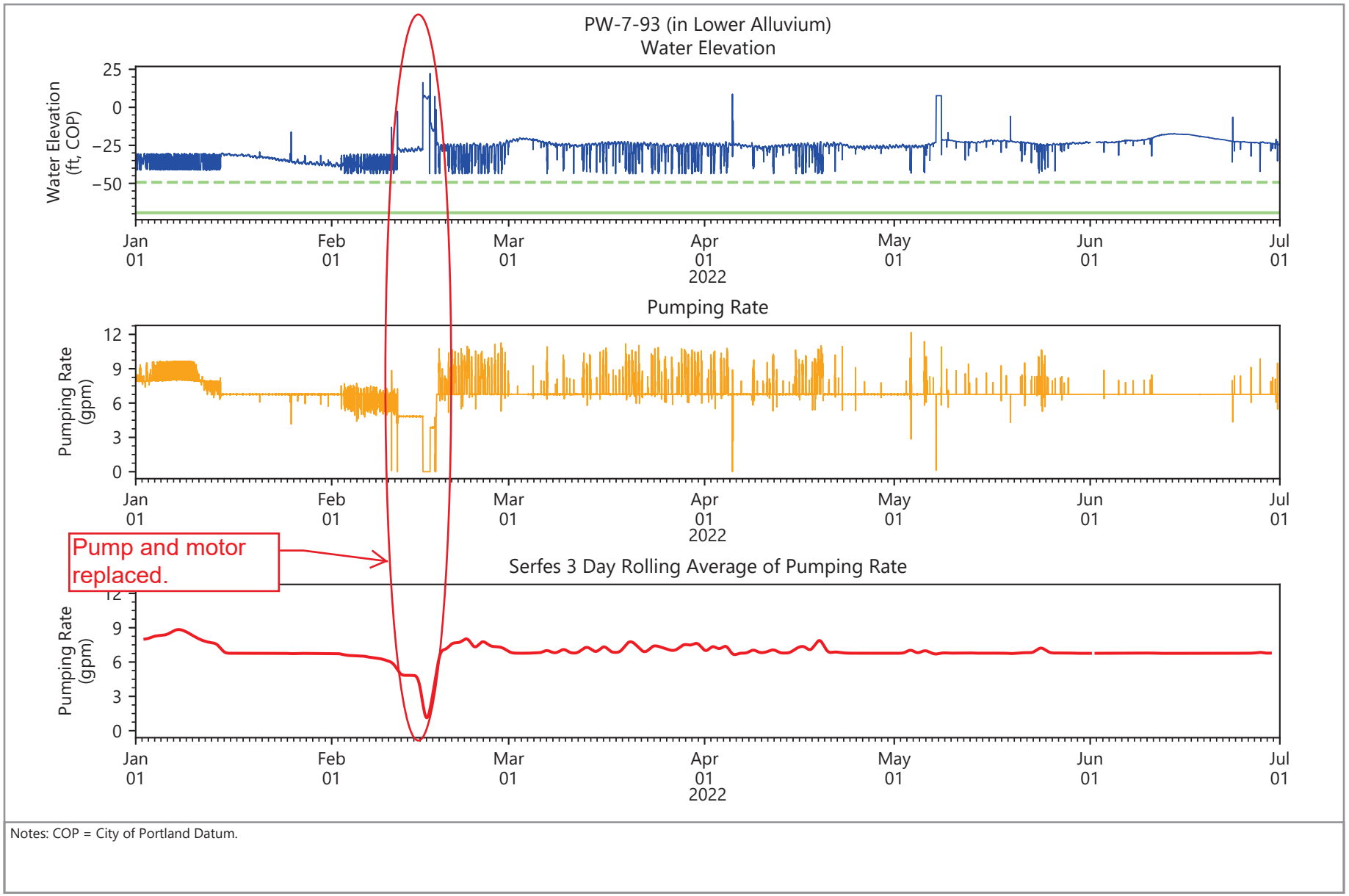
Notes: COP = City of Portland Datum.

Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.22
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



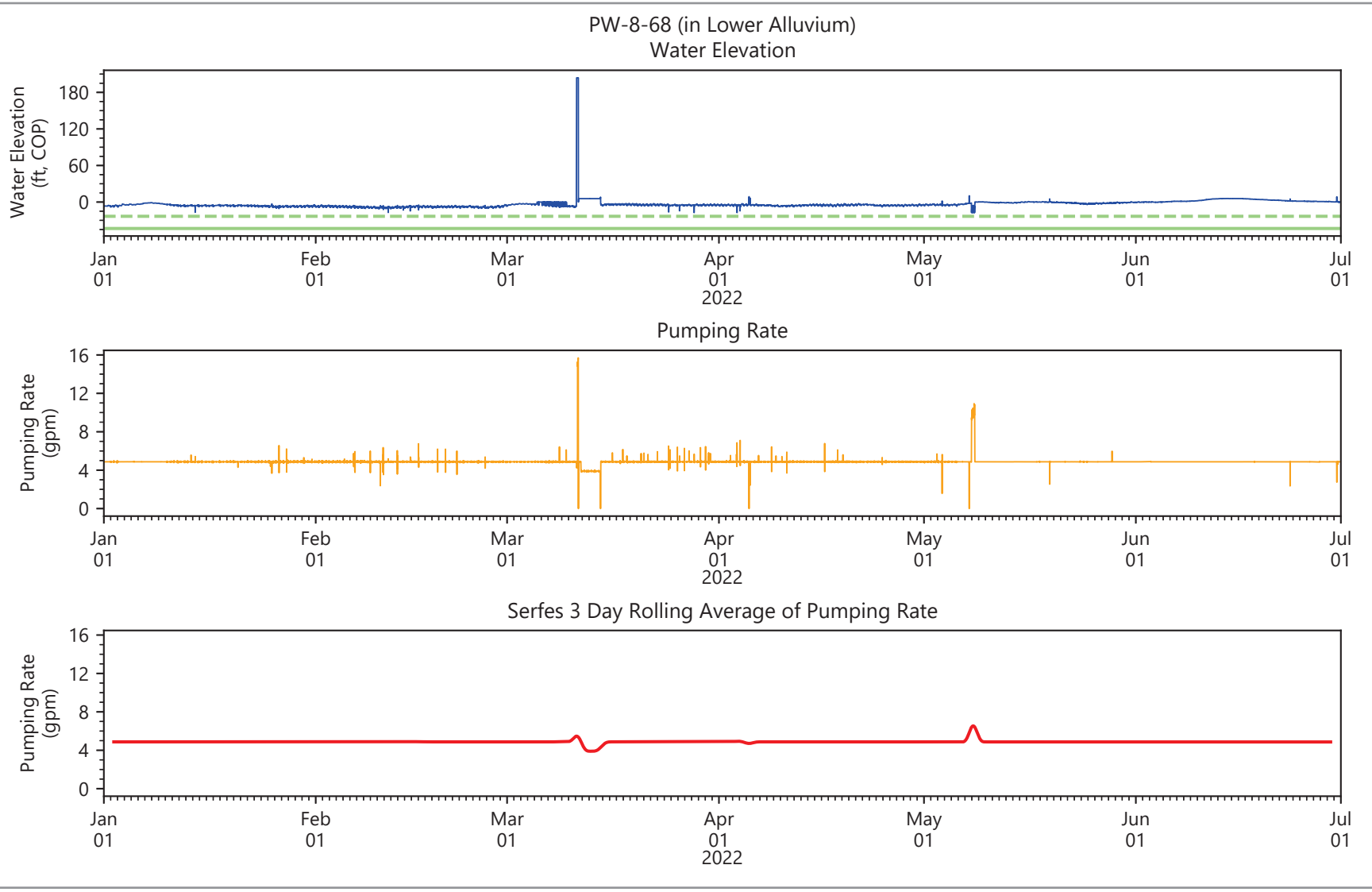
Notes: COP = City of Portland Datum.

Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.23
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

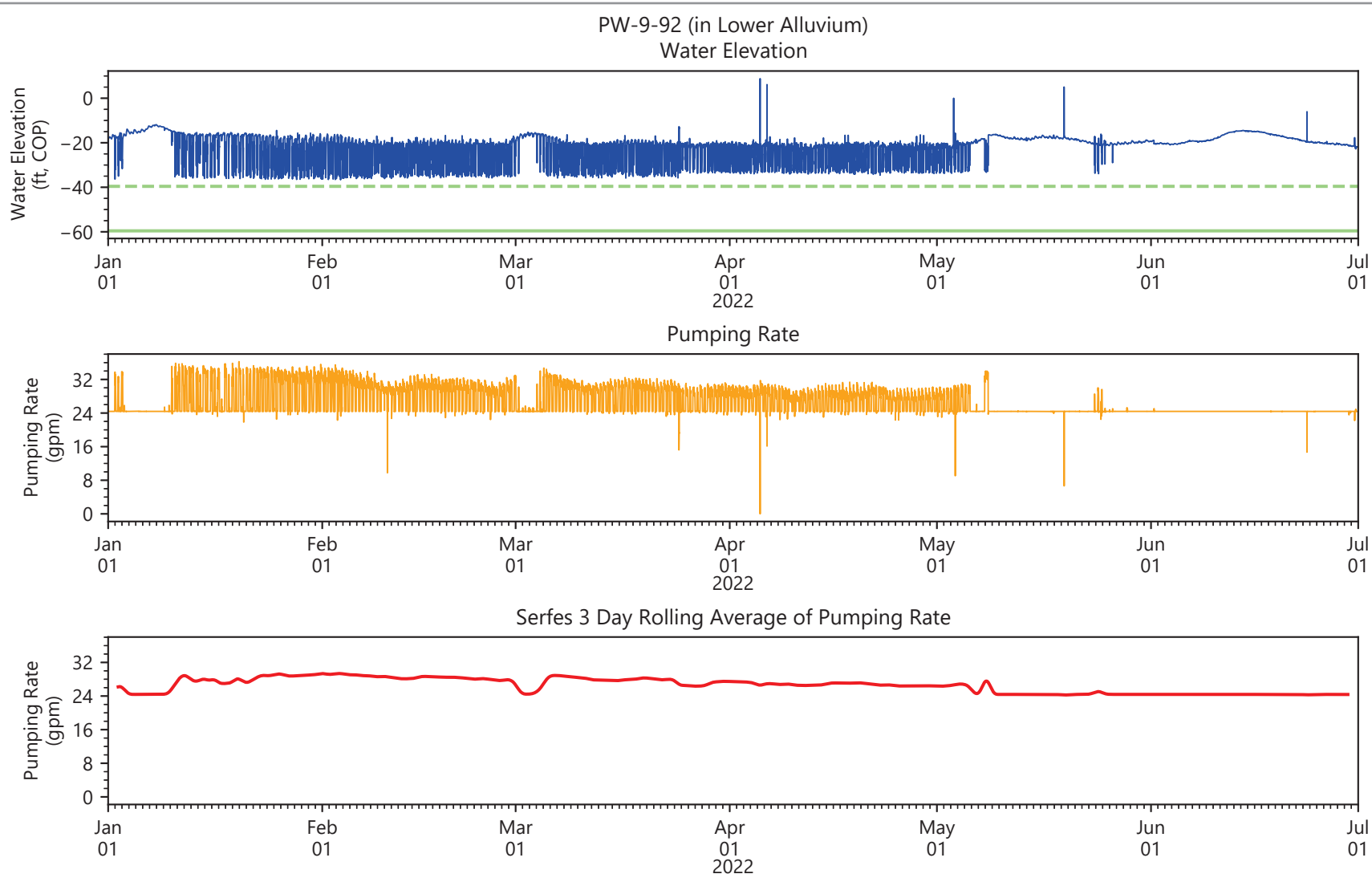


Notes: COP = City of Portland Datum.

Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 8.24
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

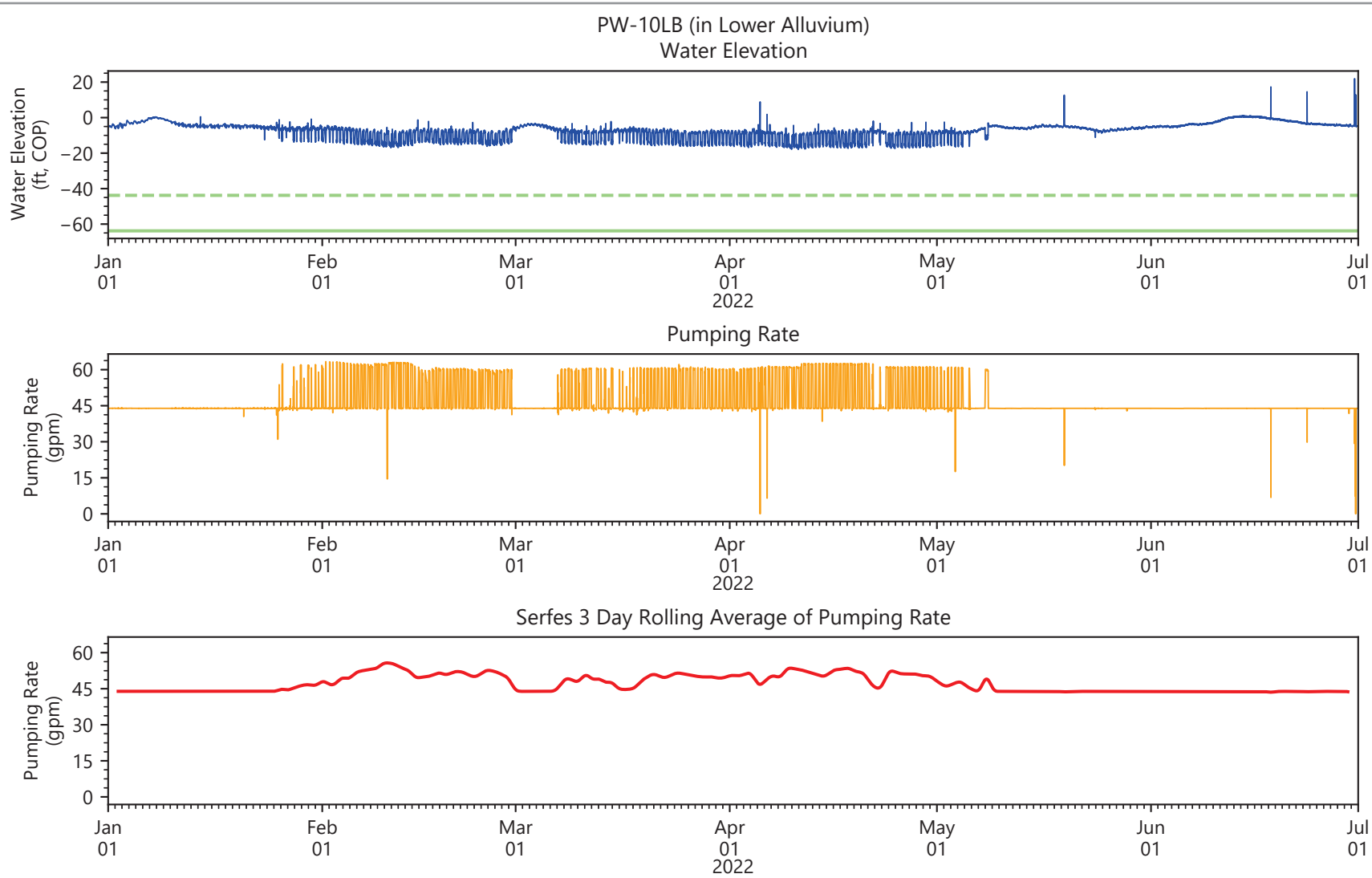


Notes: COP = City of Portland Datum.

Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 8.25
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

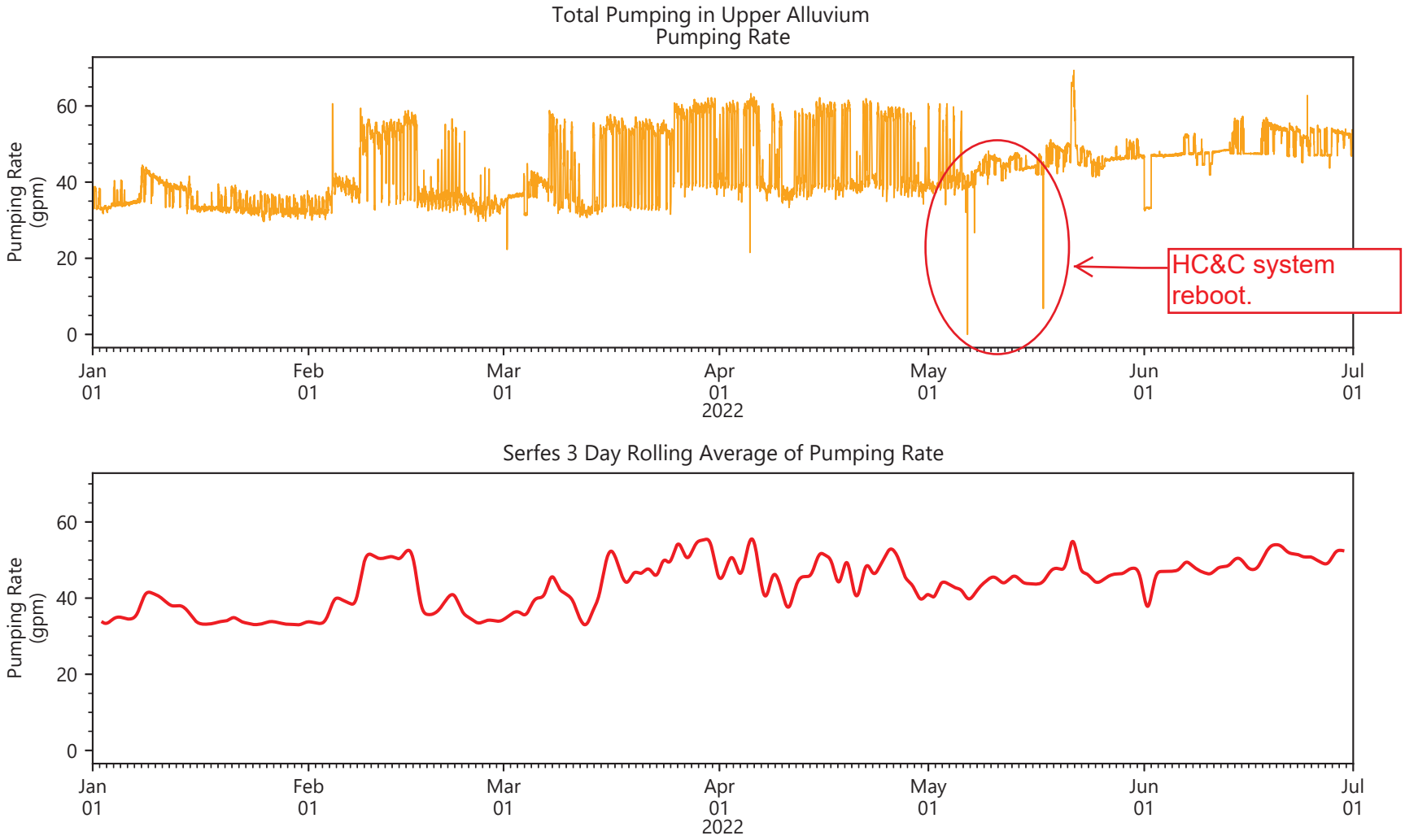


Notes: COP = City of Portland Datum.

Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 8.26
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



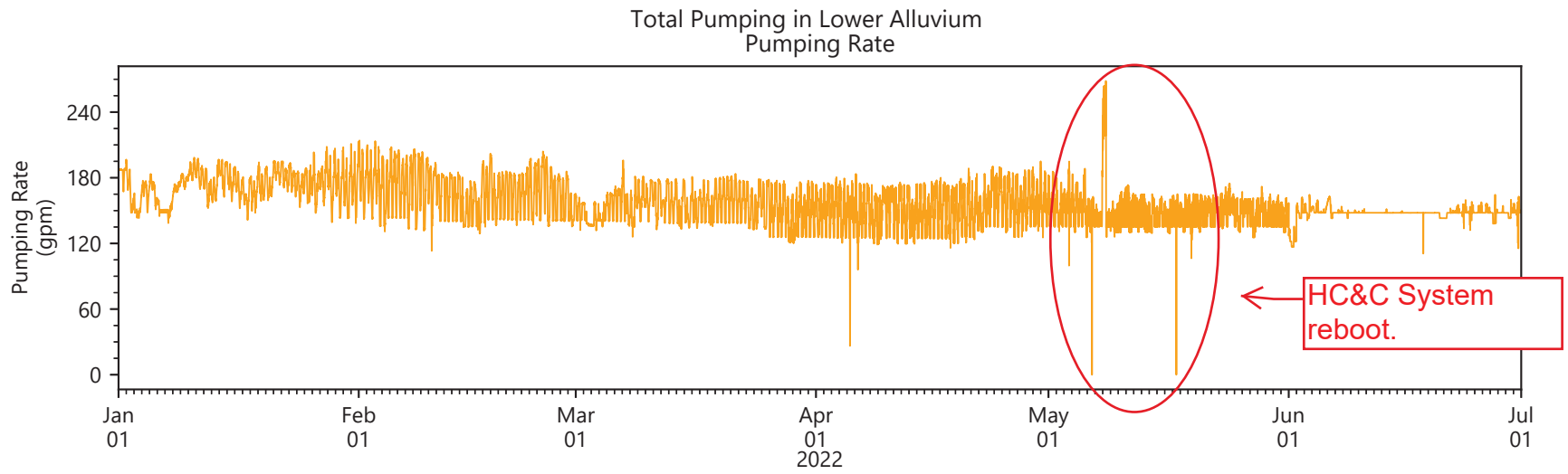
Notes: COP = City of Portland Datum.

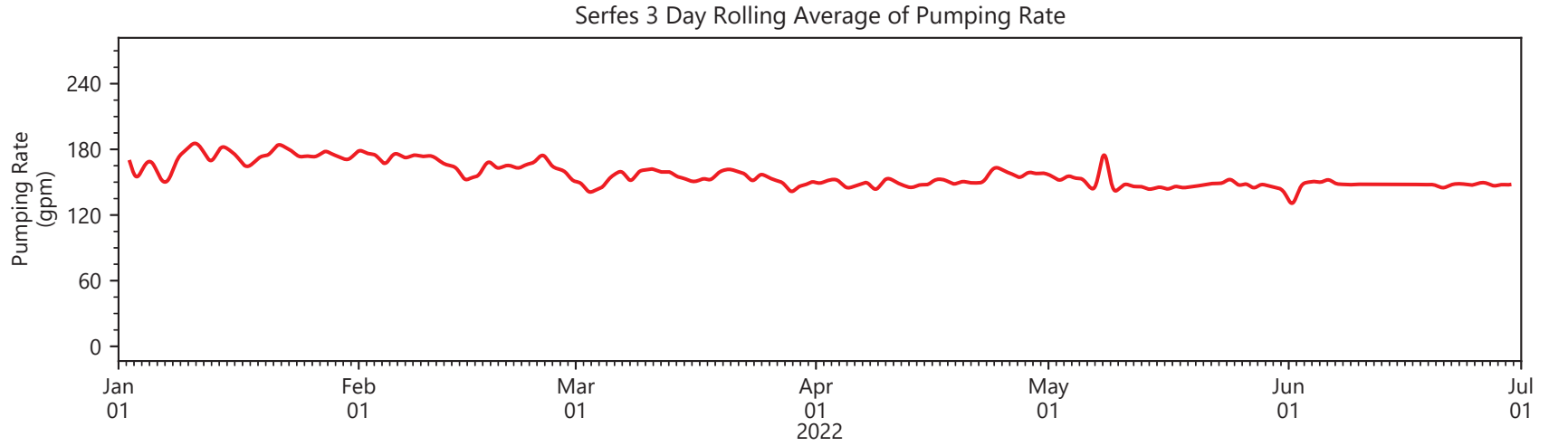
Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Pumping Rate: 15-min Data
Pumping Rate: Serfes Averages

Figure 8.27
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site





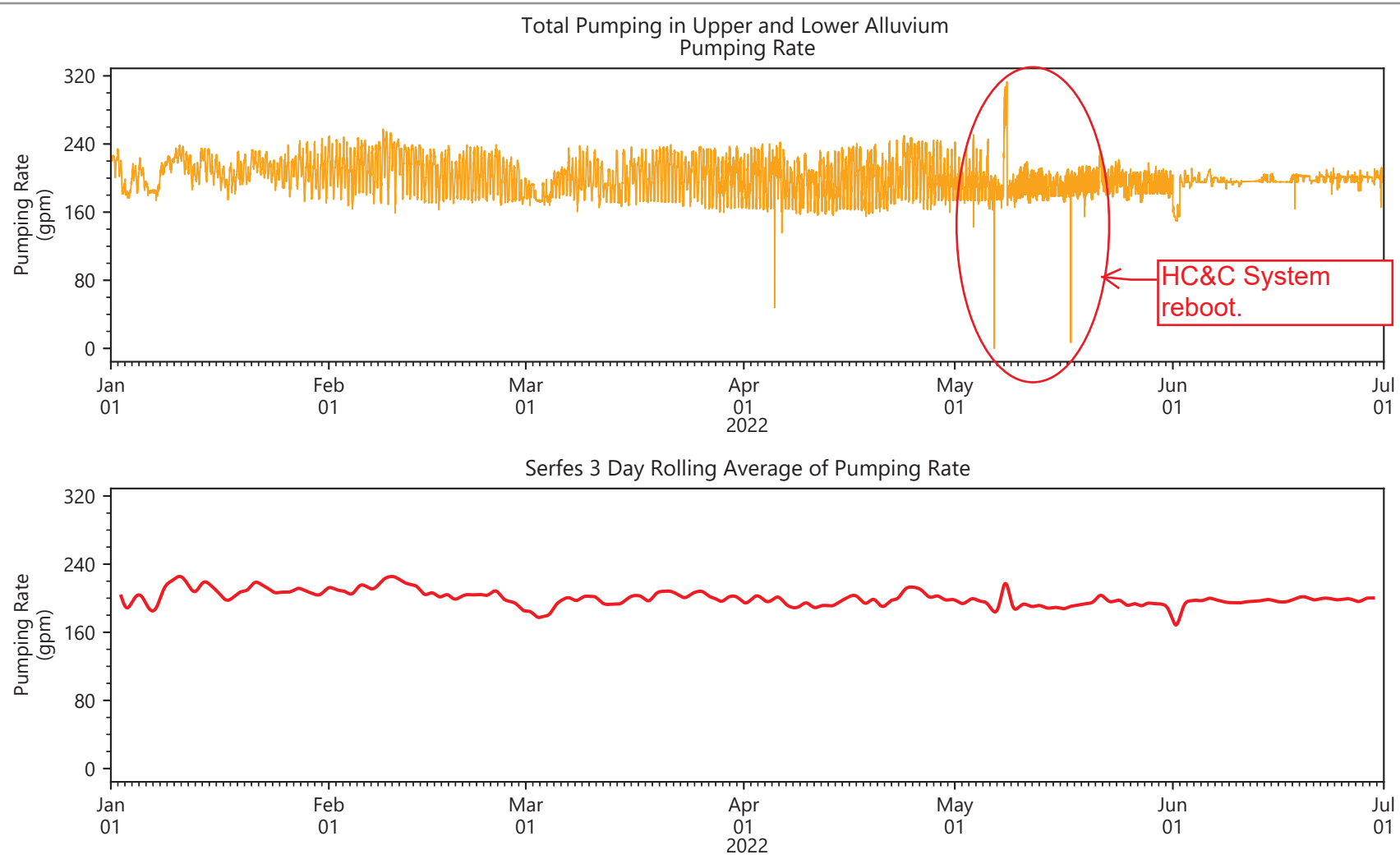
Notes: COP = City of Portland Datum.

Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Pumping Rate: 15-min Data
Pumping Rate: Serfes Averages

Figure 8.28
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



Notes: COP = City of Portland Datum.

Publish Date: 07/18/2022 14:05 PM | User: ZW
File Path: C:\Users\Public\Documents\Python_Scripts\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Pumping Rate: 15-min Data
Pumping Rate: Serfes Averages

Figure 8.29
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

Appendix B2
July Through December 2022

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:46 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\07 July\Figure_3.1a_Avg_GW_Contours_fill_2022_07_11_13.mxd

ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:48 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\07 July\Figure_3.1b_Avg_GW_Contours_ua_2022_07_11_13.mxd

ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

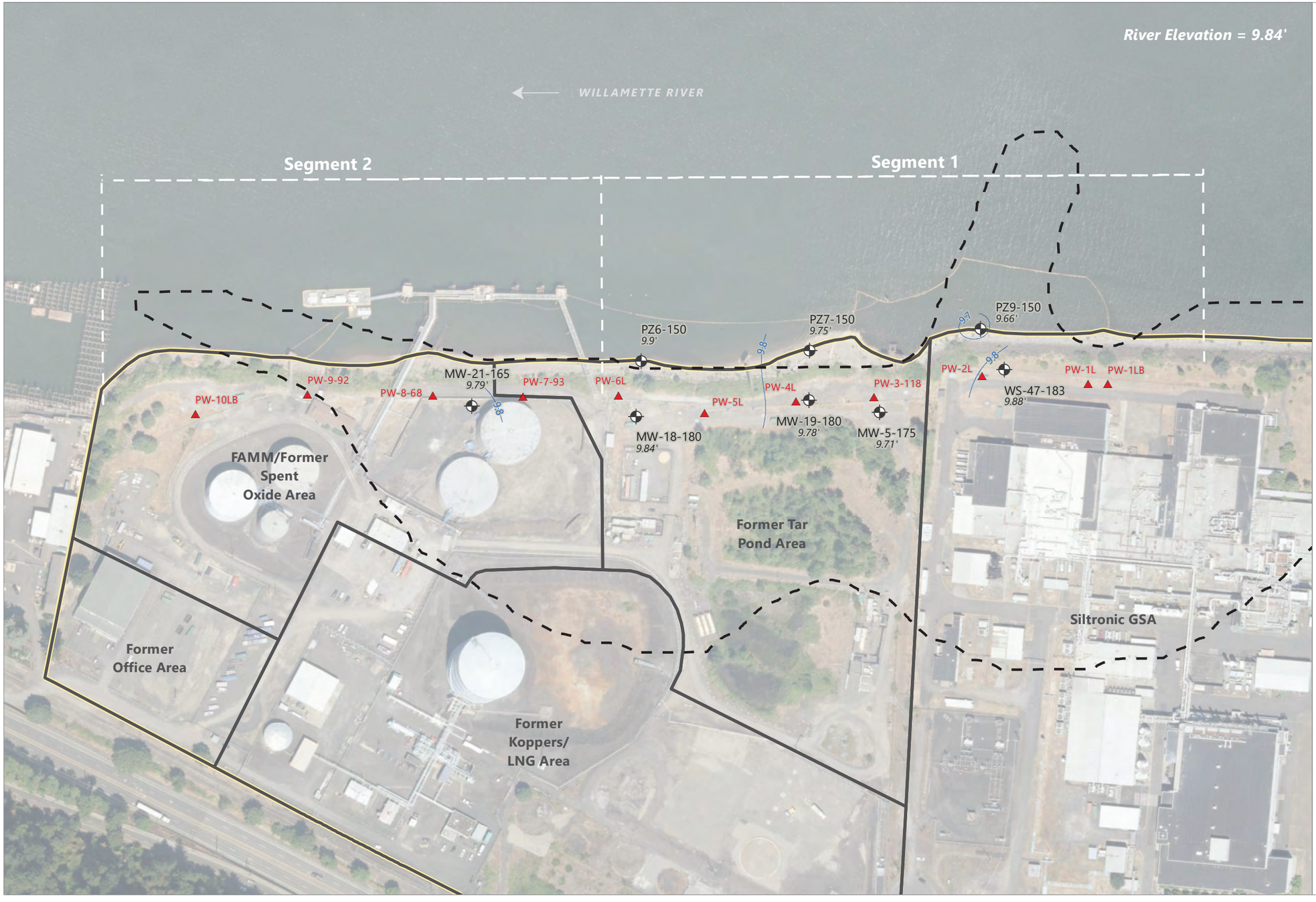
1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:48 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\07 July\Figure_3.1c_Avg_GW_Contours_la_2022_07_11_13.mxd

ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:49 PM | User: cgardner
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ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:50 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\07 July\Figure_3.2a_Avg_GW_Contours_fill_2022_07_24_26.mxd

ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:51 PM | User: cgardner
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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

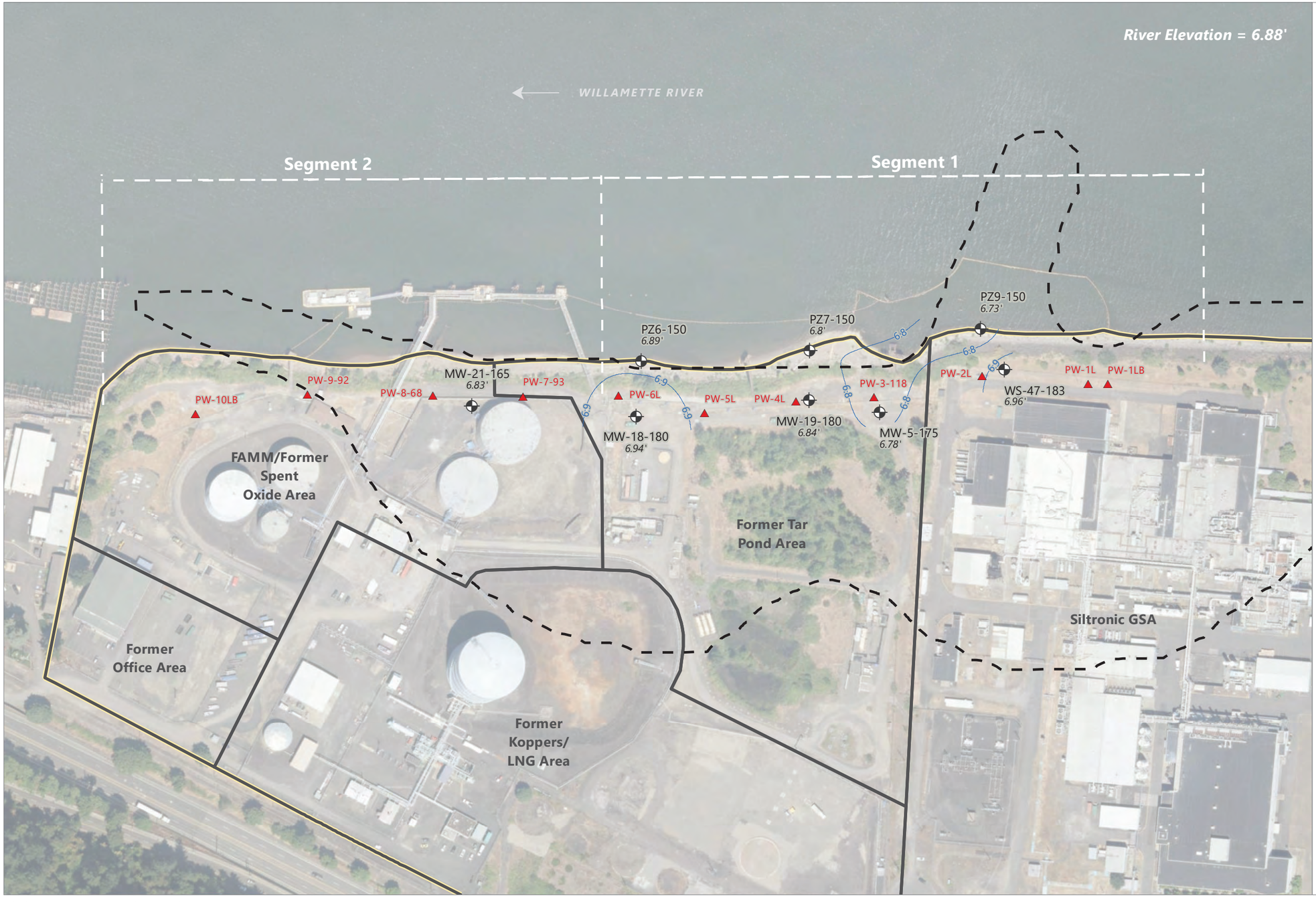
1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:51 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\07 July\Figure_3.2c_Avg_GW_Contours_la_2022_07_24_26.mxd

ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
5. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2023/01/24, 5:52 PM | User: cgardner
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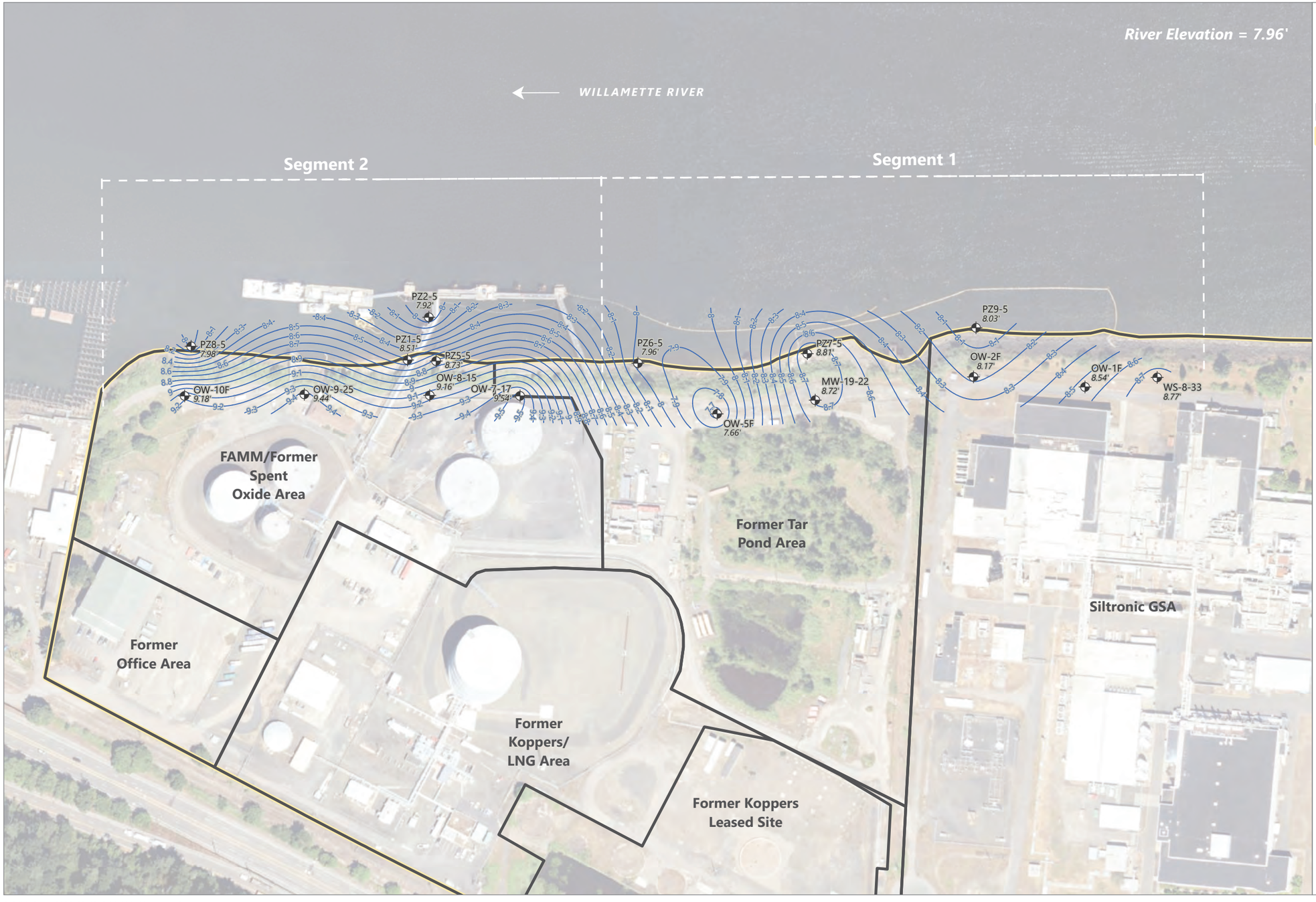
ANCHOR QEA

Figure 3.2d

Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

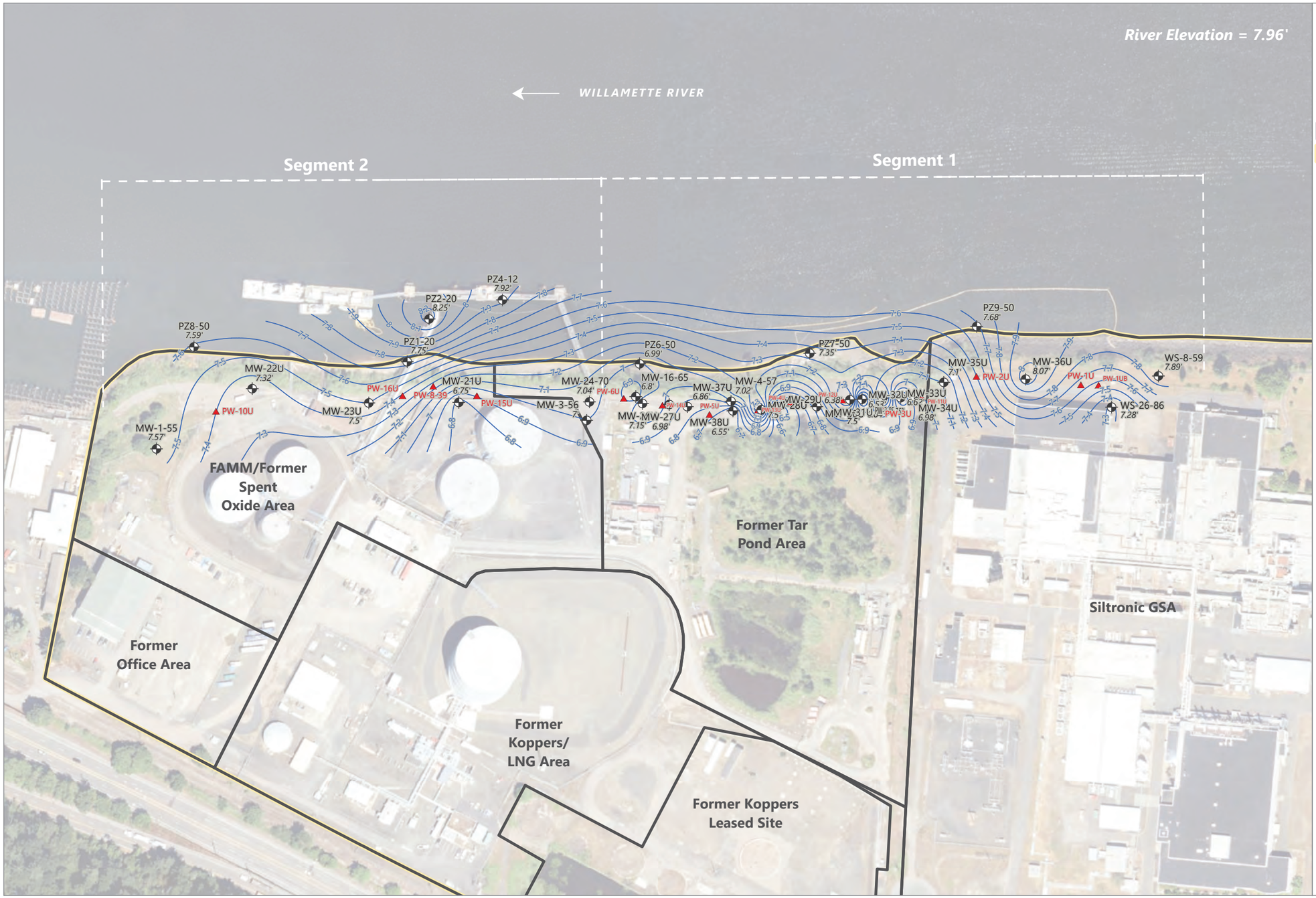
1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/19, 8:01 AM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\08 August\NWN_HCC_Maps_EarlyAugust_2022.aprx

ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/19, 7:56 AM | User: cgardner
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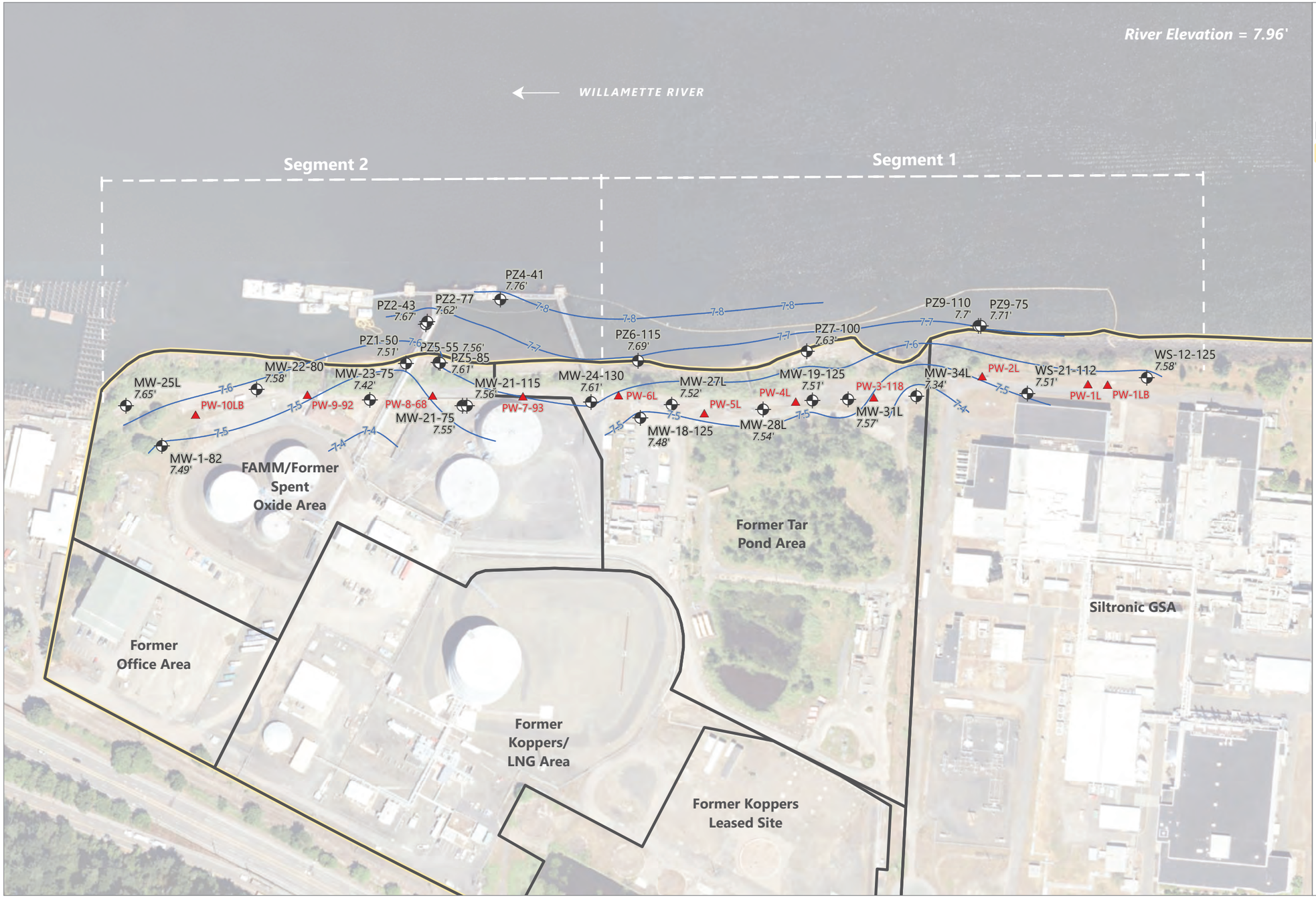
ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

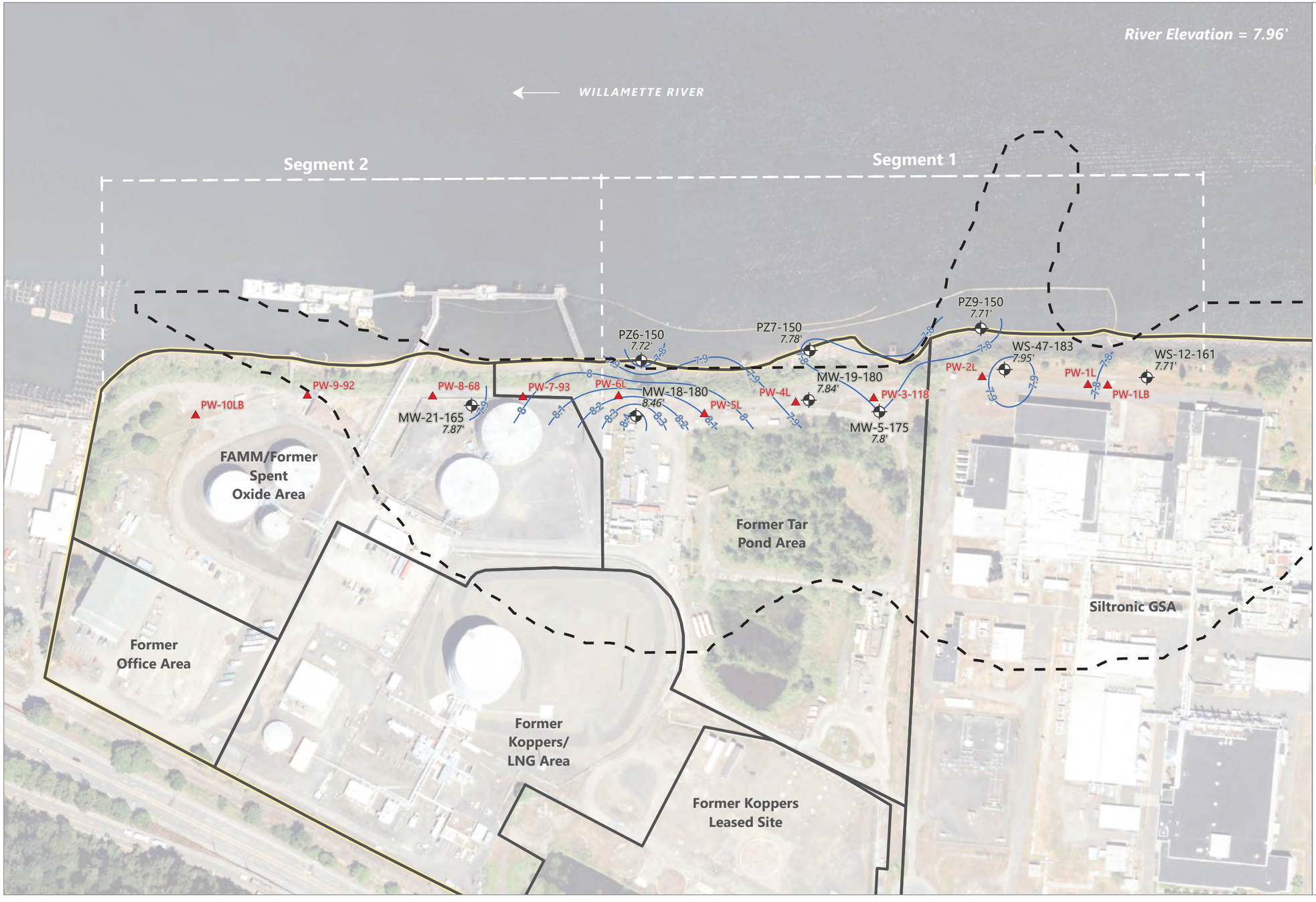
1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/19, 8:10 AM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\08 August\NWN_HCC_Maps_EarlyAugust_2022.aprx

ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/19, 8:12 AM | User: cgardner
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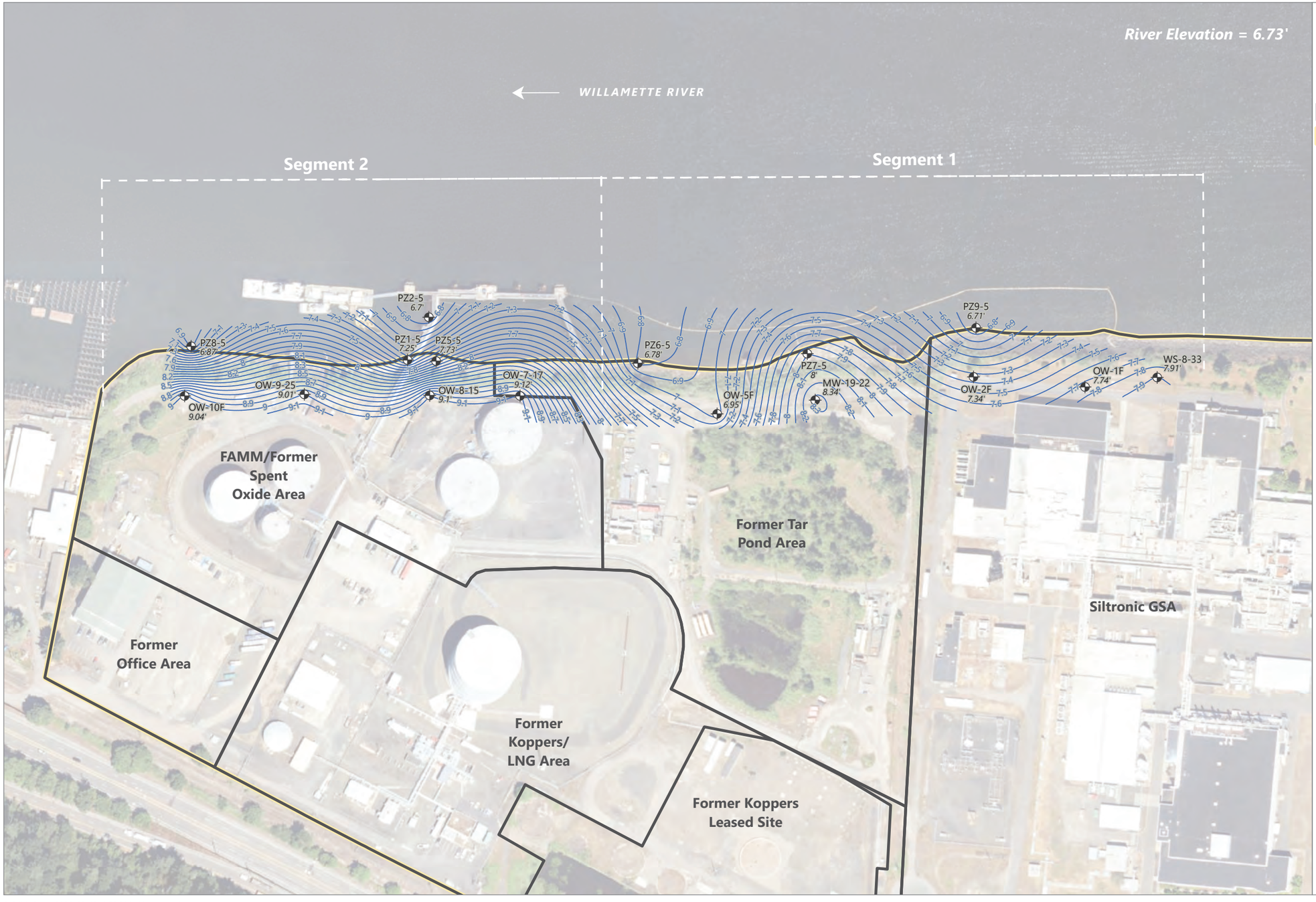
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/19, 1:55 PM | User: cgardner
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ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/20, 9:21 AM | User: cgardner
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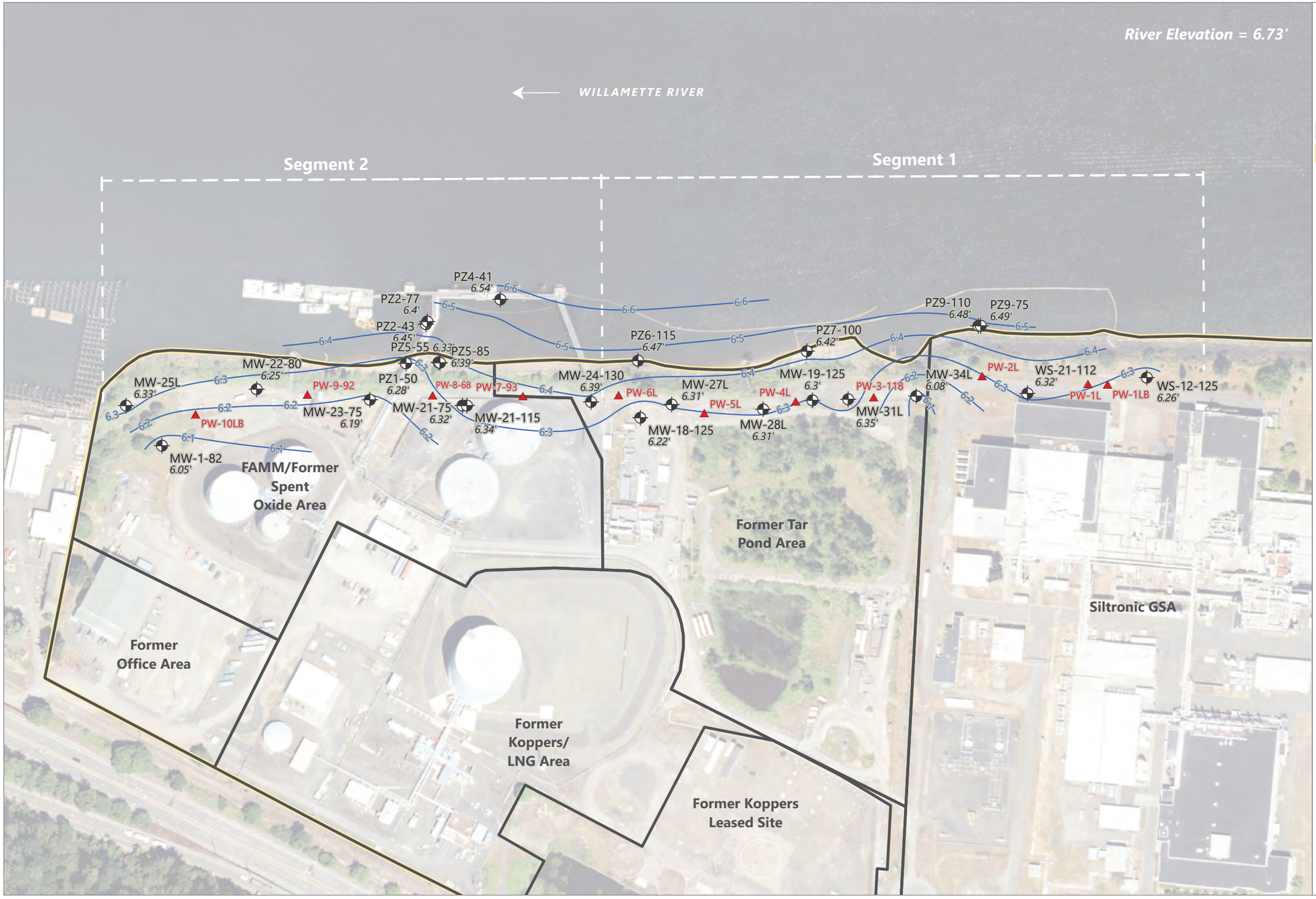
ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/19, 2:45 PM | User: cgardner
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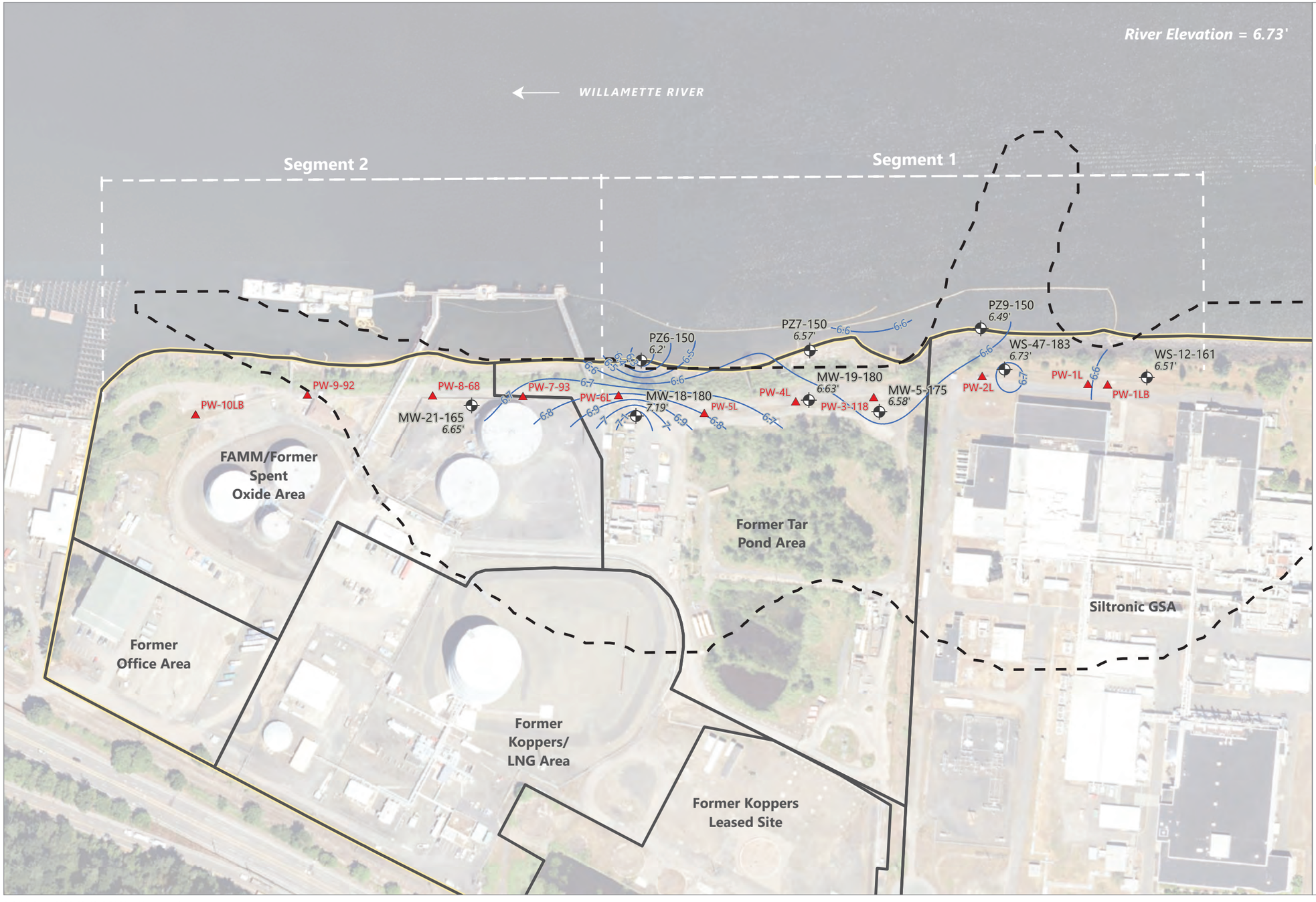
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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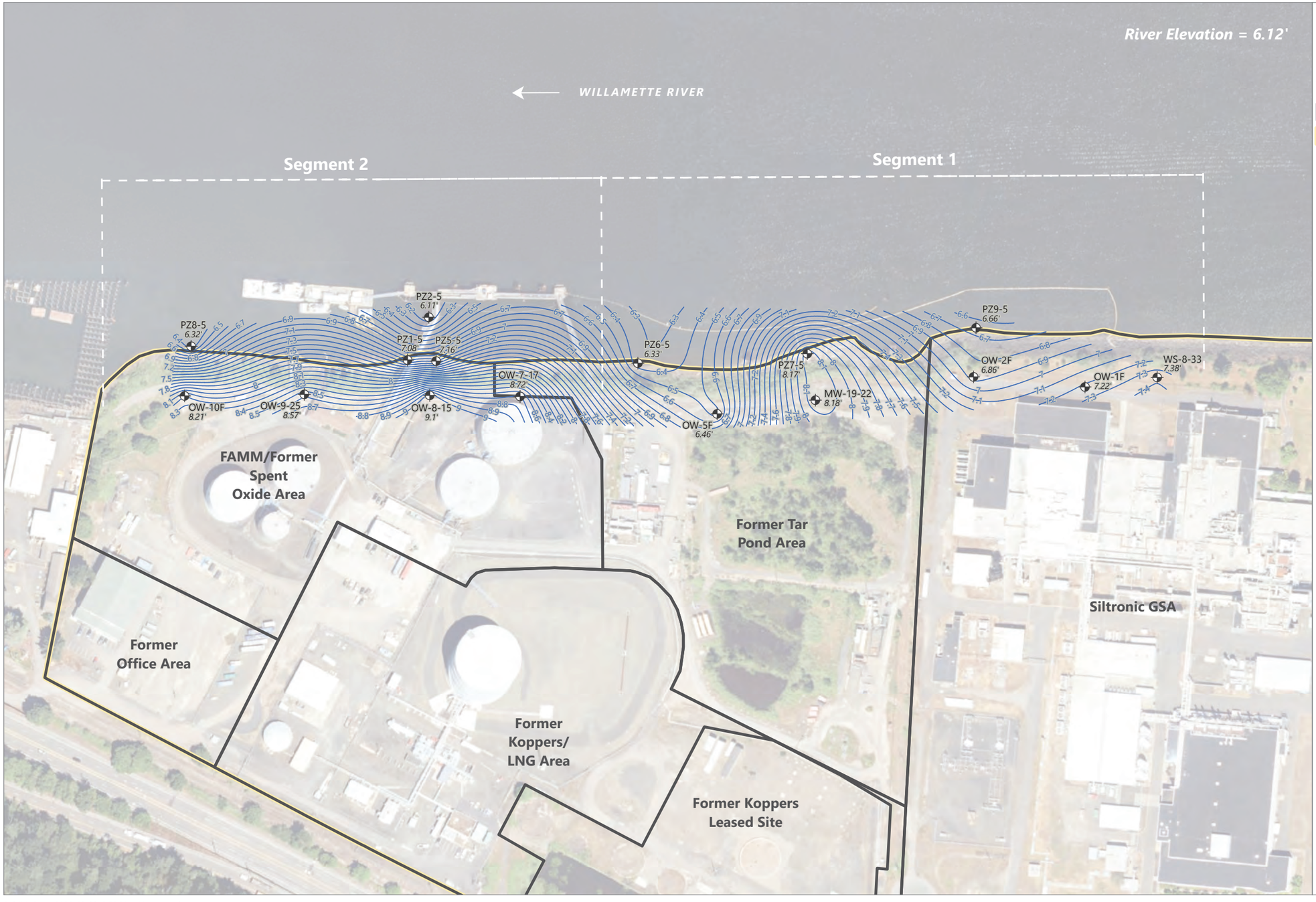
ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/20, 2:59 PM | User: cgardner
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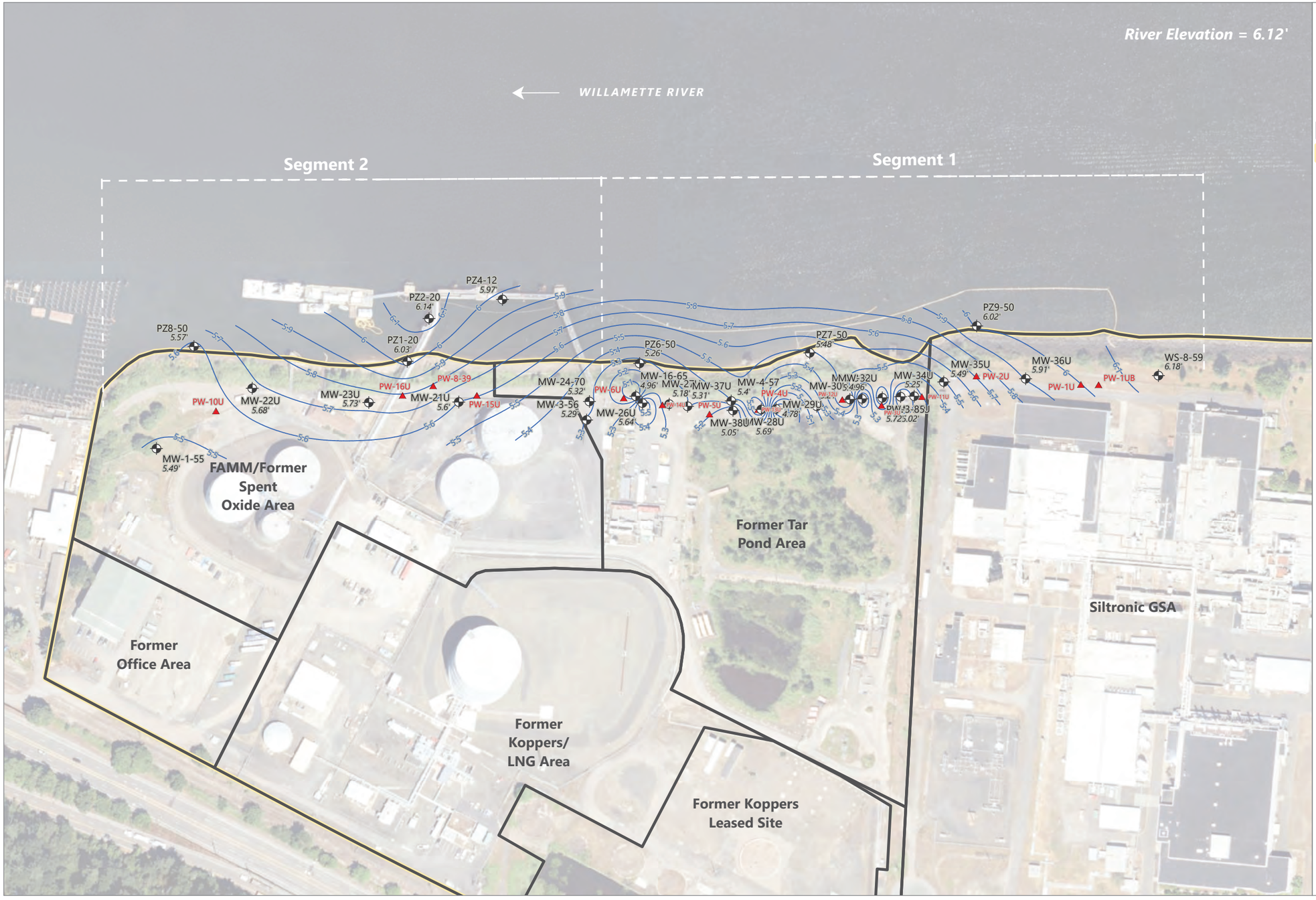
ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Transducer data collected from location WS-26-86 was not used in generation of groundwater contours. The transducer was removed from the well for groundwater sampling during the timespan over which data were averaged for this contour map and the averaged results are not accurate.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Transducer data collected from location WS-21-112 and MW-28L were not used in generation of groundwater contours. The transducer was removed WS-21-112 for groundwater sampling and MW-28L had connectivity issues during the timespan over which data were averaged for this contour map and the averaged results are not accurate.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/20, 3:02 PM | User: cgardner
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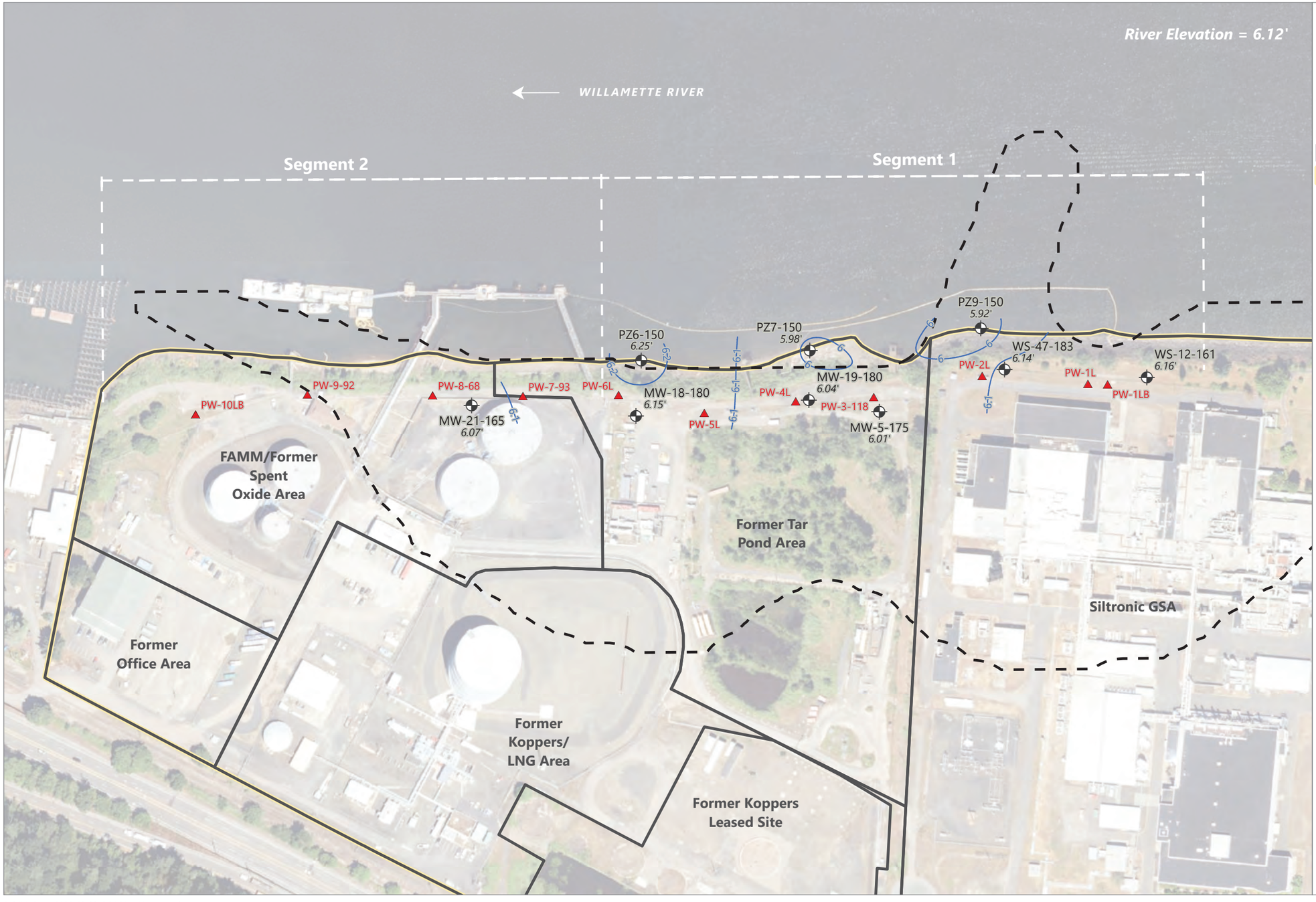
ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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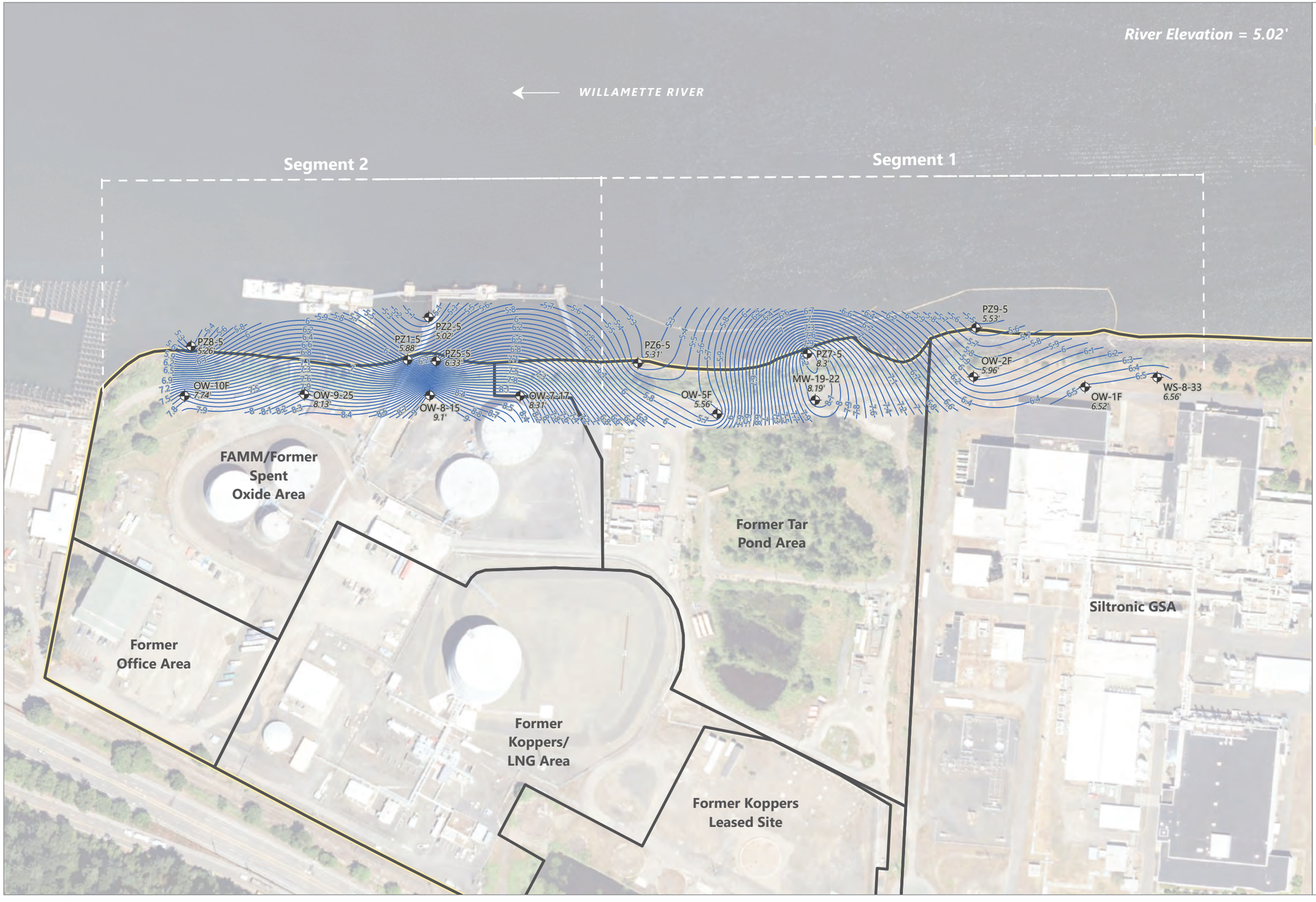
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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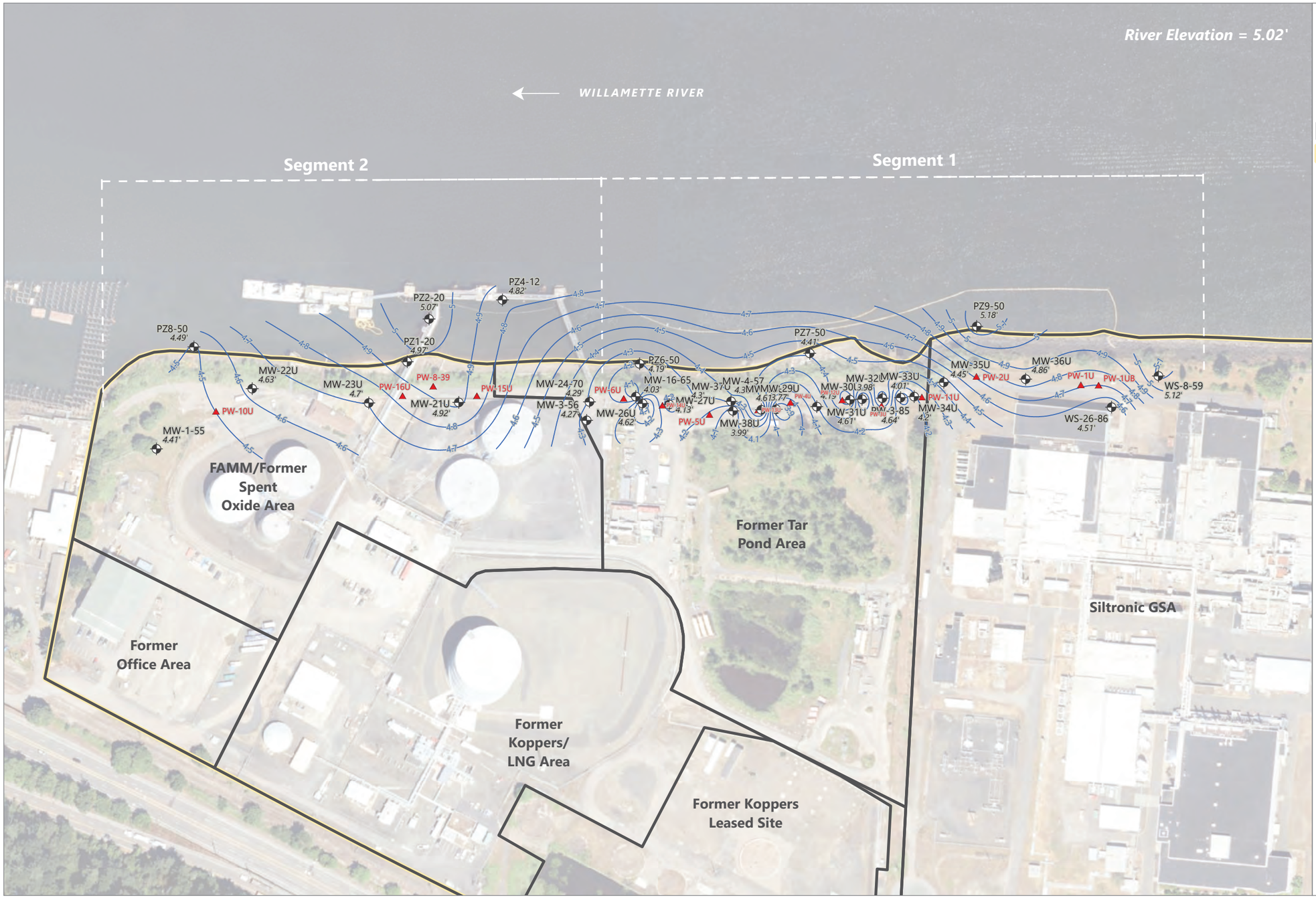
ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

Publish Date: 2022/12/21, 3:26 PM | User: cgardner
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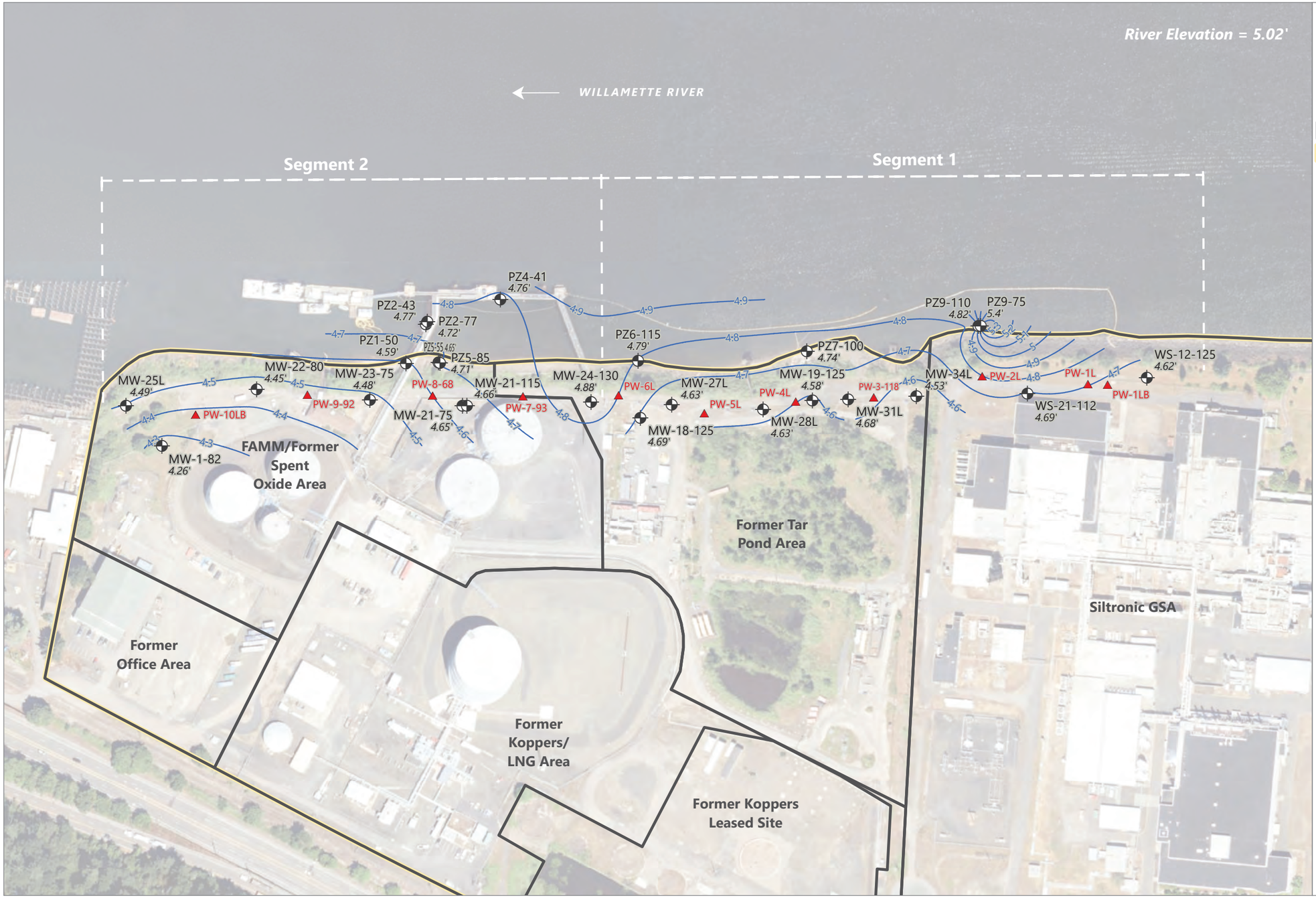
Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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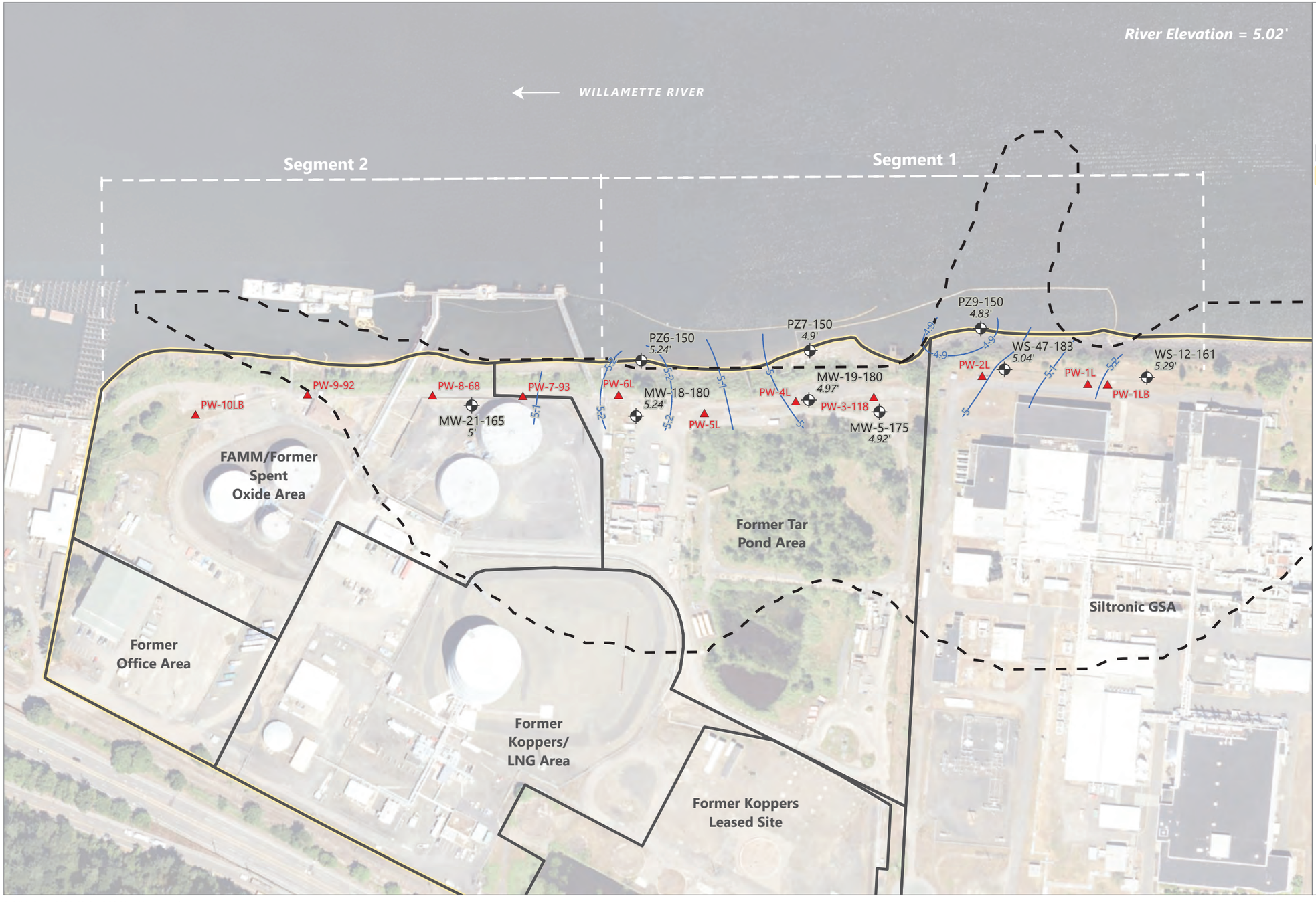
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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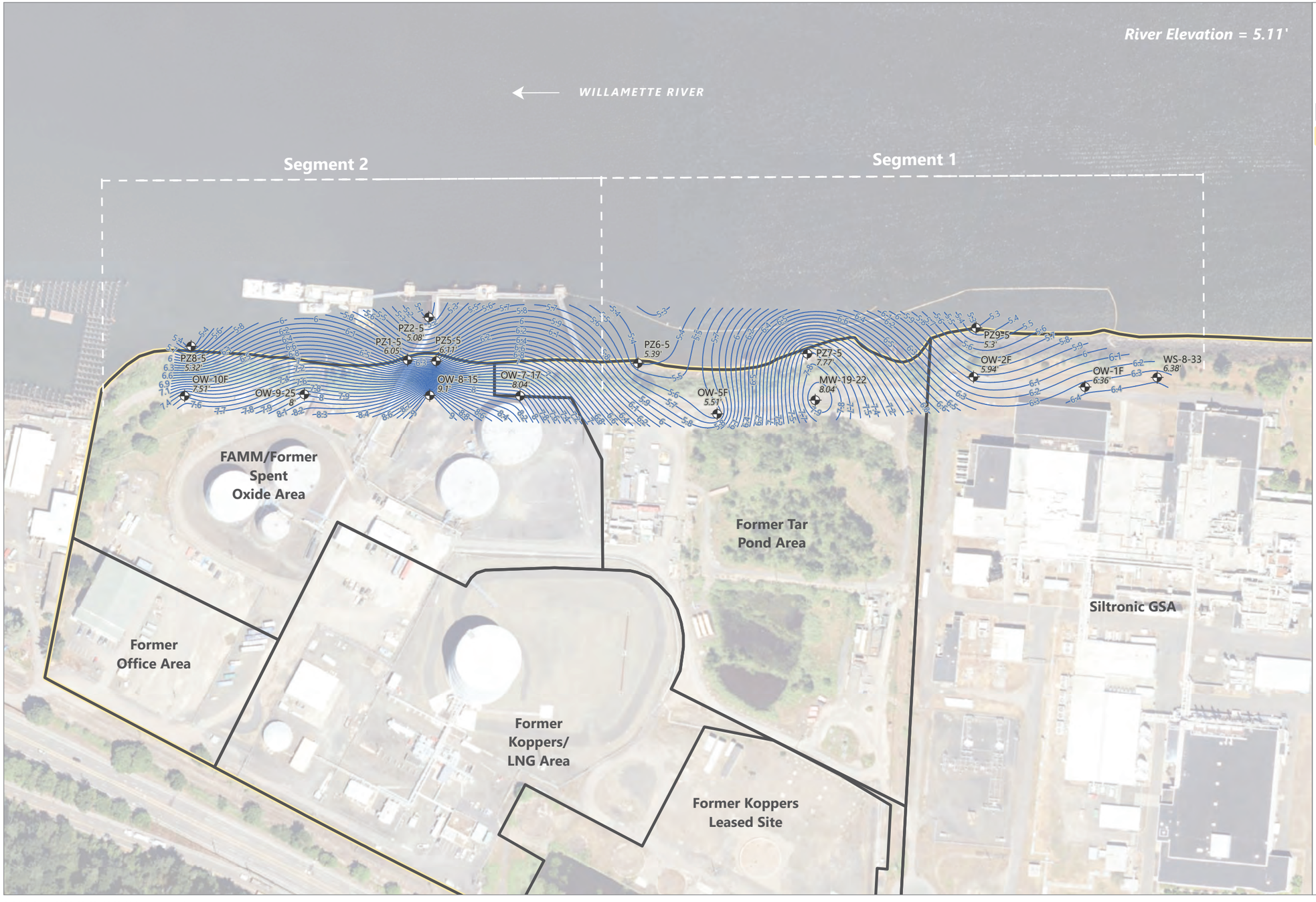
ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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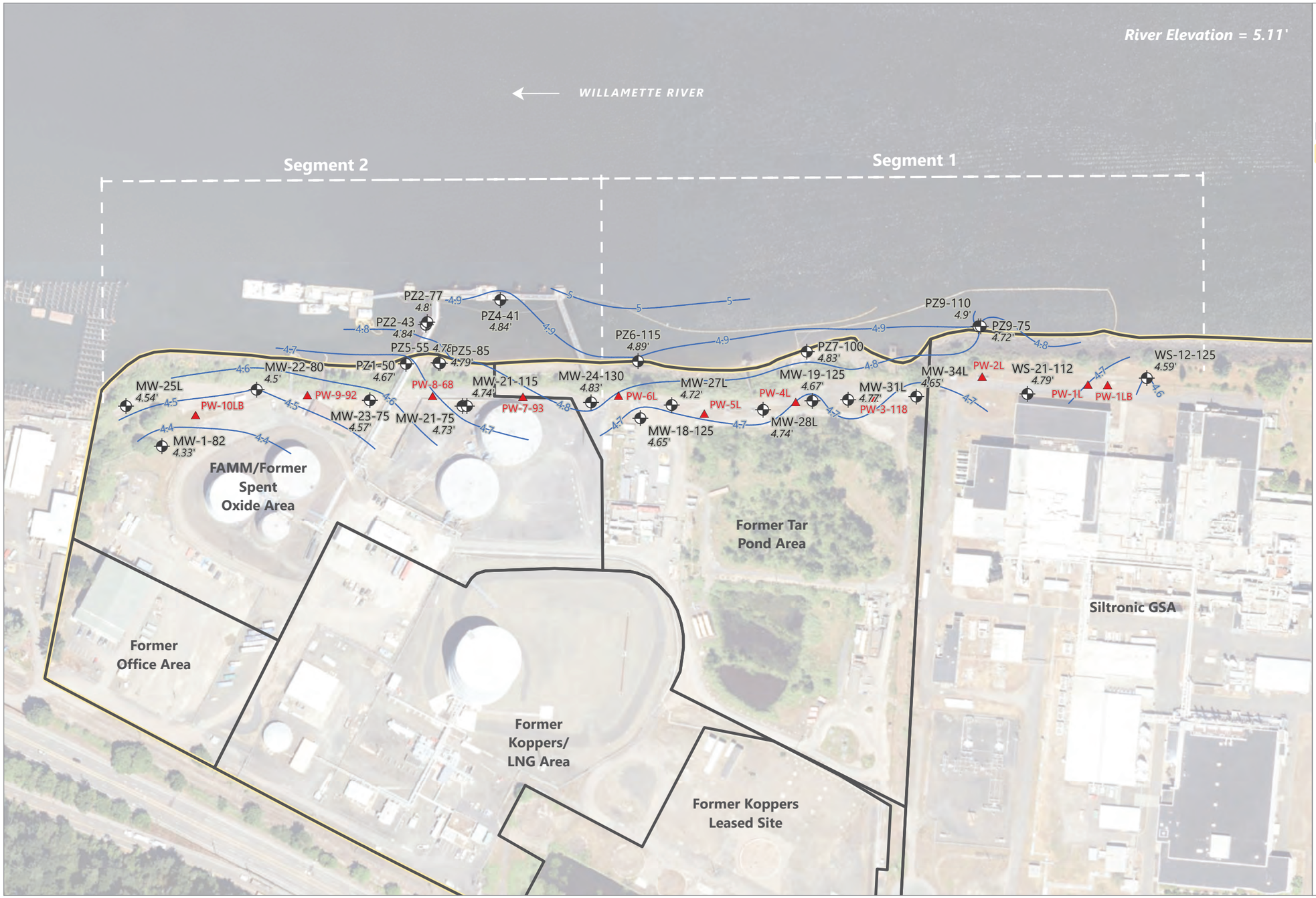
ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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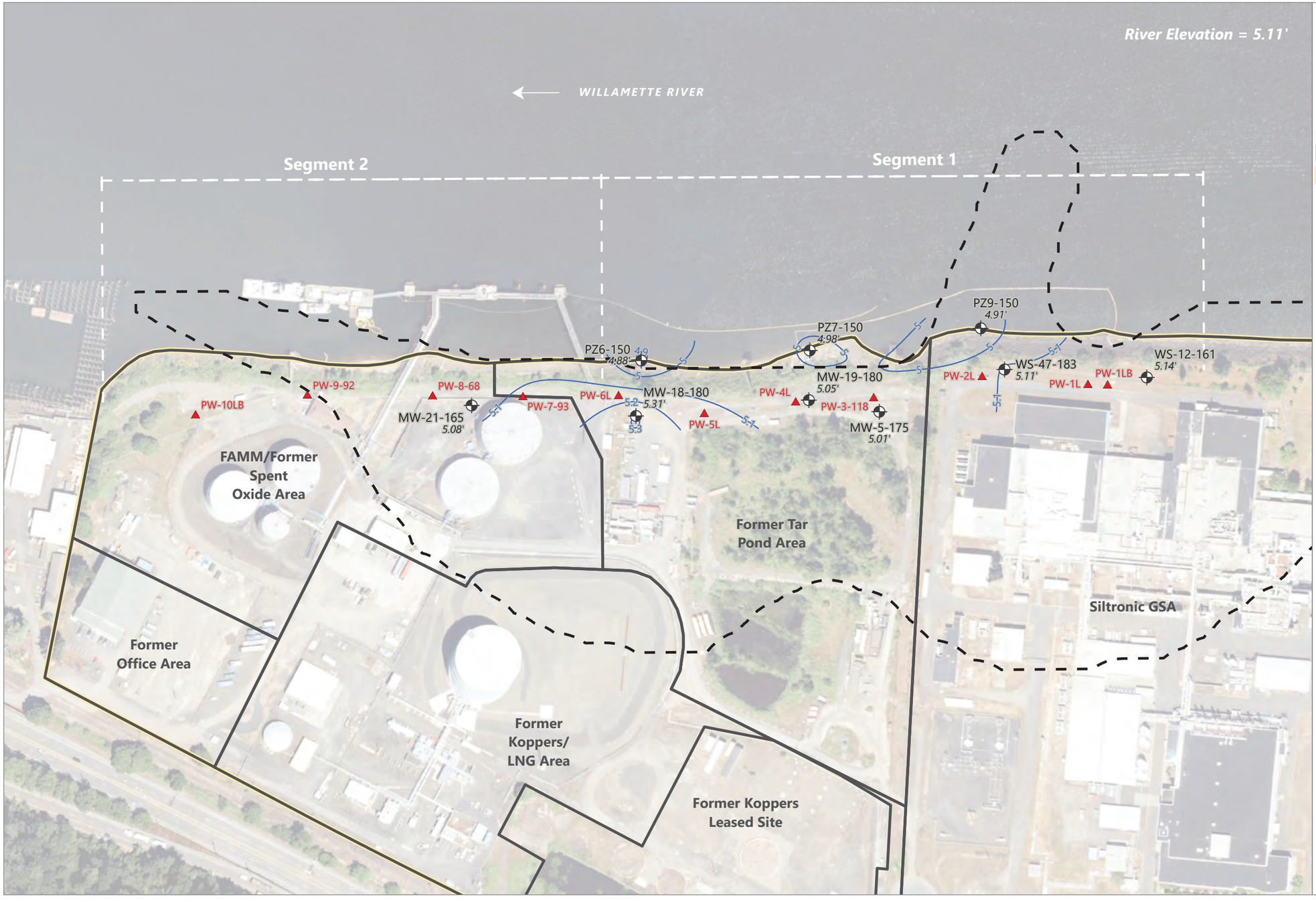
ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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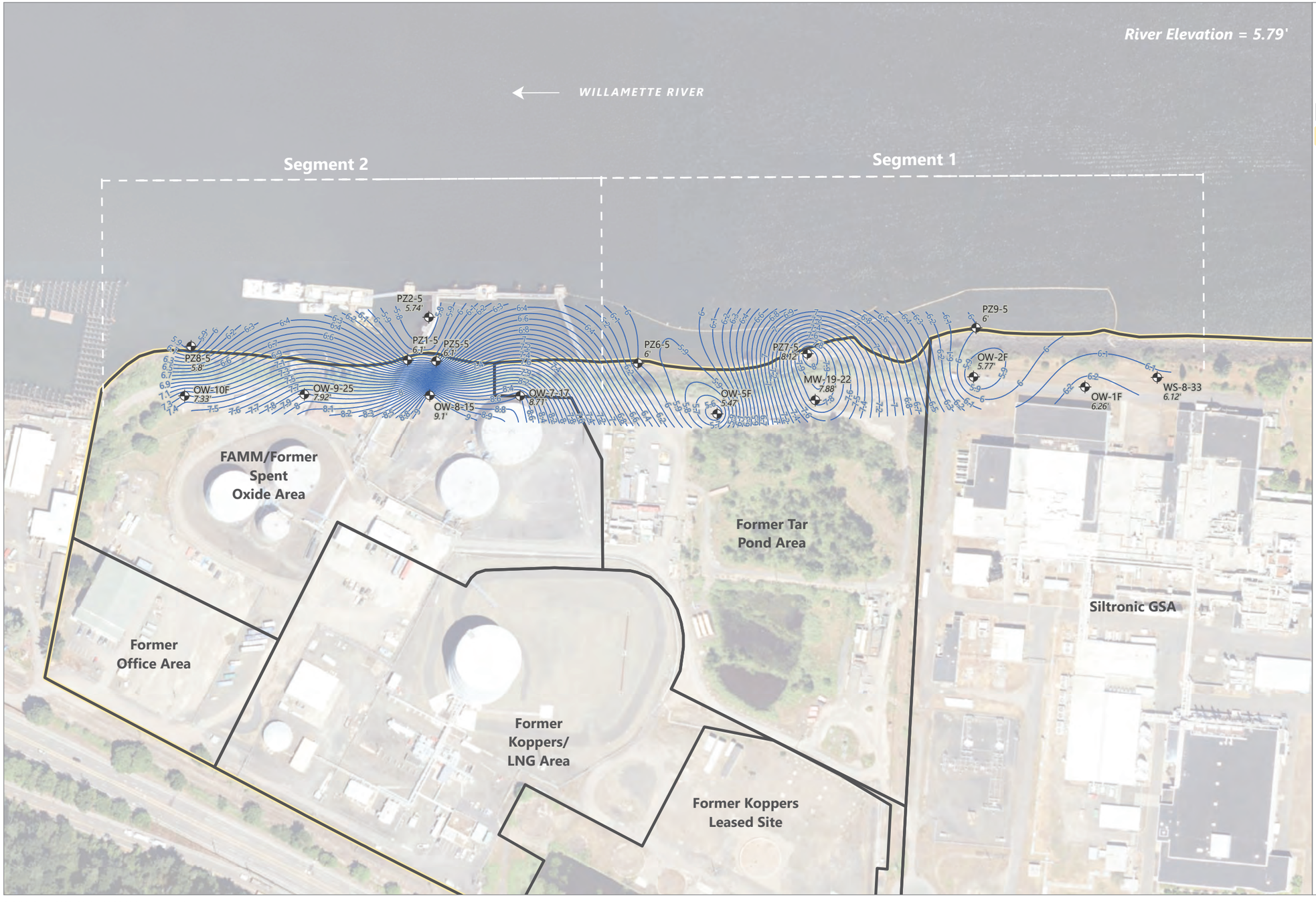
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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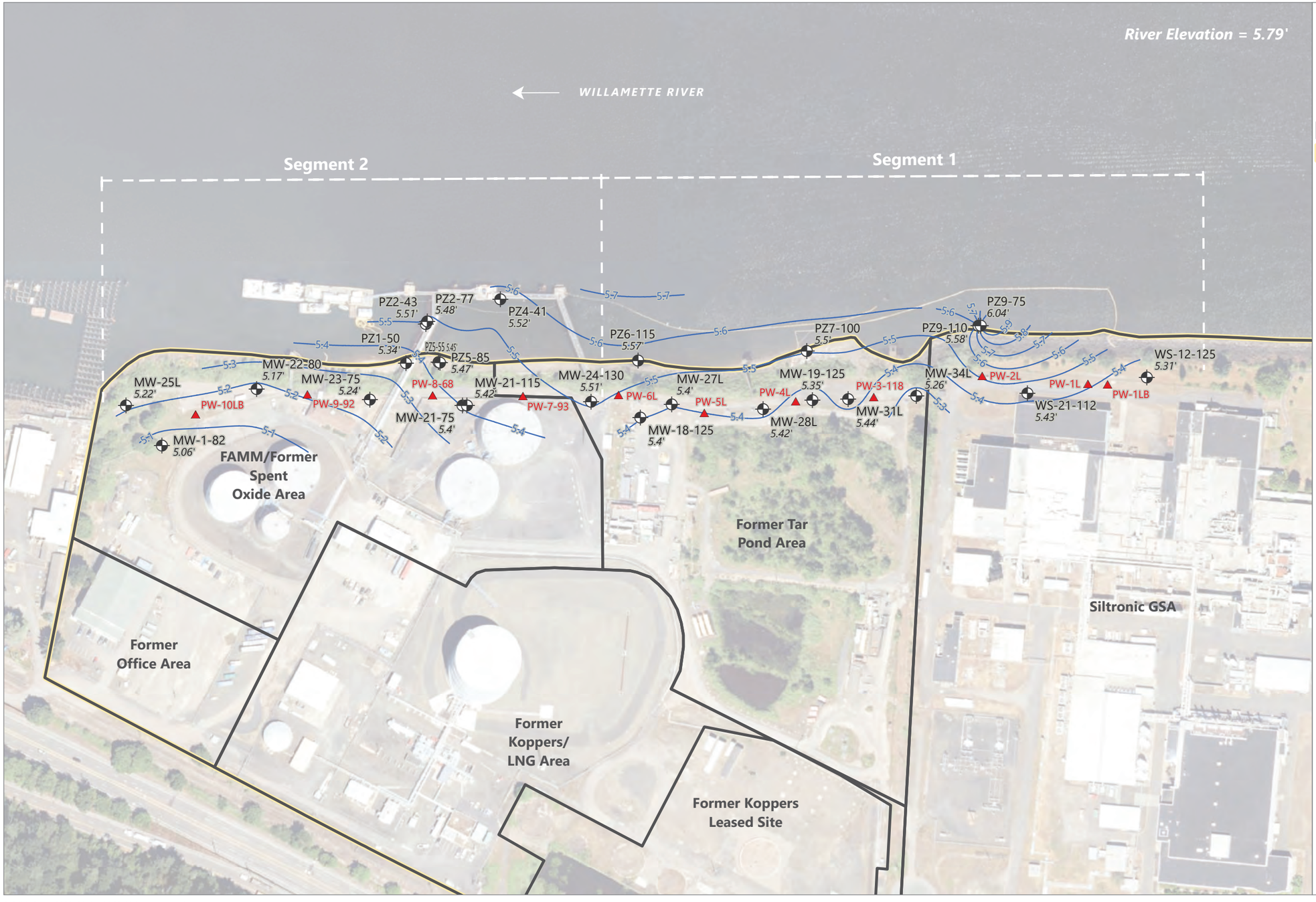
ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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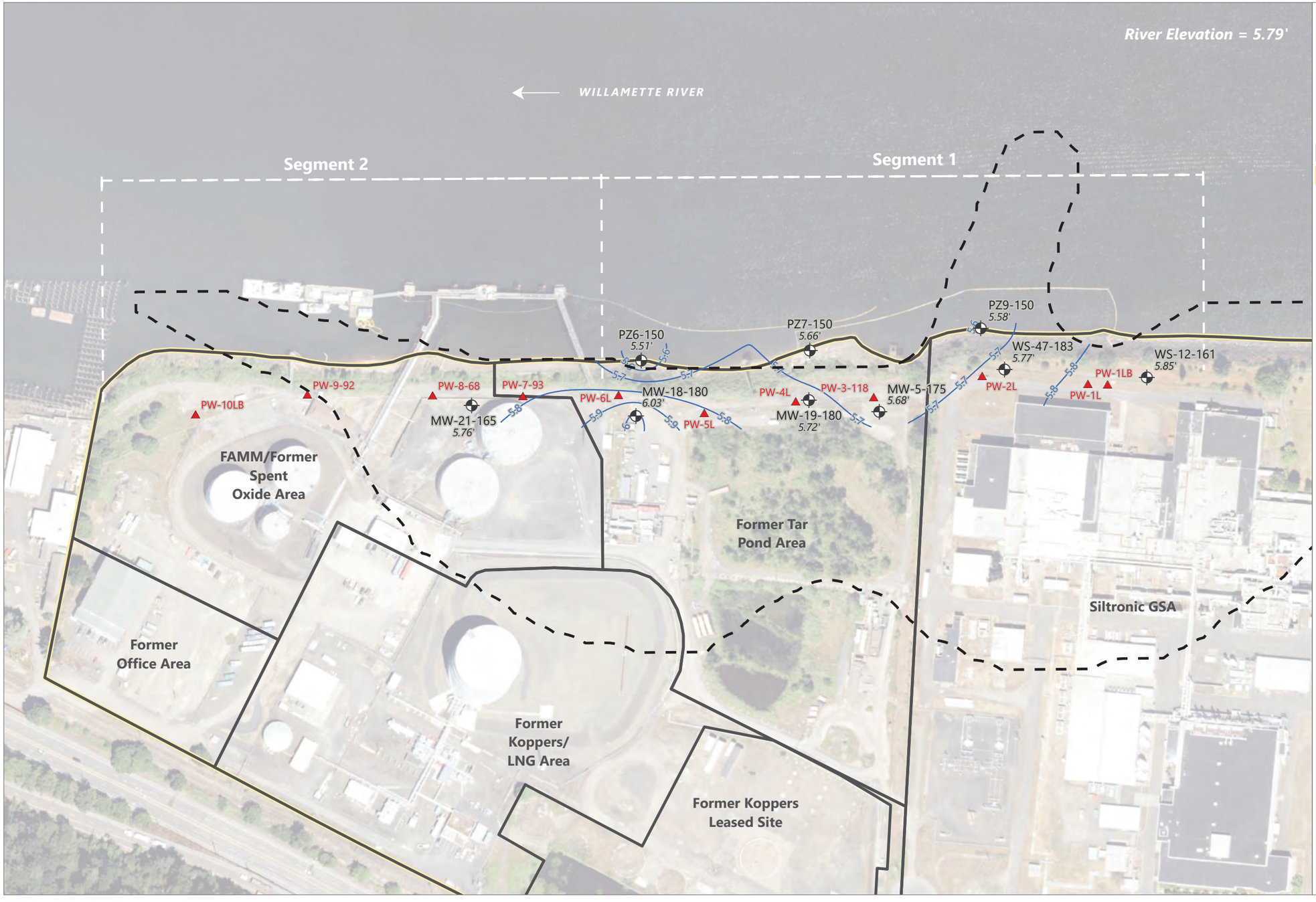
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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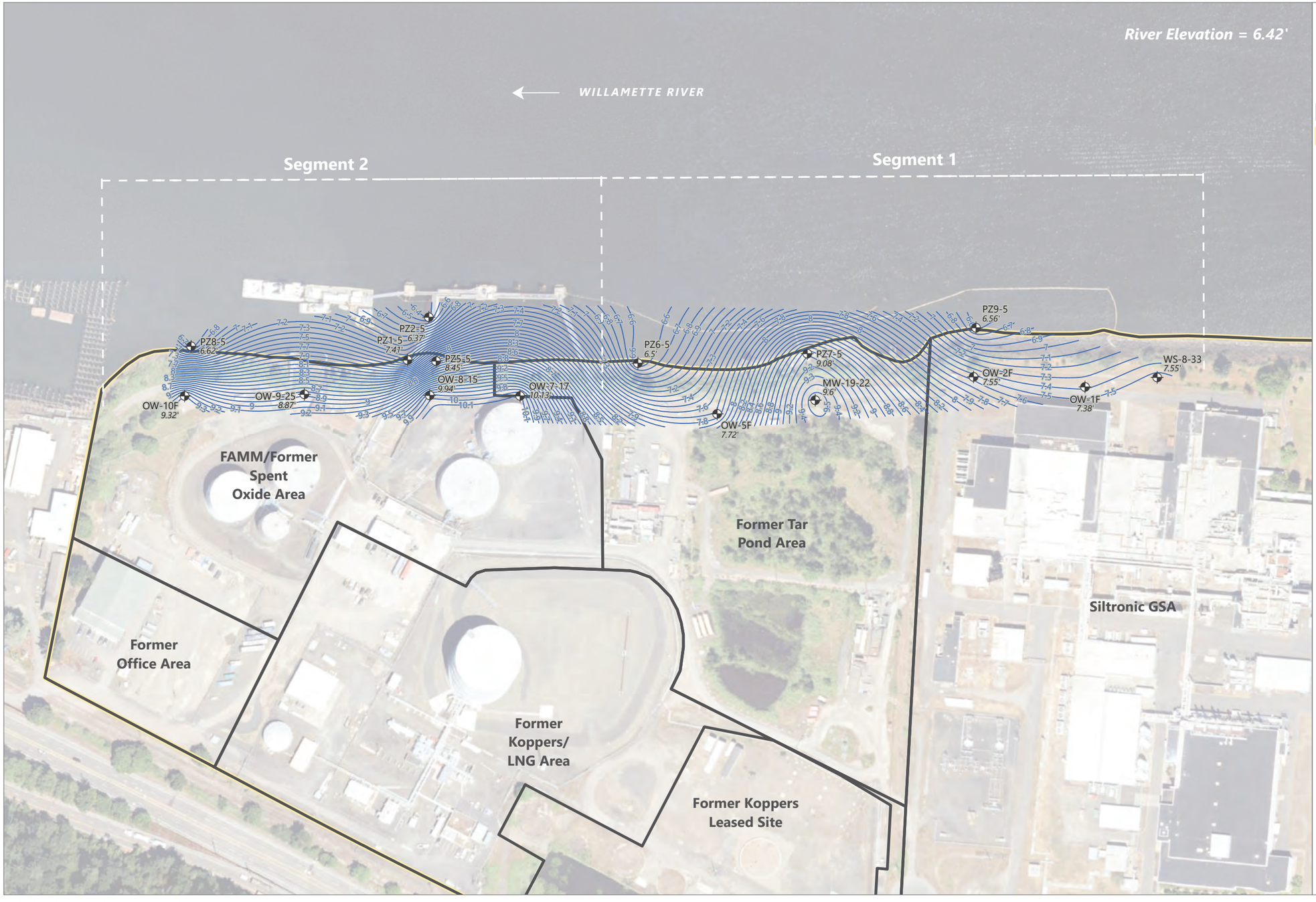
ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

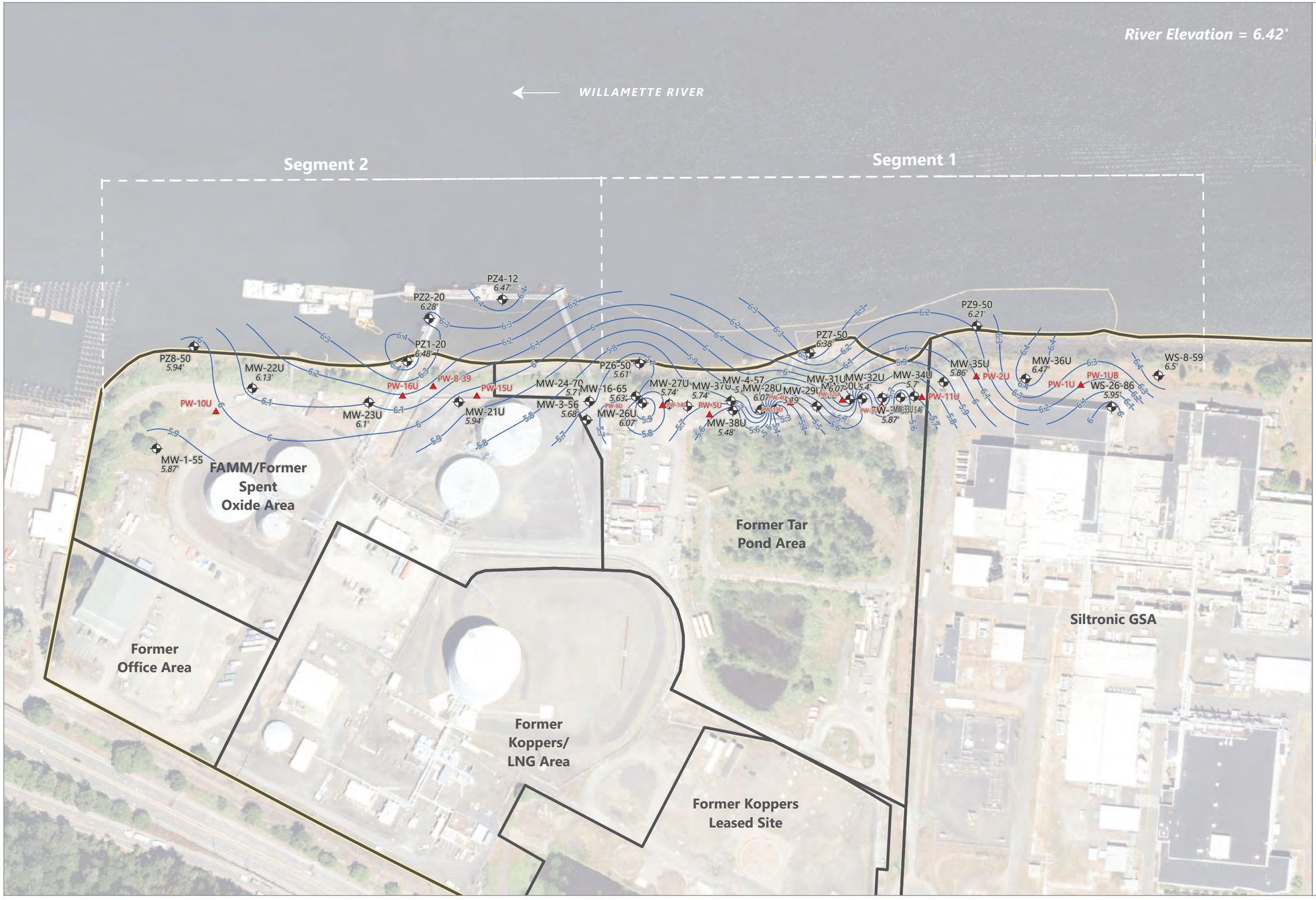
1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/11, 2:54 PM | User: cgardner
Filepath: \\orcas\gis\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\11 November\NWN_HCC_Maps_EarlyNovember_2022.aprx

ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/12, 2:56 PM | User: cgardner
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ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/17, 12:43 PM | User: cgardner
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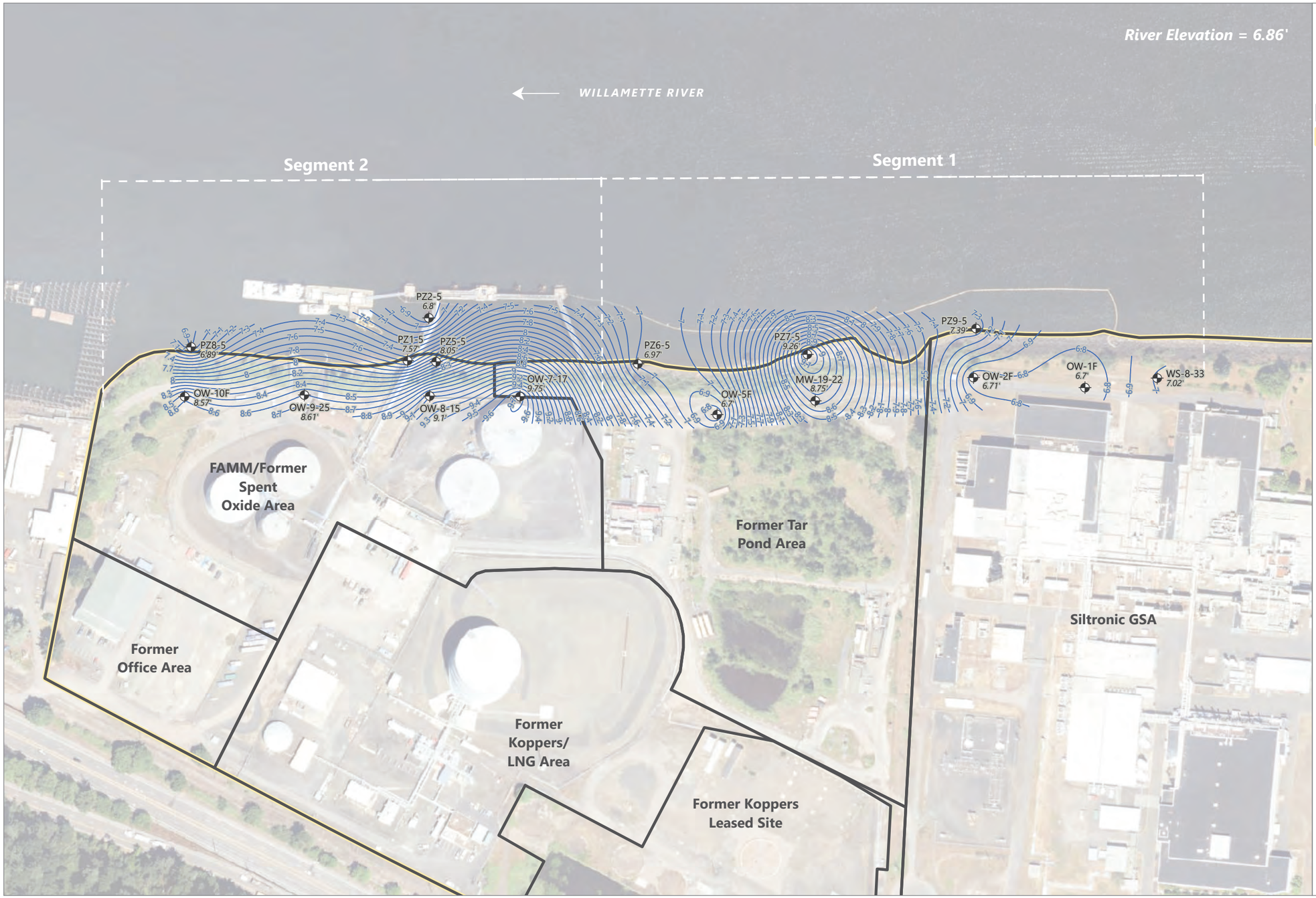
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/16, 9:48 AM | User: cgardner
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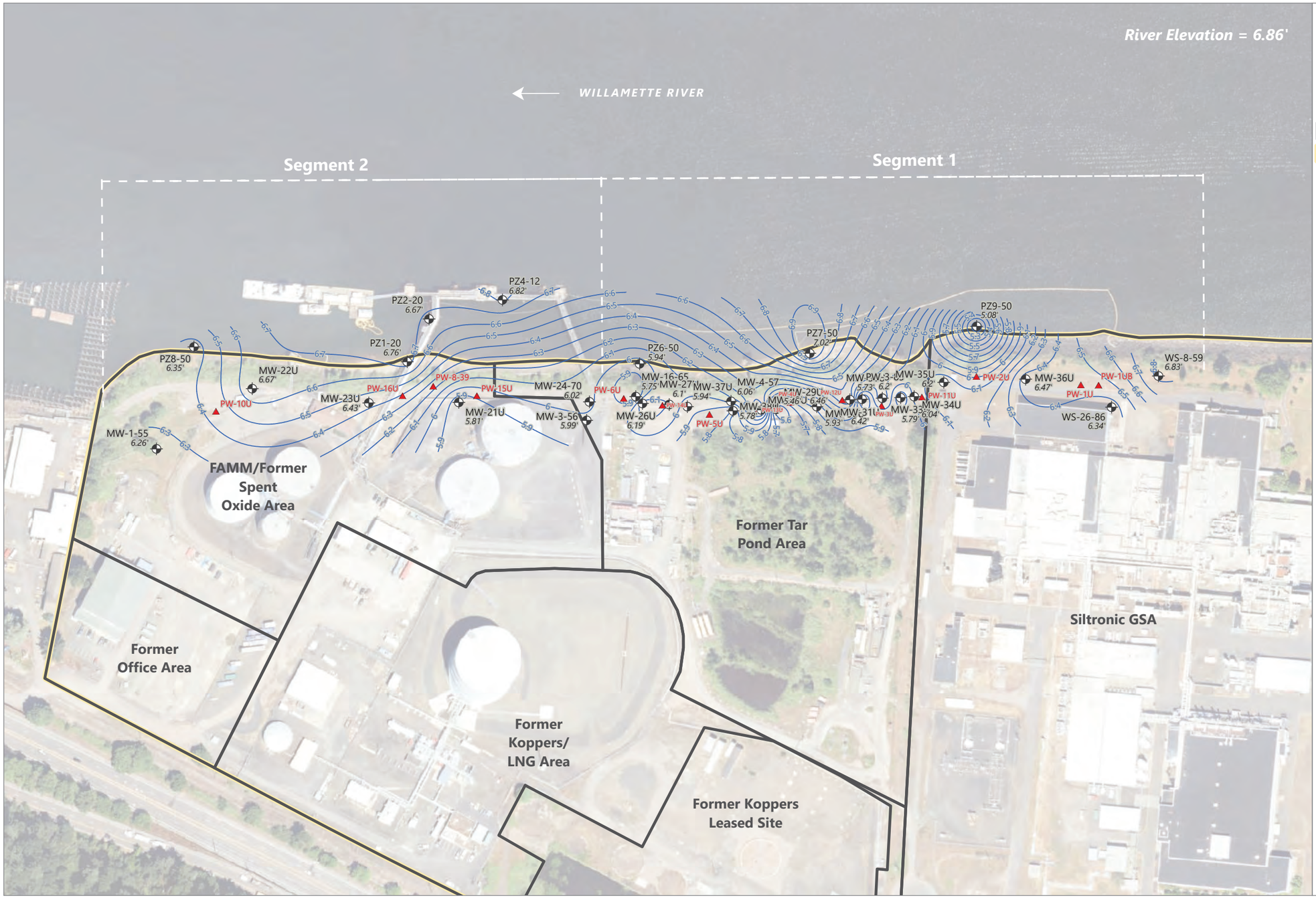
ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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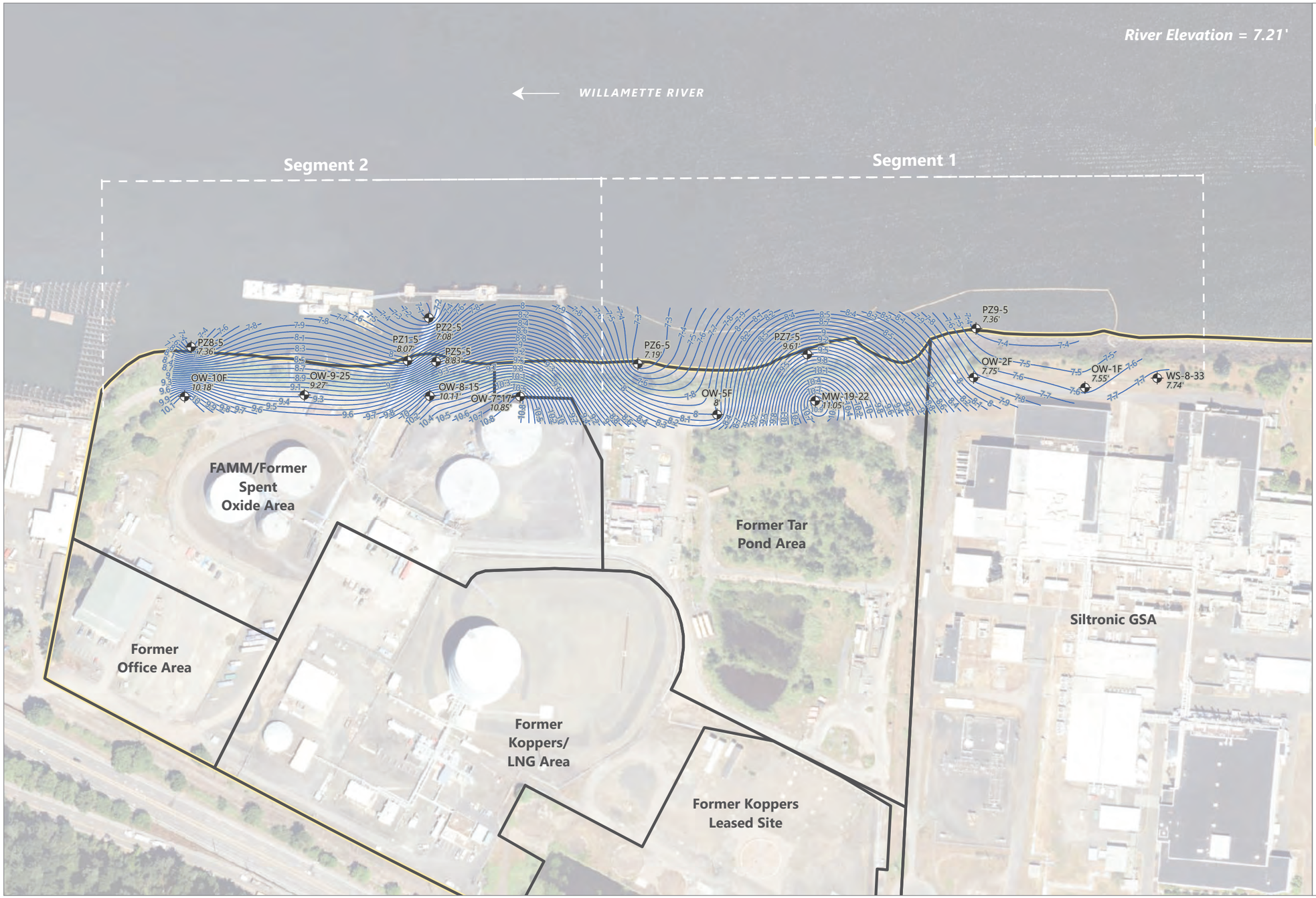
ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/17, 3:31 PM | User: cgardner
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ANCHOR QEA

Figure 3.1a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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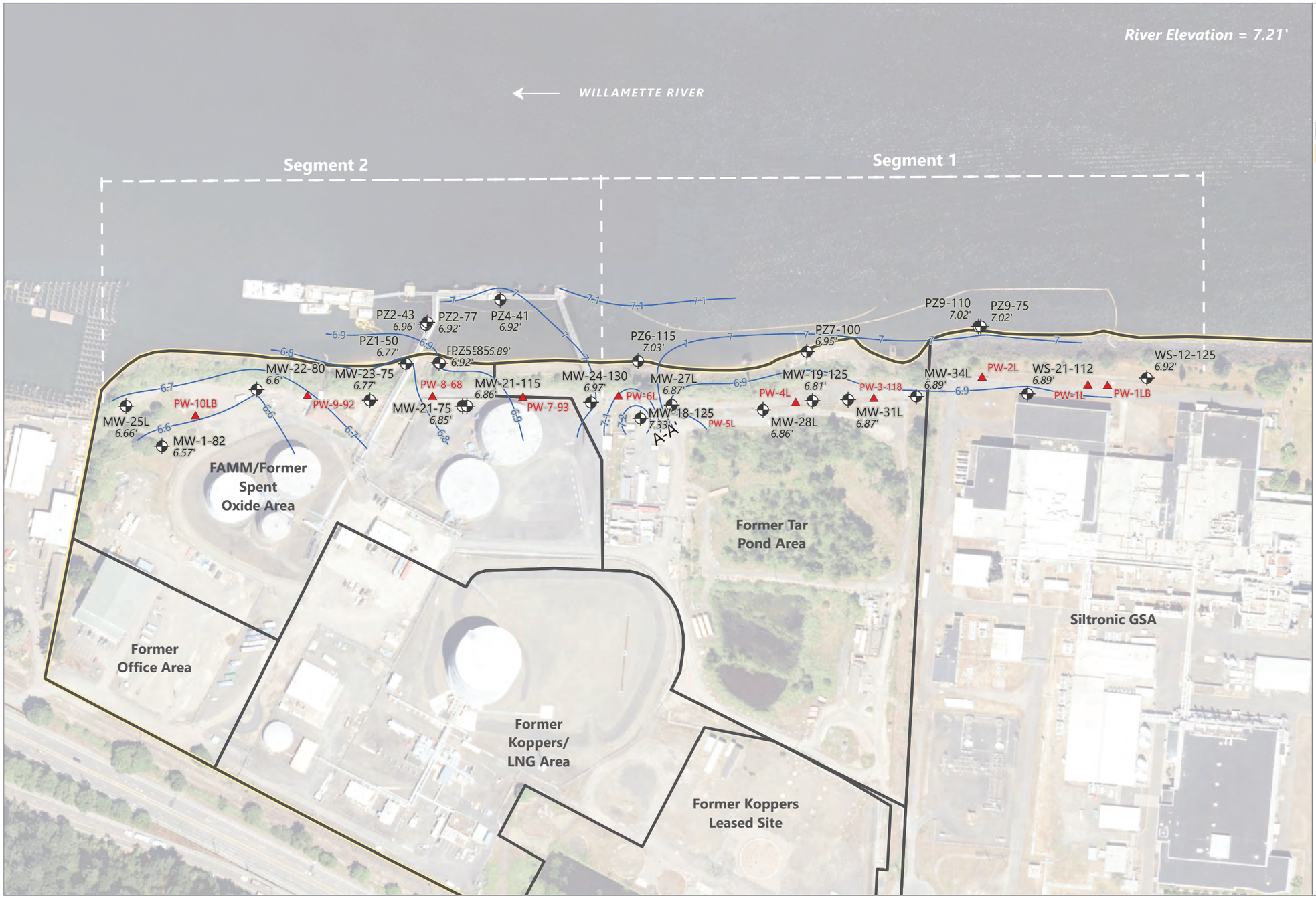
Figure 3.1b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/24, 9:51 AM | User: cgardner
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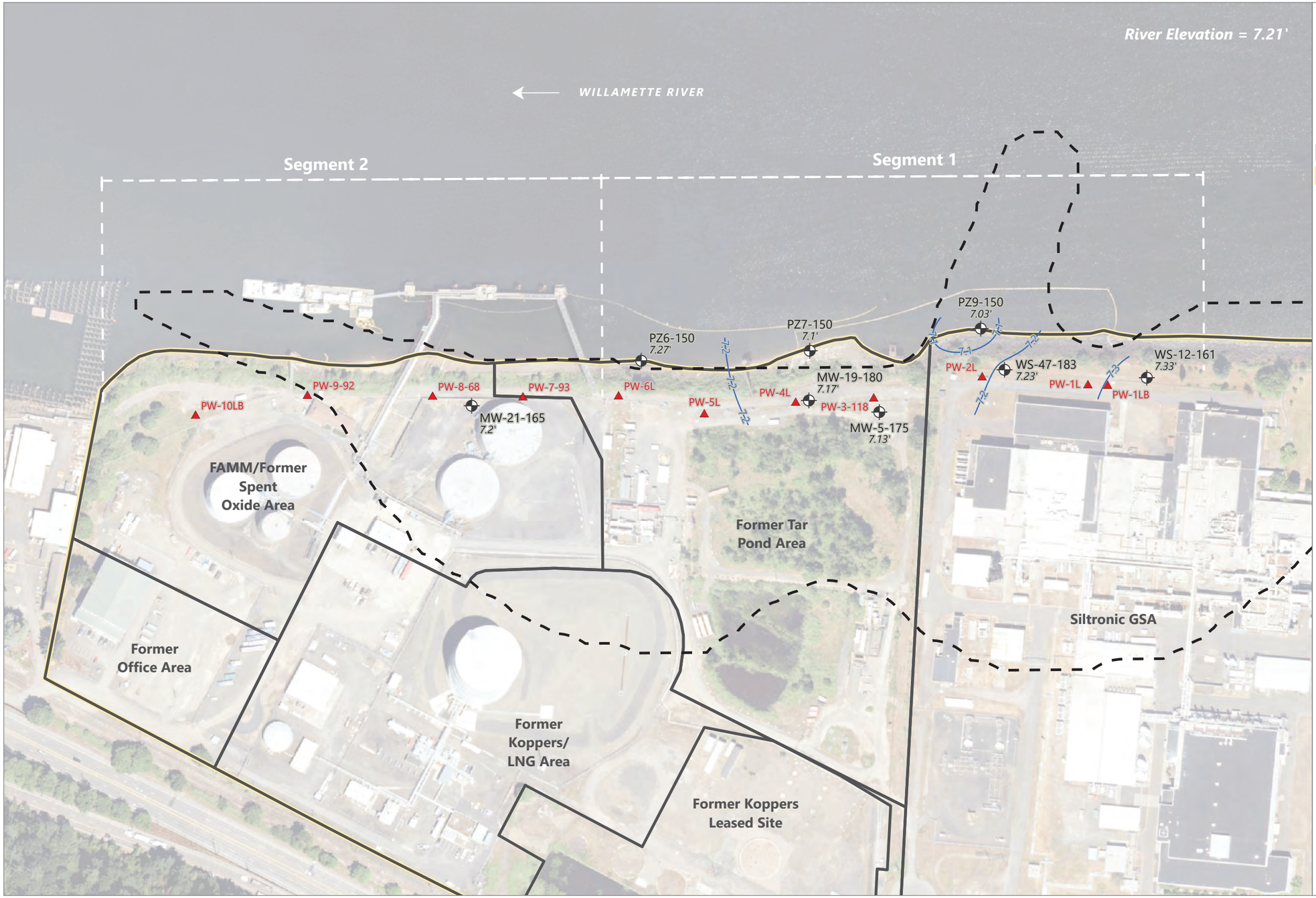
ANCHOR QEA

Figure 3.1c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/24, 12:43 PM | User: cgardner
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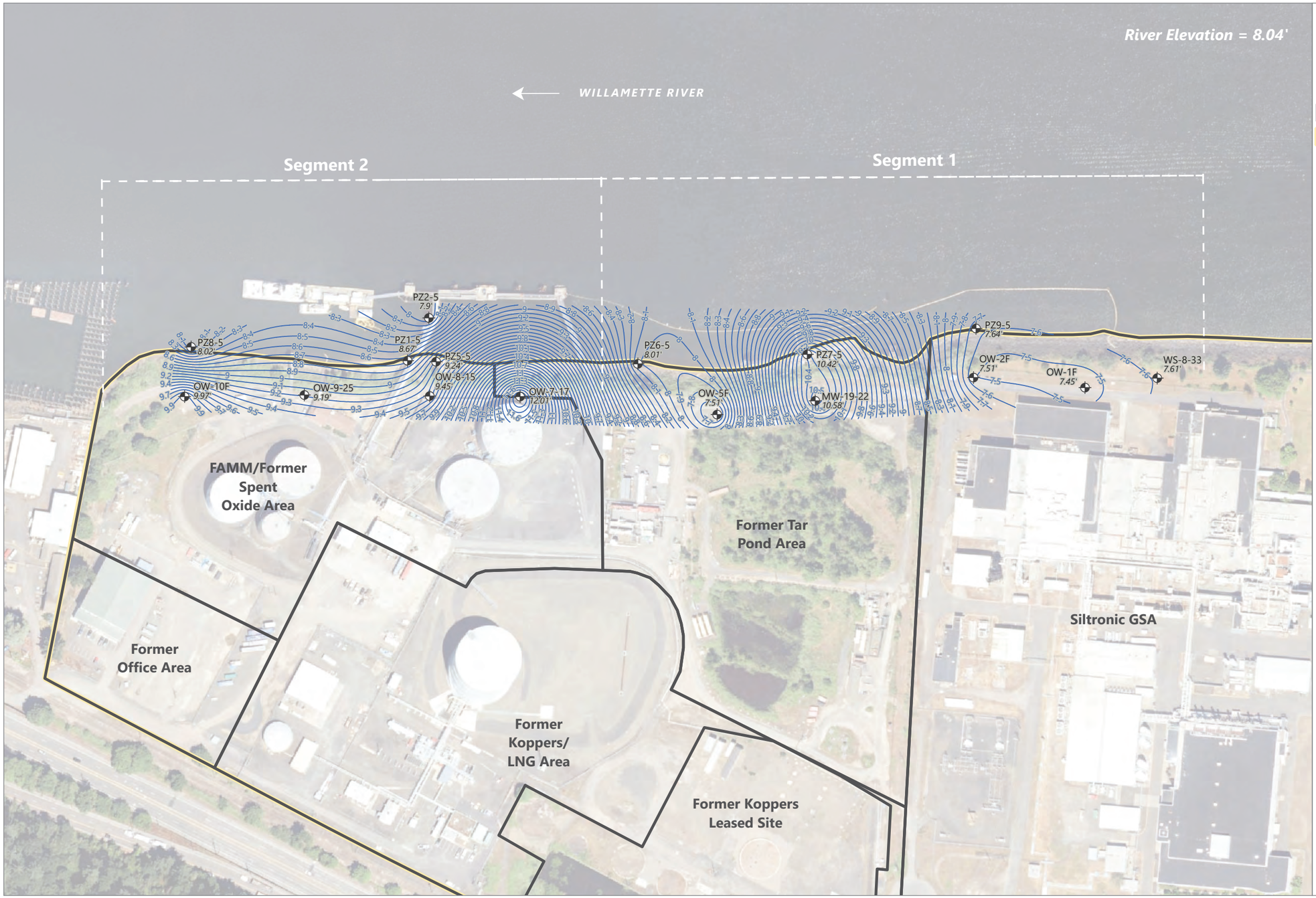
ANCHOR QEA

Figure 3.1d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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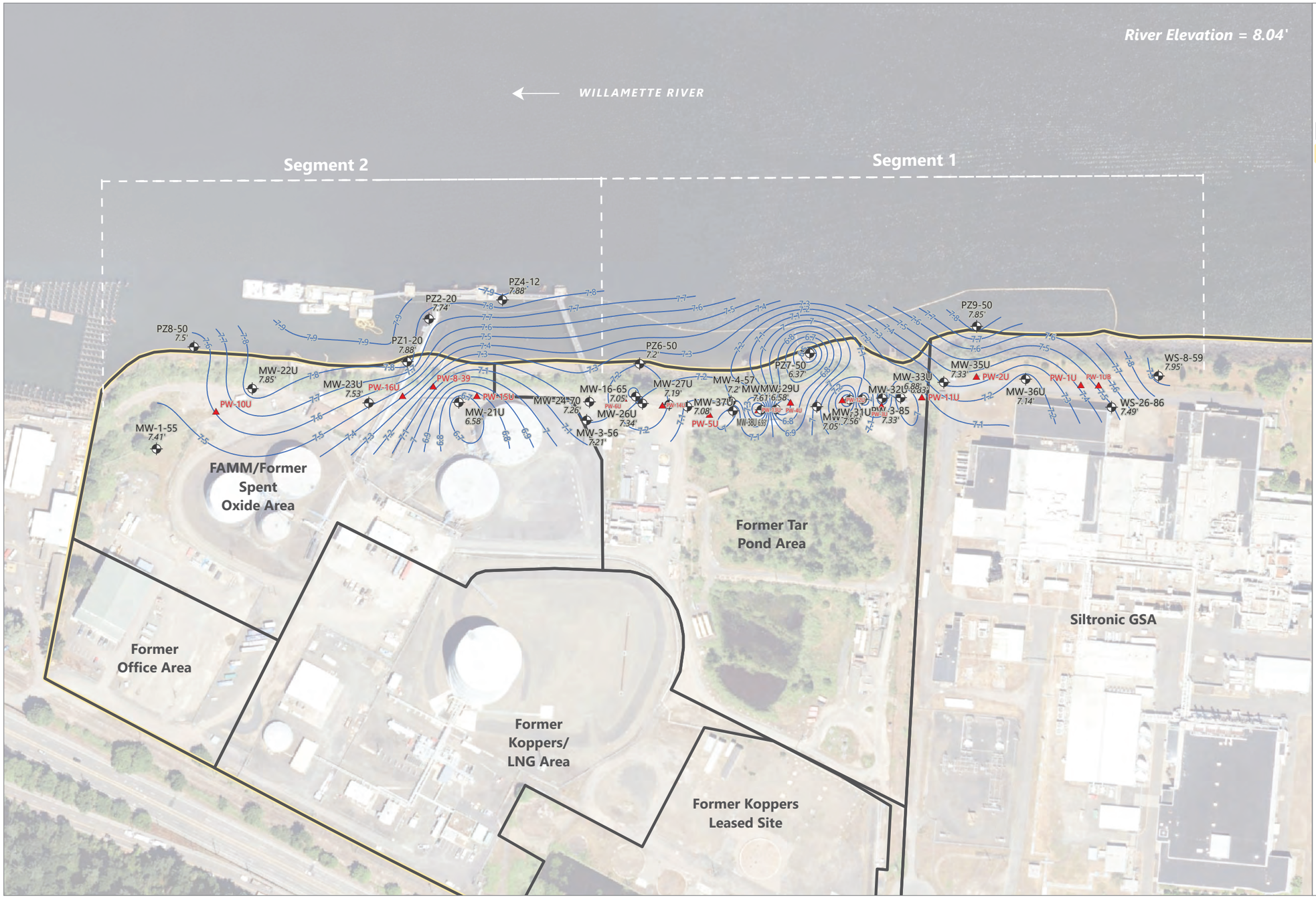
ANCHOR QEA

Figure 3.2a
Fill WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Locations PZ5-20 and MW-5-32 were not used.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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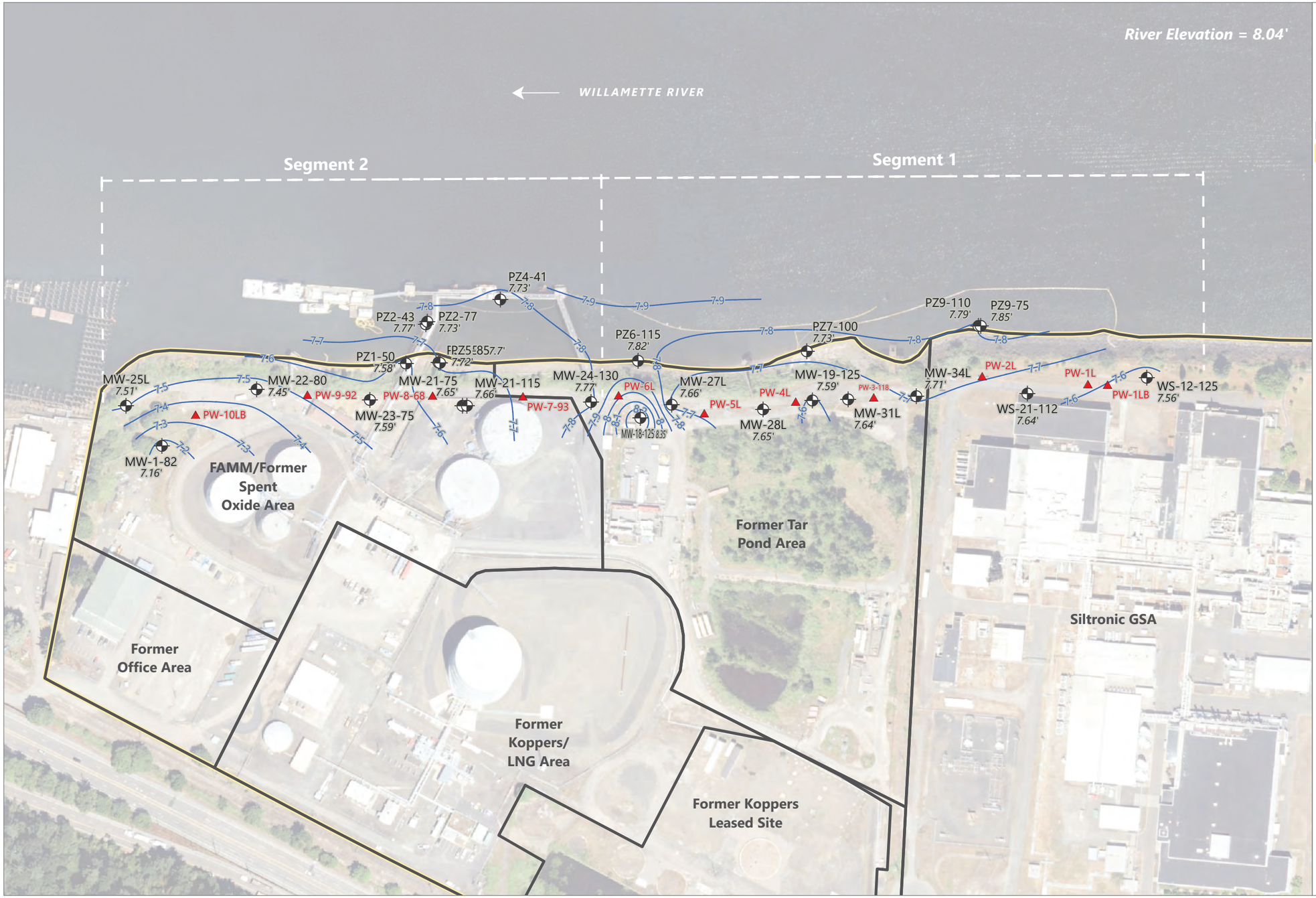
ANCHOR QEA

Figure 3.2b
Upper Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/24, 2:58 PM | User: cgardner
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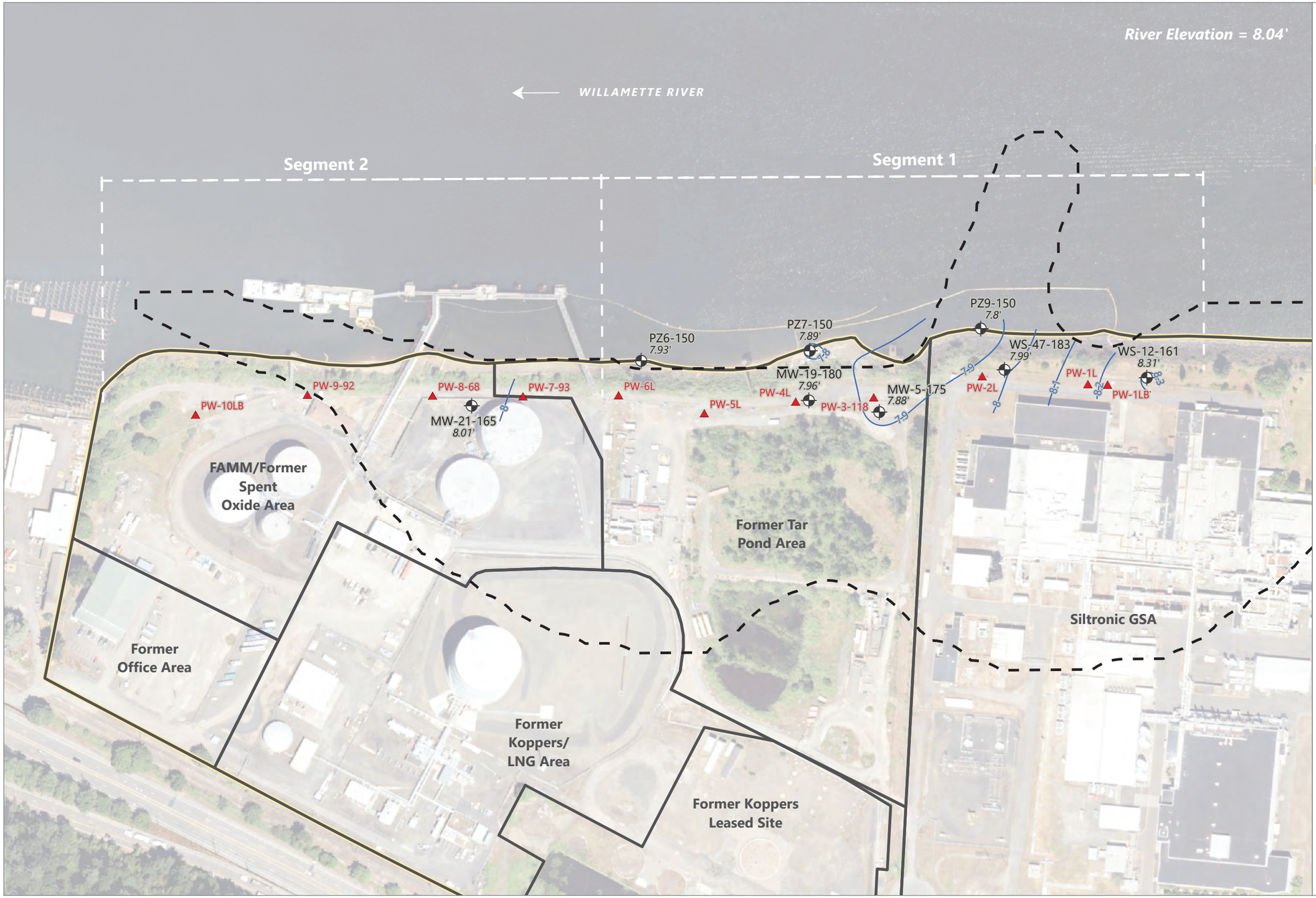
ANCHOR QEA

Figure 3.2c
Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Average GW Elevation (ft. COP)
- Pumping Well Location
- Groundwater Elevation Contour Lines (0.1-foot Interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
5. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.2d
Deep Lower Alluvium WBZ Potentiometric Surface Contours Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2023/01/24, 5:53 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\07 July\Figure_3.3a_GW_Elev_Minus_River_Stage_fill_2022_07_11_13.mxd

ANCHOR QEA

Figure 3.3a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:54 PM | User: cgardner
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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:54 PM | User: cgardner
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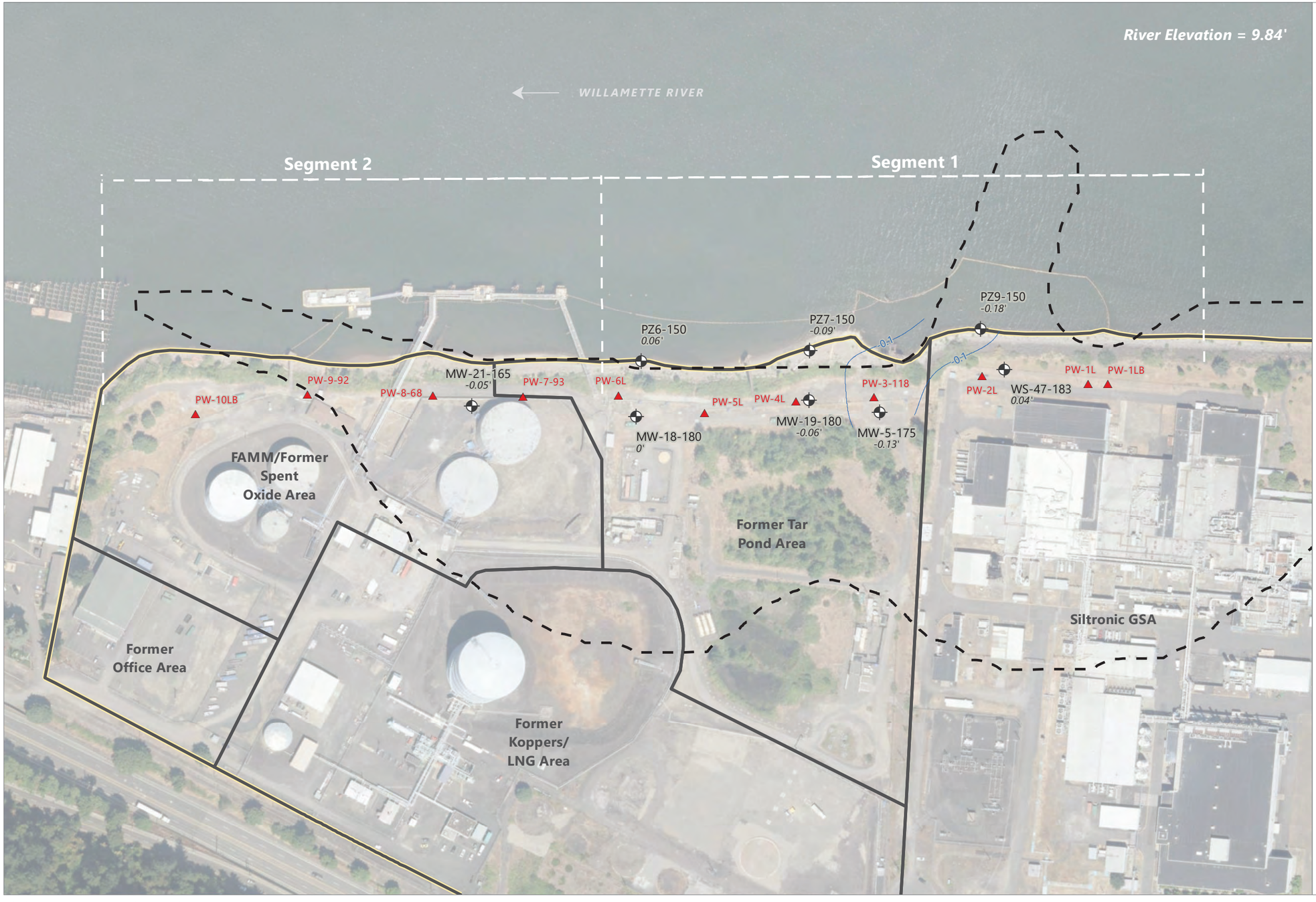
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.3d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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ANCHOR QEA

Figure 3.4a

Contours of Water Elevation Difference Between Fill and River Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
7. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 5:56 PM | User: cgardner
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ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium and River Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

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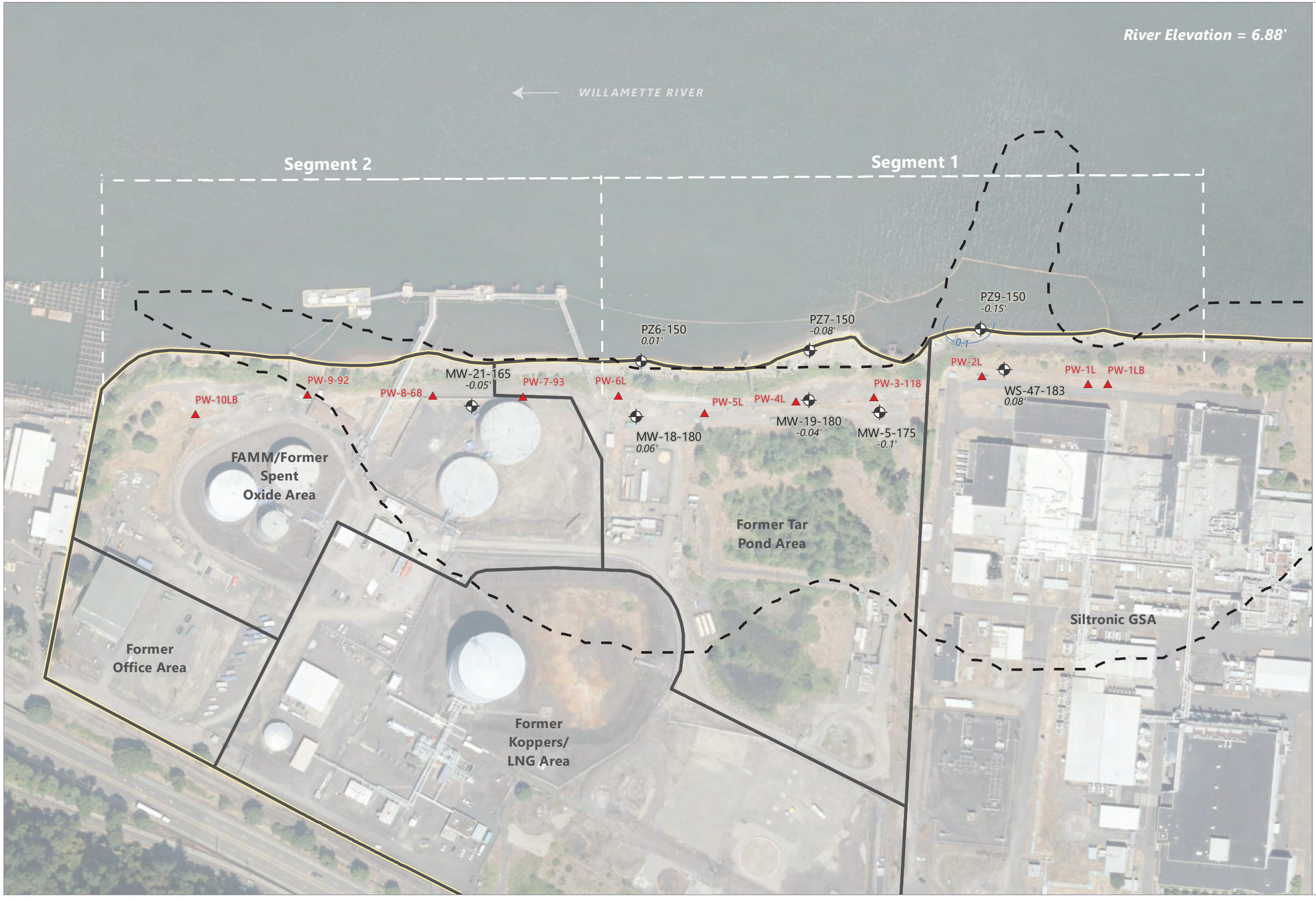
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Extent of Deep Aquitard
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

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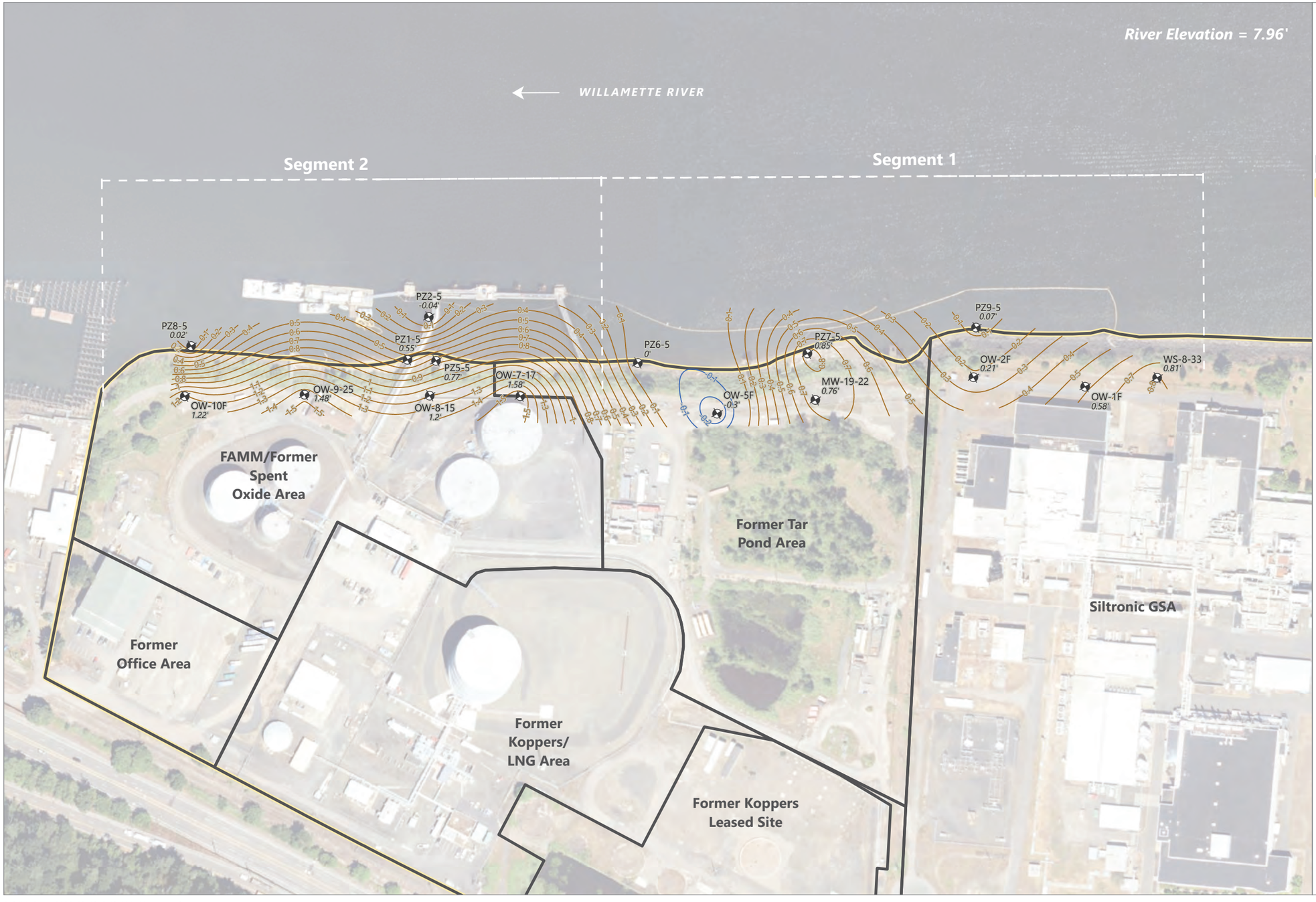
ANCHOR QEA

Figure 3.4d

Contours of Water Elevation Difference Between Deep Lower Alluvium and River Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300

Feet

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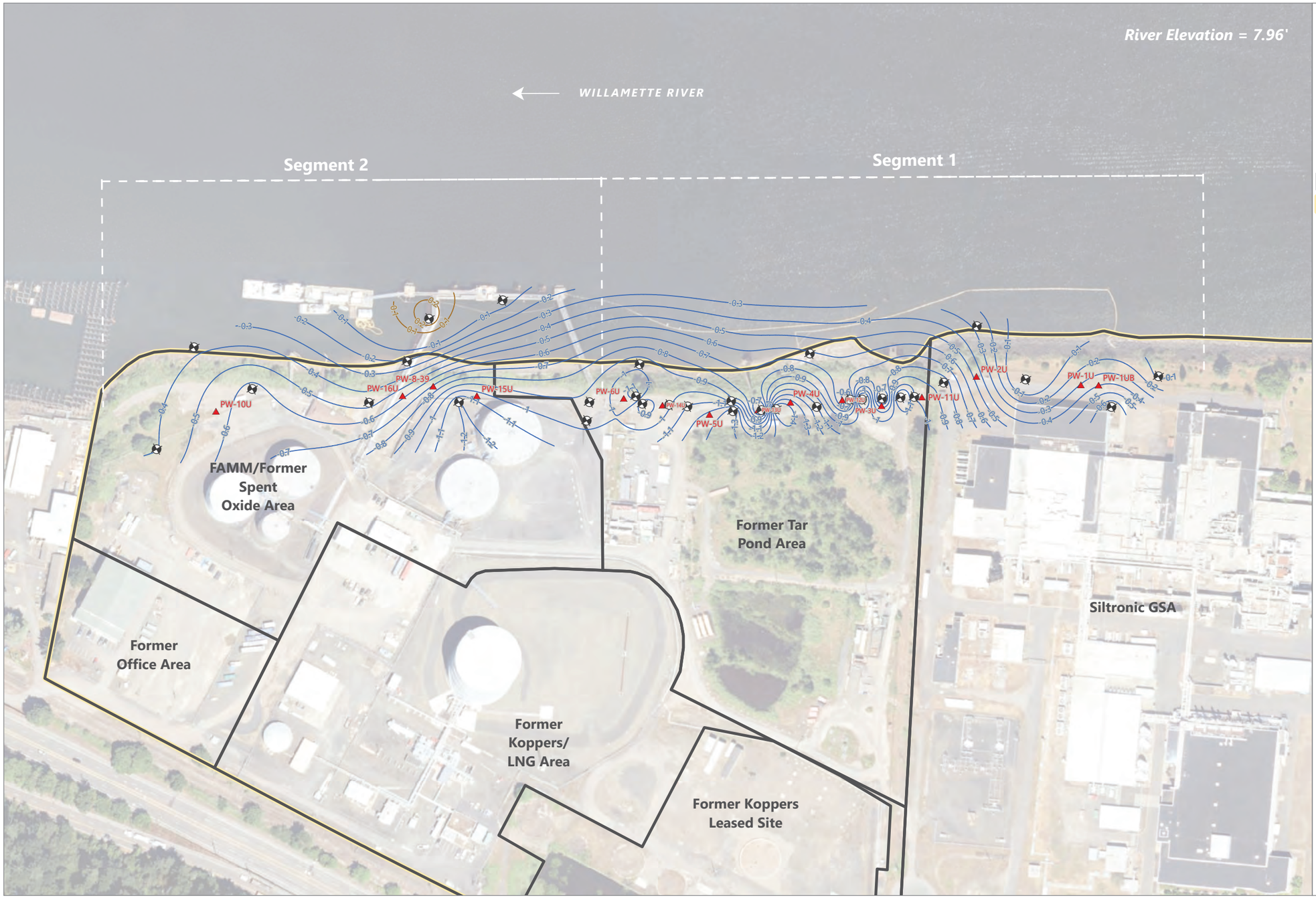
ANCHOR QEA

Figure 3.3a

Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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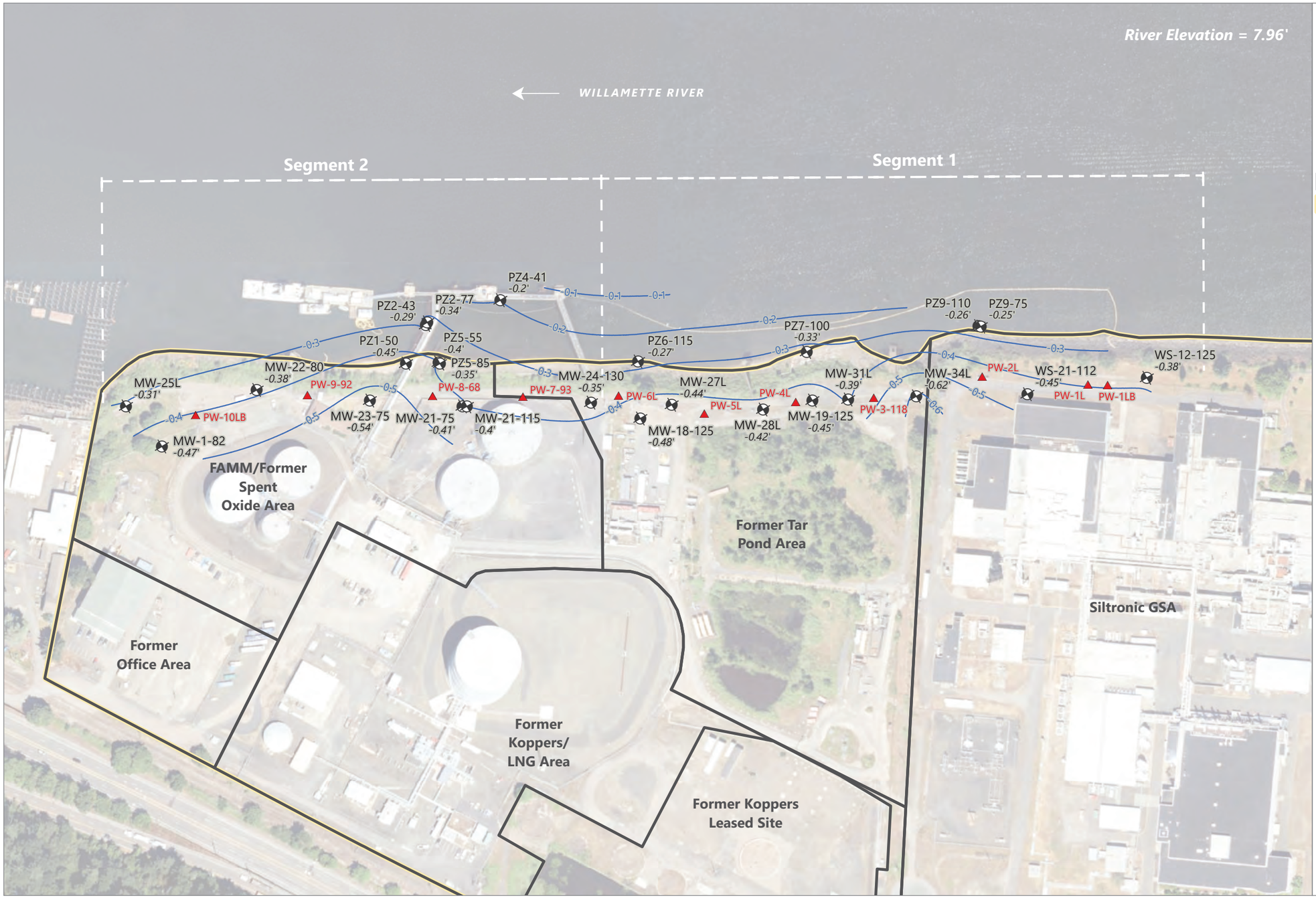
ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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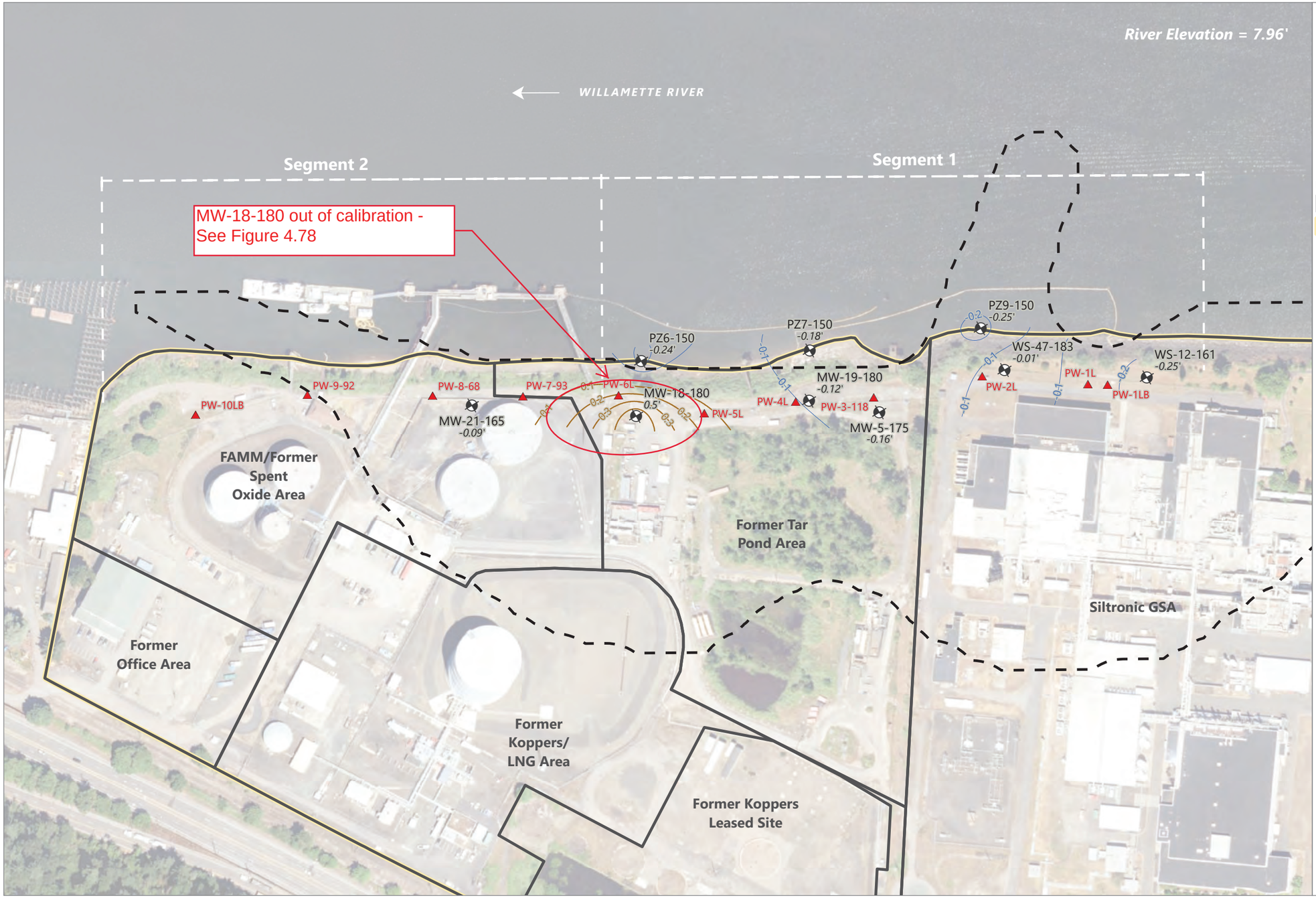
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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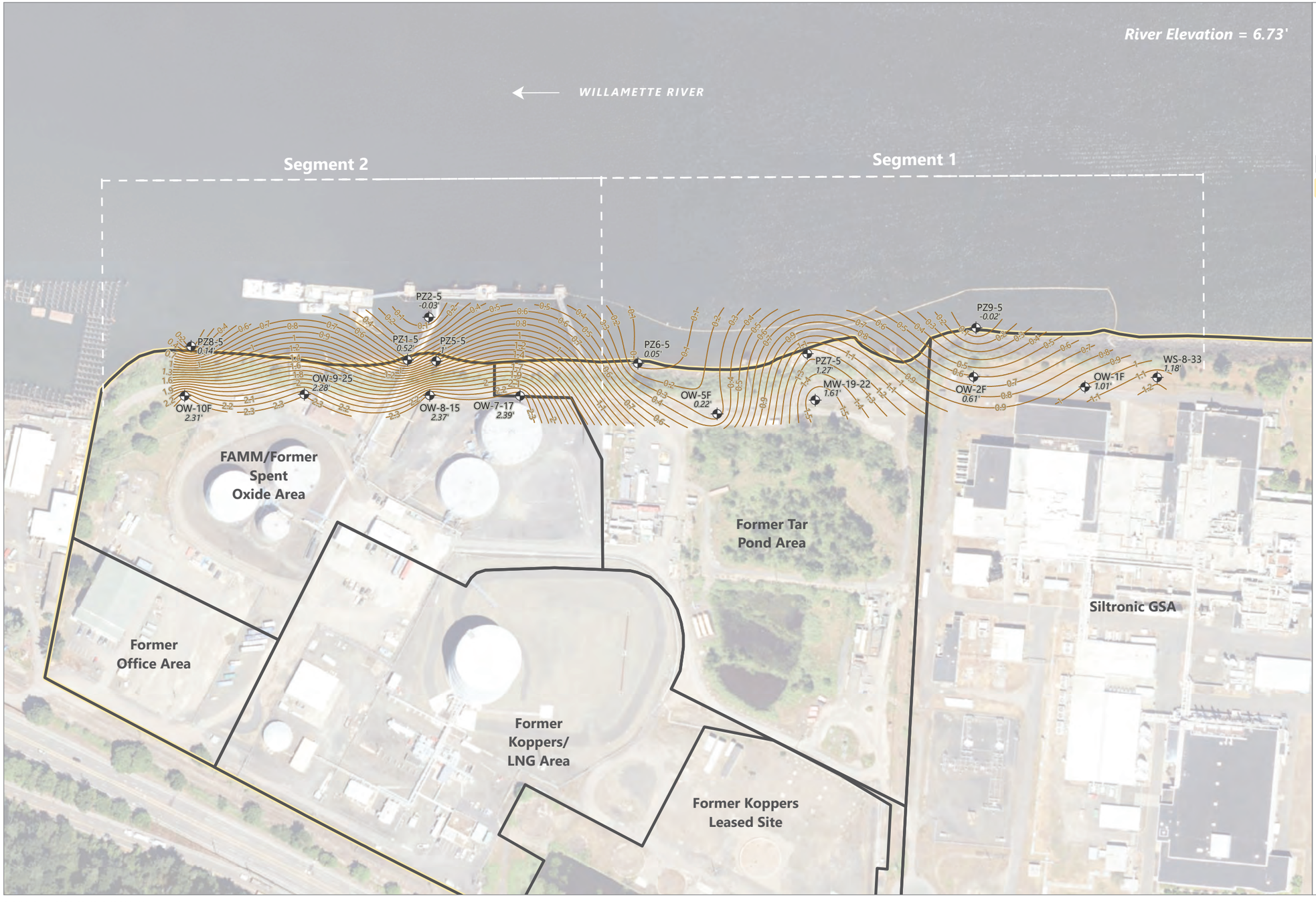
ANCHOR QEA

Figure 3.3d
Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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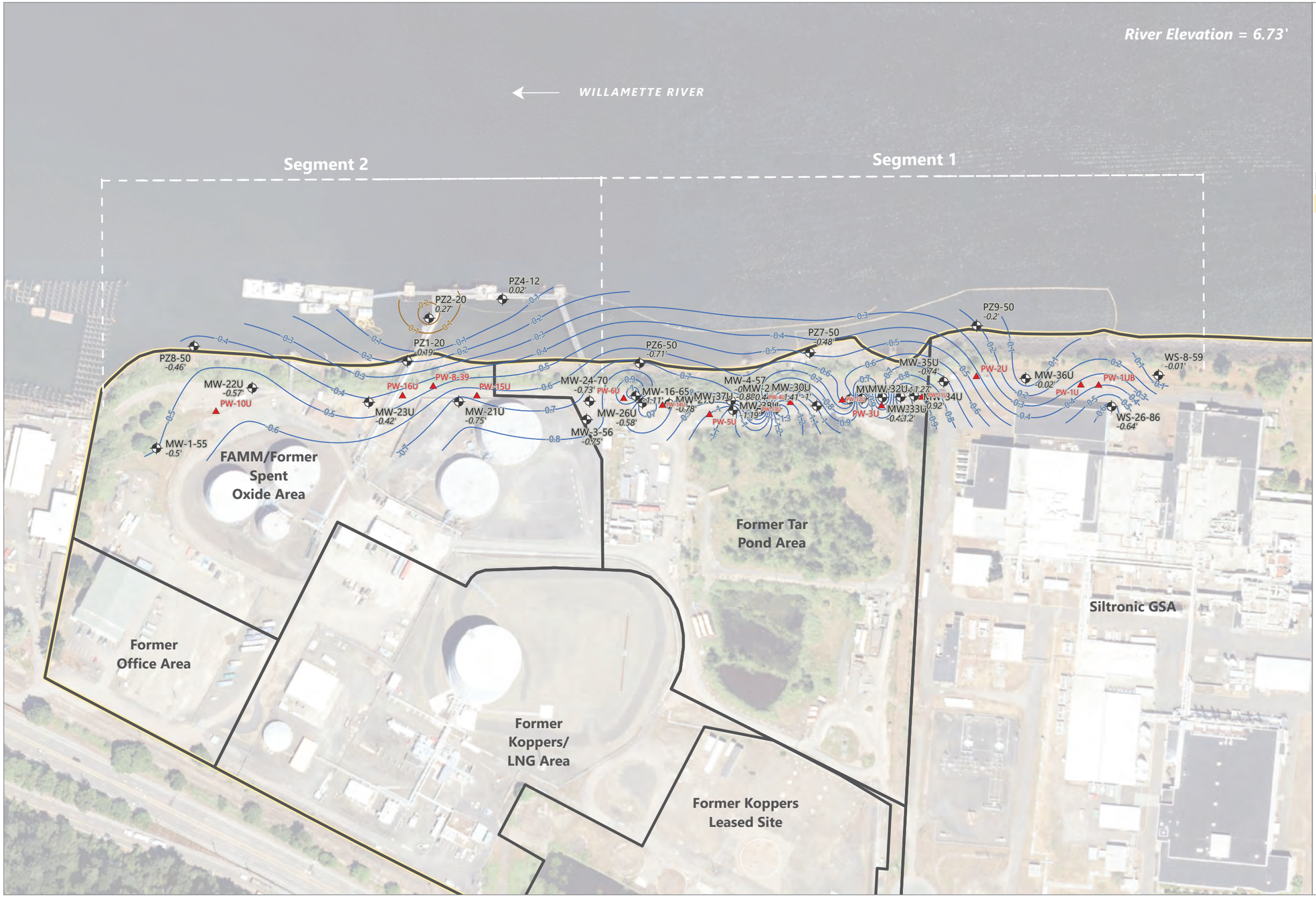
ANCHOR QEA

Figure 3.4a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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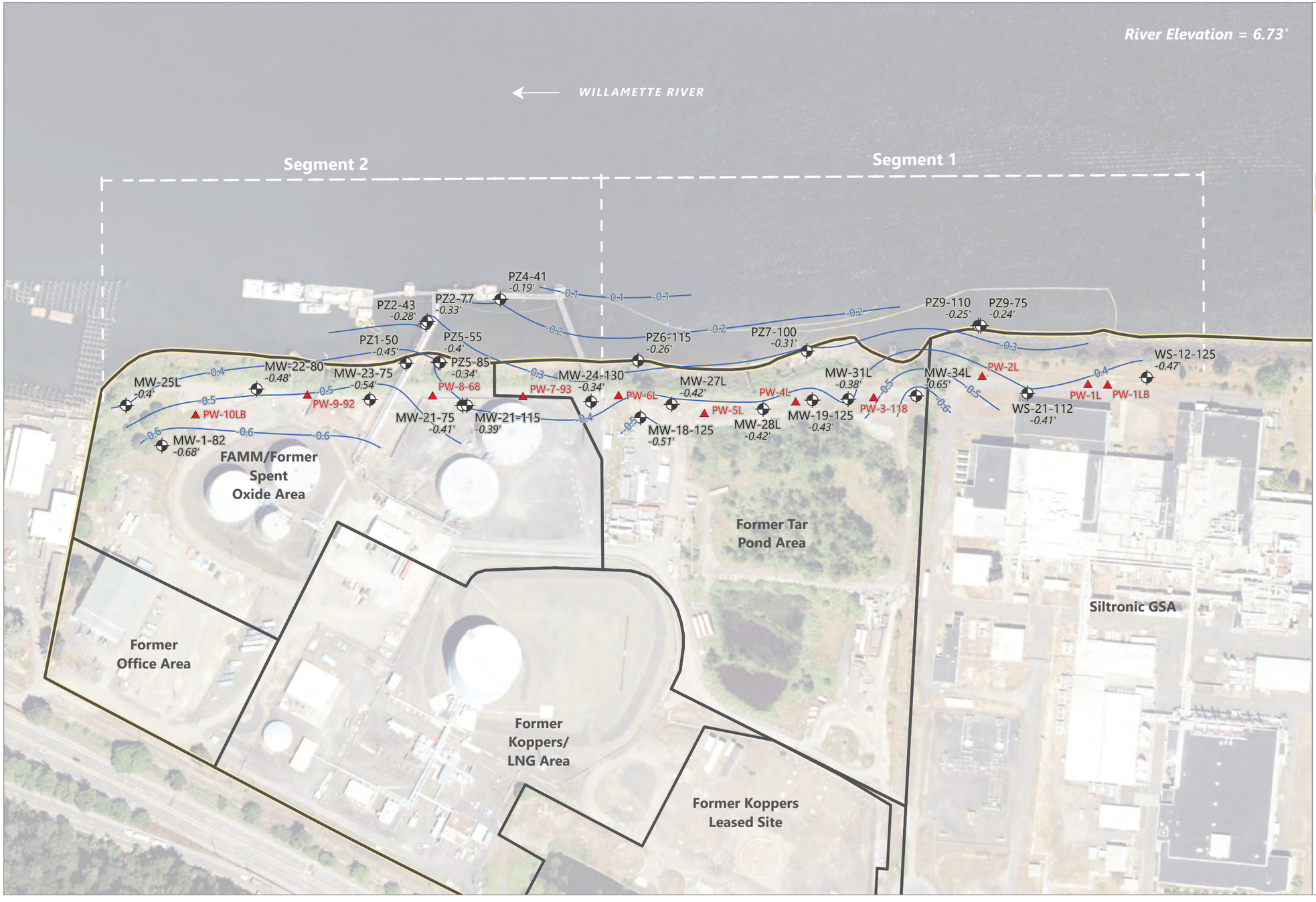
ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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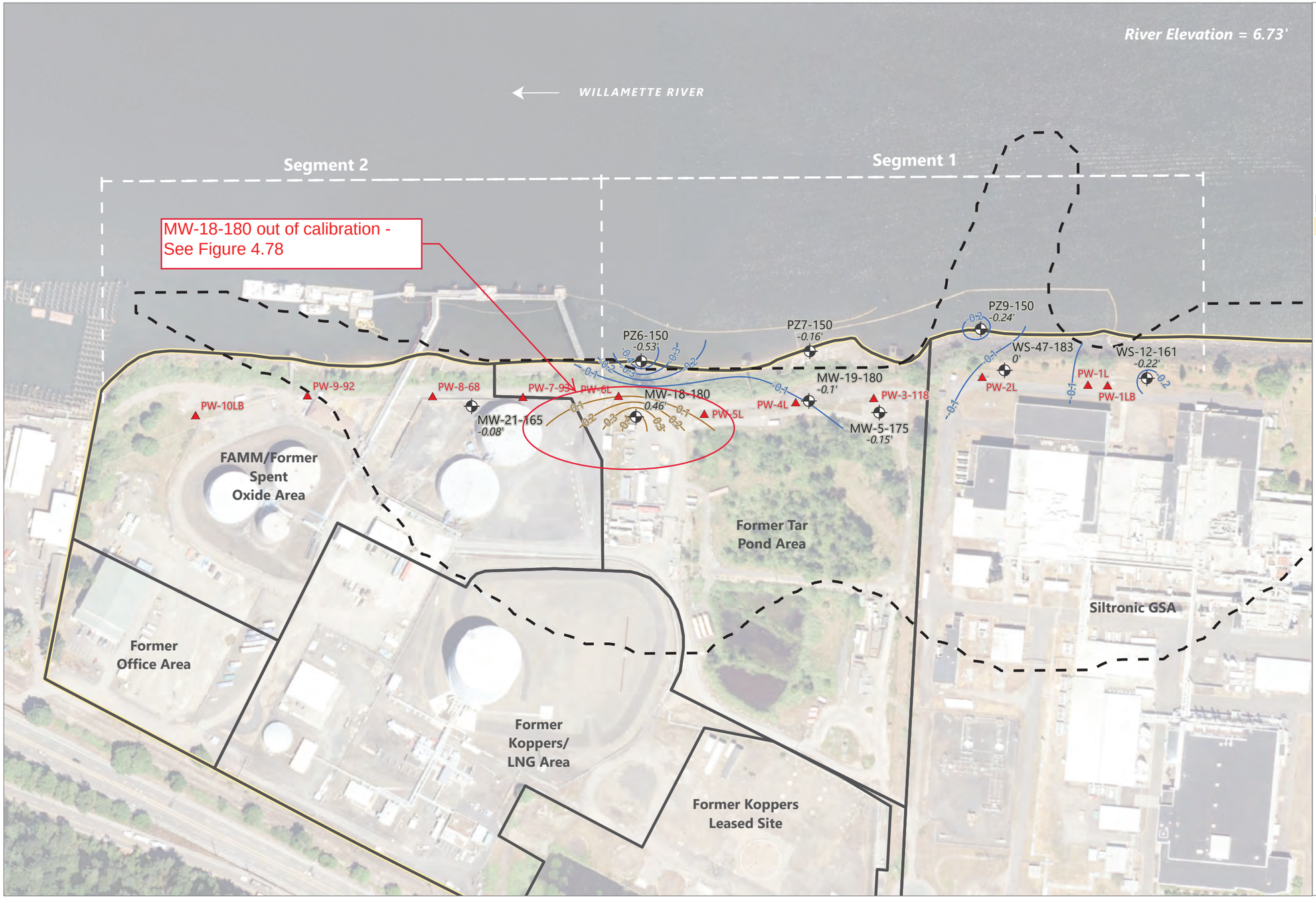
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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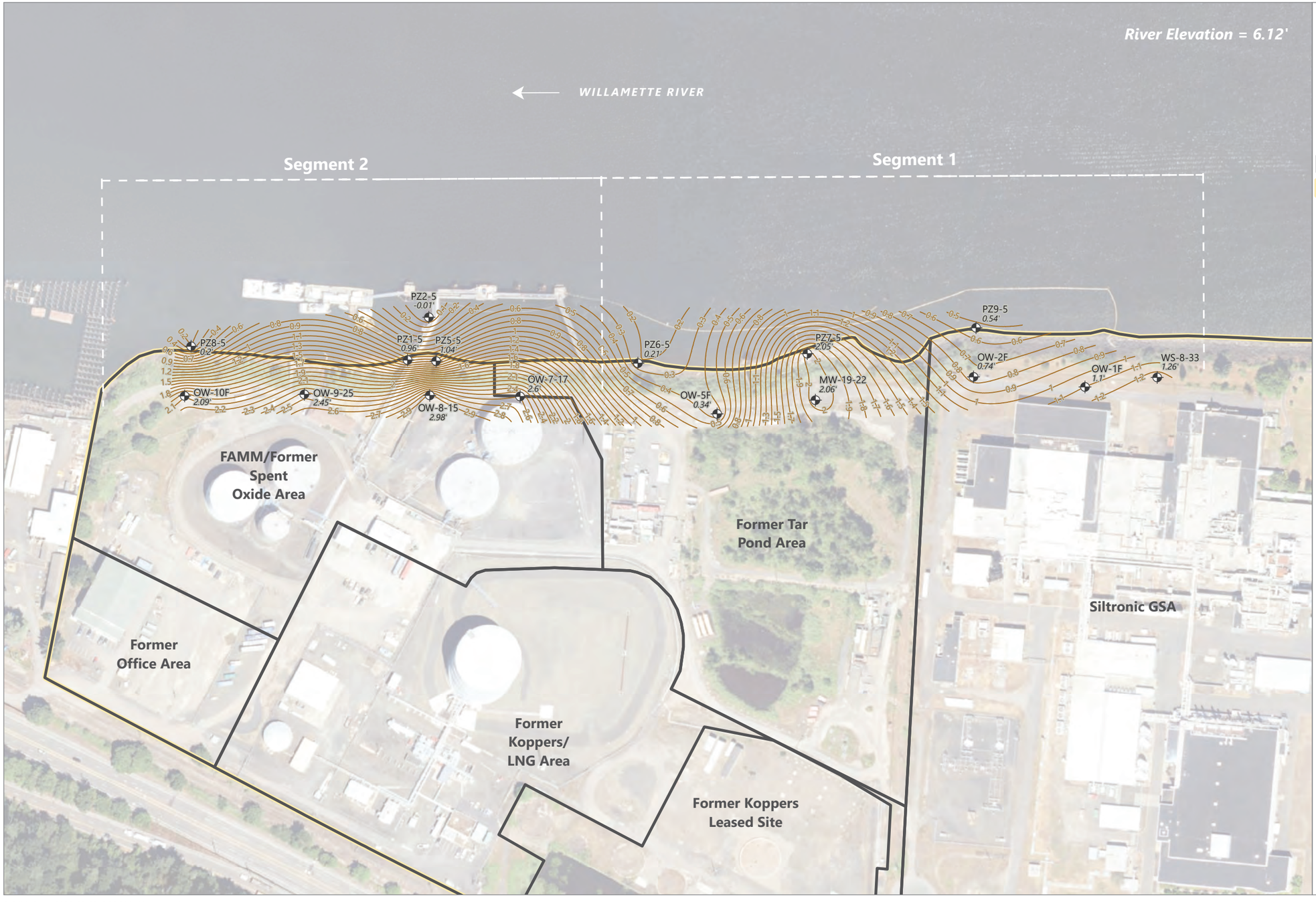
ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.3a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Transducer data collected from location WS-26-86 was not used in generation of groundwater contours. The transducer was removed from the well for groundwater sampling during the timespan over which data were averaged for this contour map and the averaged results are not accurate.
5. Locations PZ5-20 and MW-5-32 were not used.
6. Arrow indicates direction of flow of river.
7. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
8. Aerial imagery from City of Portland 2021.

0 300
Feet

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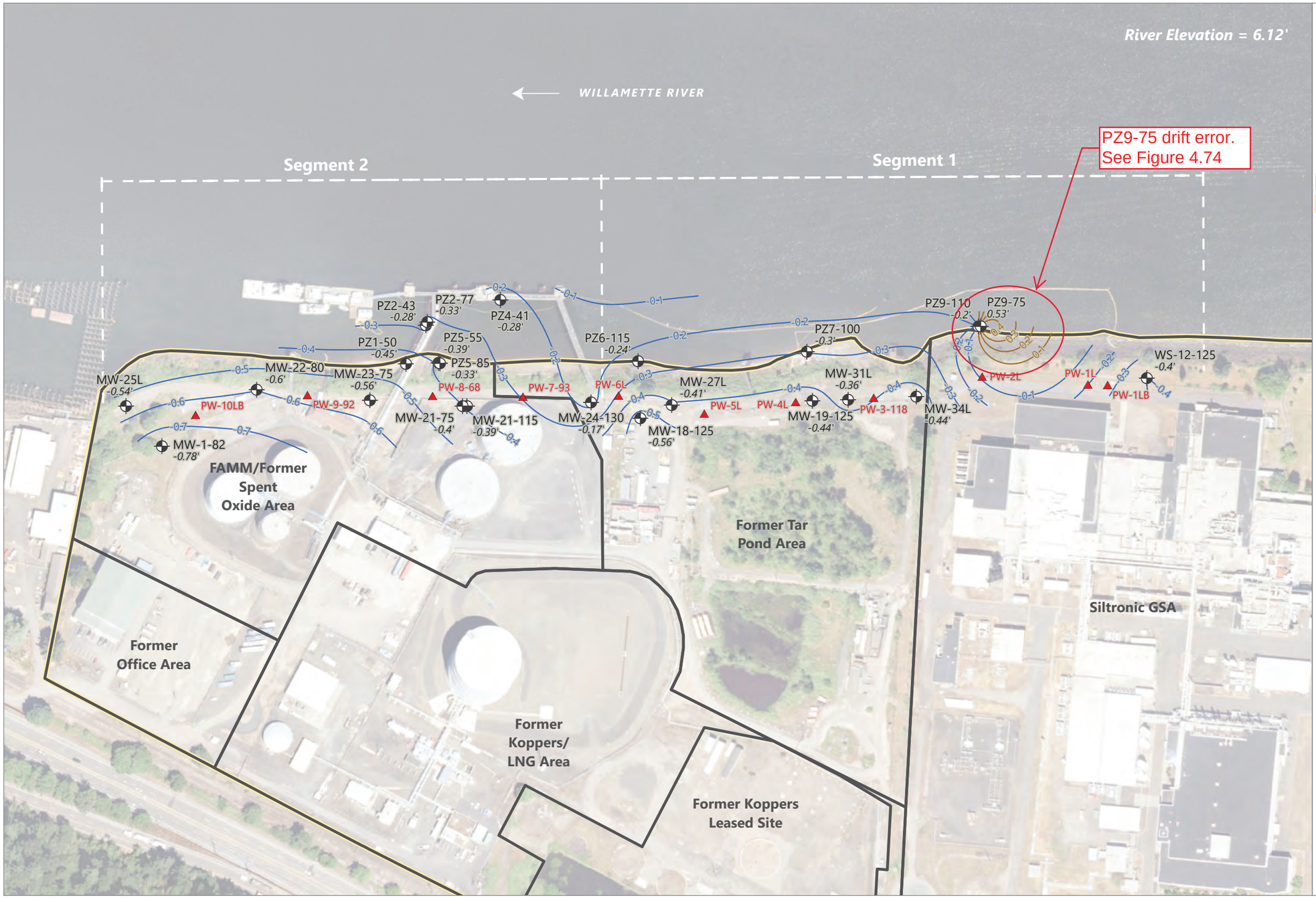
ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Transducer data collected from location WS-21-112 and MW-28L were not used in generation of groundwater contours. The transducer was removed WS-21-112 for groundwater sampling and MW-28L had connectivity issues during the timespan over which data were averaged for this contour map and the averaged results are not accurate.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/20, 3:49 PM | User: cgardner
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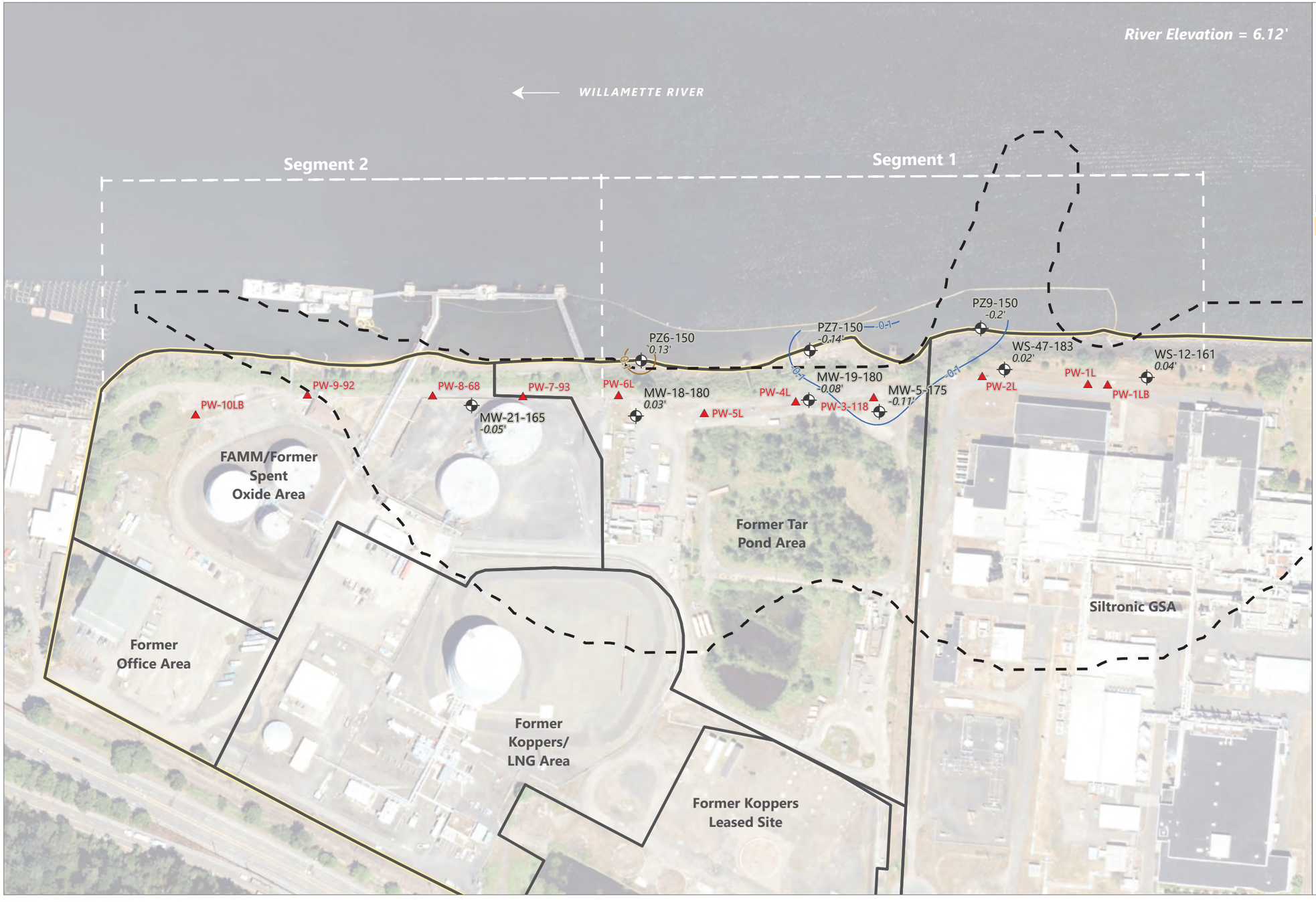
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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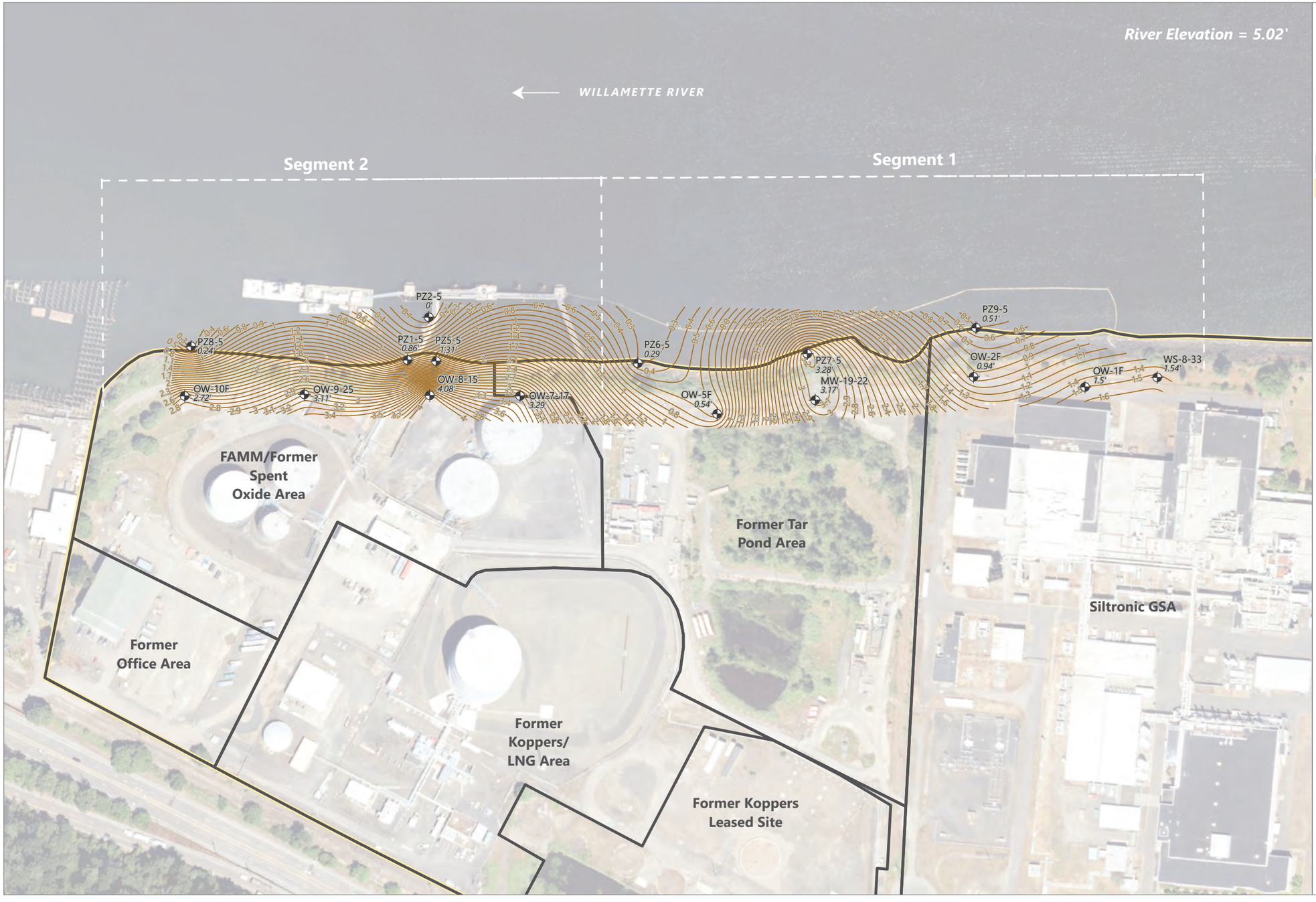
ANCHOR QEA

Figure 3.3d
Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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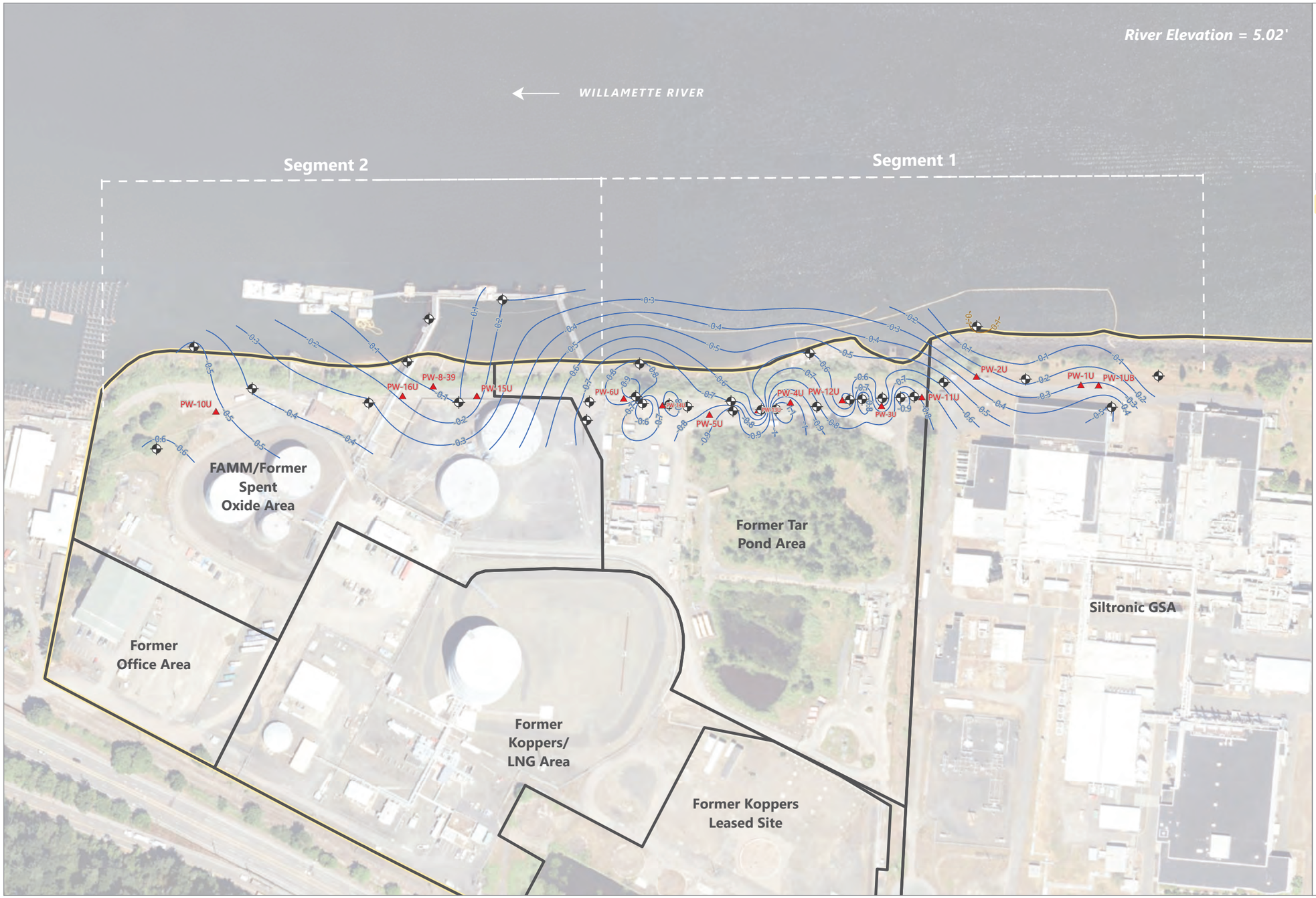
ANCHOR QEA

Figure 3.4a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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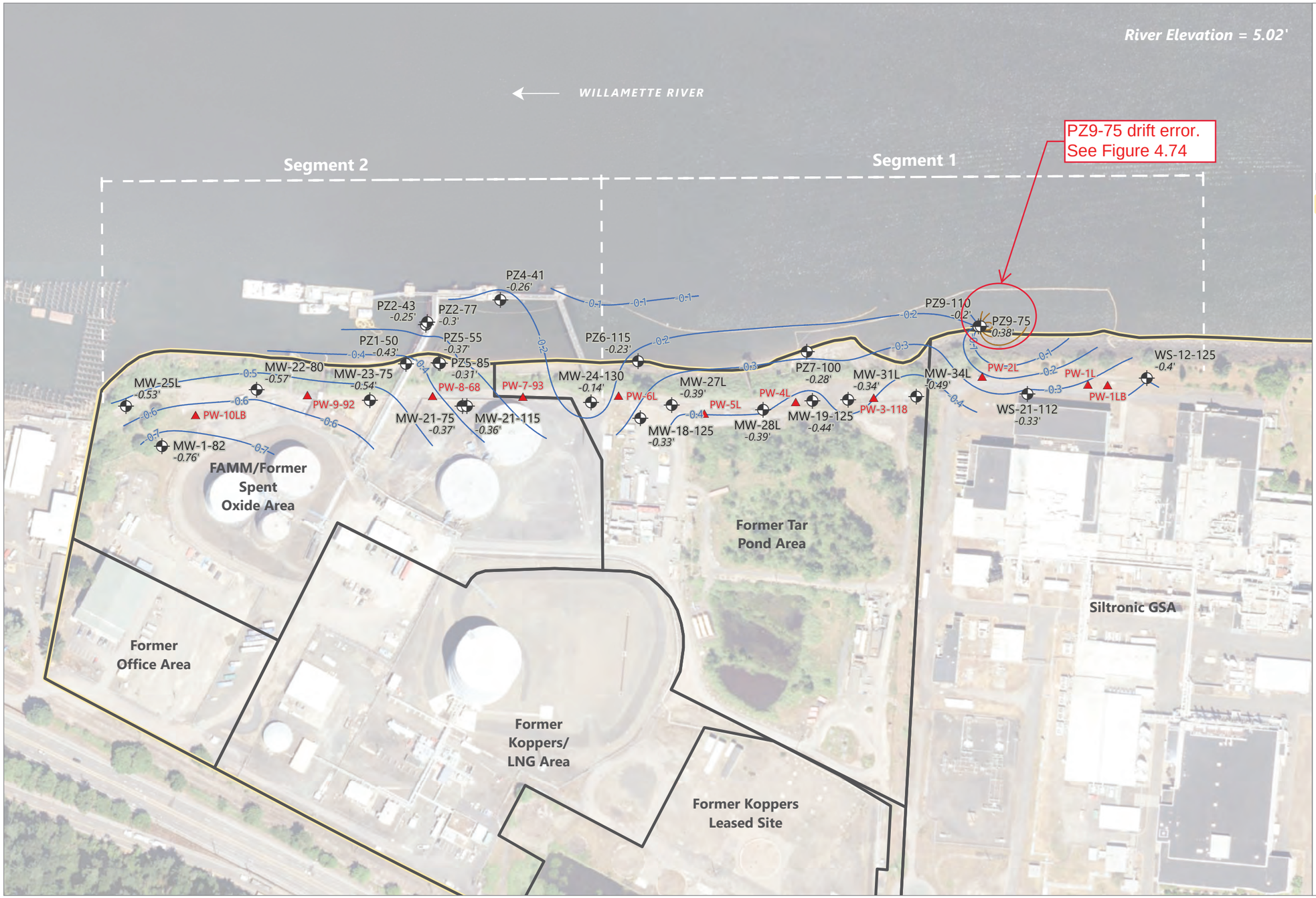
ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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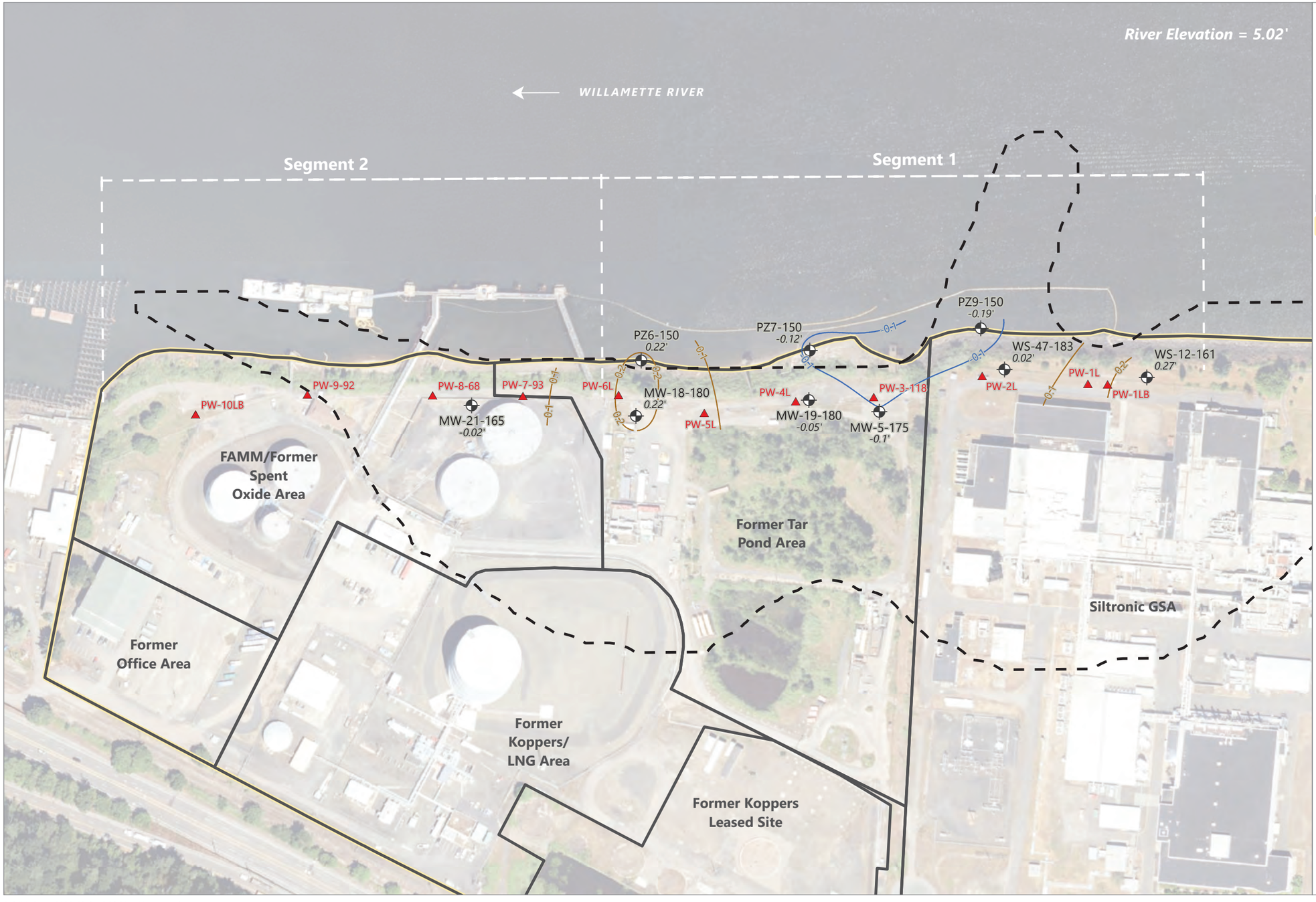
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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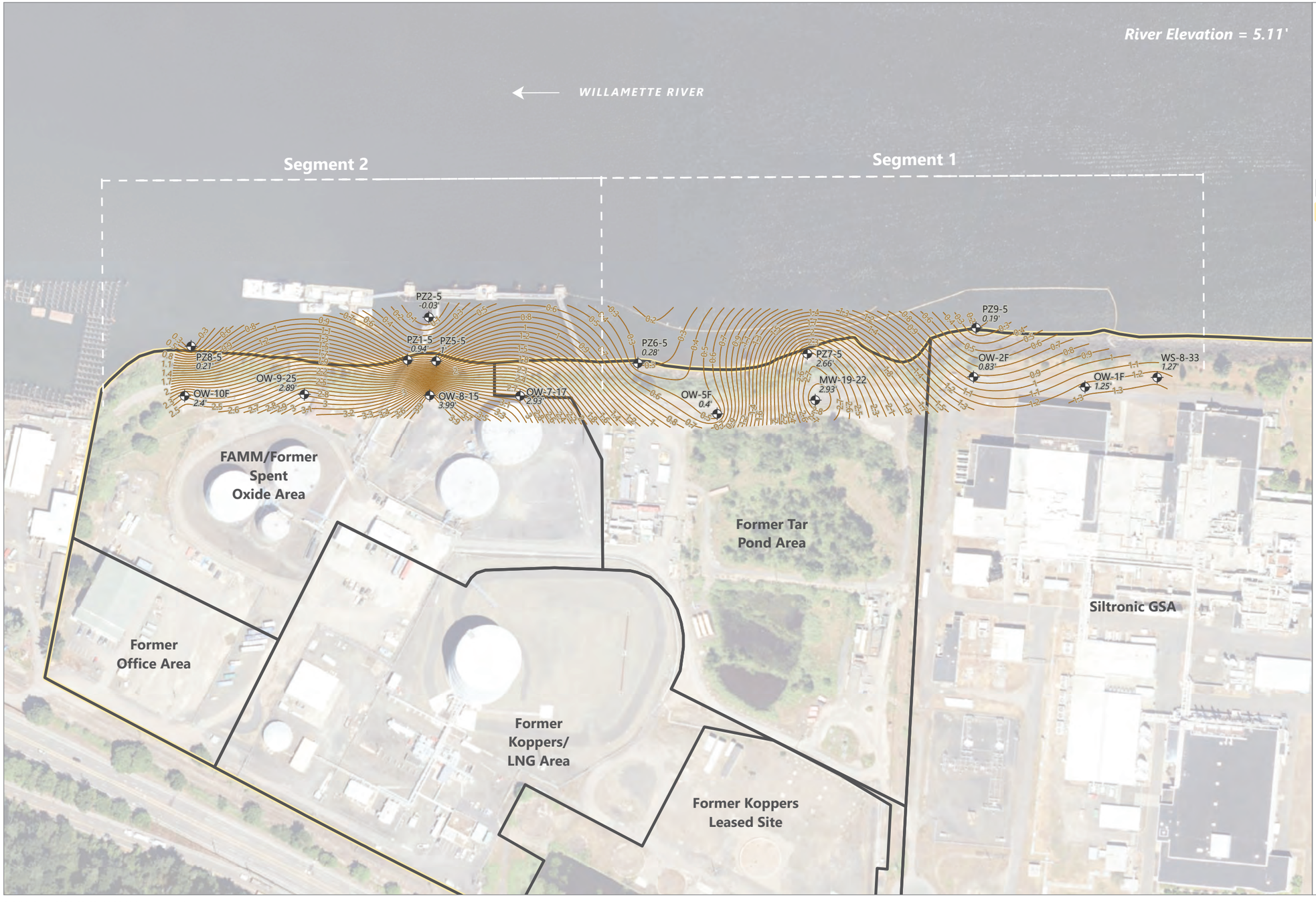
ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Segment Lines
- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.3a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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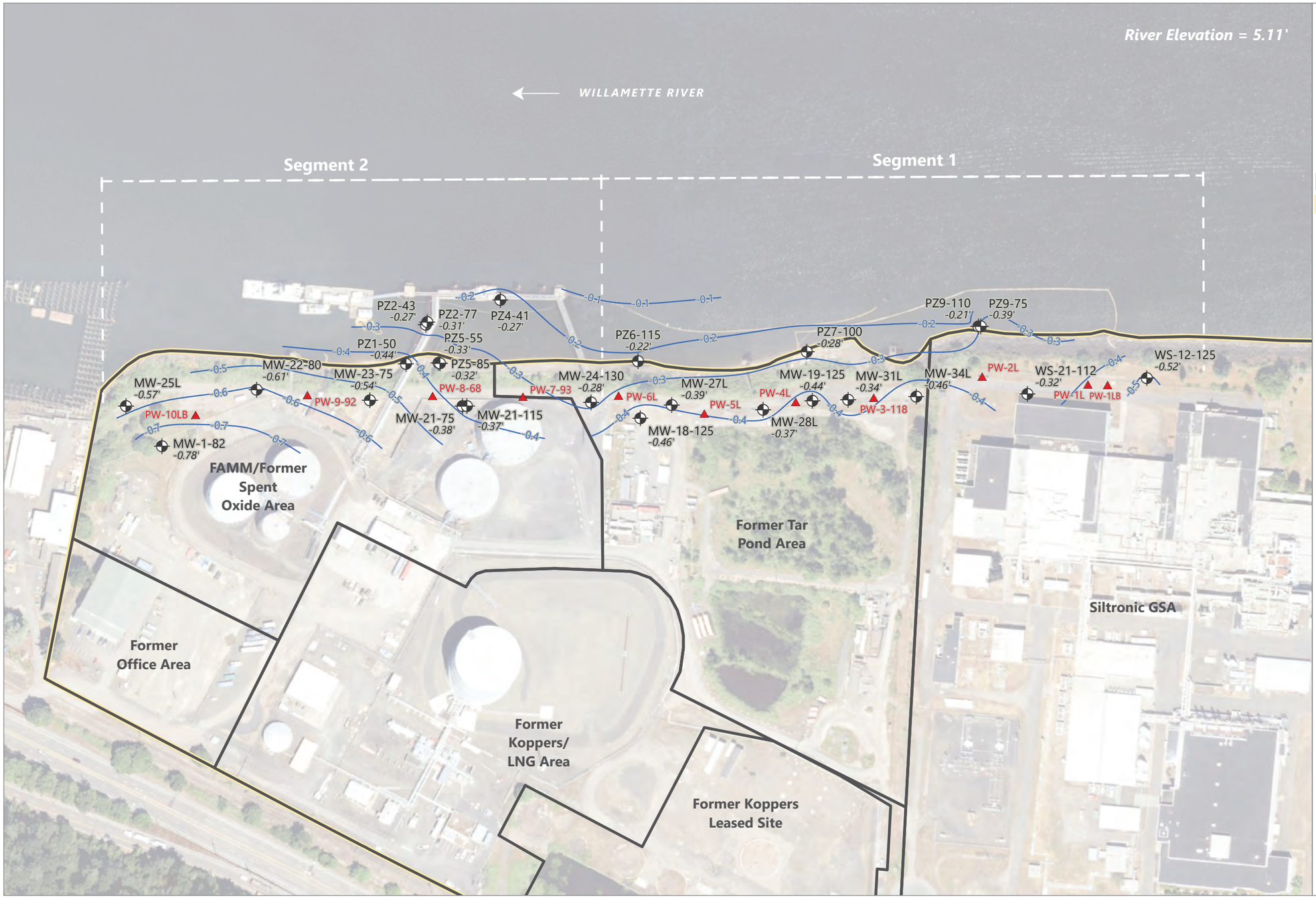
Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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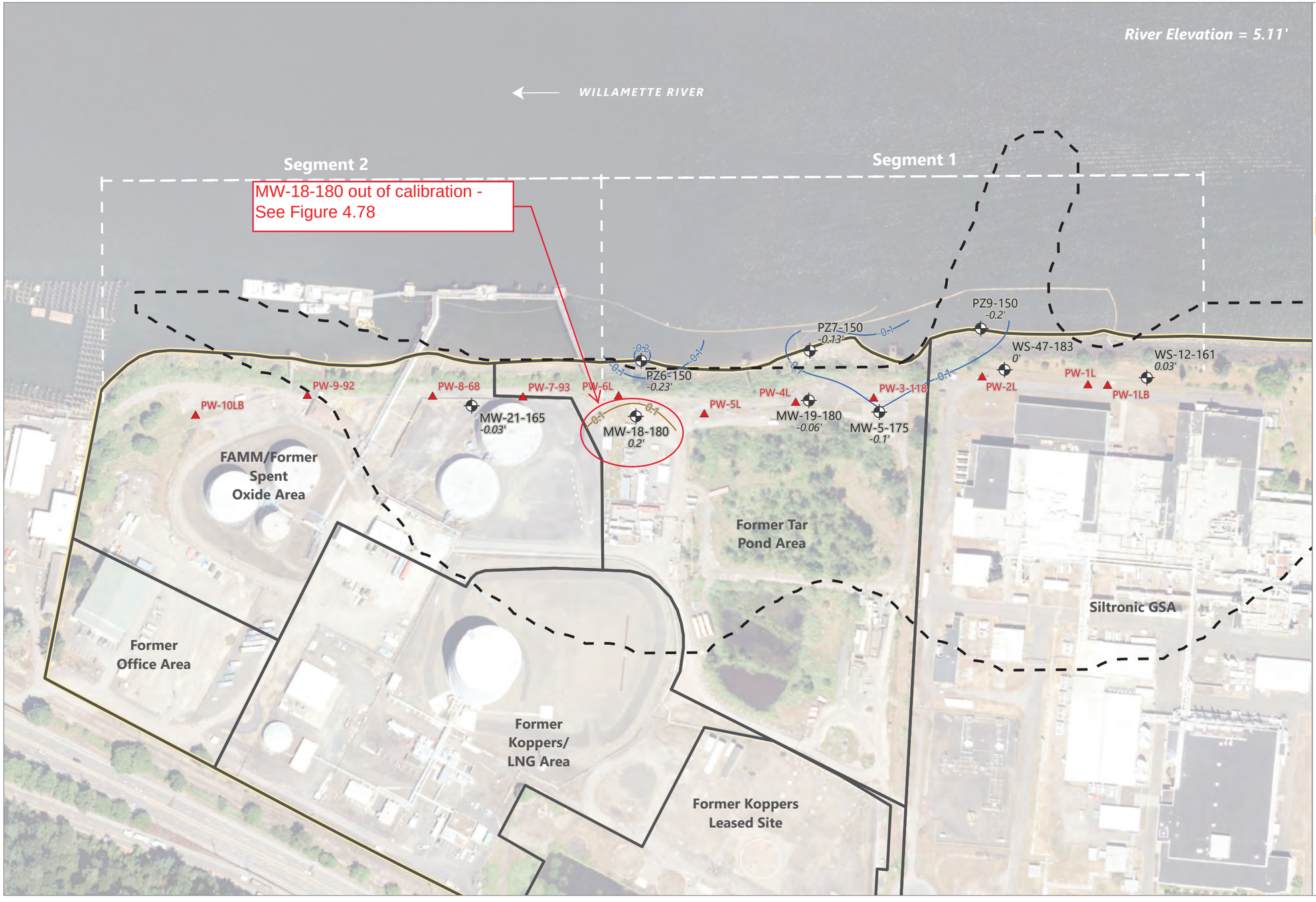
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
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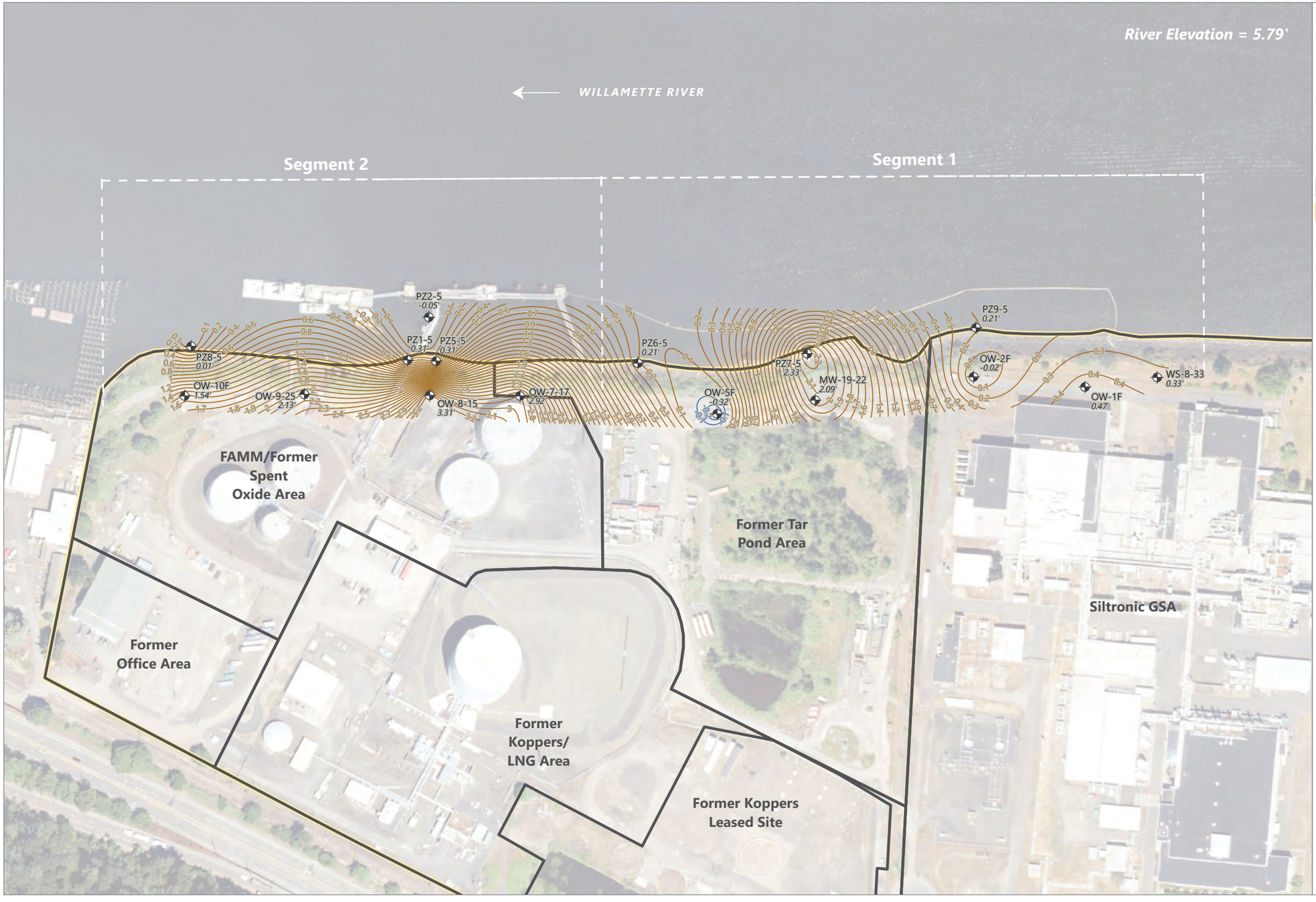
ANCHOR QEA

Figure 3.3d
Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND

- Segment Lines
- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.4a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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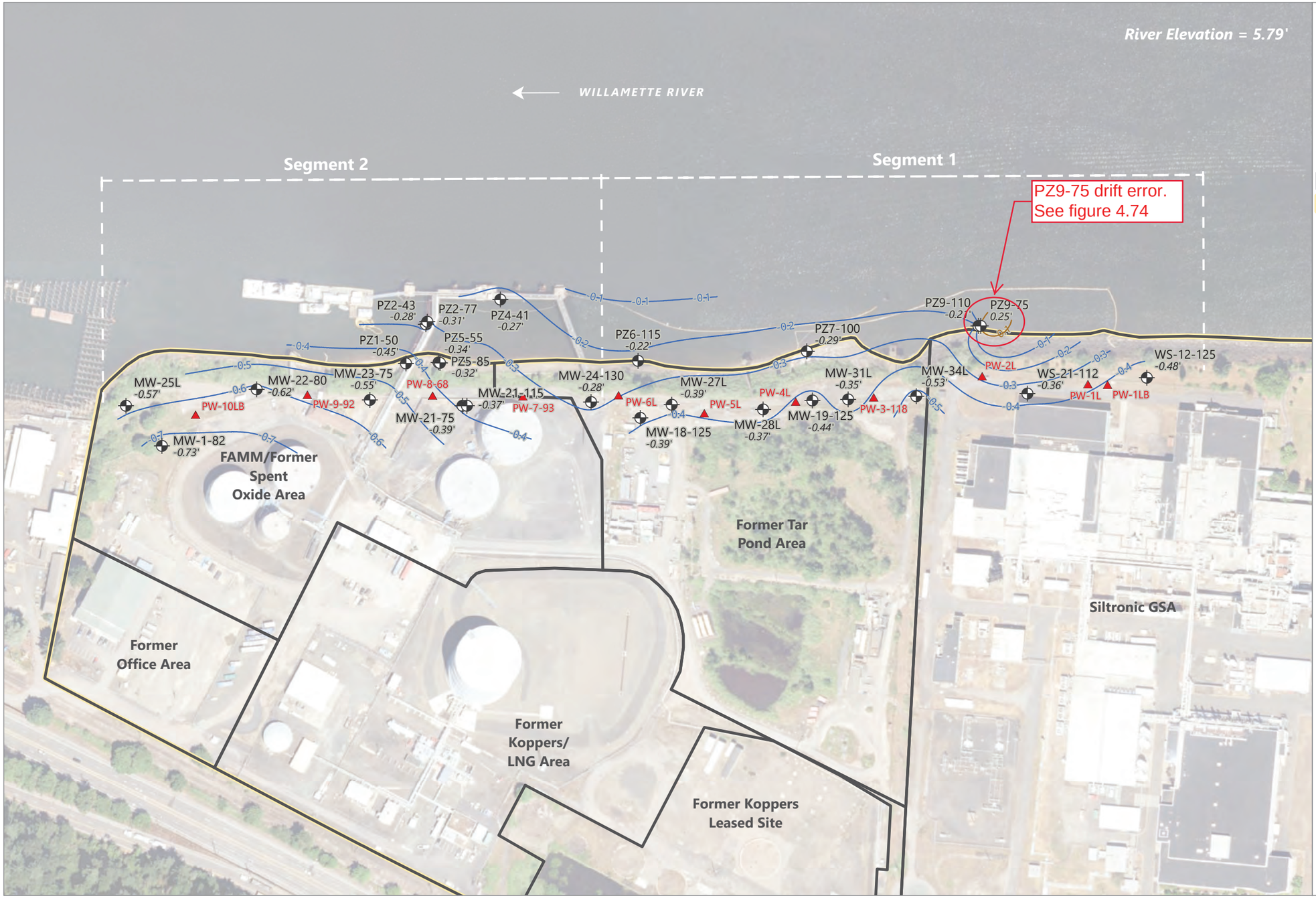
ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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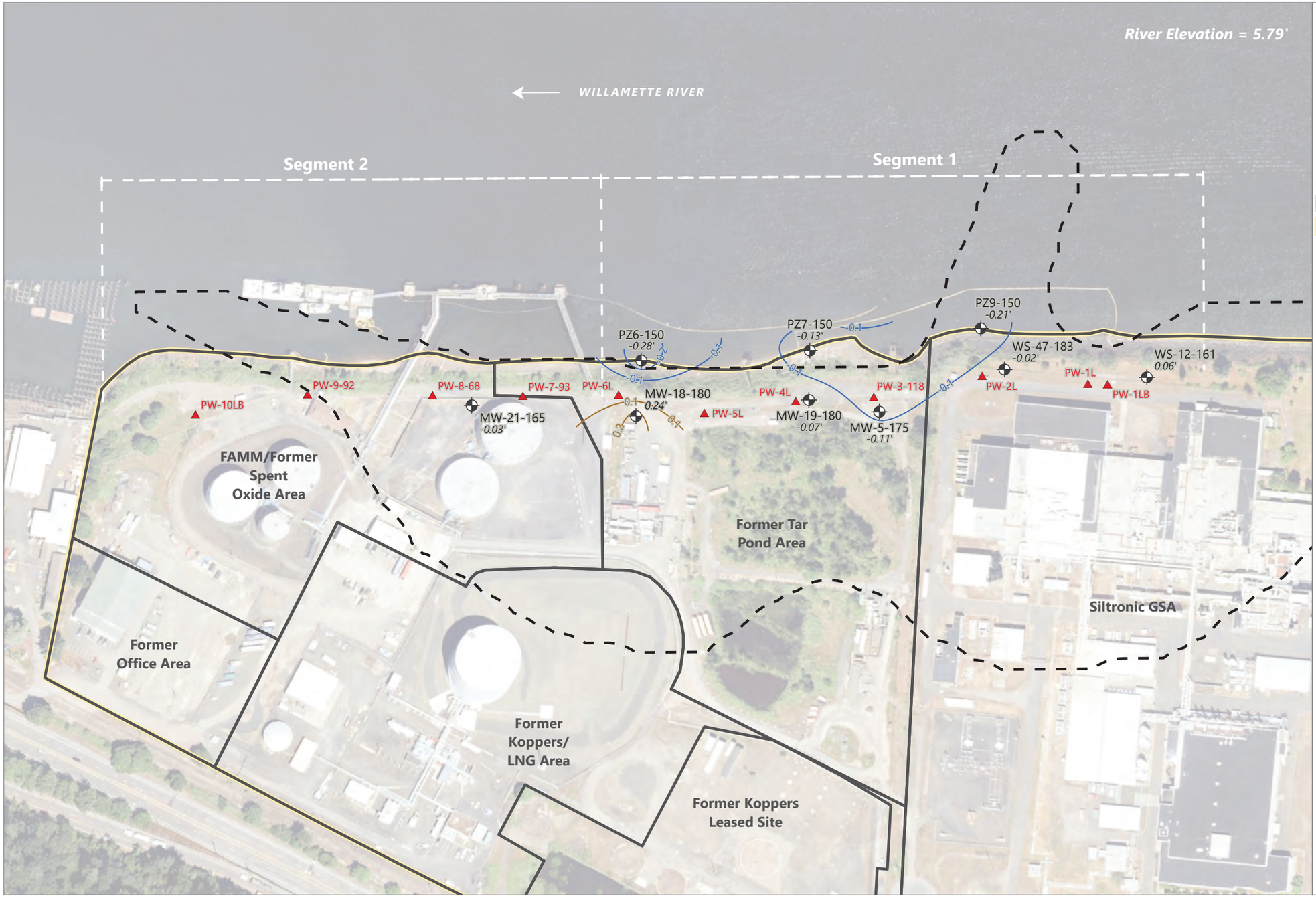
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.4d
Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND

- Segment Lines
- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.3a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
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5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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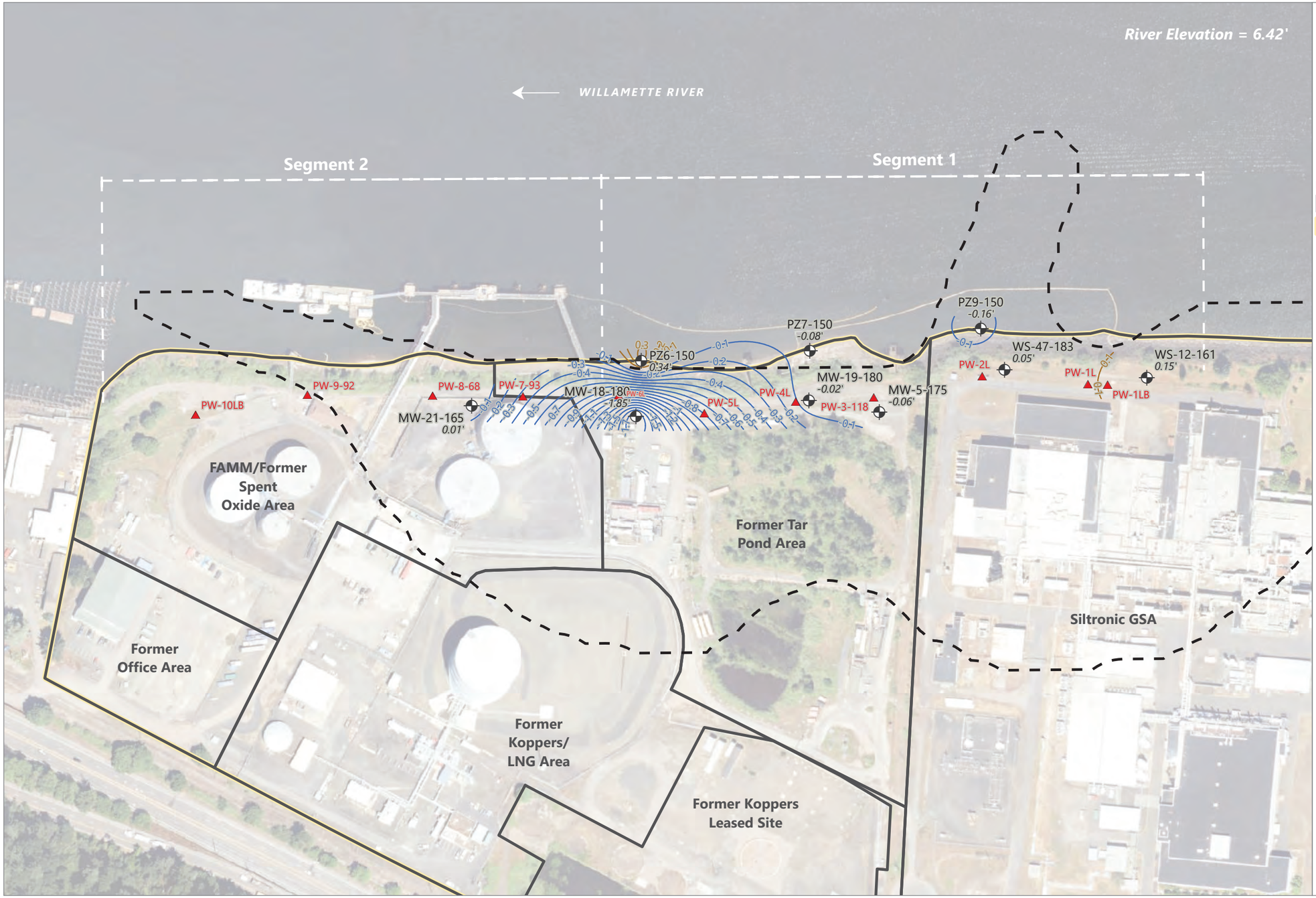
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 3.3d
Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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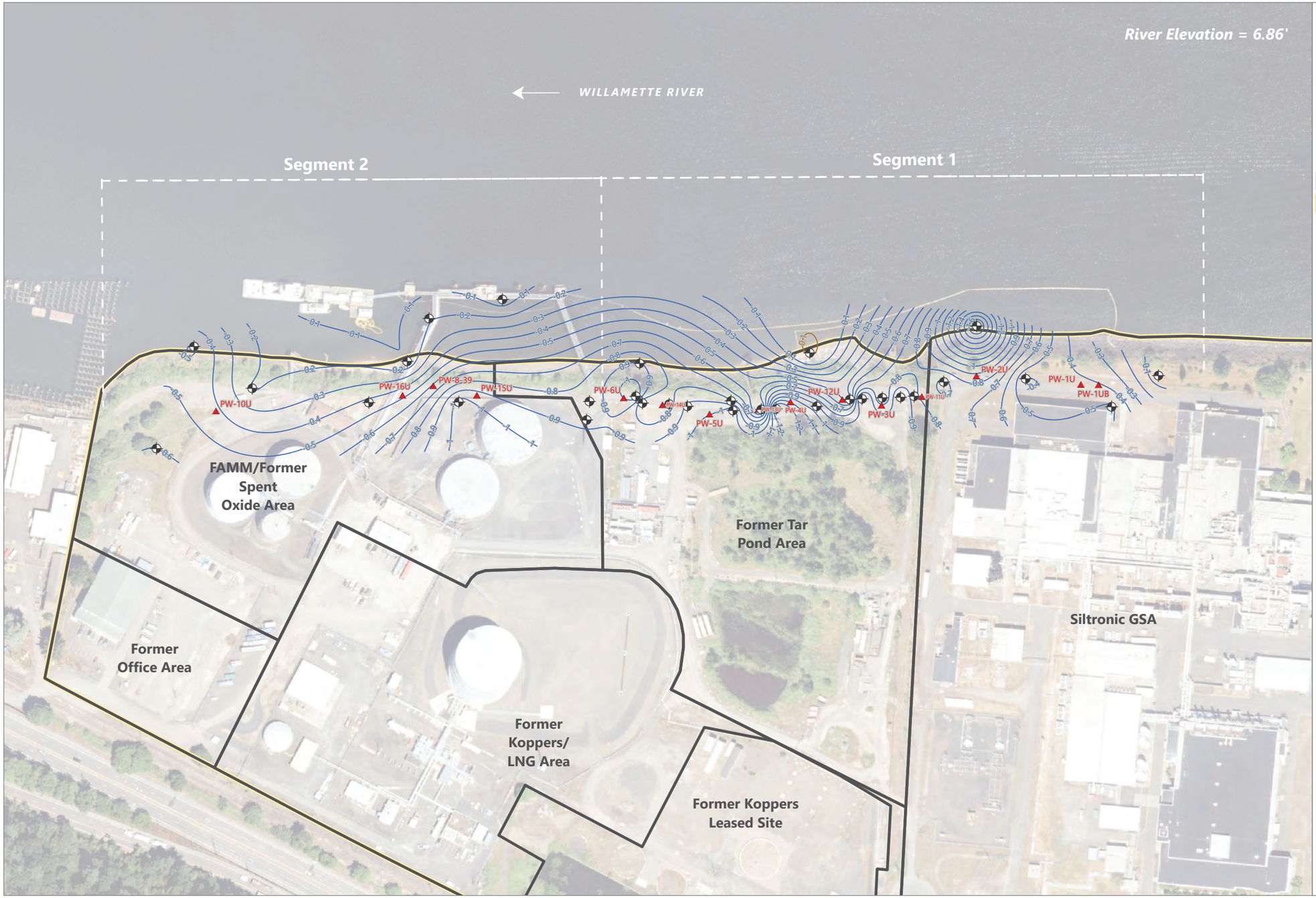
ANCHOR QEA

Figure 3.4a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/16, 3:28 PM | User: cgardner
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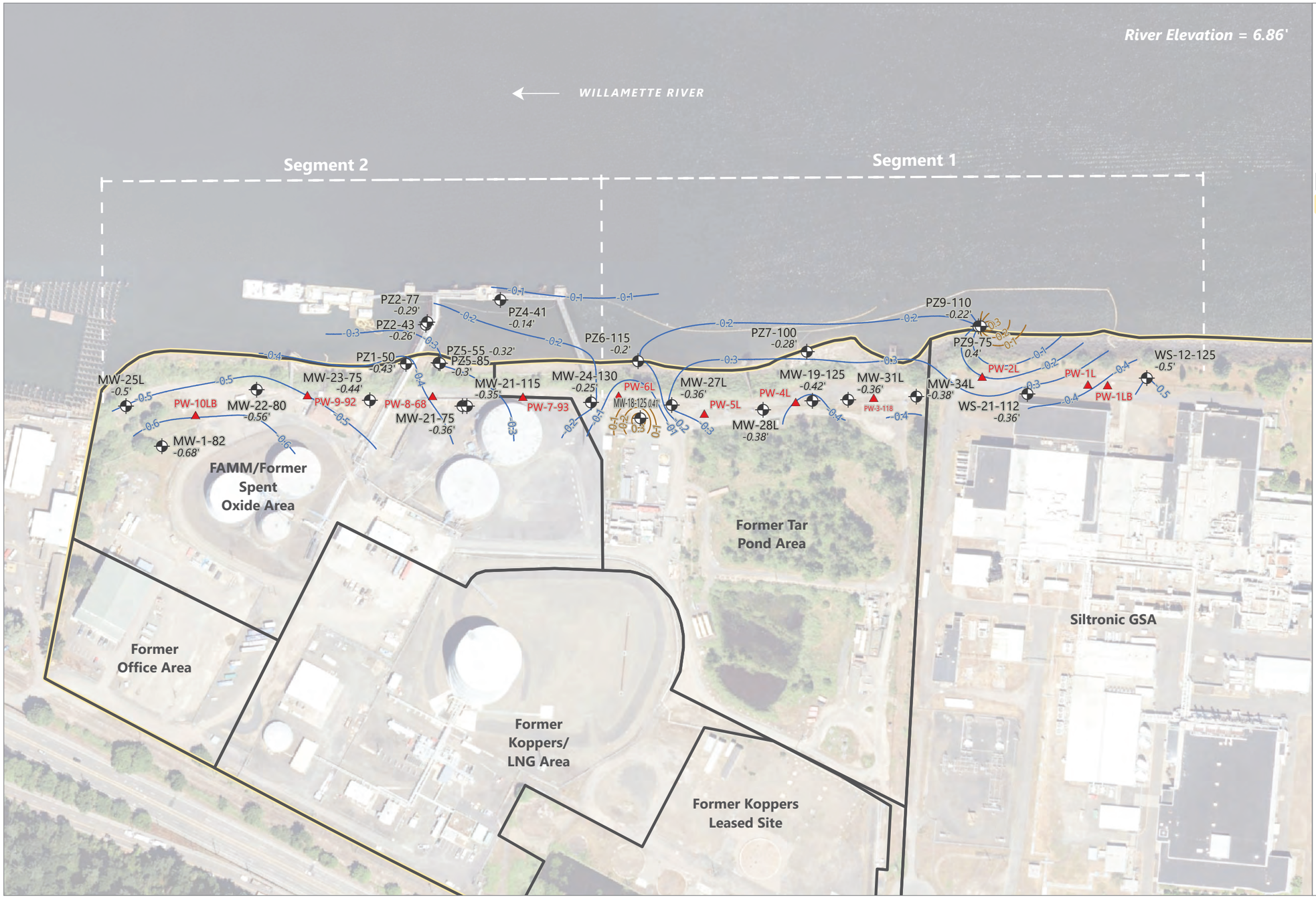
ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/17, 10:45 AM | User: cgardner
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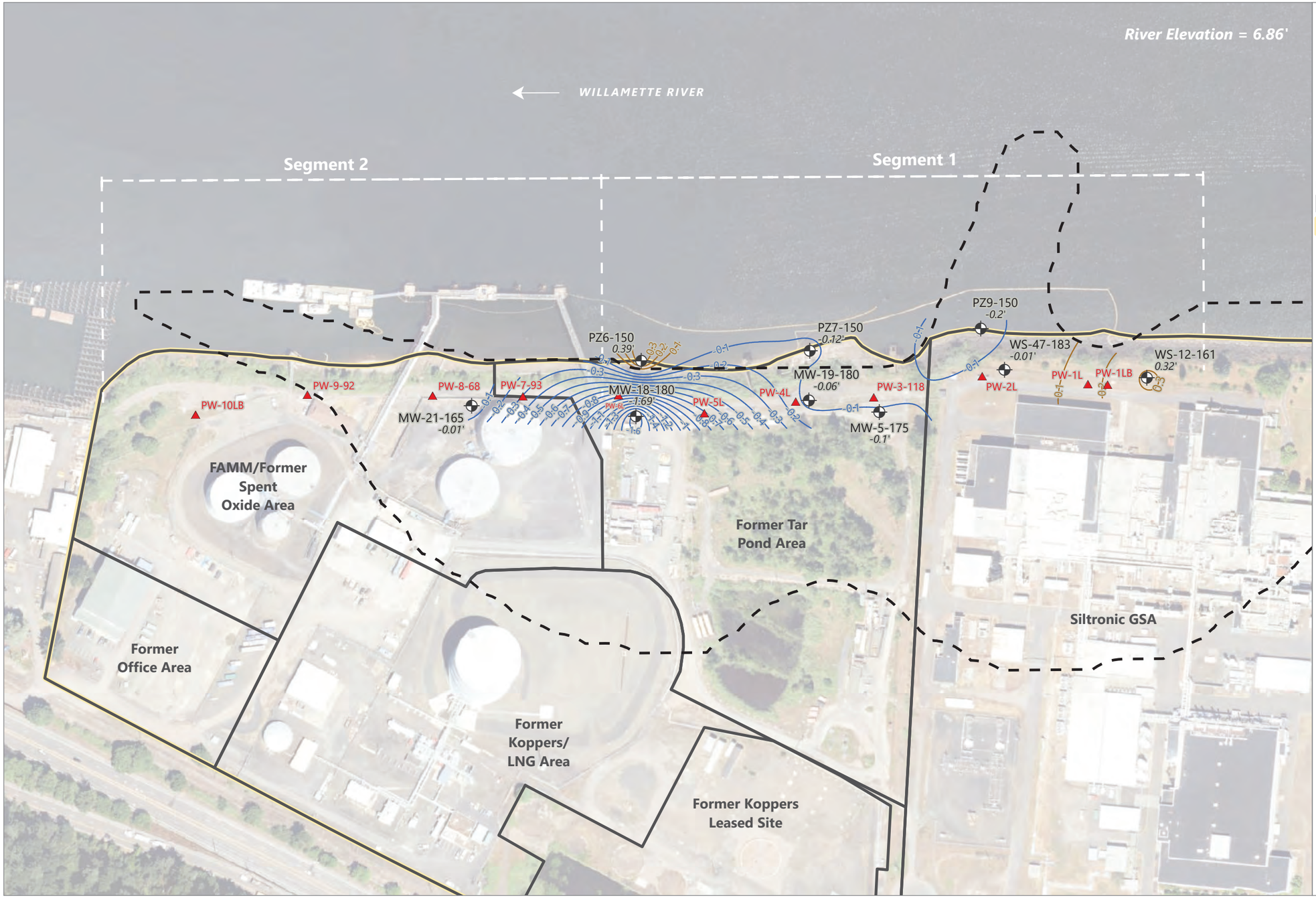
ANCHOR QEA

Figure 3.4c

Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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Figure 3.4d

Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022

NWN Gasco Site
Portland, Oregon

LEGEND

- Segment Lines
- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/24, 11:25 AM | User: cgardner
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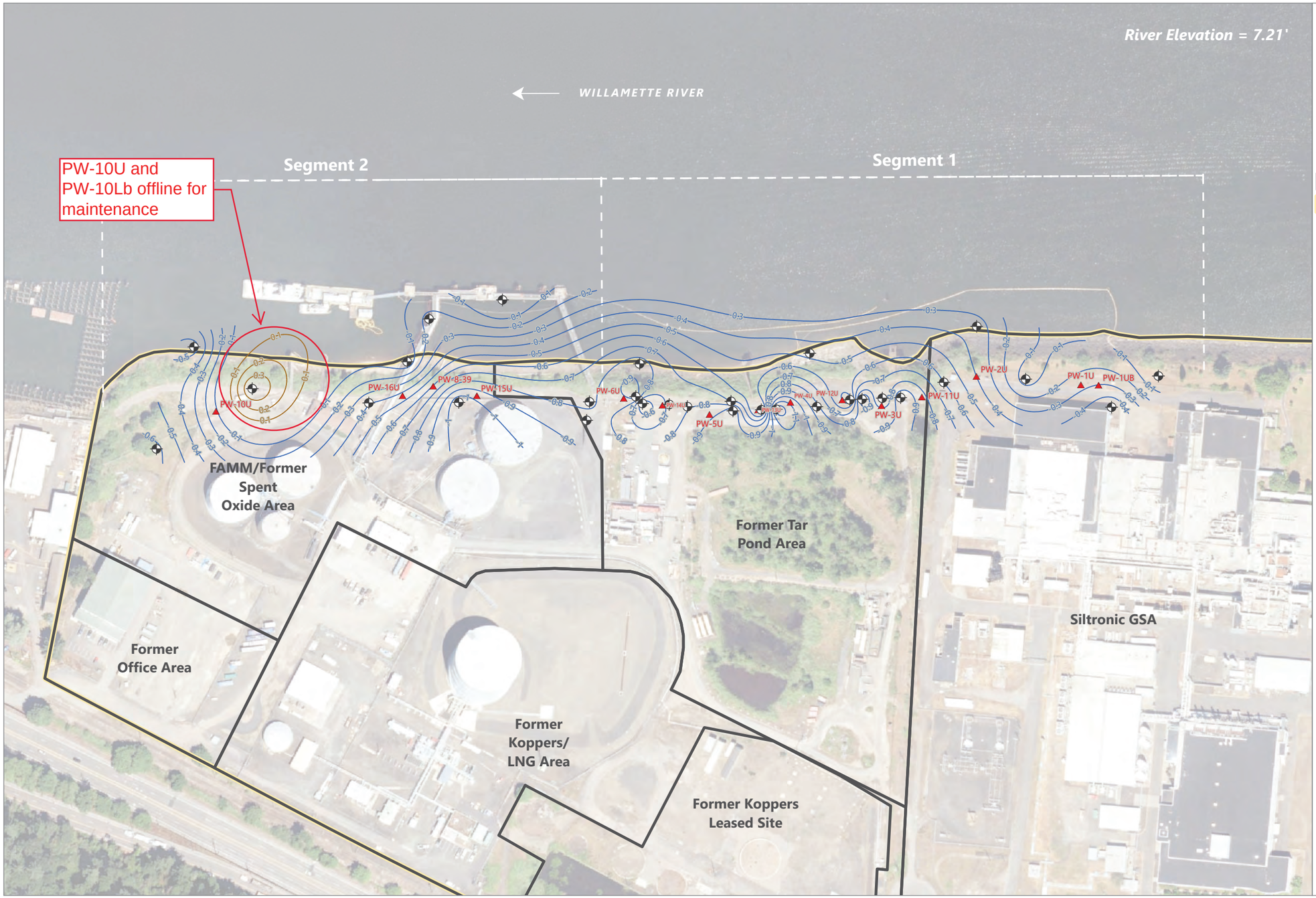
ANCHOR QEA

Figure 3.3a
Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/24, 12:27 PM | User: cgardner
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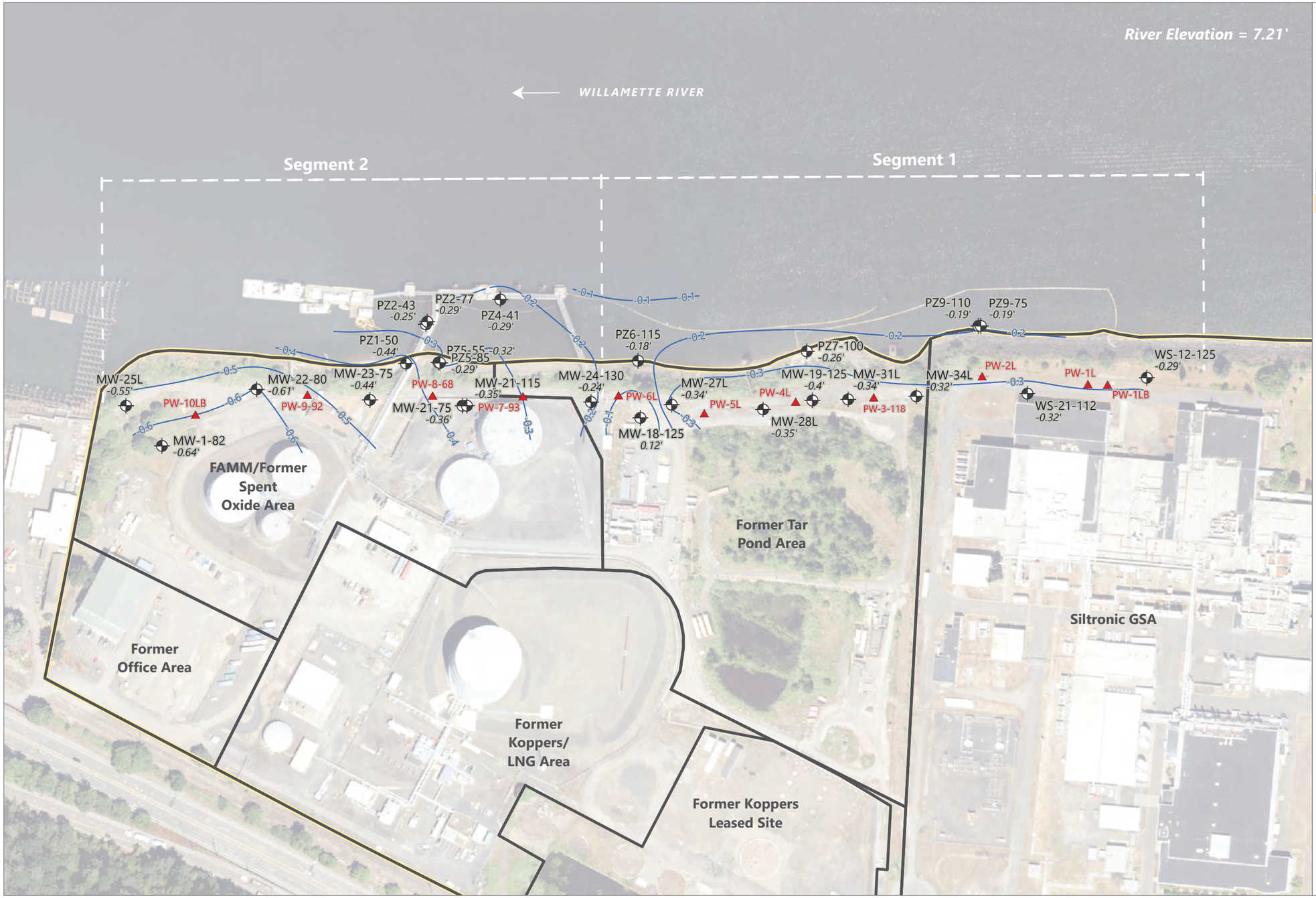
ANCHOR QEA

Figure 3.3b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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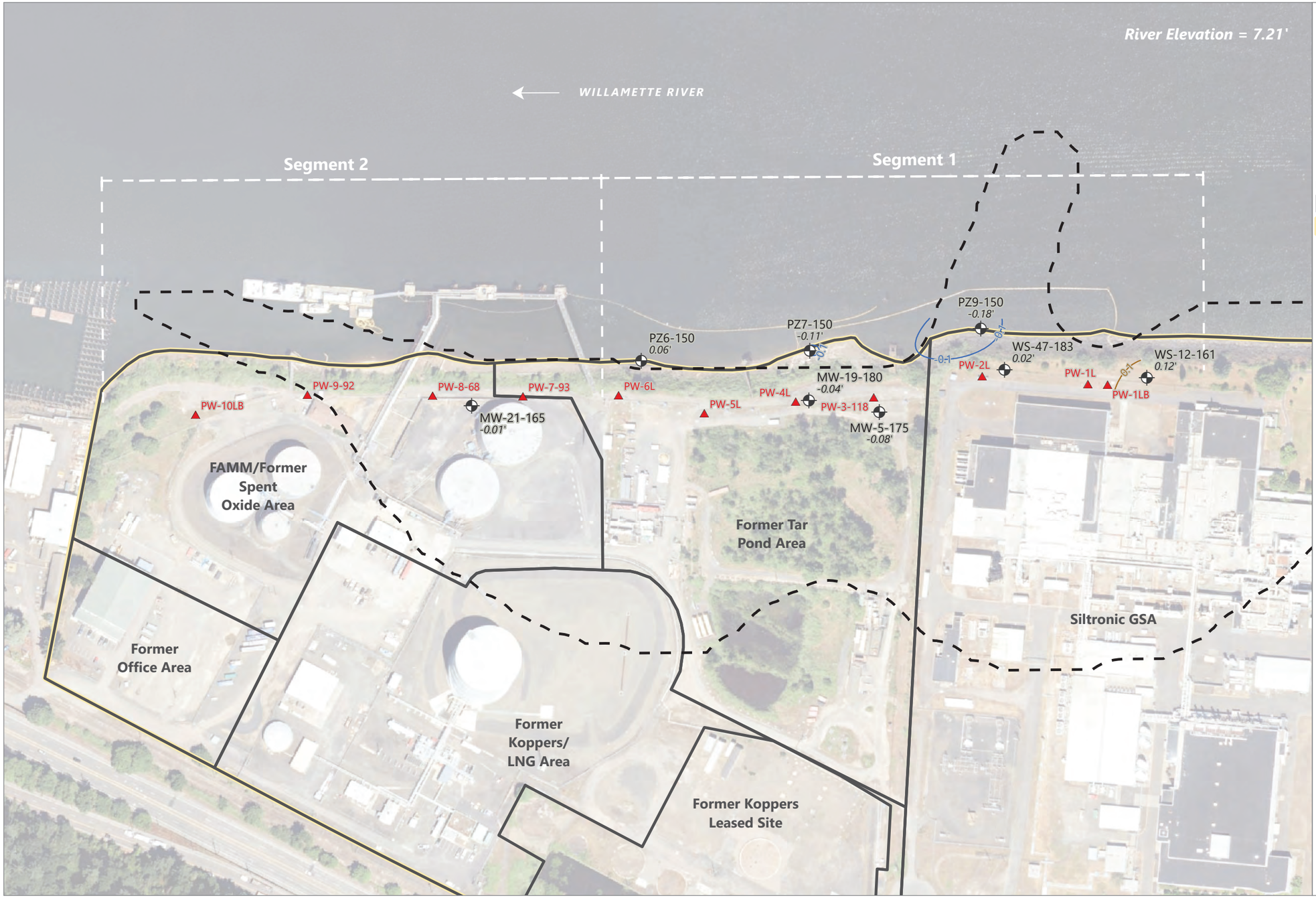
ANCHOR QEA

Figure 3.3c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300

Feet

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ANCHOR QEA

Figure 3.3d

Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND

- Segment Lines
- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as groundwater elevation minus river elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300

Feet

Publish Date: 2023/01/24, 4:25 PM | User: cgardner
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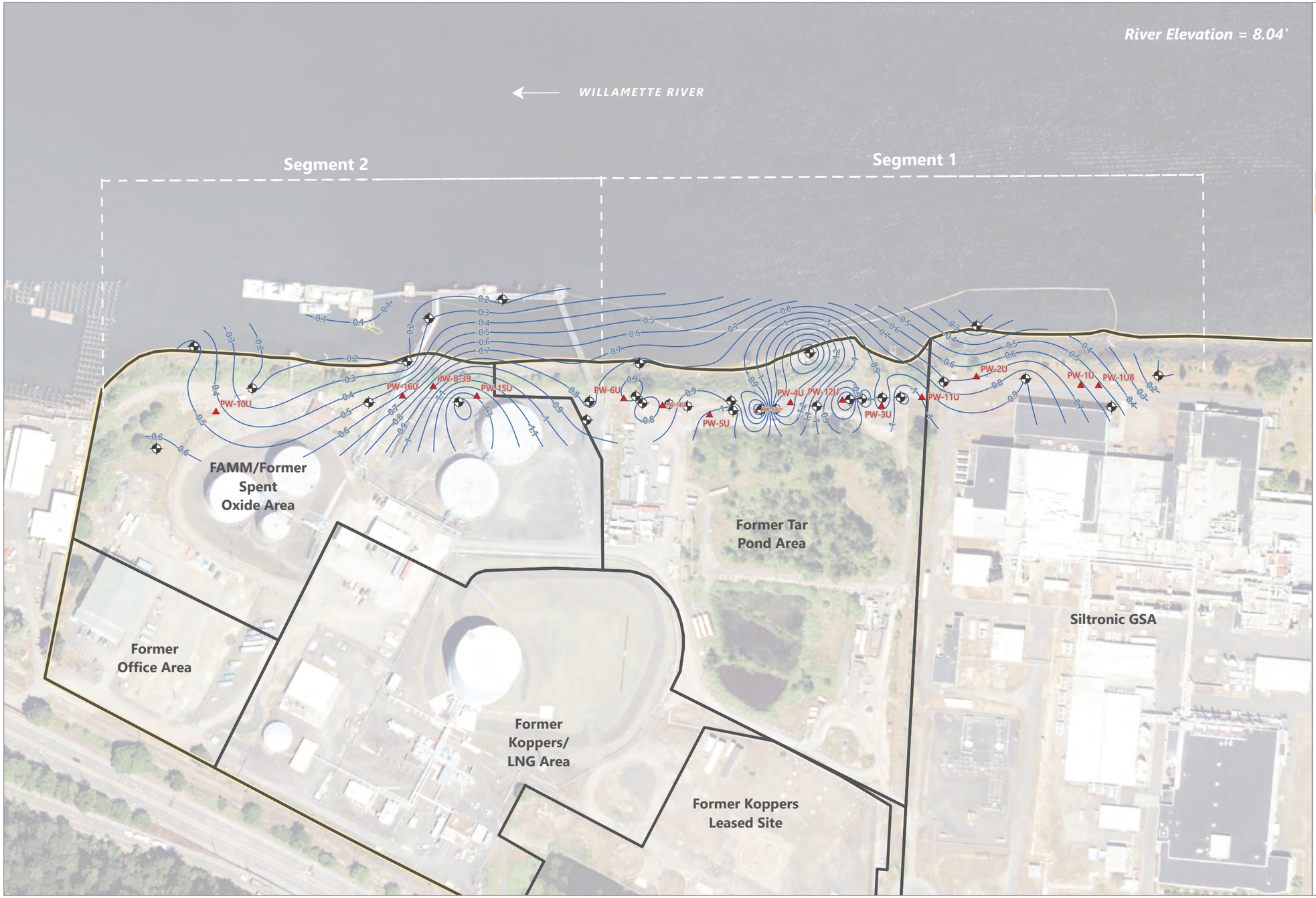
Figure 3.4a

Contours of Water Elevation Difference Between Fill WBZ and River Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022

NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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4. Locations PZ5-20 and MW-5-32 were not used.
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
7. Aerial imagery from City of Portland 2021.

0 300
Feet

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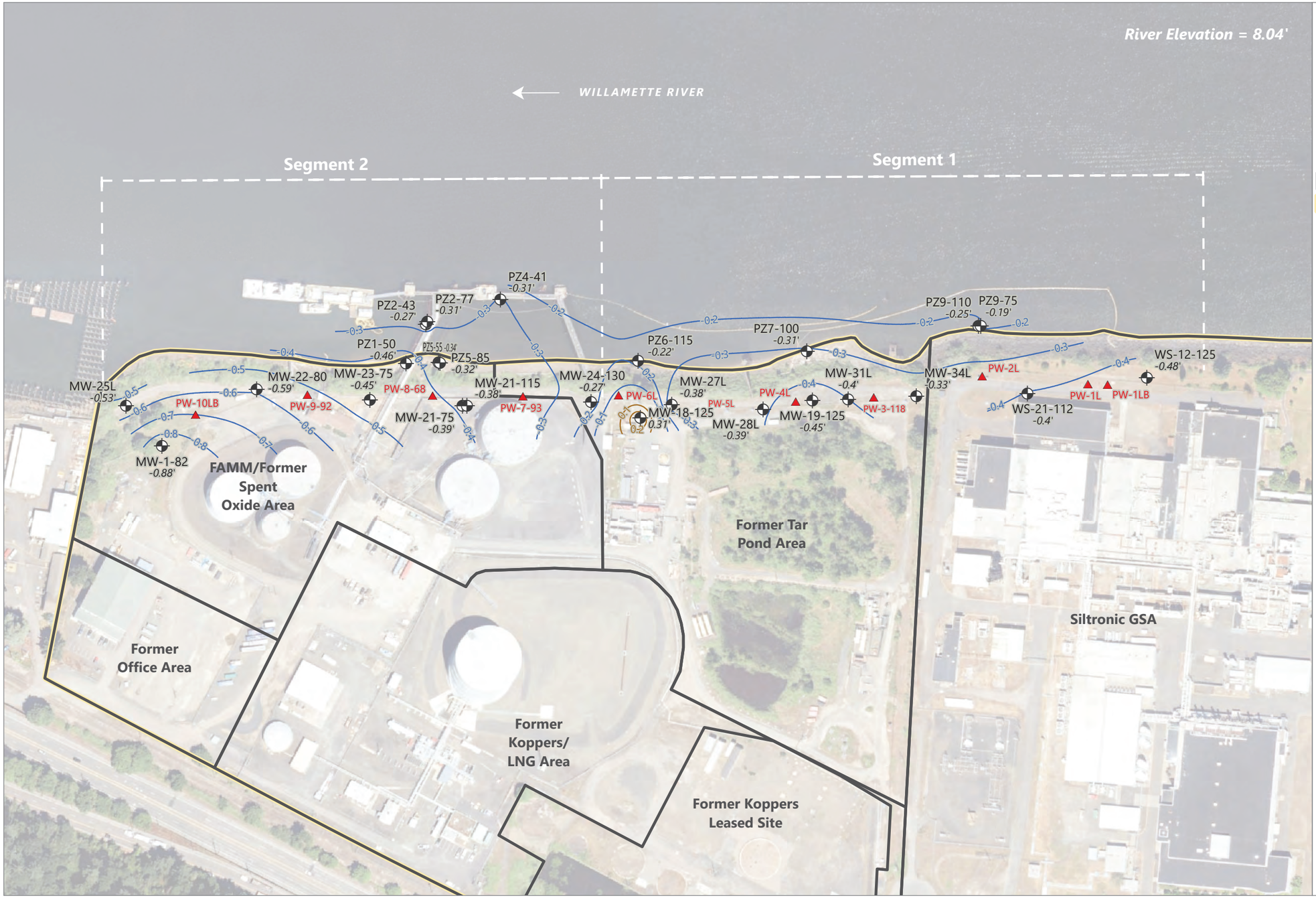
ANCHOR QEA

Figure 3.4b
Contours of Water Elevation Difference Between Upper Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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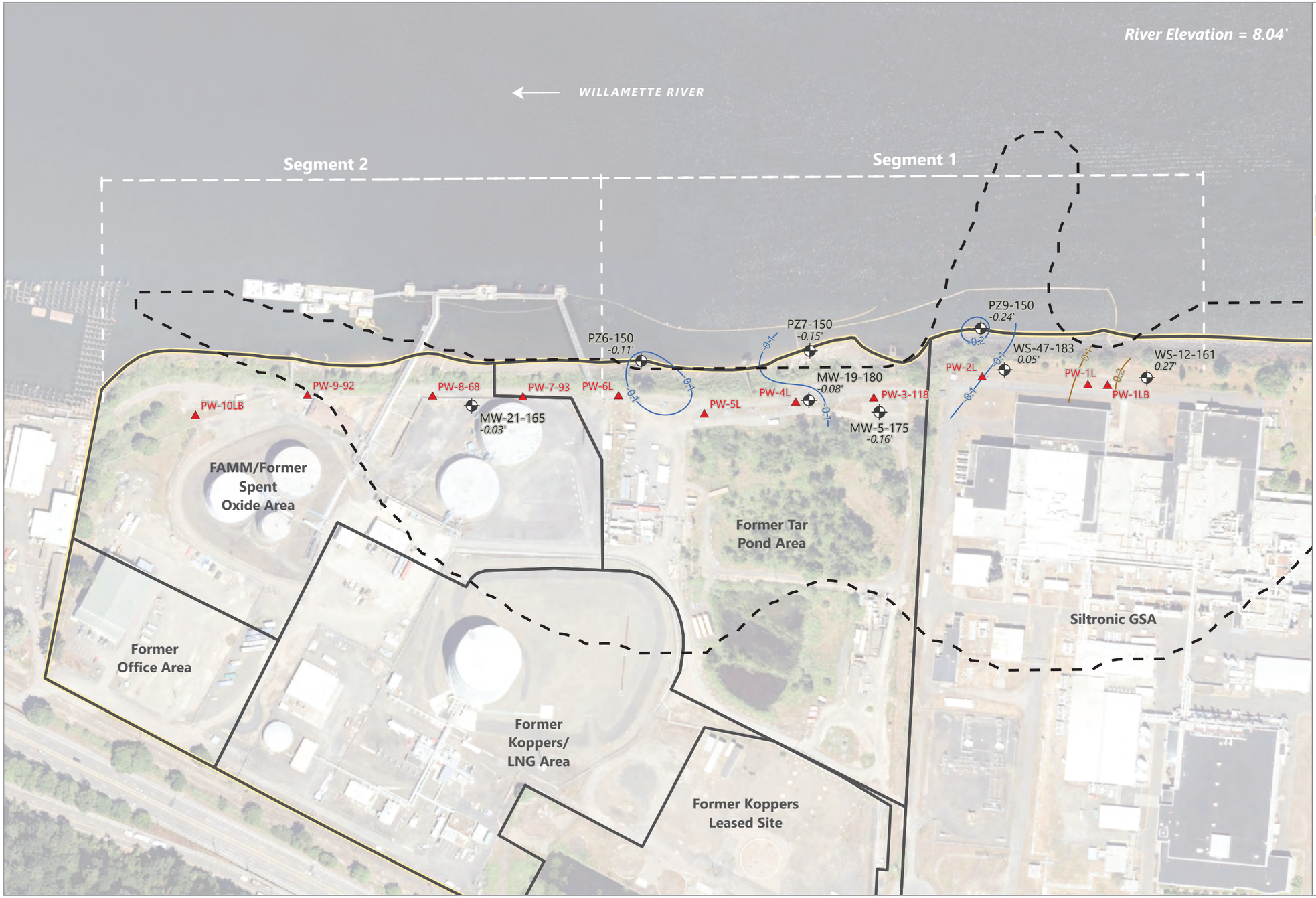
ANCHOR QEA

Figure 3.4c
Contours of Water Elevation Difference Between Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Monitoring Well Location and Elevation Difference between Water Bearing Zone and River in Feet
- Pumping Well Location
- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Extent of Deep Aquitard
- Geographic Subareas
- Approximate Gasco OU Boundary

NOTES:

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4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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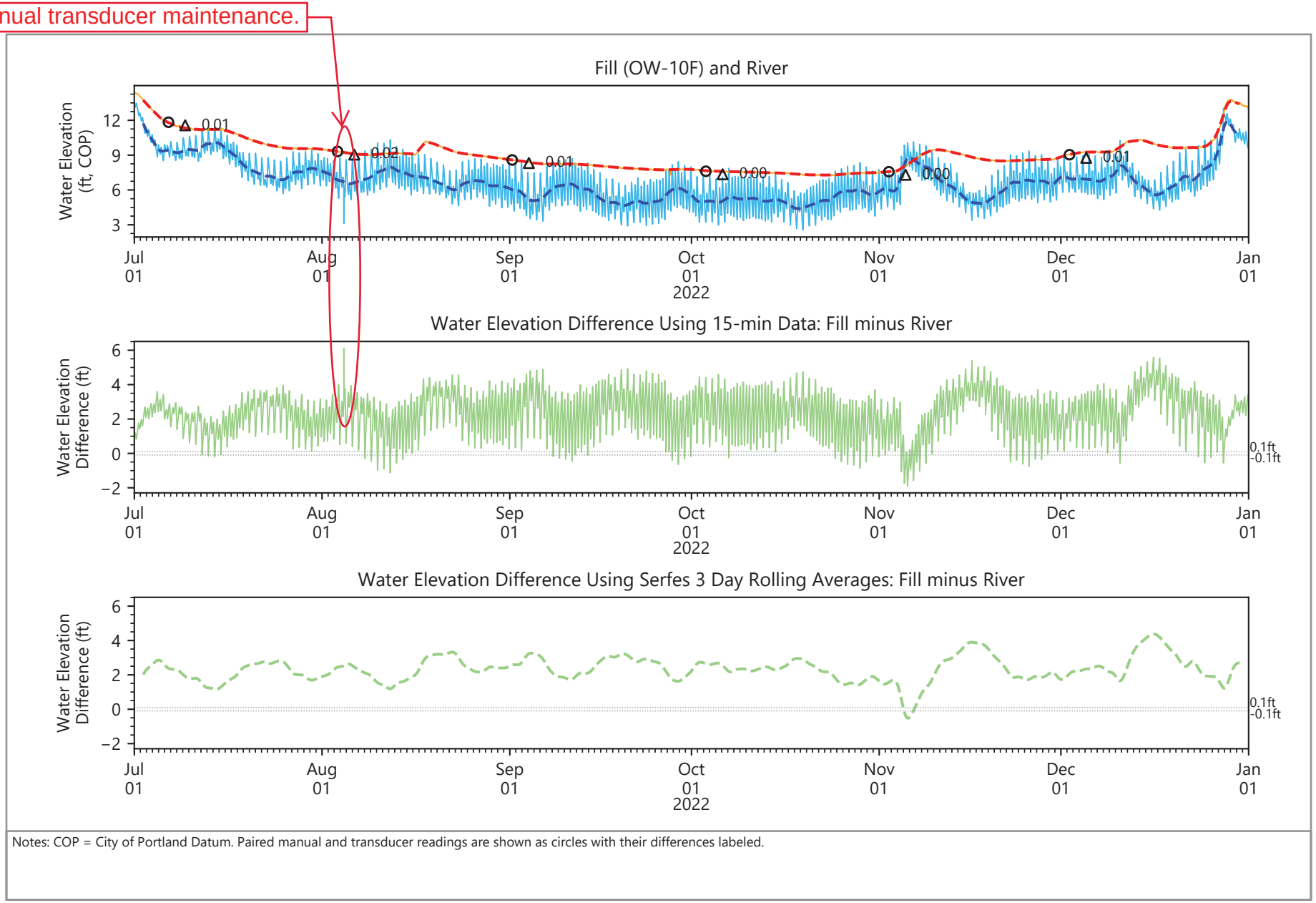
ANCHOR QEA

Figure 3.4d

Contours of Water Elevation Difference Between Deep Lower Alluvium WBZ and River Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022

NWN Gasco Site
Portland, Oregon

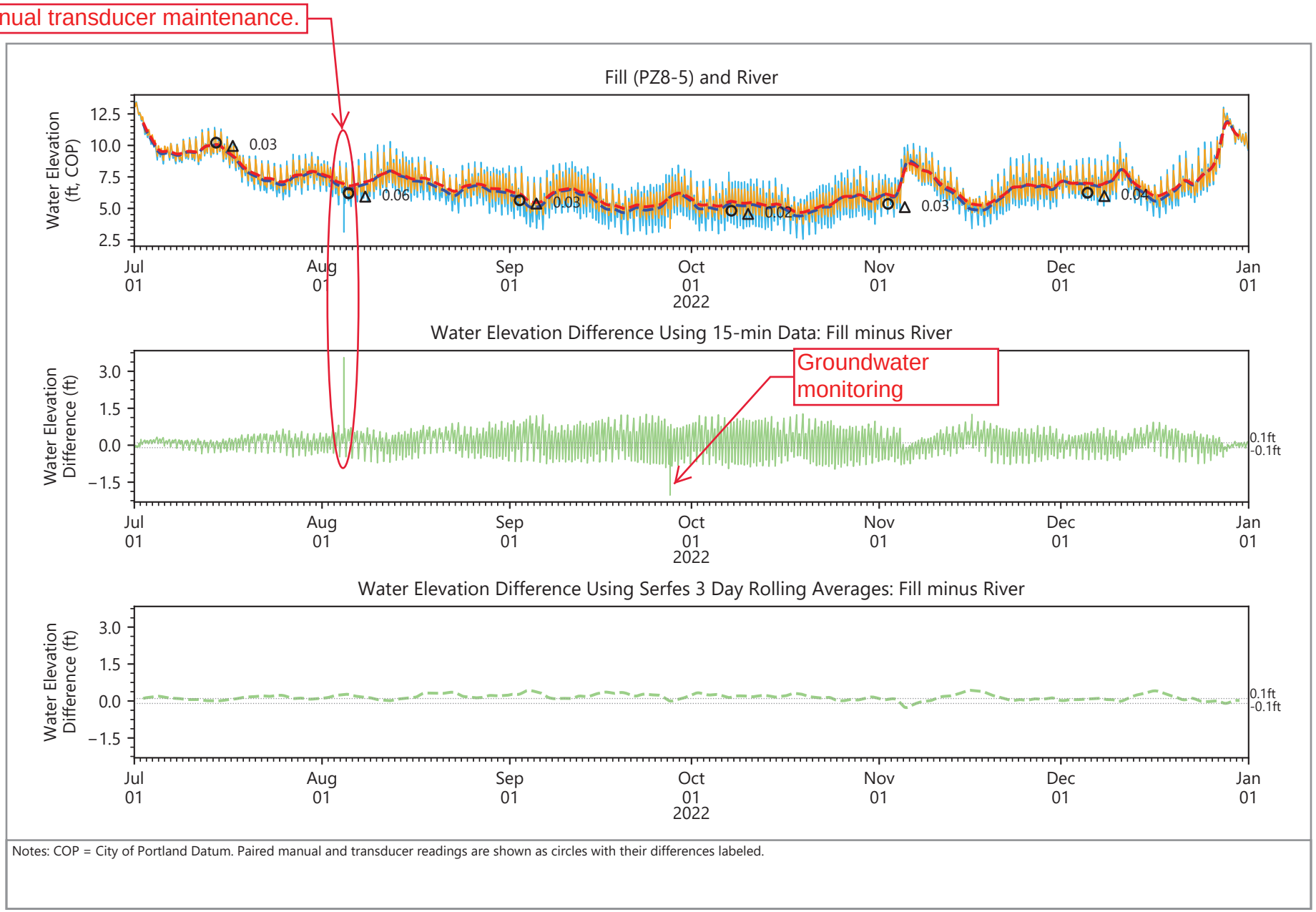


Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.1
Groundwater Elevation Differences
NW Natural Gasco Site



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File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

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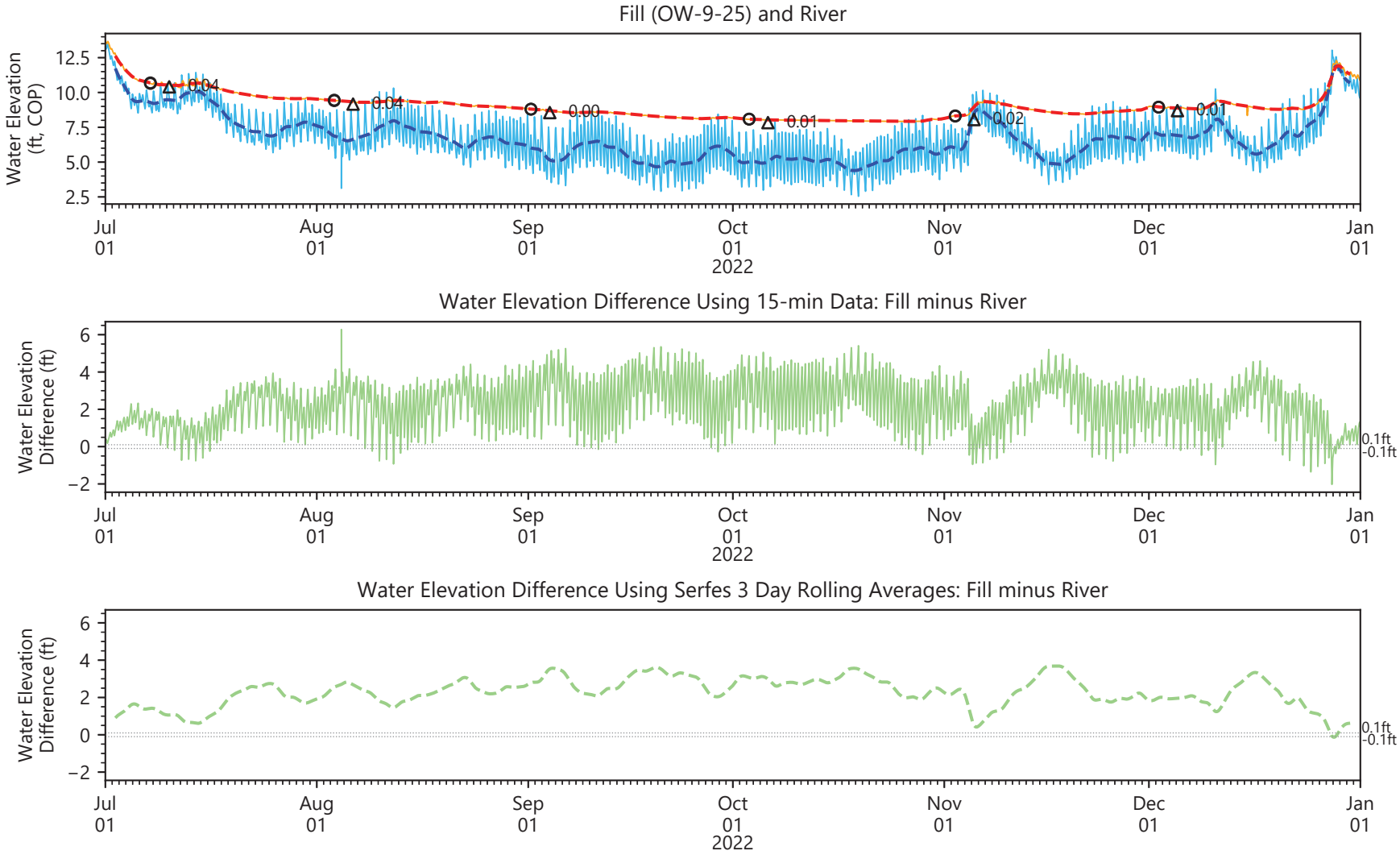
Figure 4.2
Groundwater Elevation Differences
NW Natural Gasco Site



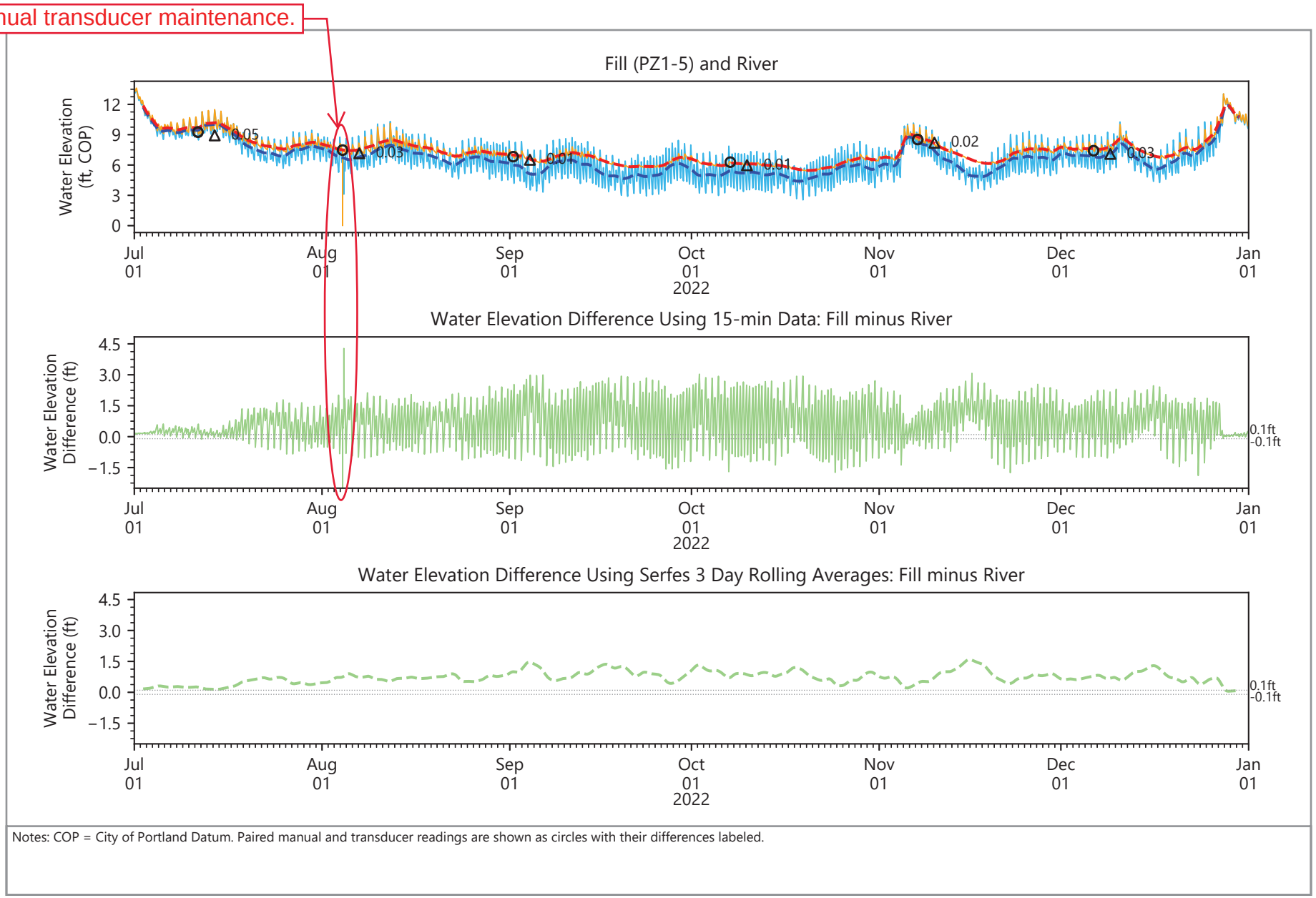
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.3
Groundwater Elevation Differences
NW Natural Gasco Site



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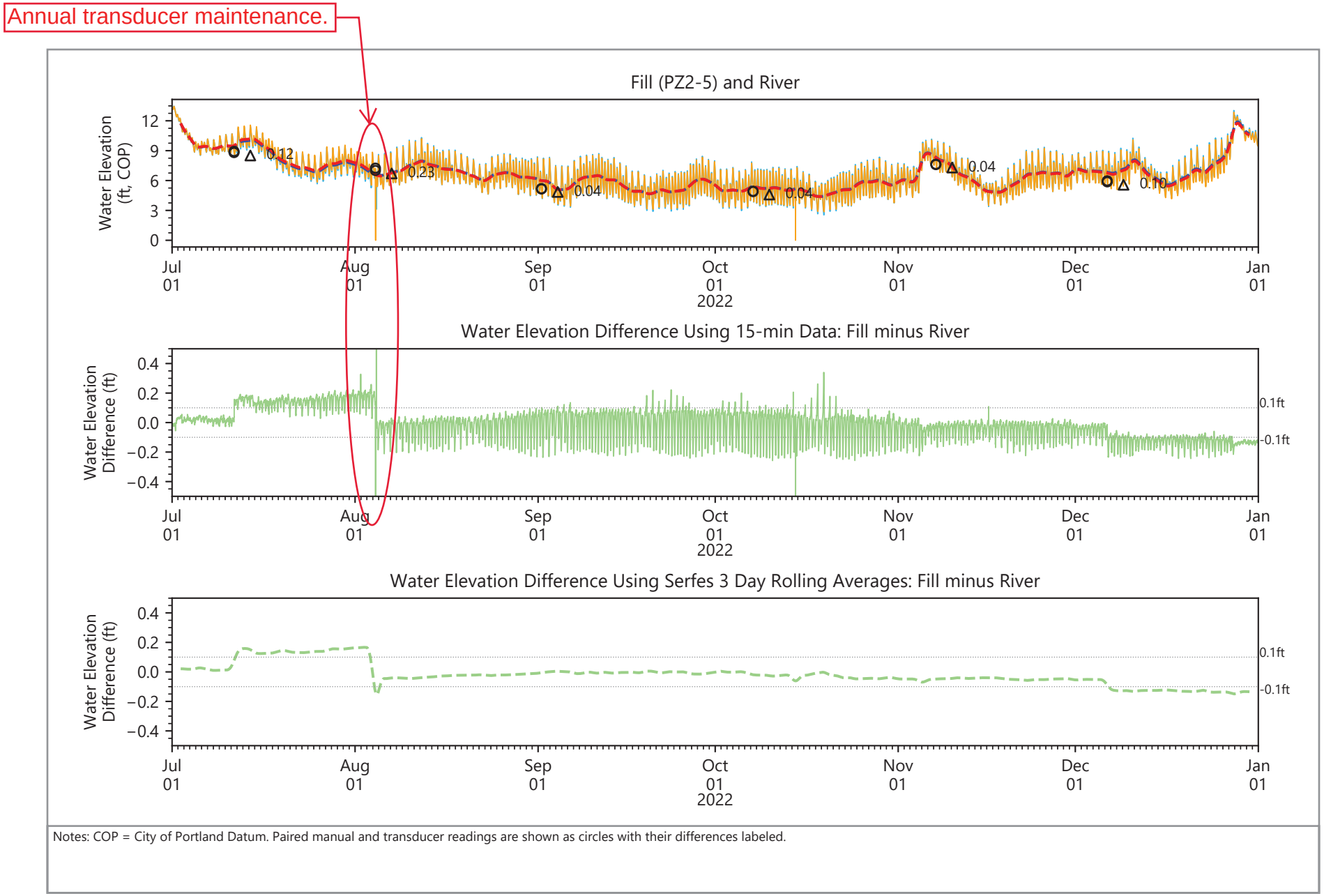
ANCHOR QEA

Figure 4.4
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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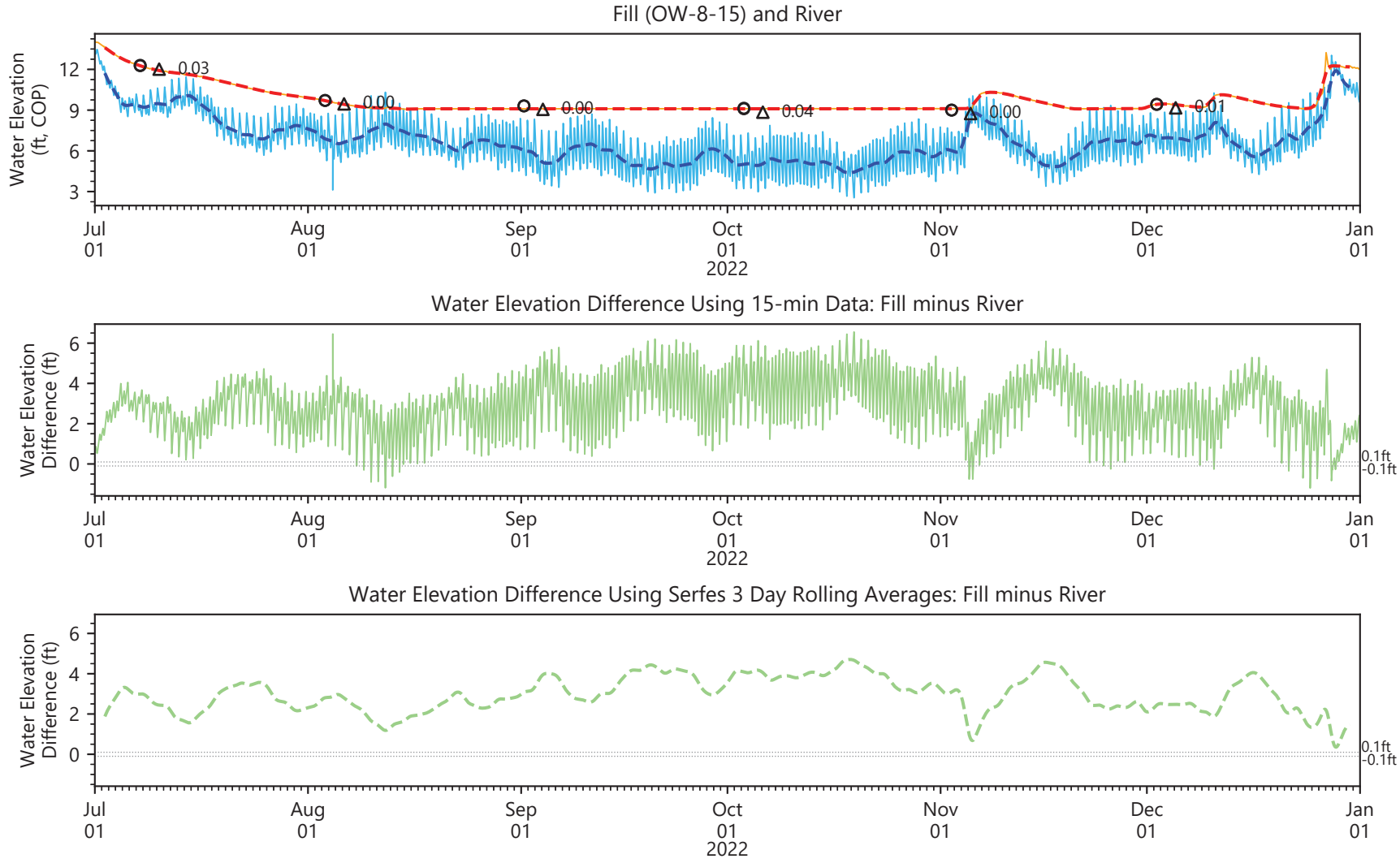
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.5
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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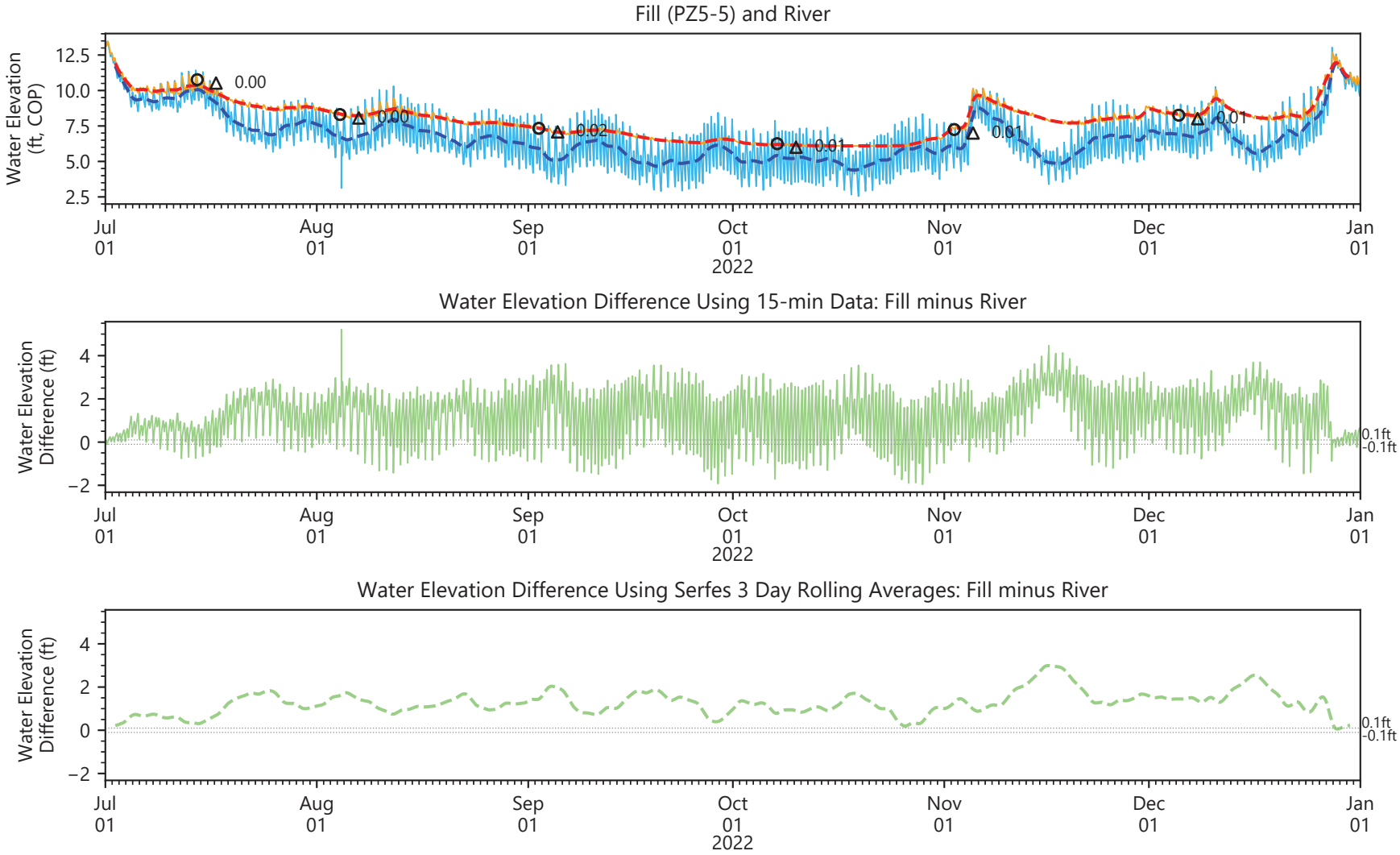
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.6
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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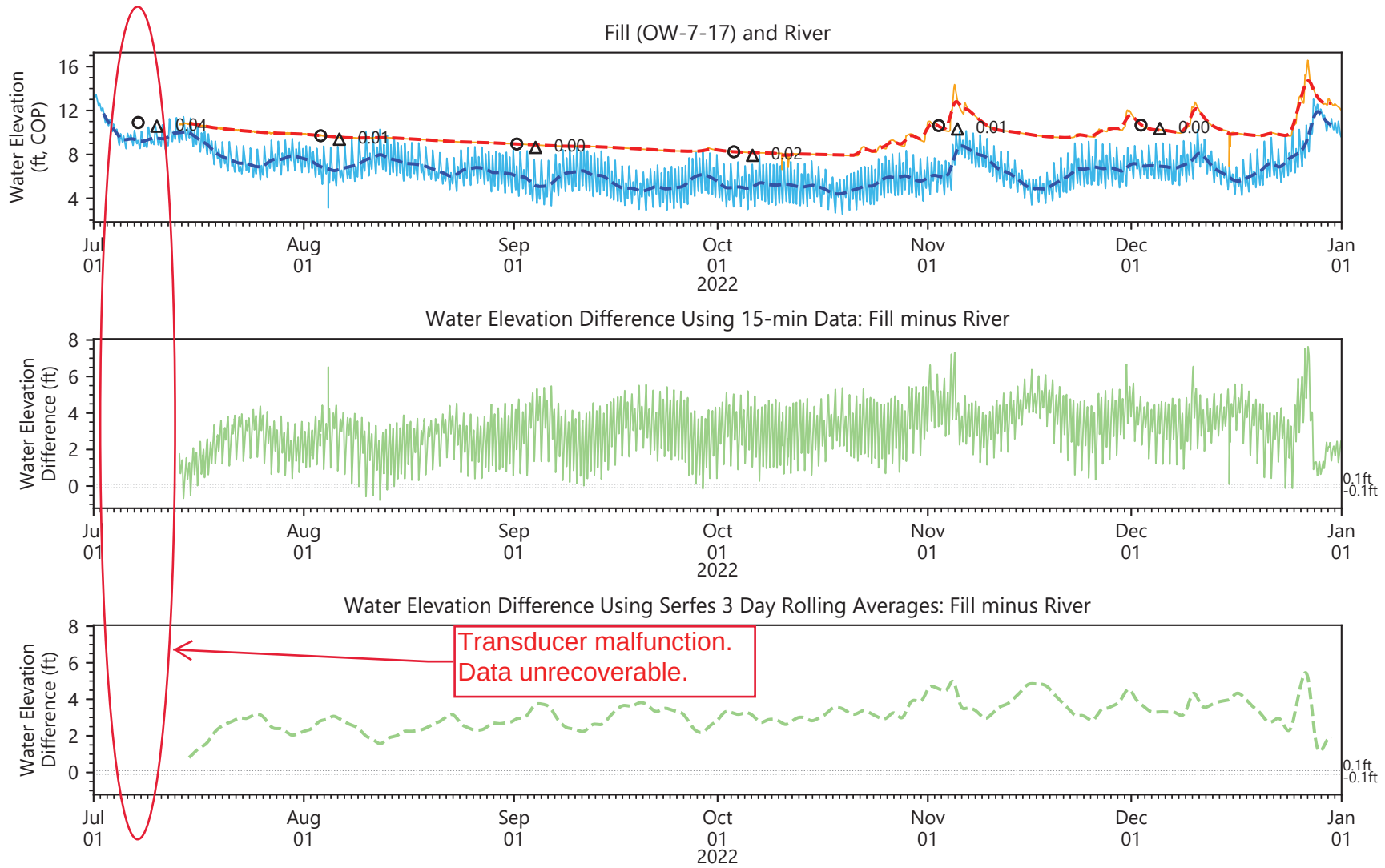
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.7
Groundwater Elevation Differences
NW Natural Gasco Site



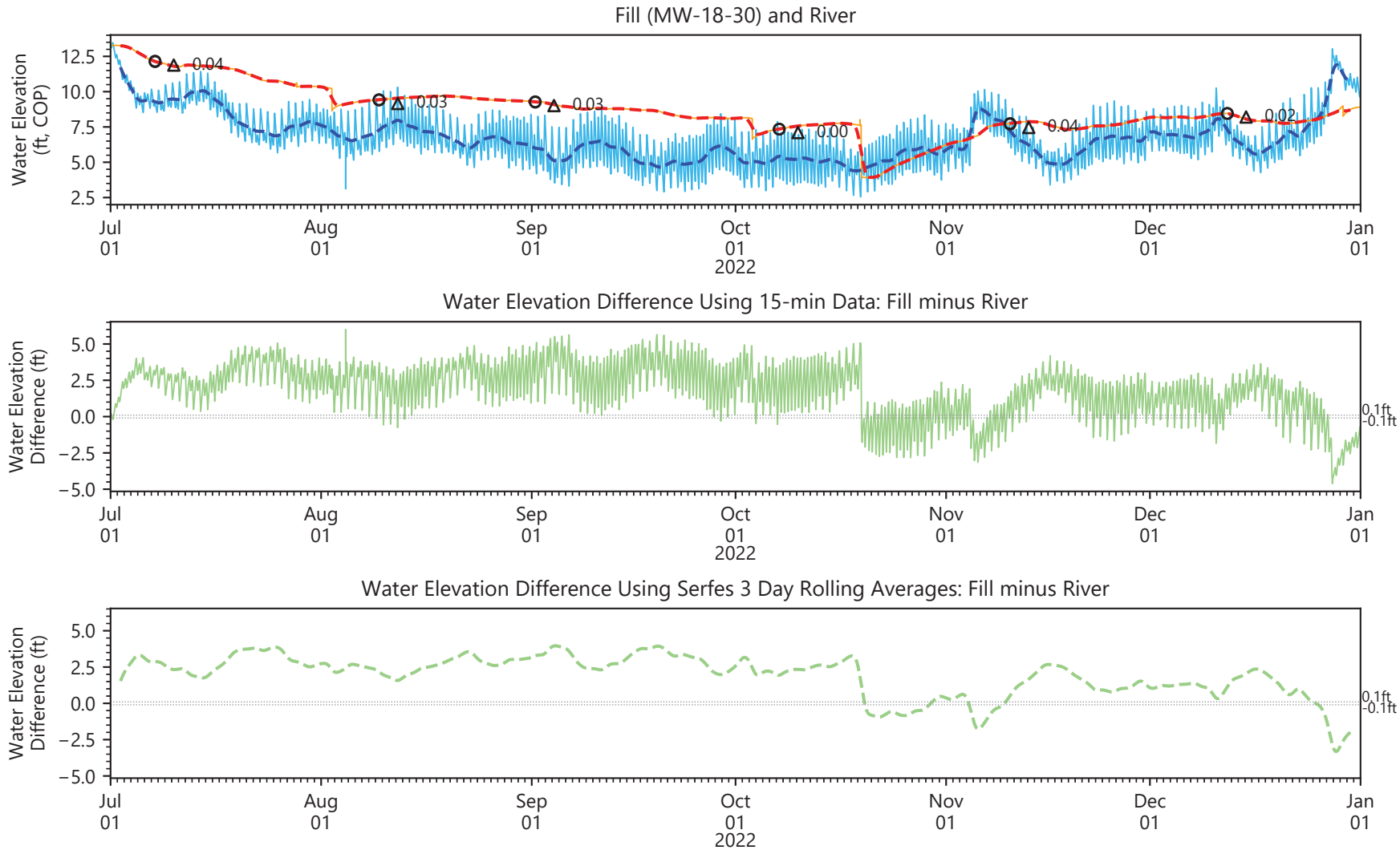
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.8
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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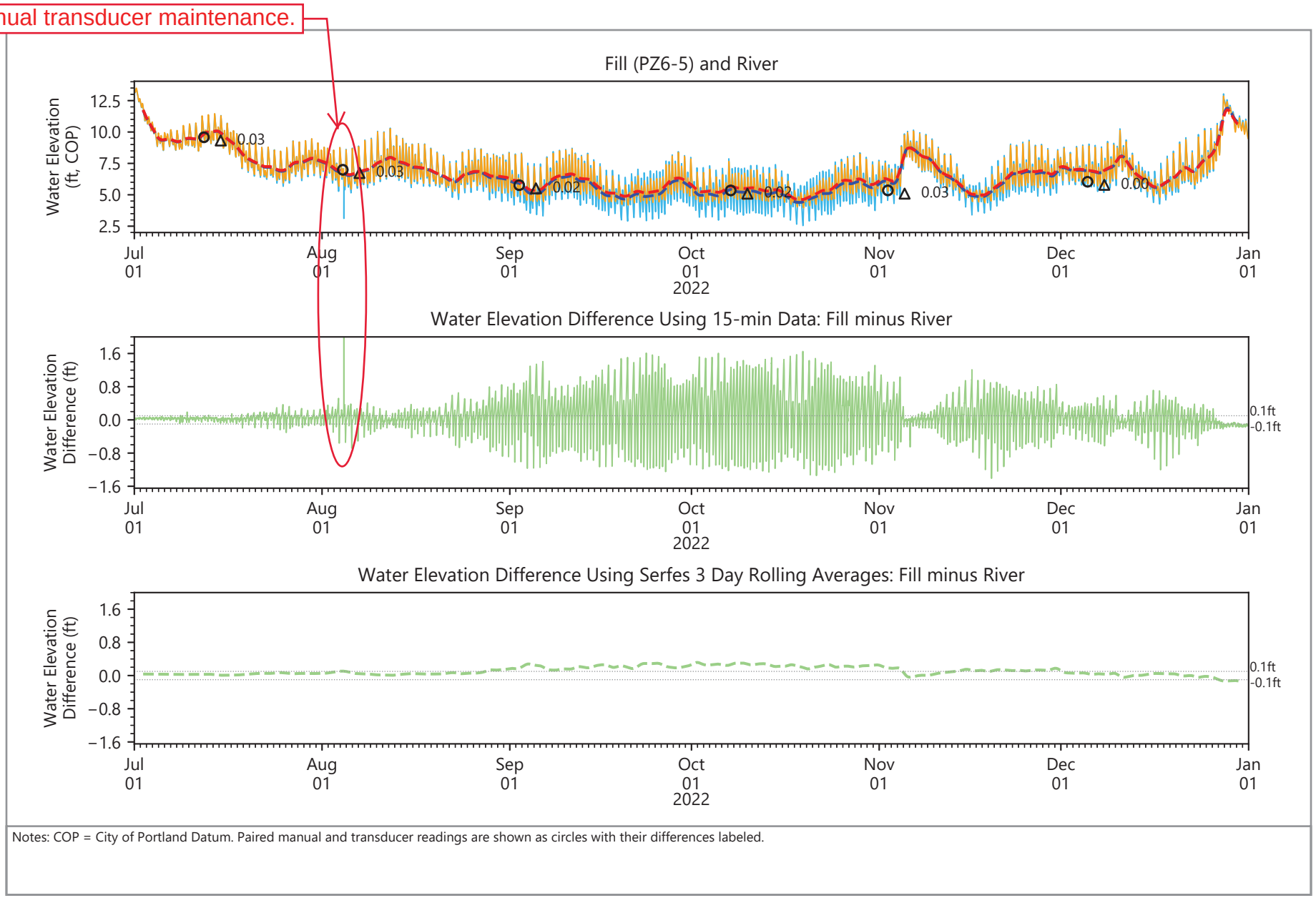
ANCHOR QEA

Figure 4.9
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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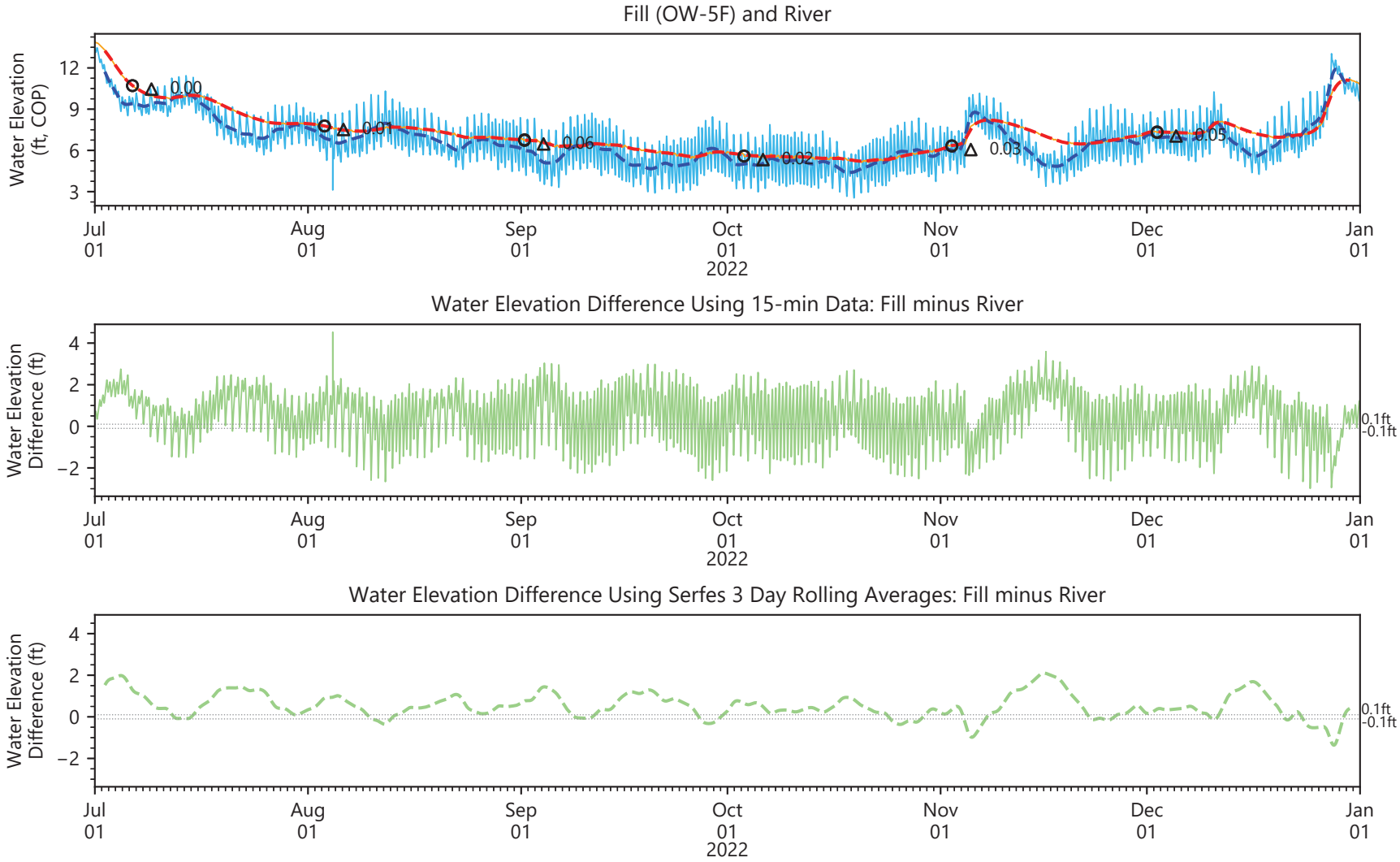
ANCHOR QEA

Figure 4.10
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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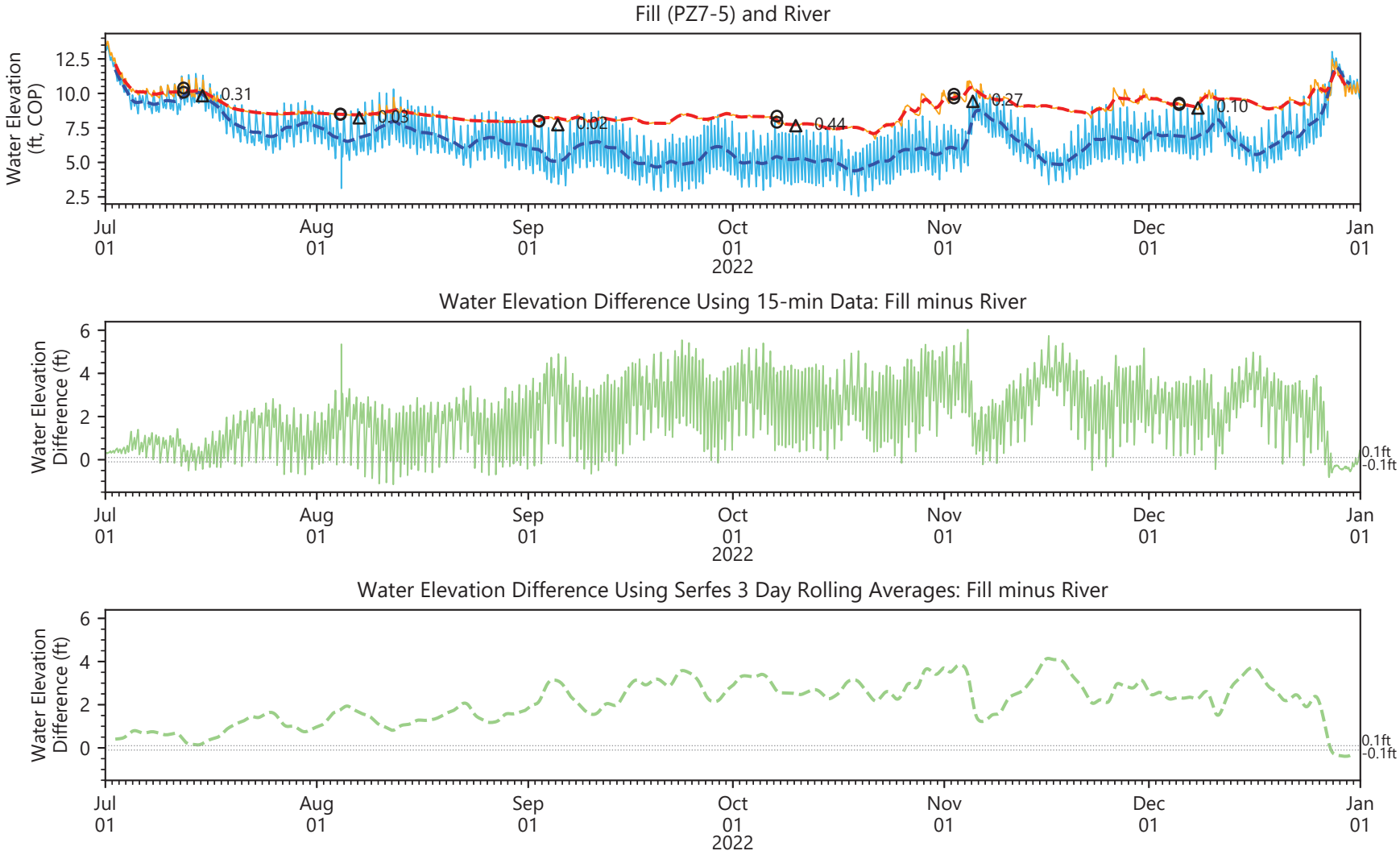
ANCHOR QEA

Figure 4.11
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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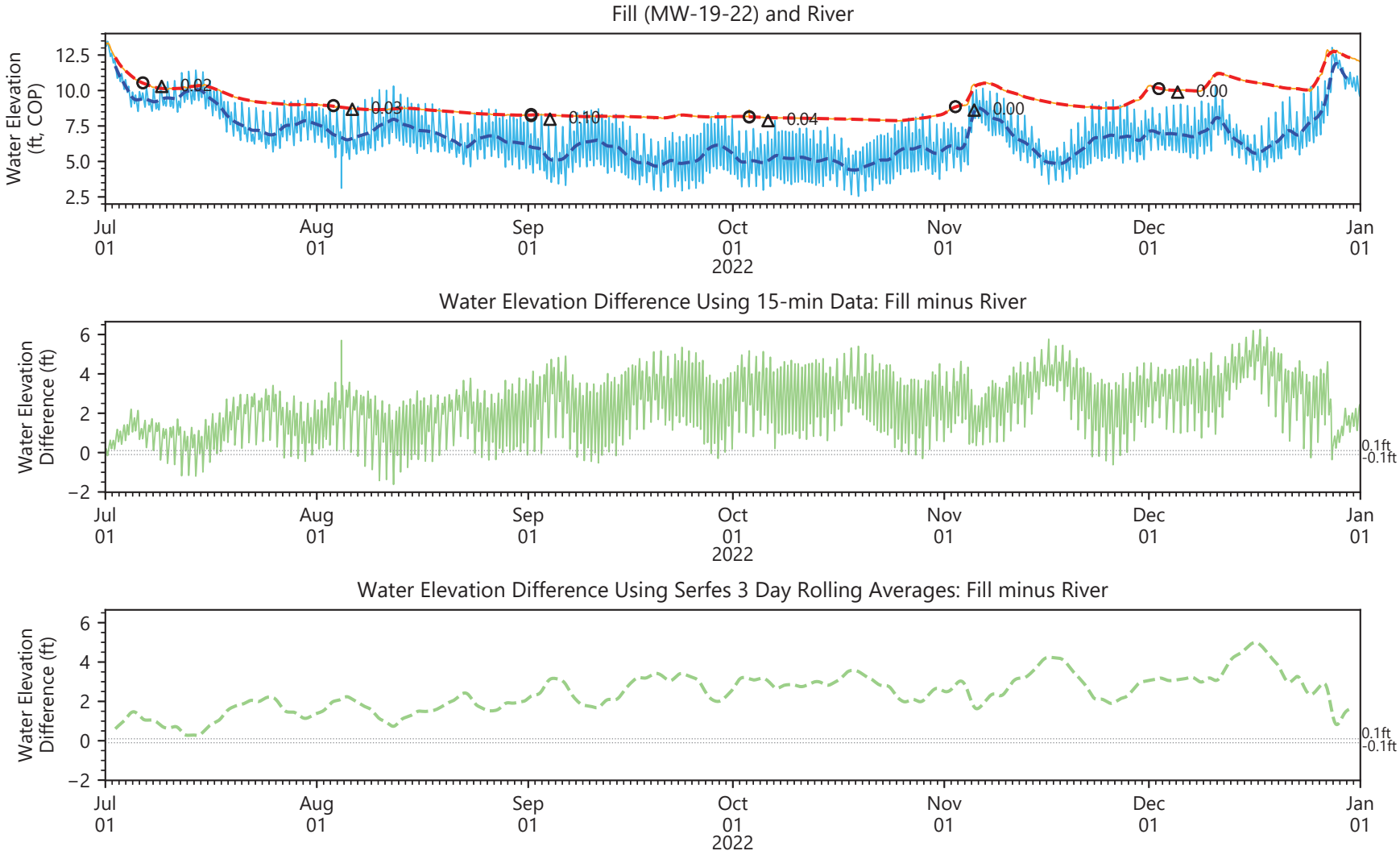
ANCHOR QEA

Figure 4.12
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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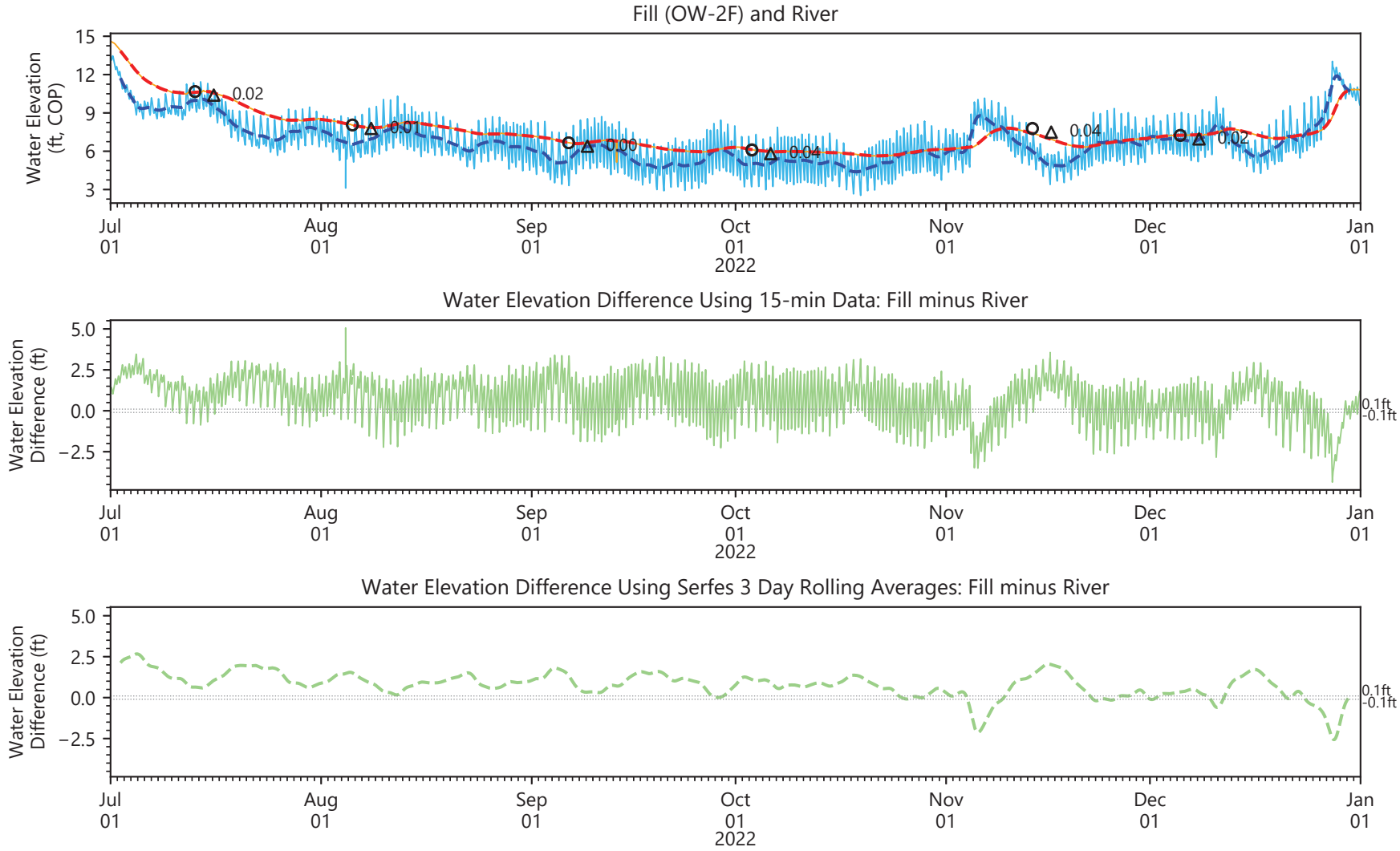
ANCHOR QEA

Figure 4.13
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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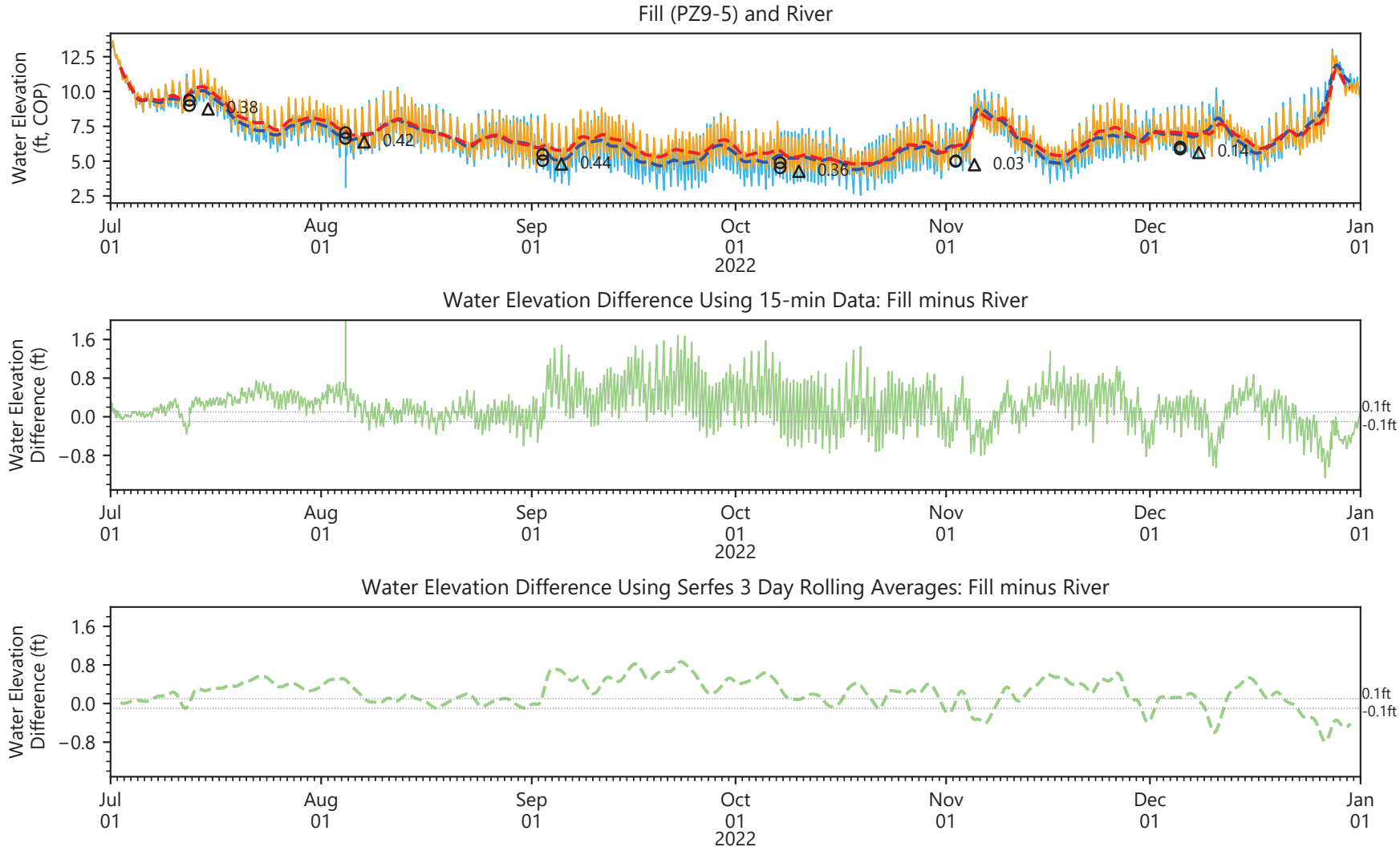
ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.14
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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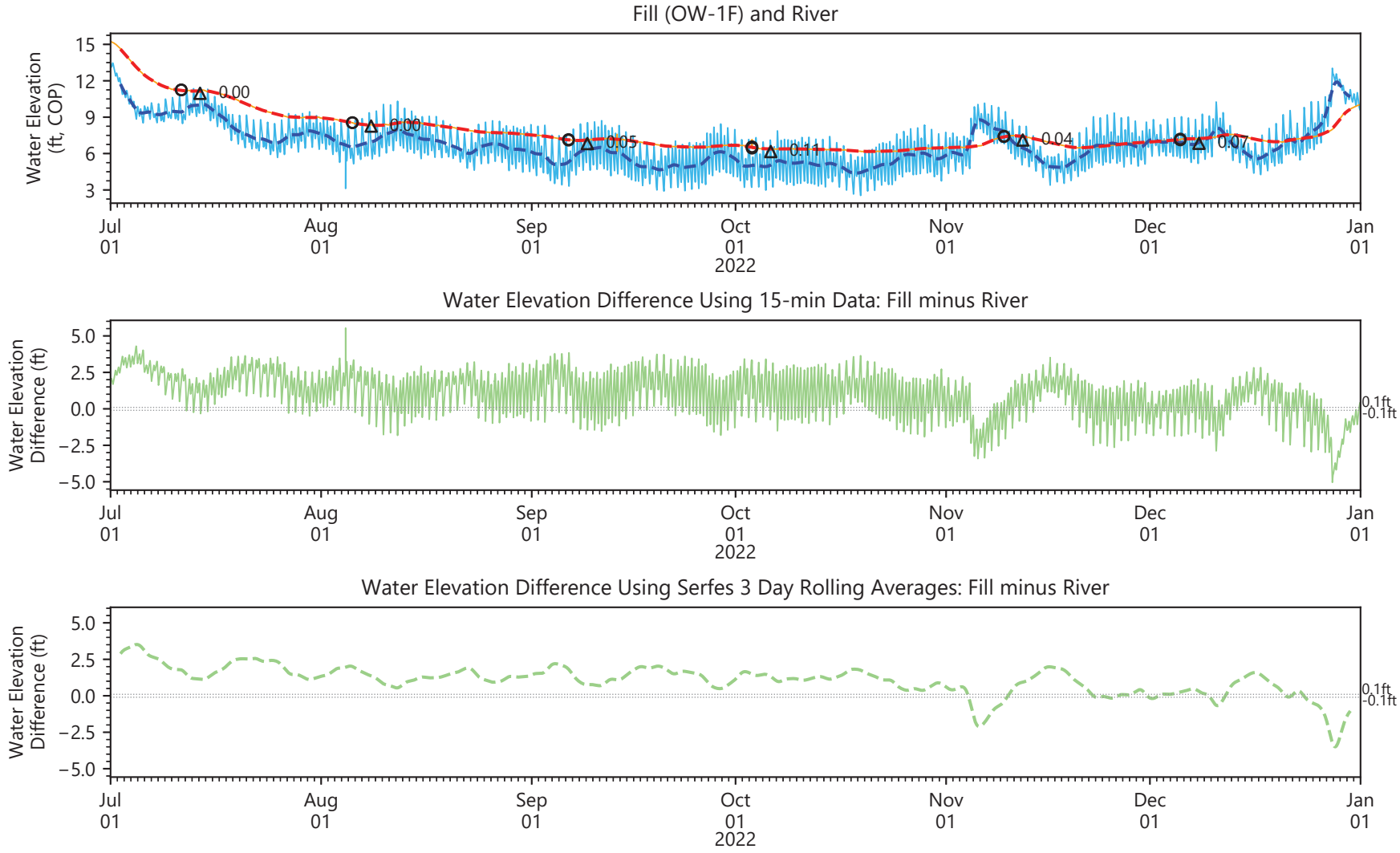
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.15
Groundwater Elevation Differences
NW Natural Gasco Site

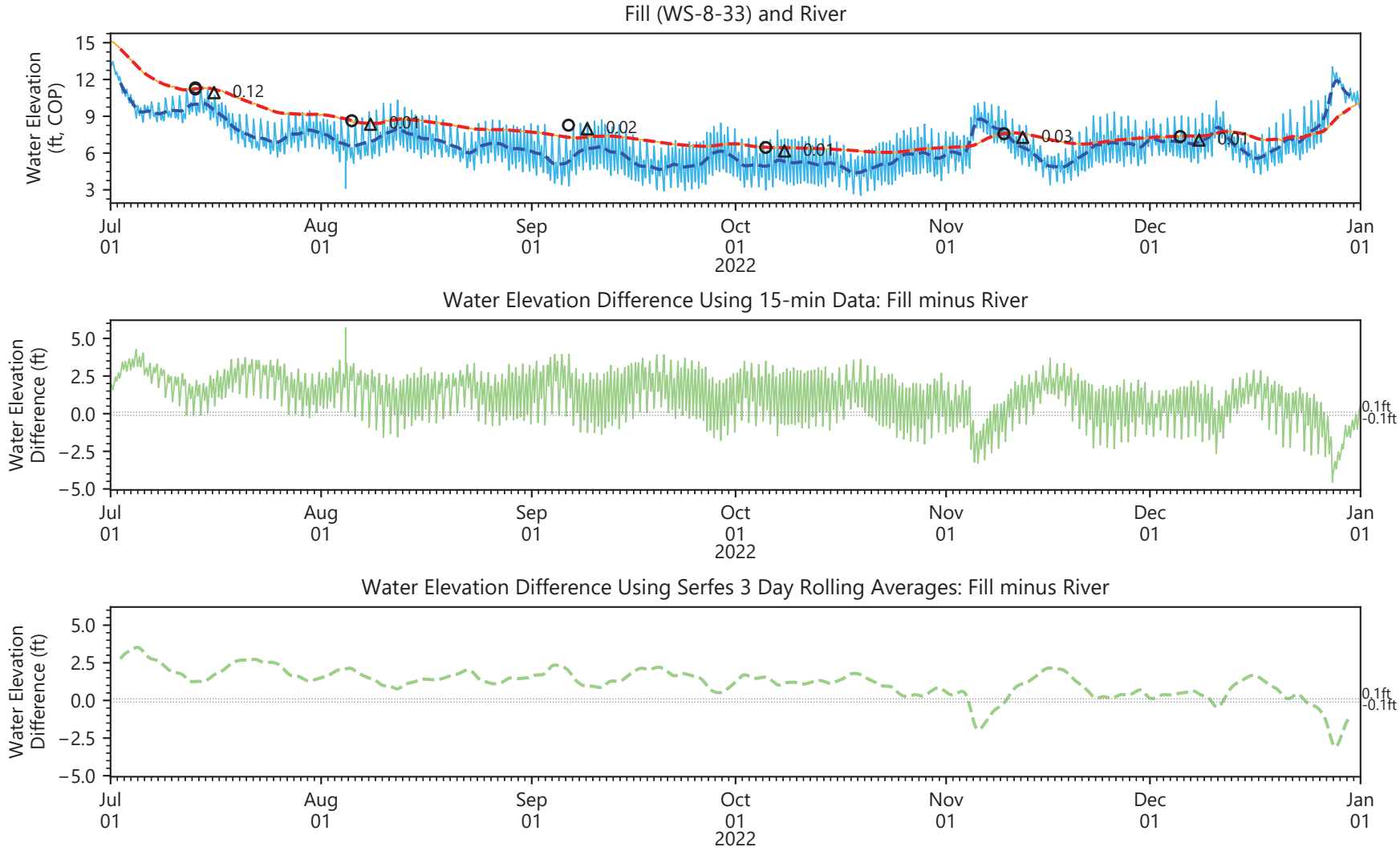


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.16
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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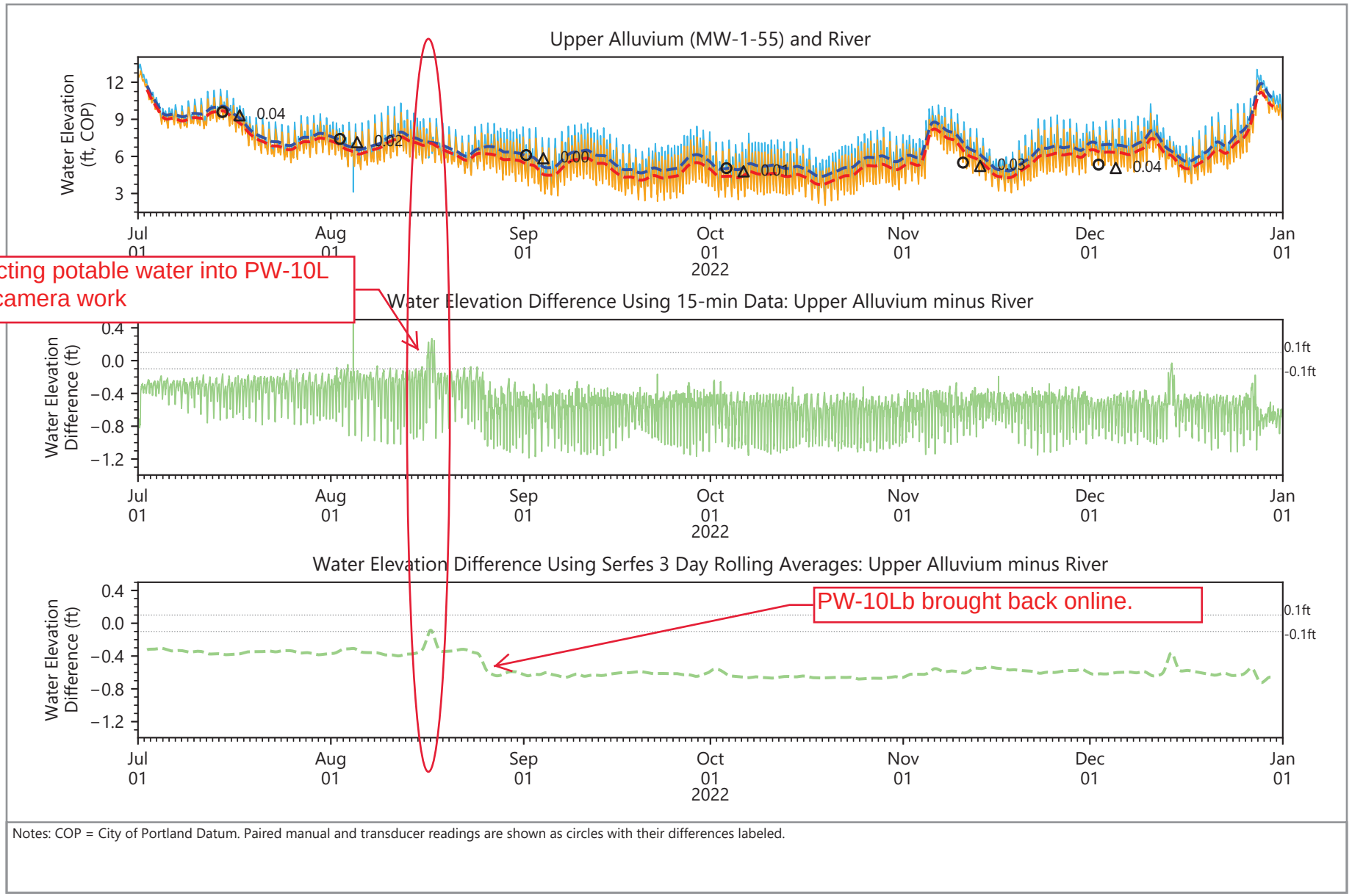
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Fill: 15-min Data
- Fill: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.17
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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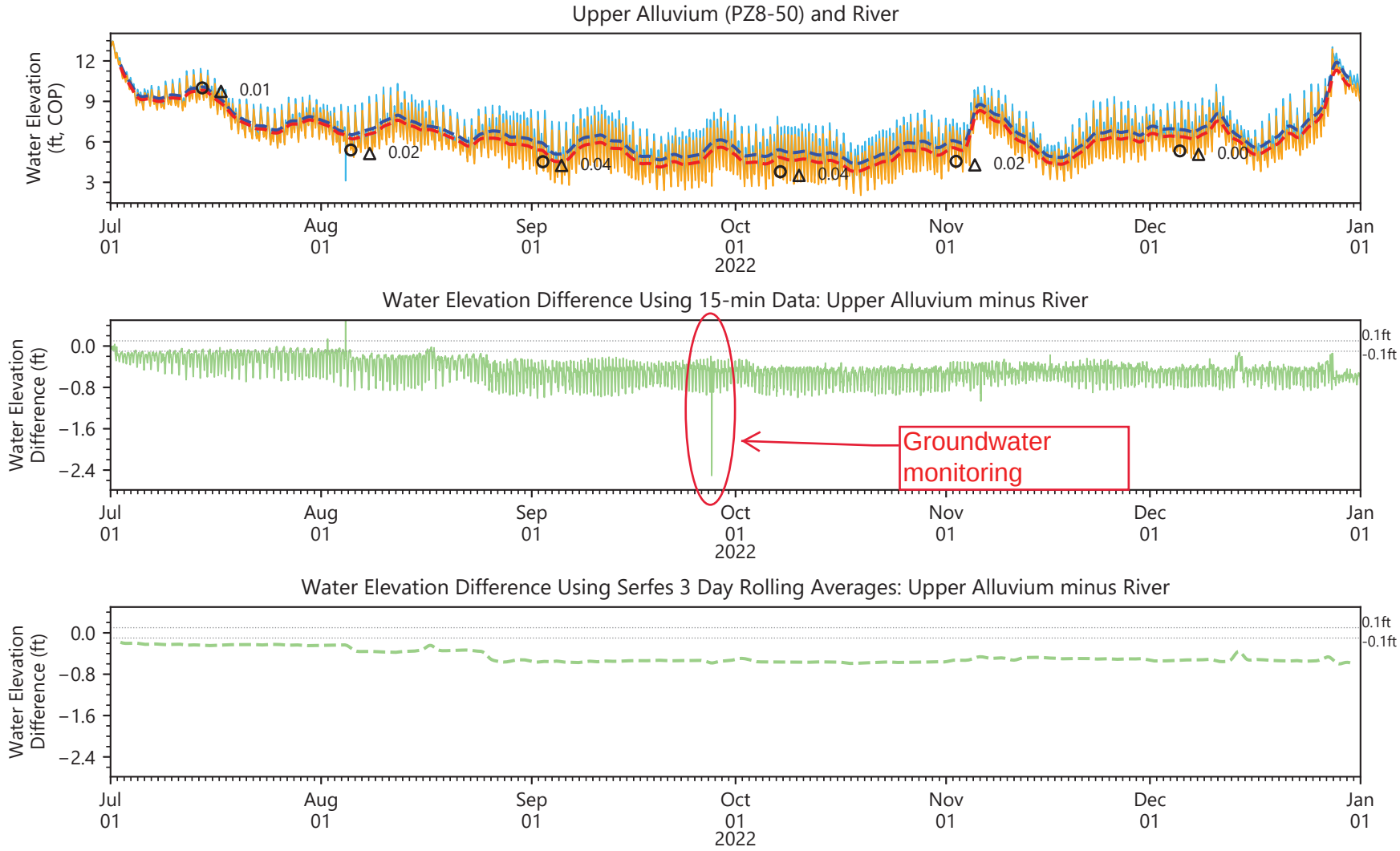
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.18
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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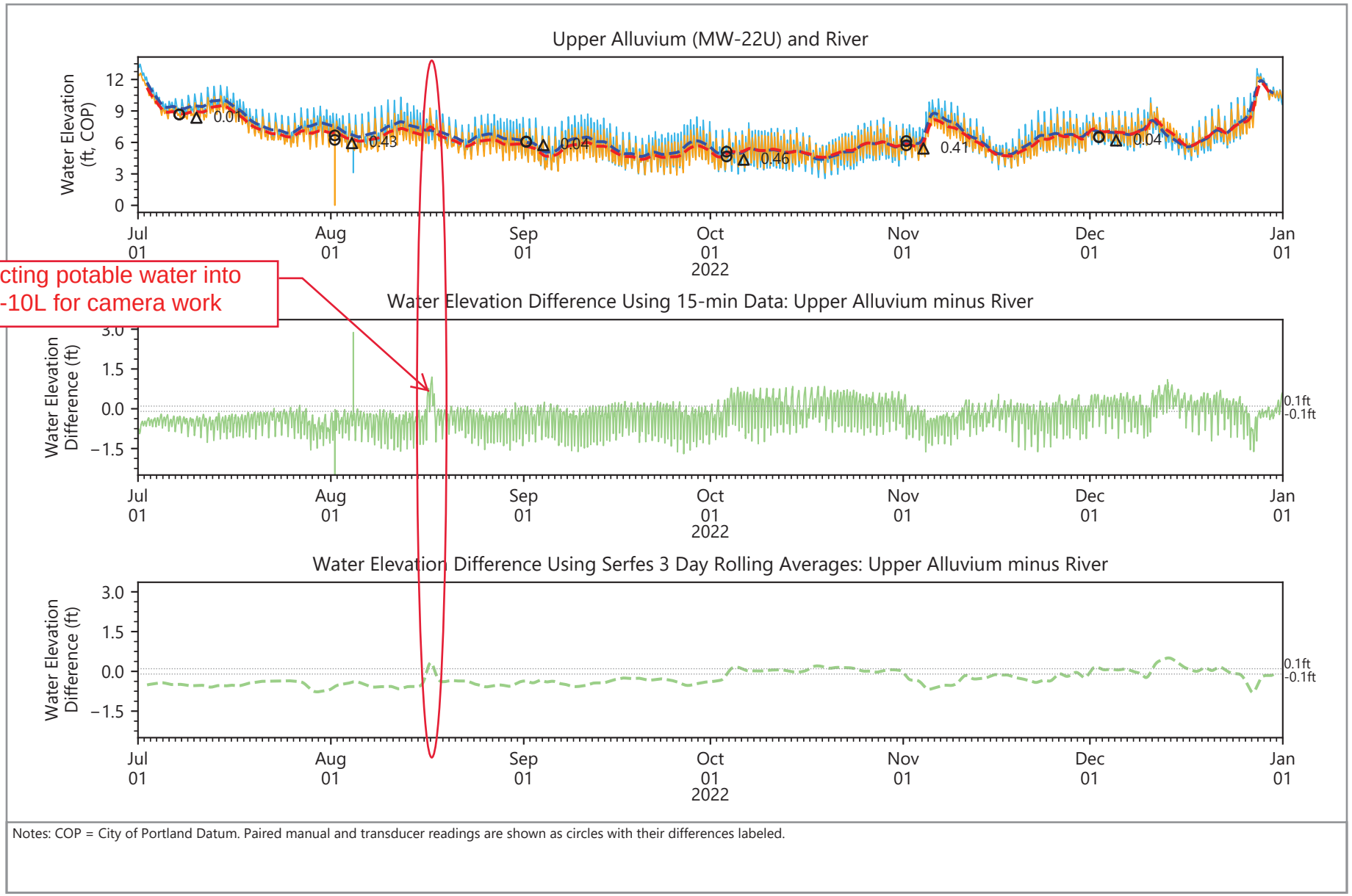
ANCHOR QEA

Figure 4.19
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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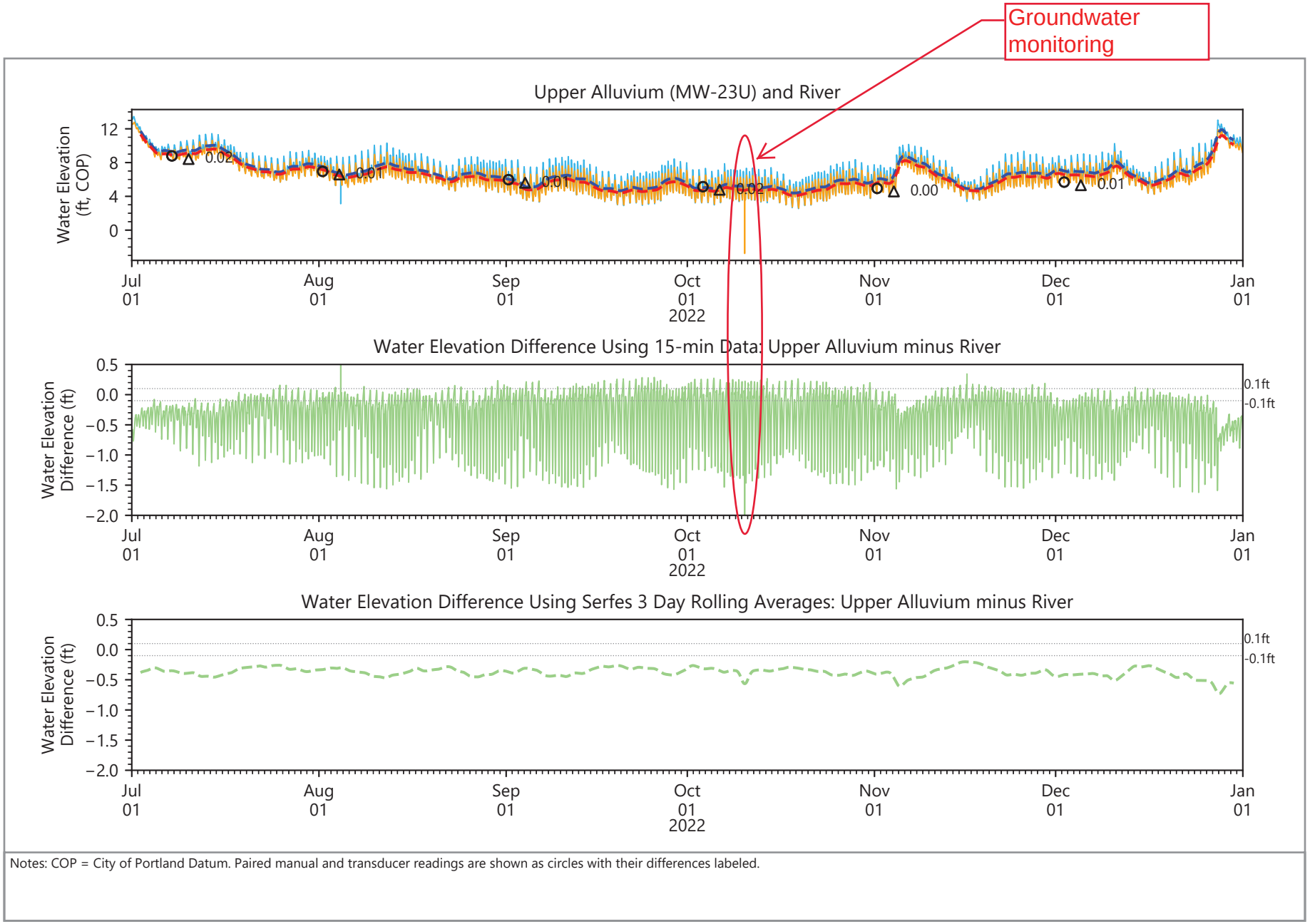
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.20
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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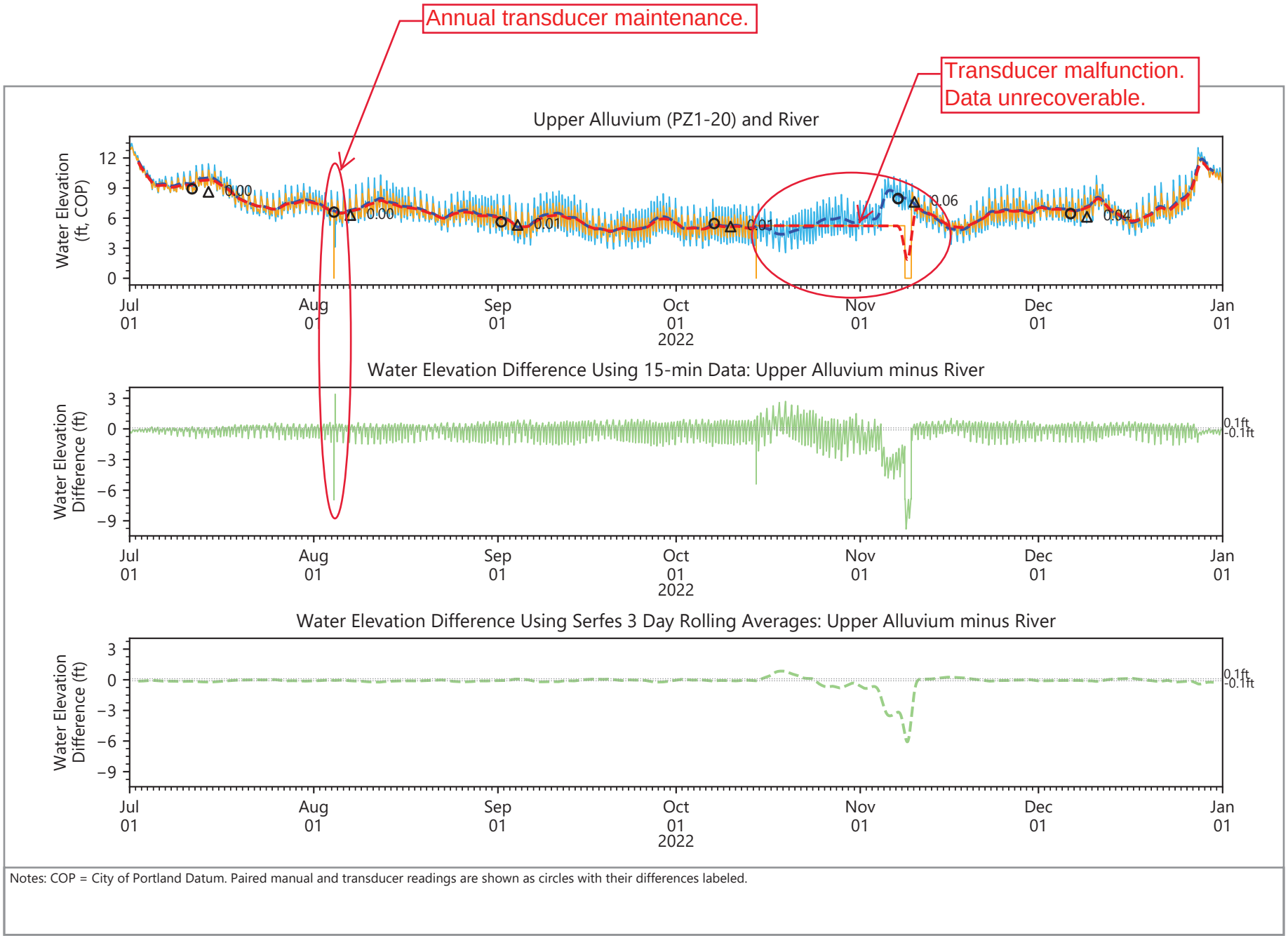
ANCHOR QEA

Figure 4.21
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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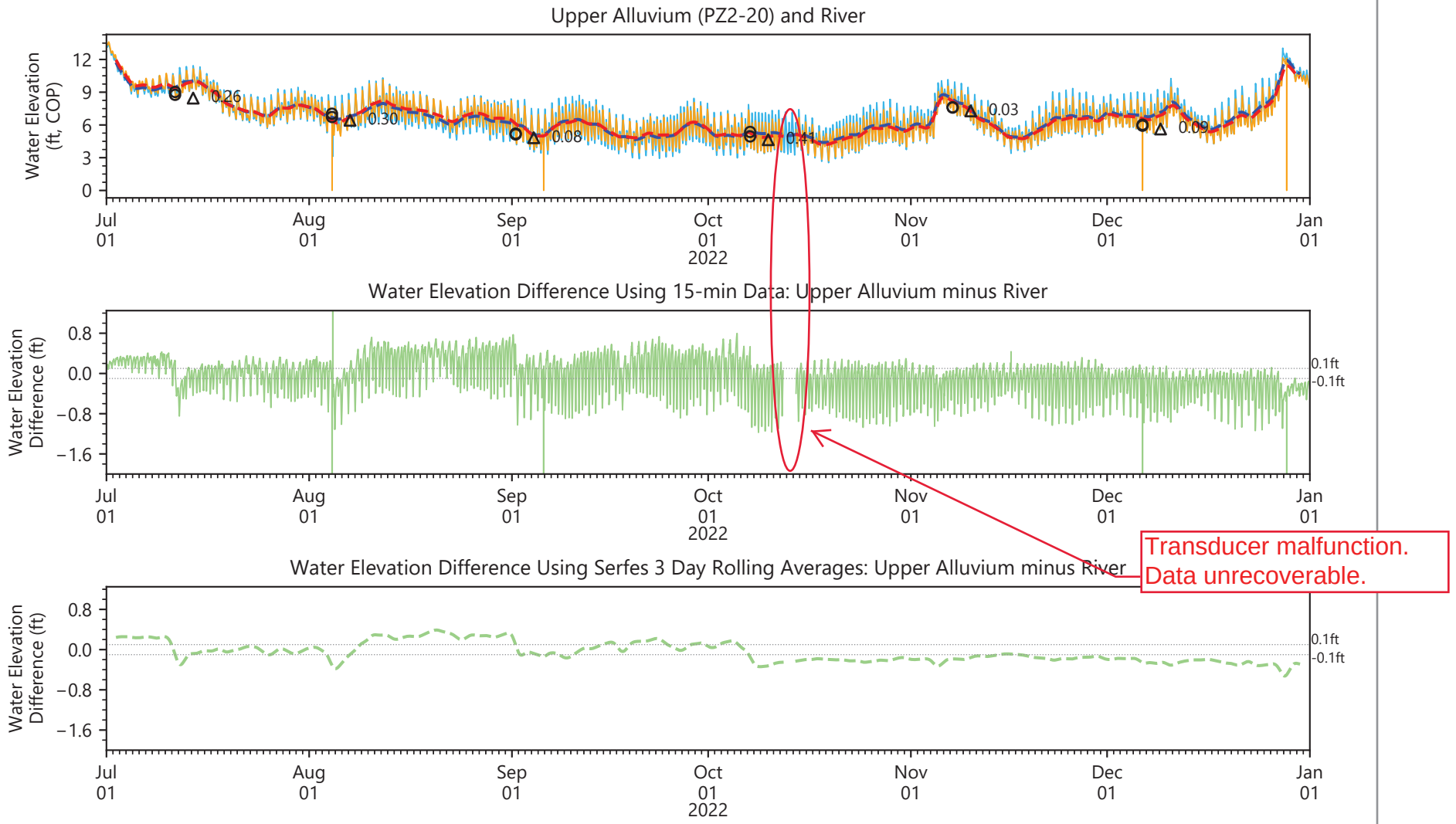
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.22
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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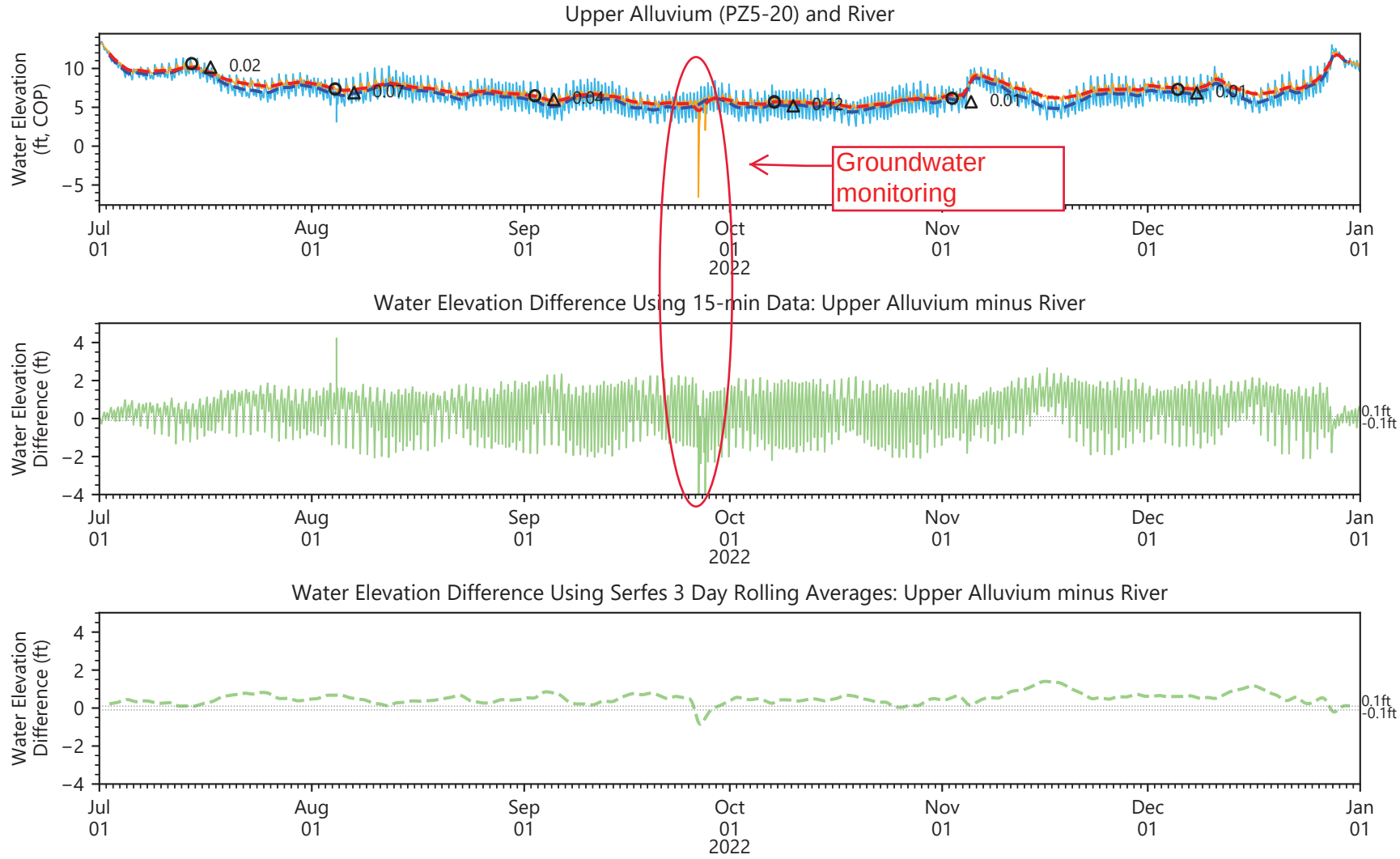
Figure 4.23
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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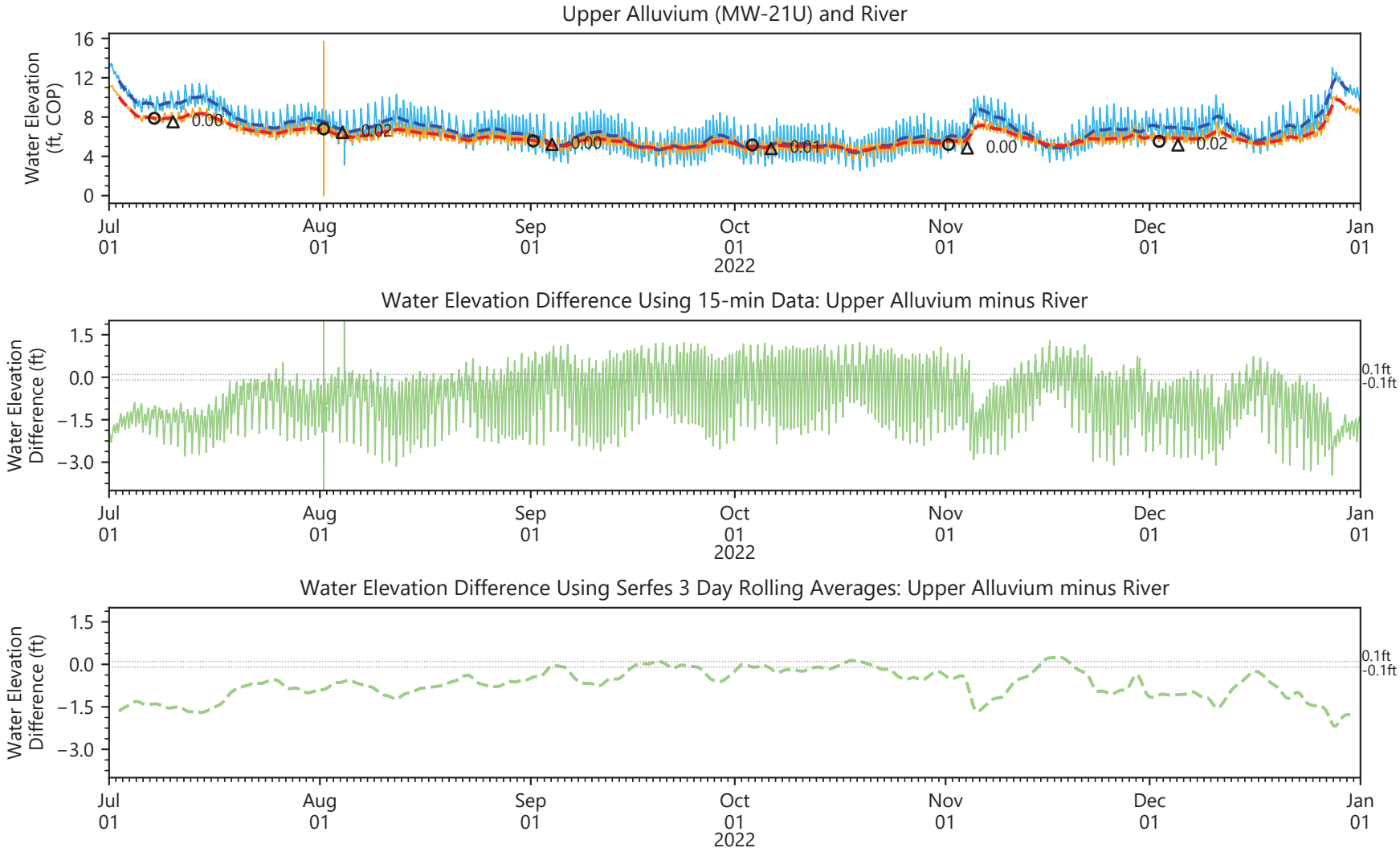
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.24
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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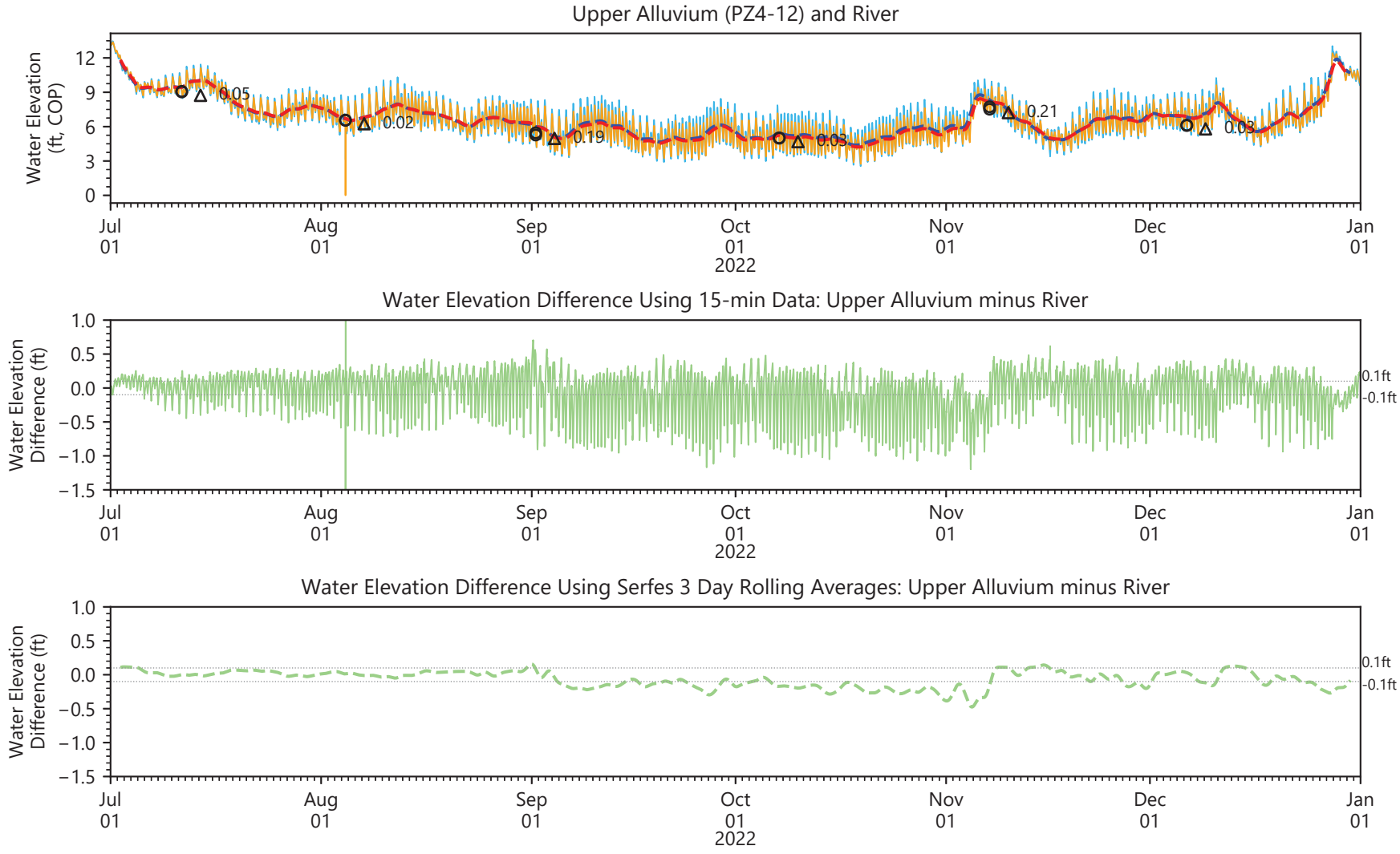
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.25
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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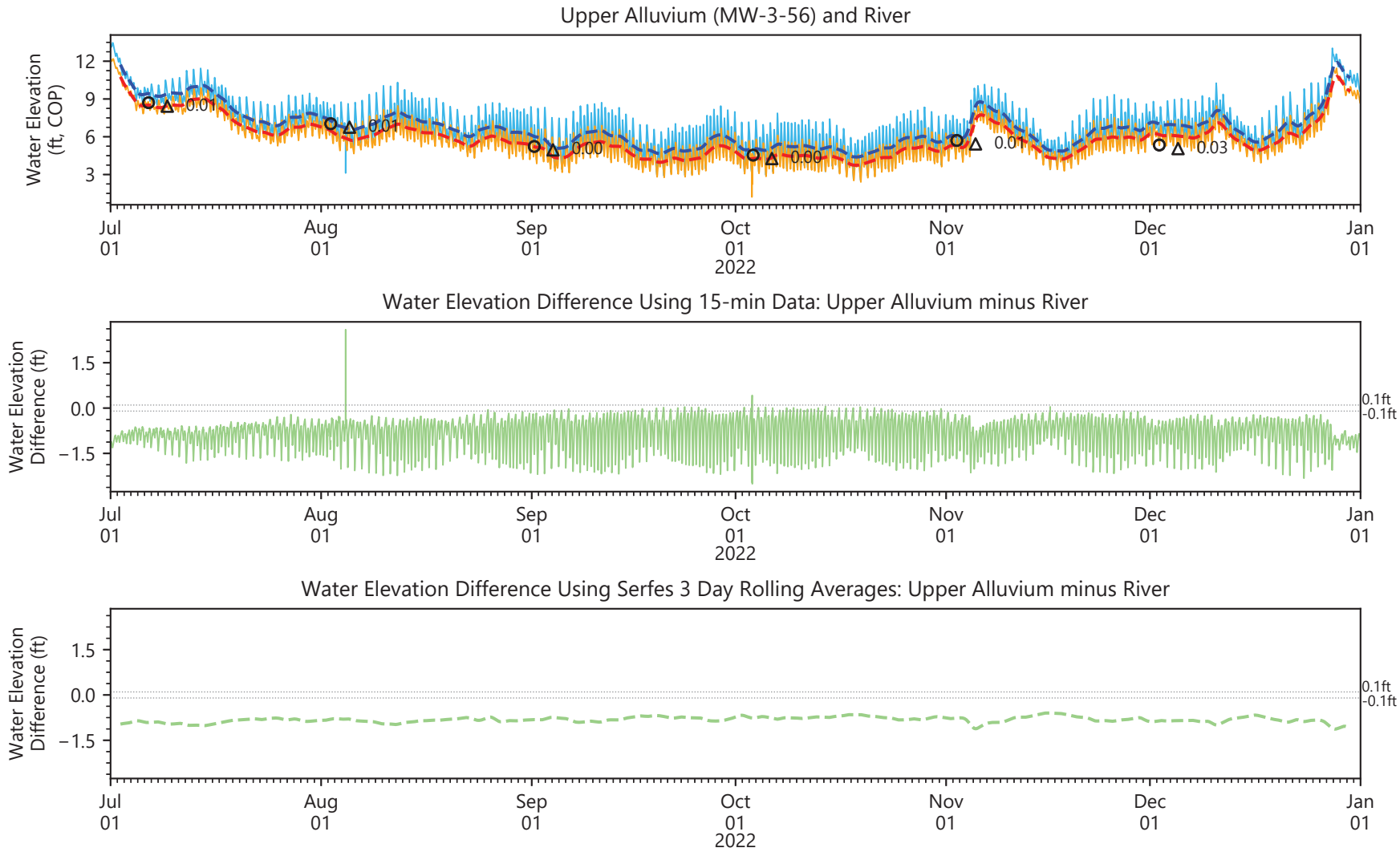
ANCHOR QEA

Figure 4.26
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

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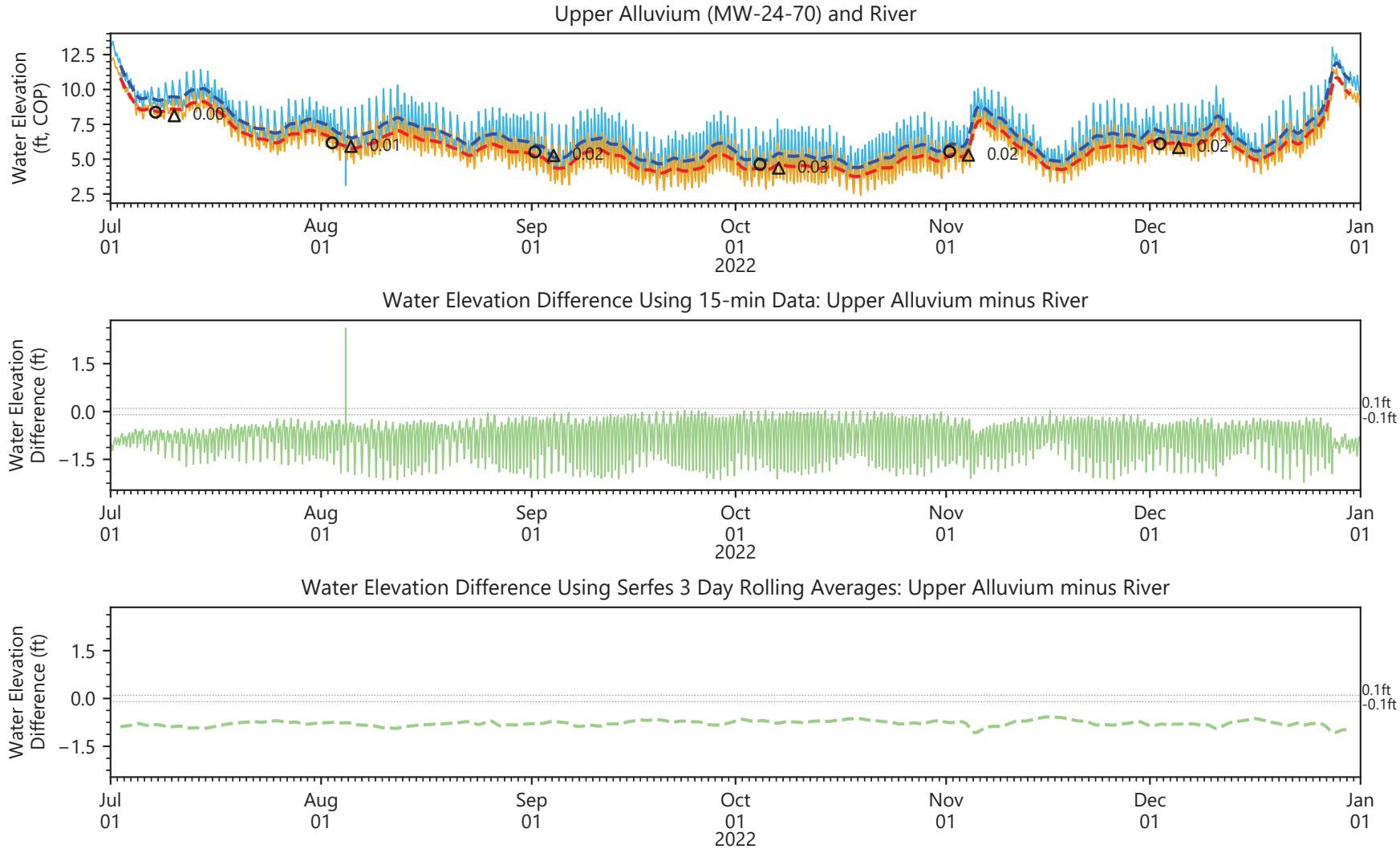
Figure 4.27
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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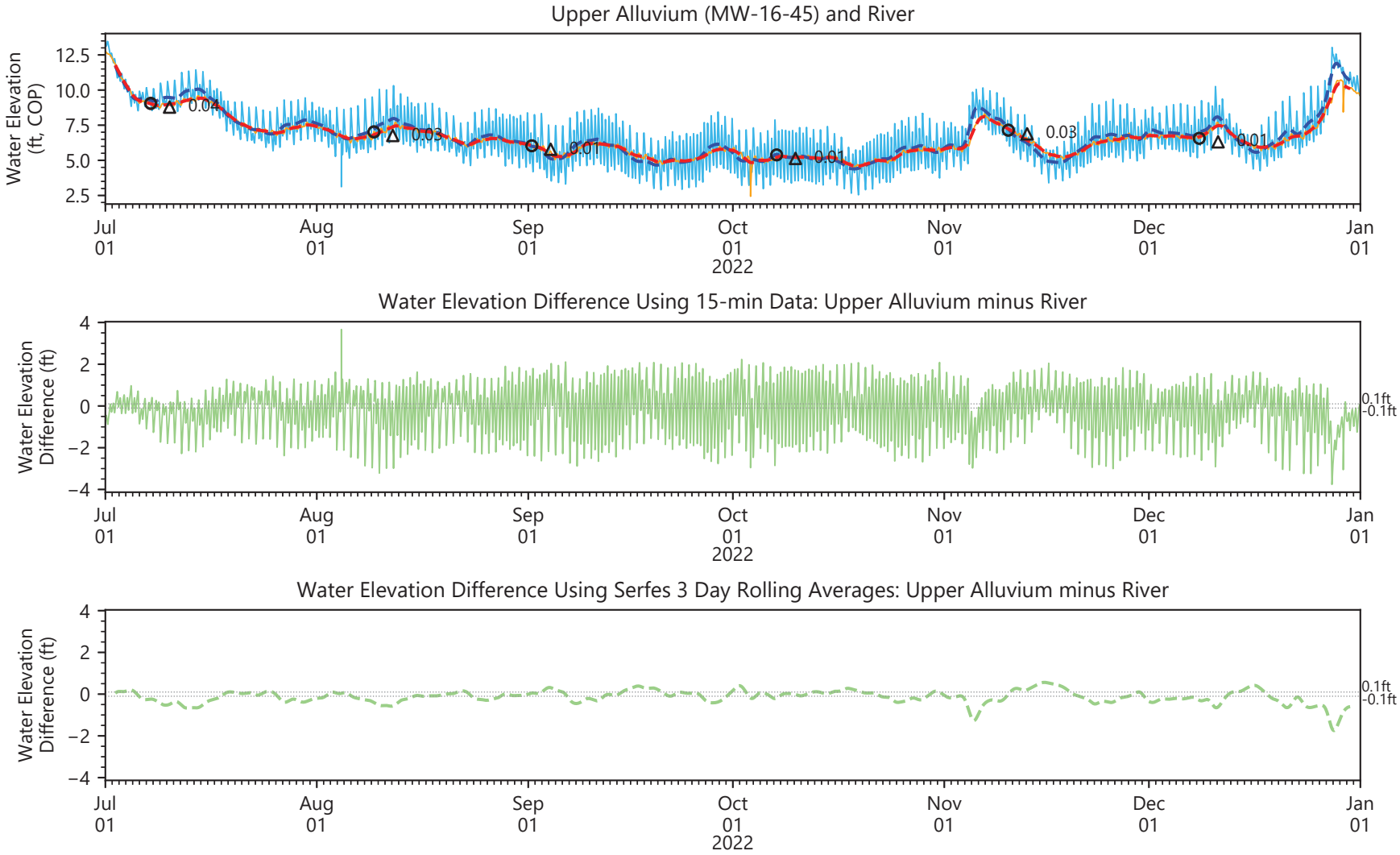
ANCHOR QEA

Figure 4.28
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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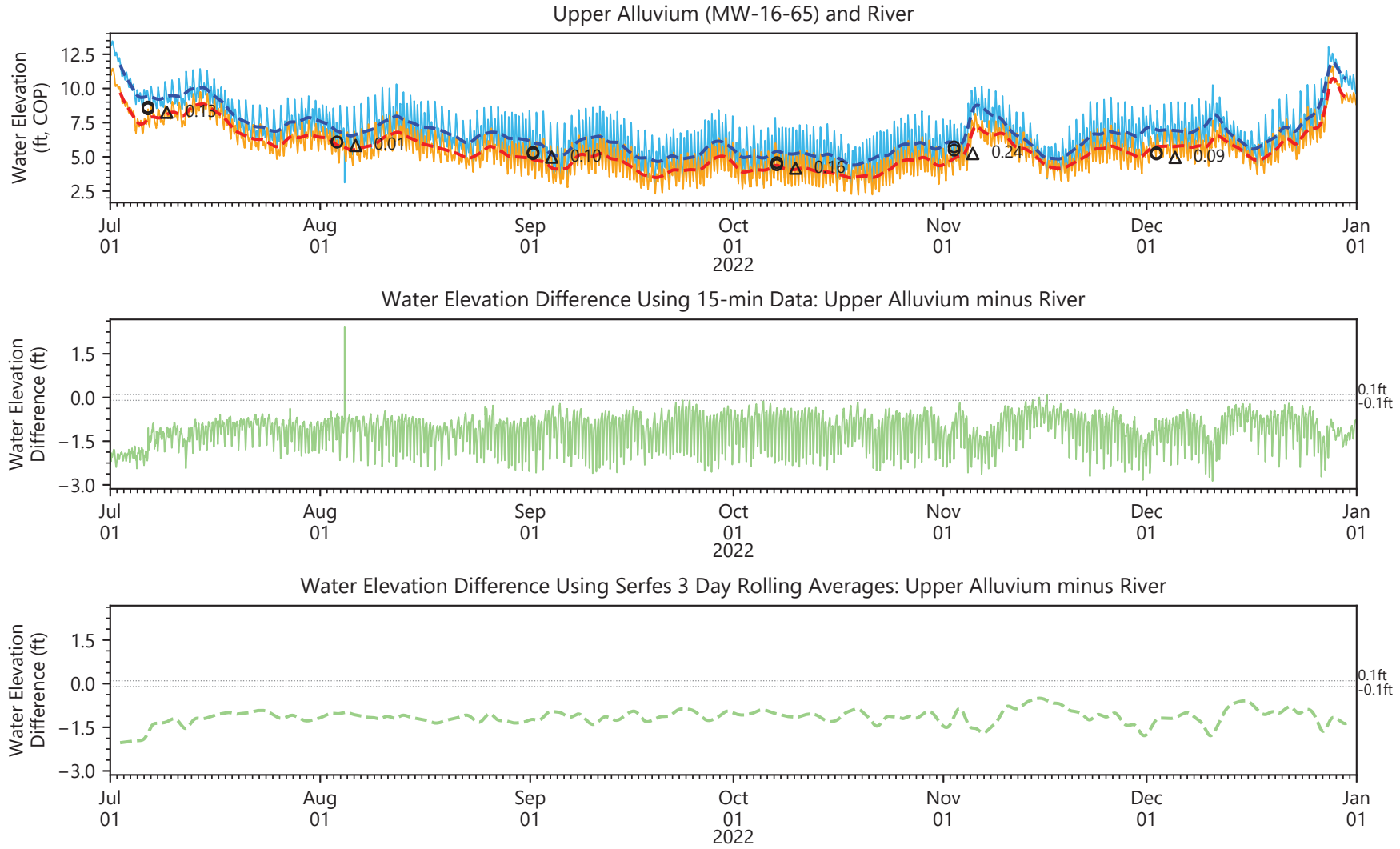
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.29
Groundwater Elevation Differences
NW Natural Gasco Site

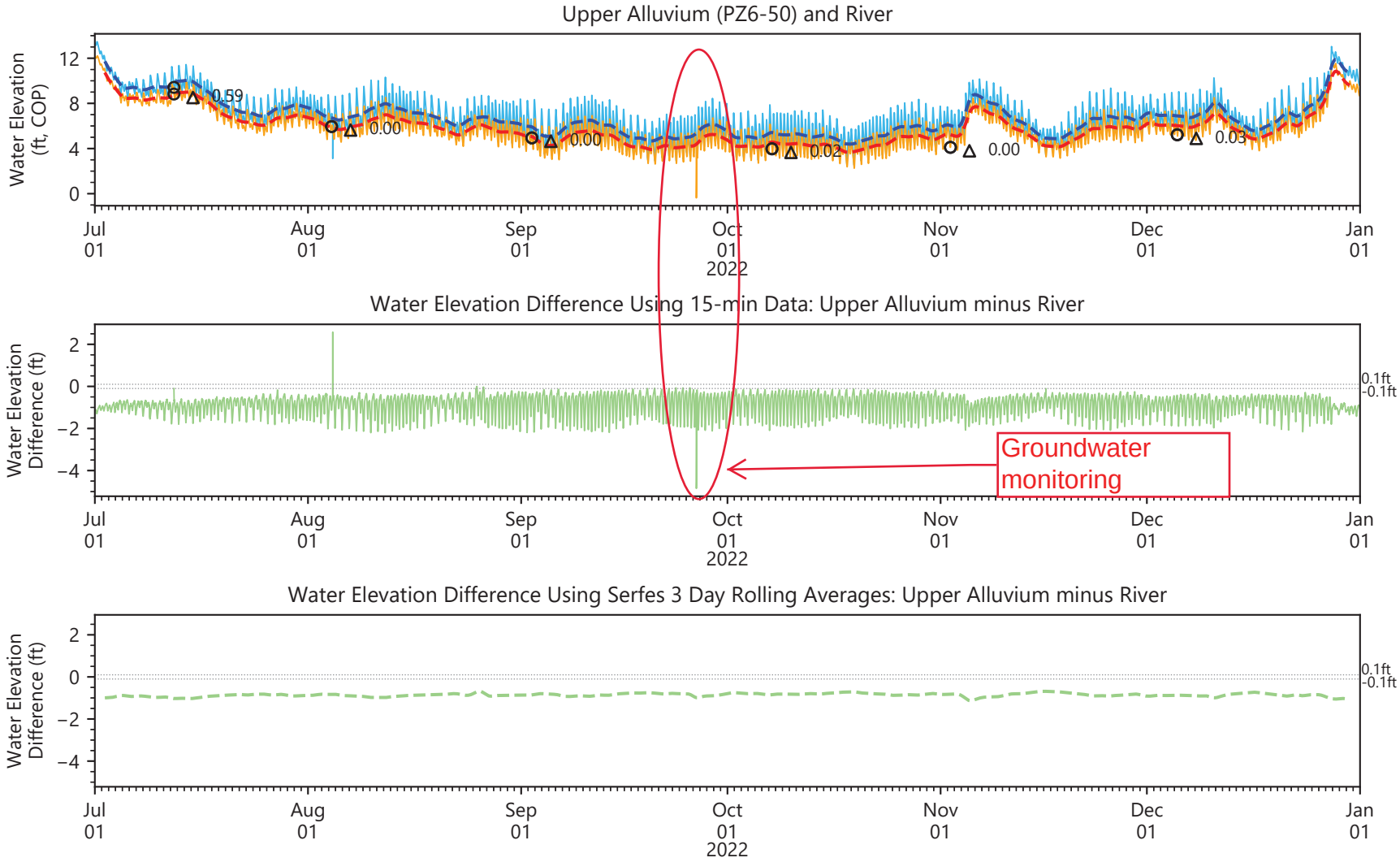


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.30
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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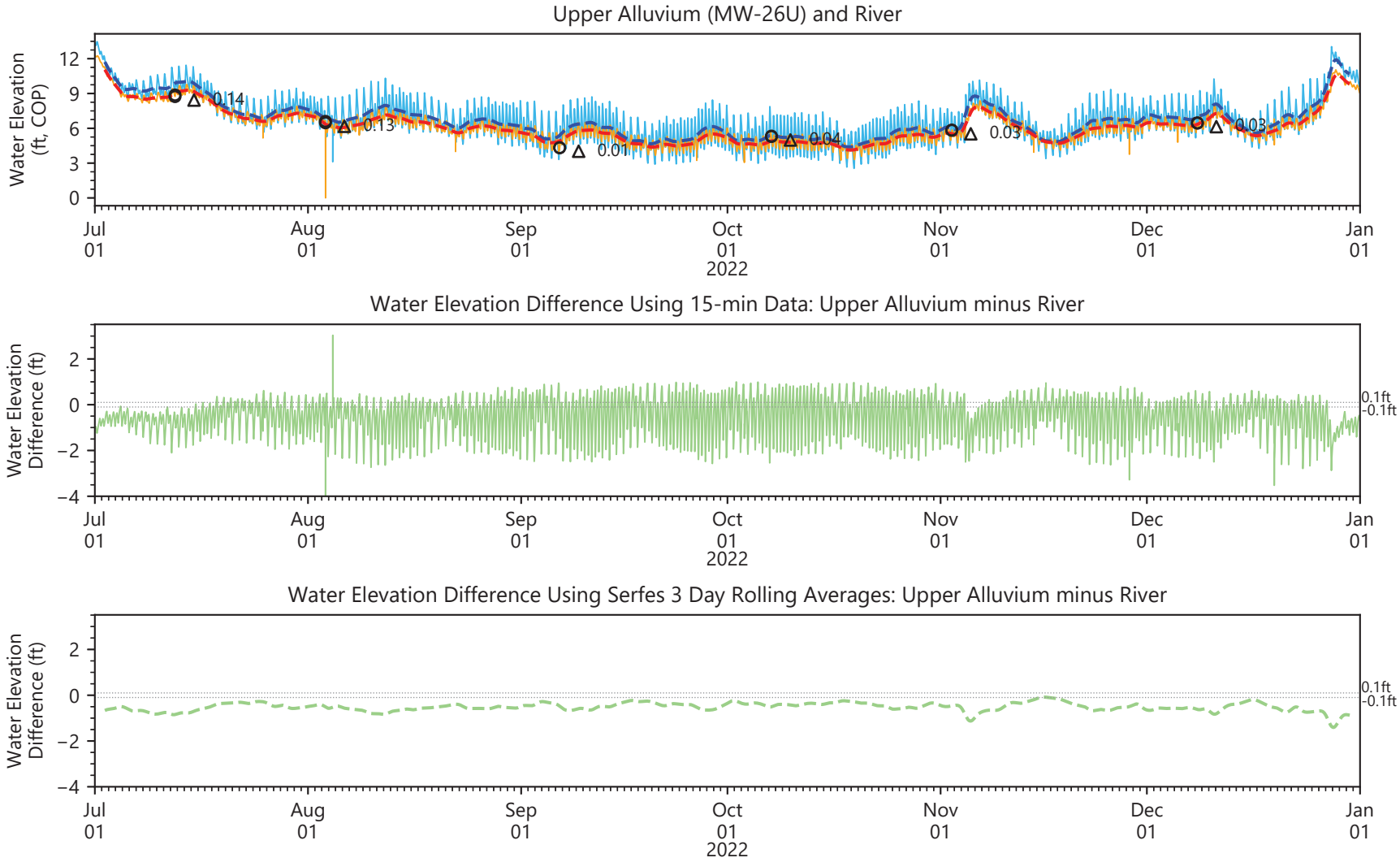
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.31
Groundwater Elevation Differences
NW Natural Gasco Site



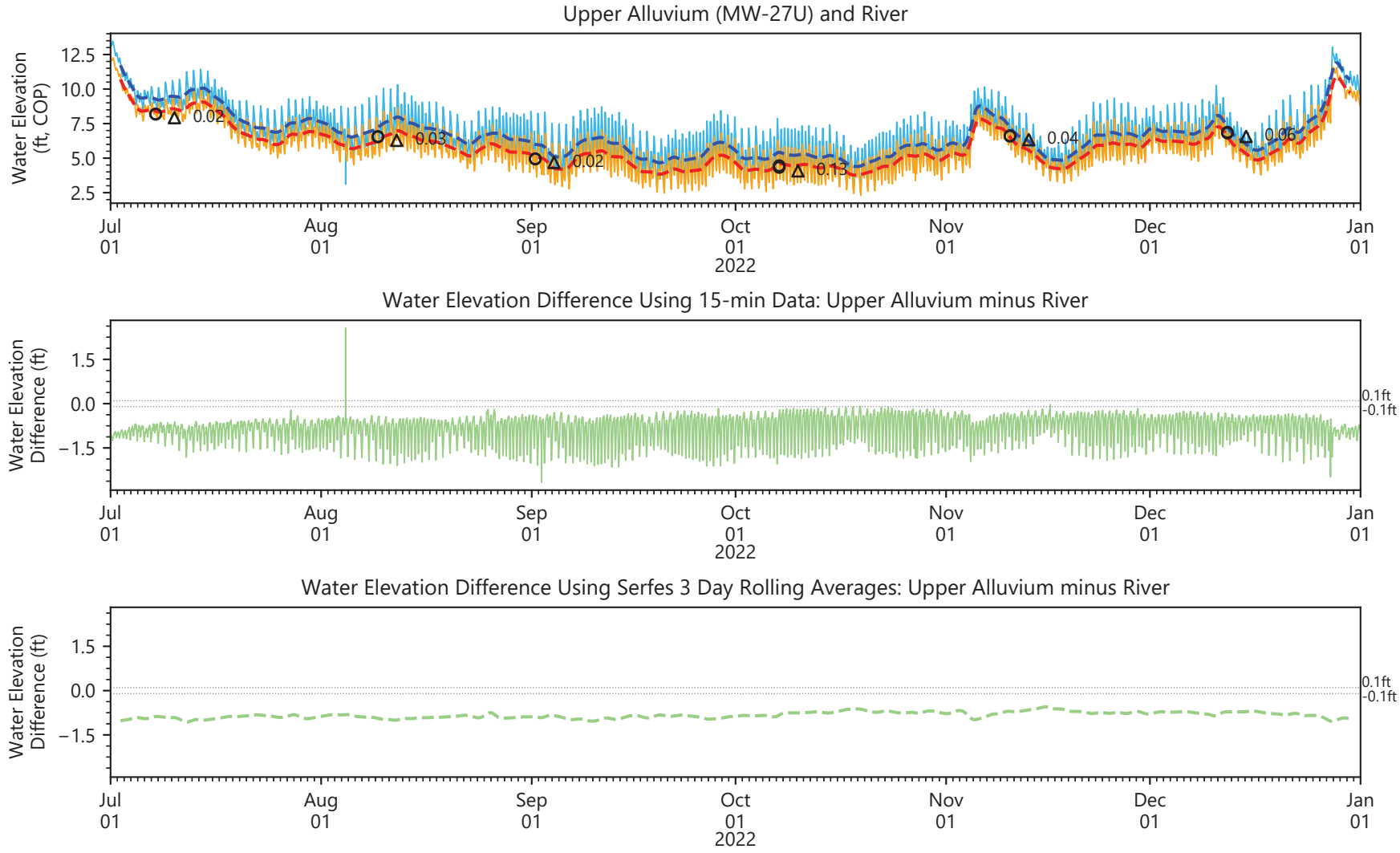
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.32
Groundwater Elevation Differences
NW Natural Gasco Site

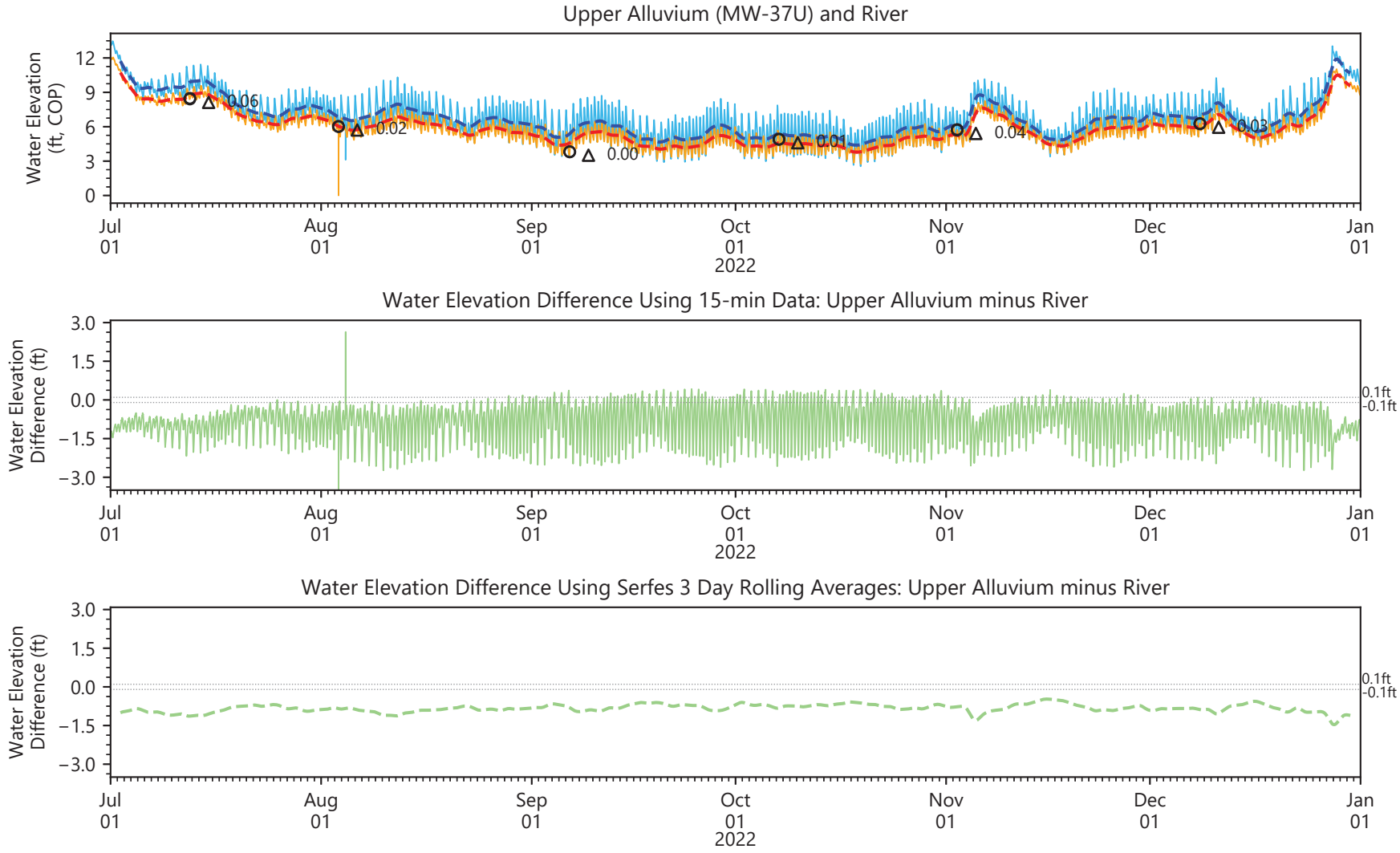


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.33
Groundwater Elevation Differences
NW Natural Gasco Site

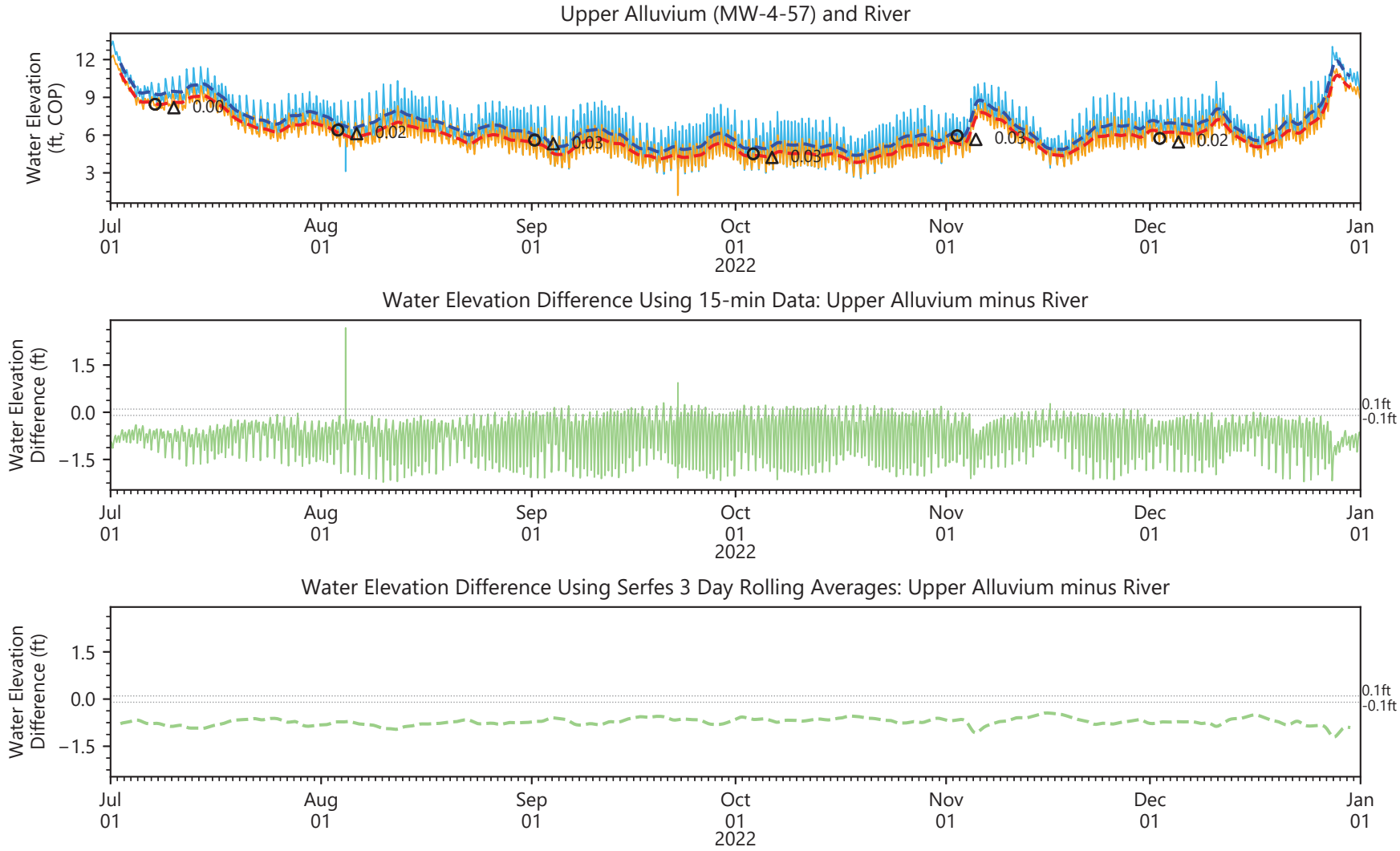


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.34
Groundwater Elevation Differences
NW Natural Gasco Site

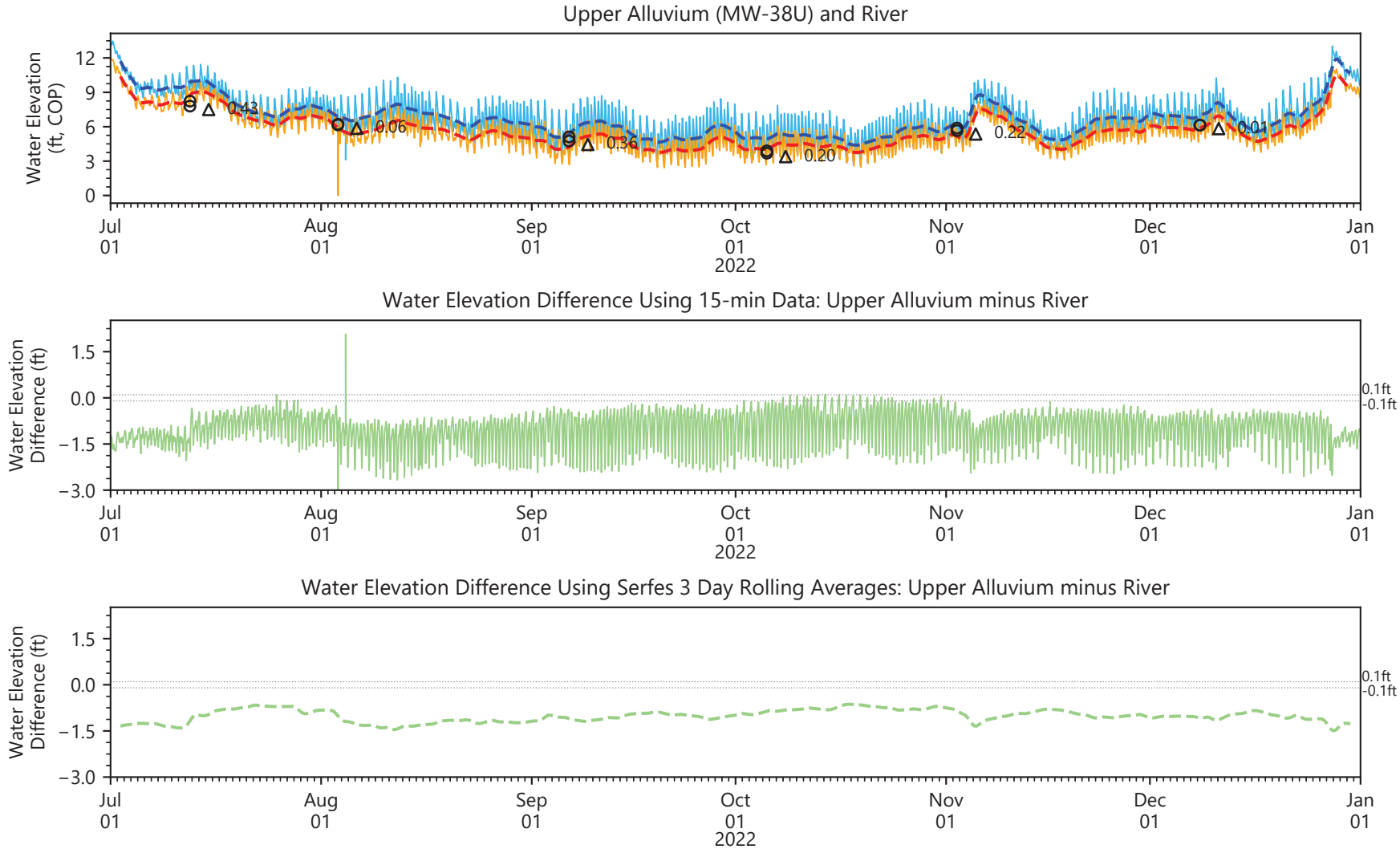


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.35
Groundwater Elevation Differences
NW Natural Gasco Site

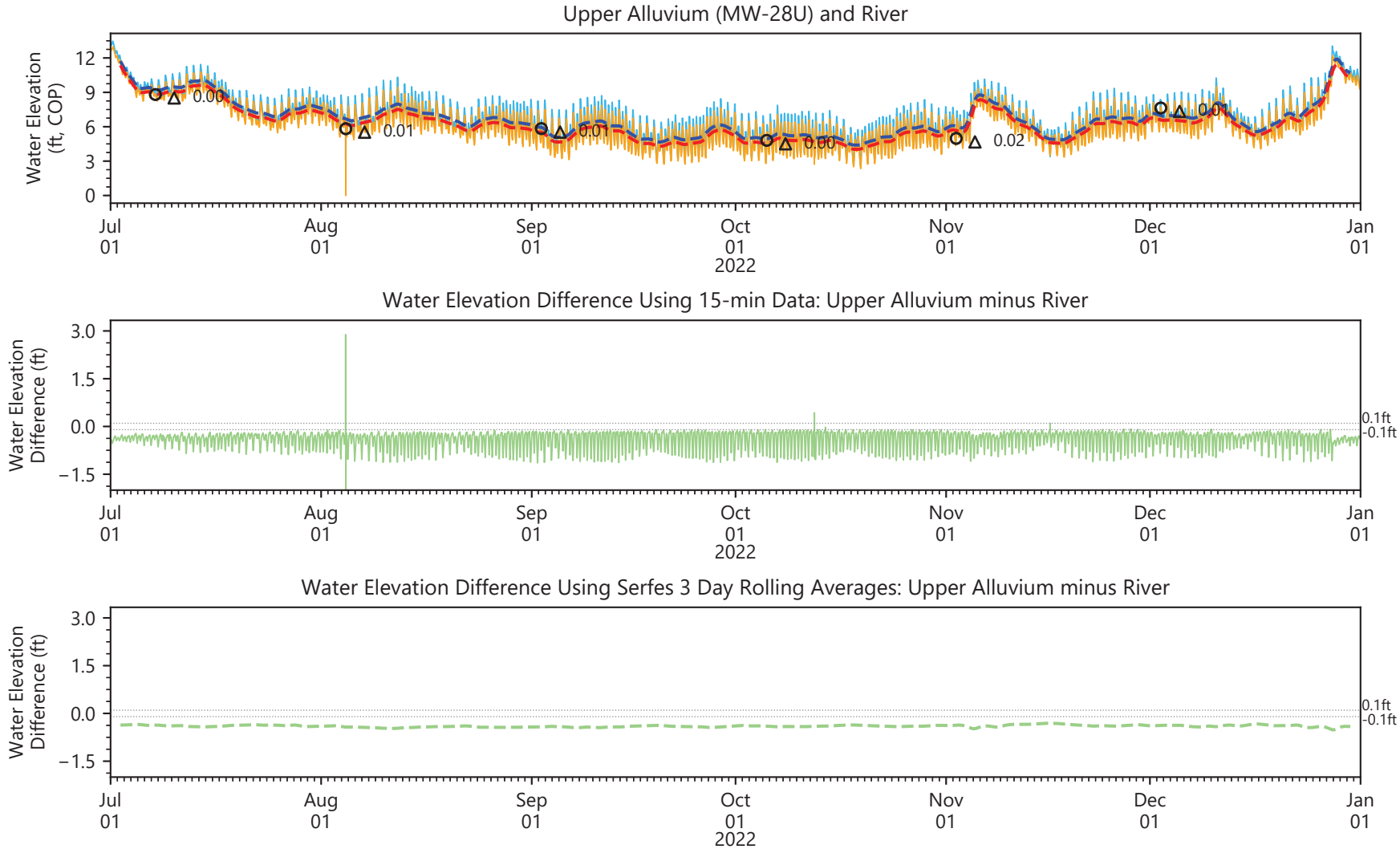


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.36
Groundwater Elevation Differences
NW Natural Gasco Site

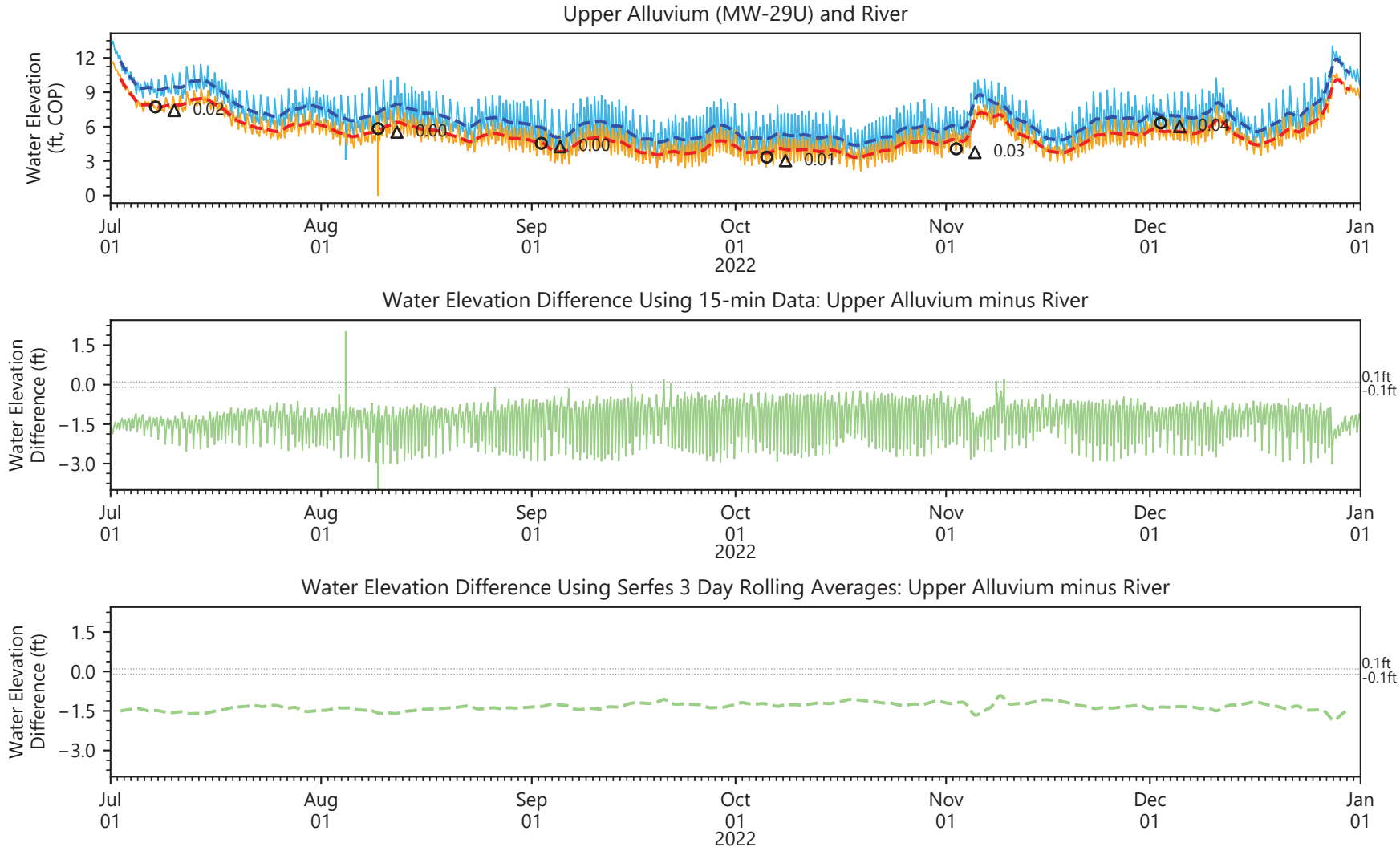


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:35 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.37
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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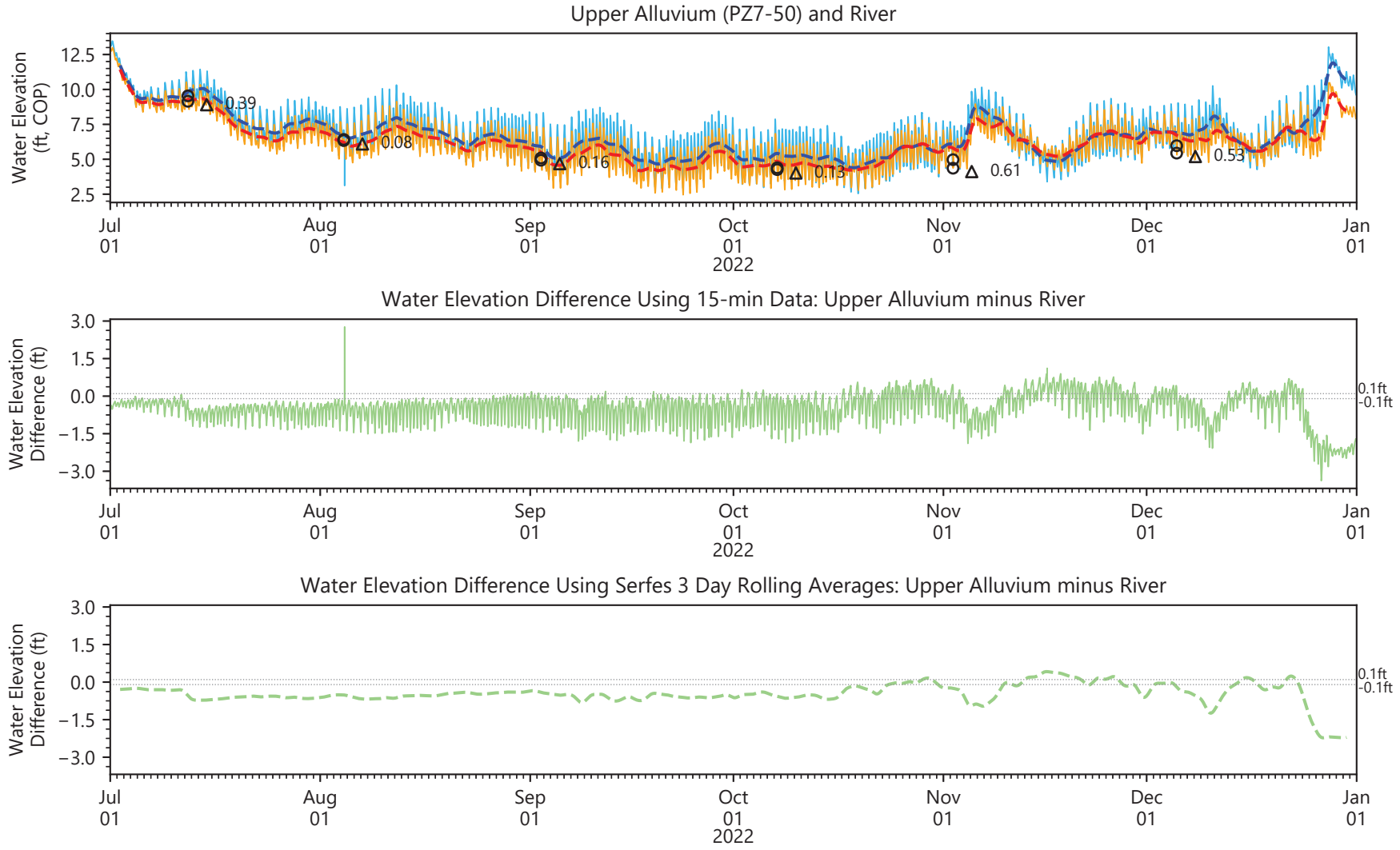
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.38
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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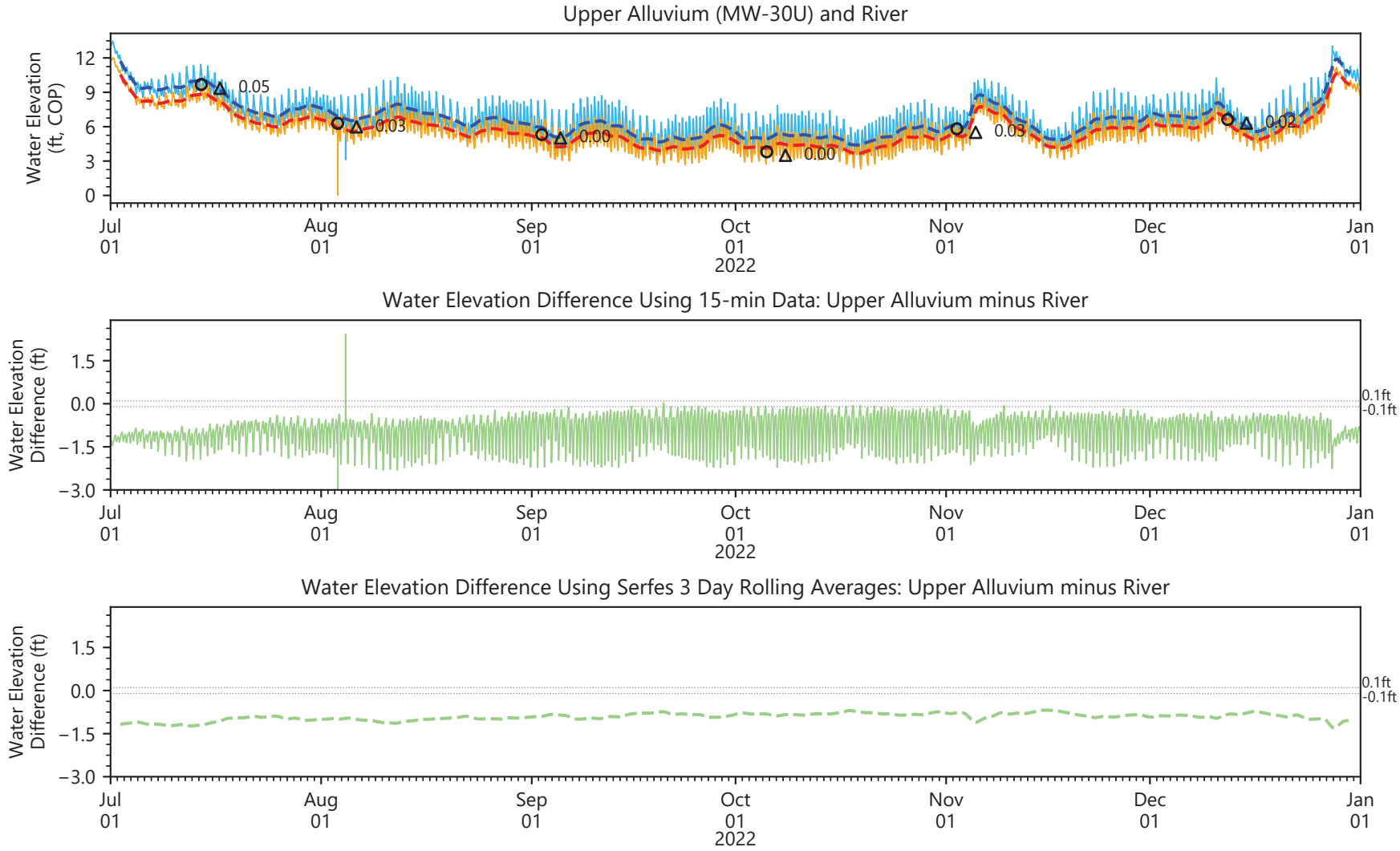
ANCHOR QEA

Figure 4.39
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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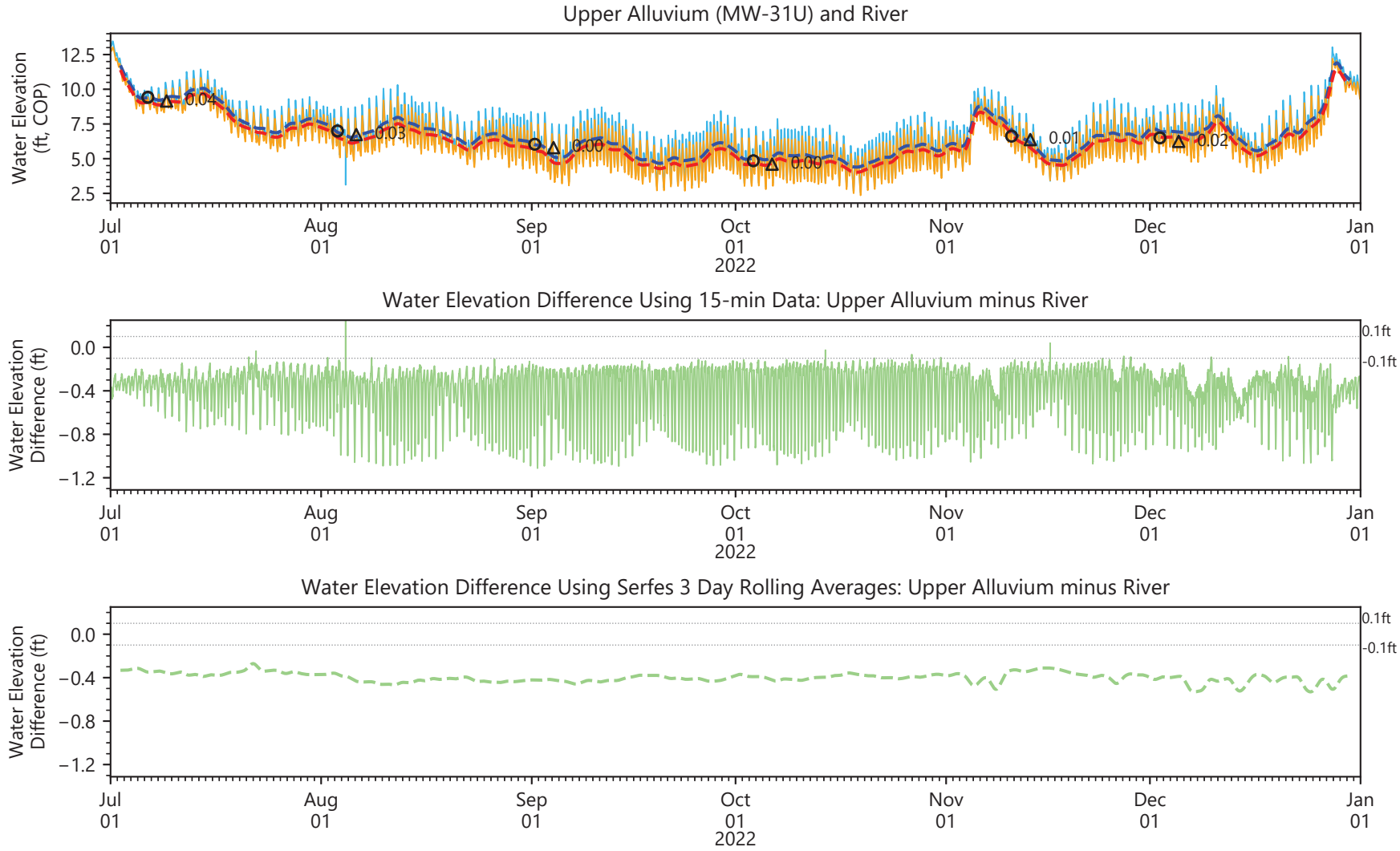
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.40
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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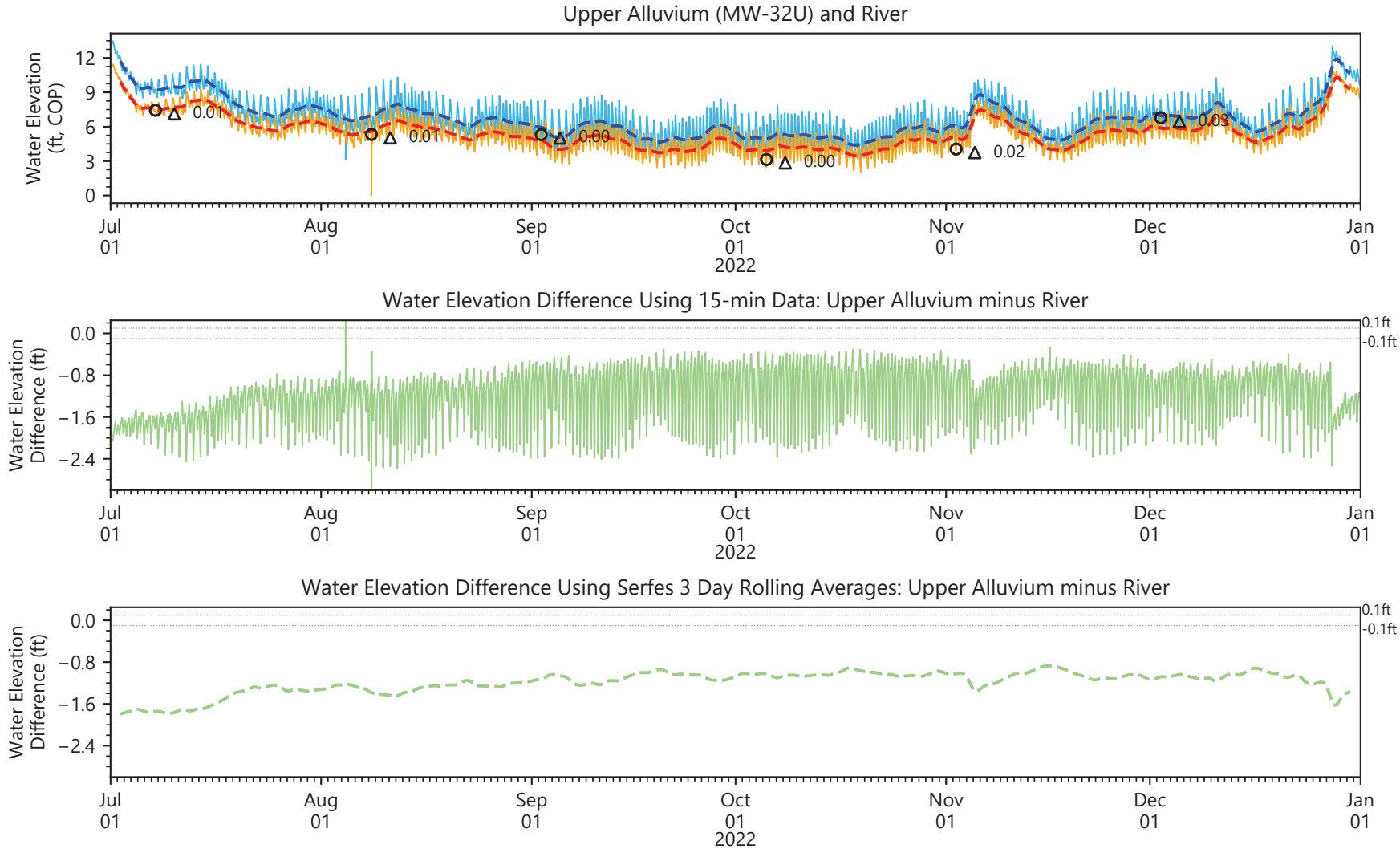
ANCHOR QEA

Figure 4.41
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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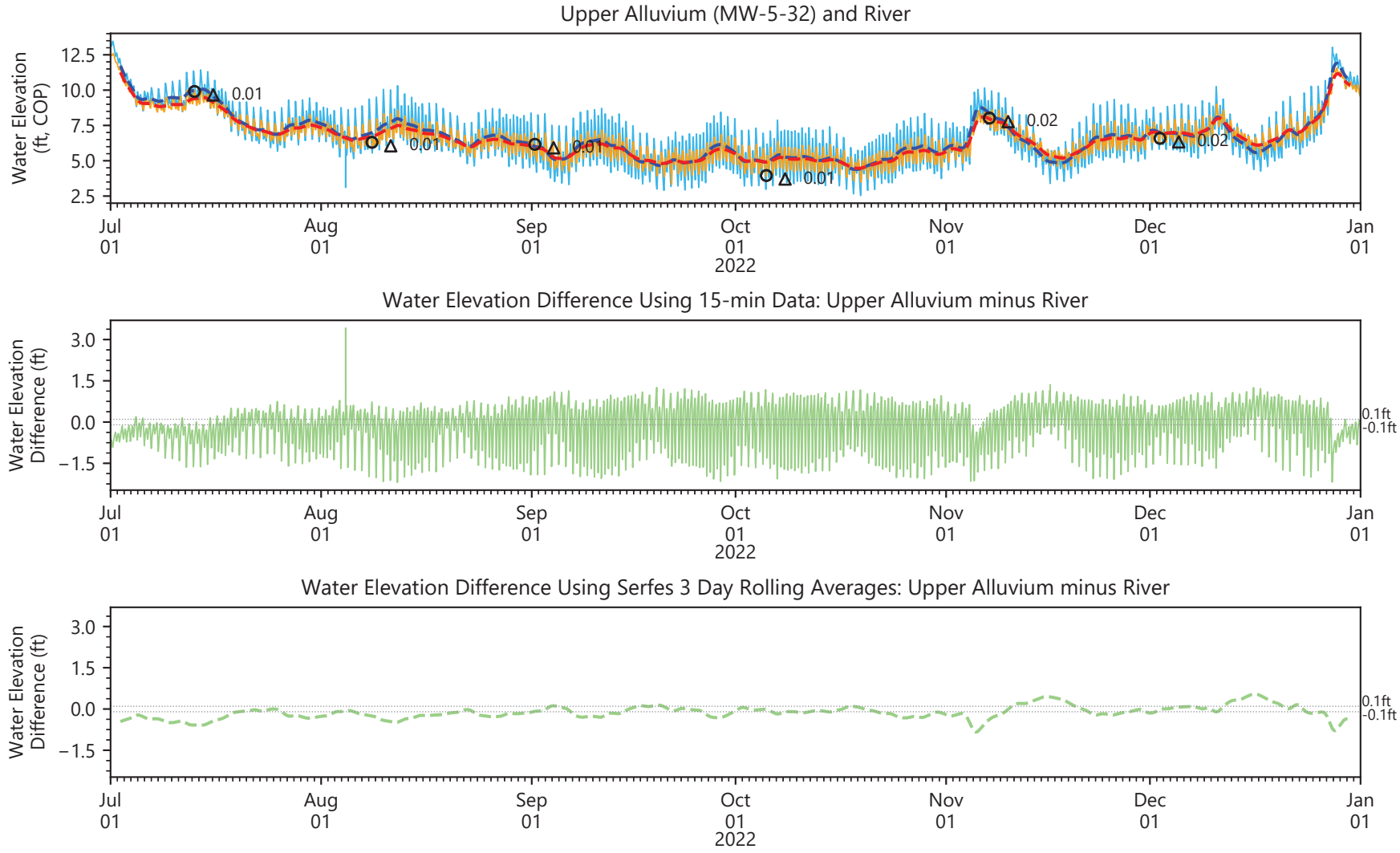
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.42
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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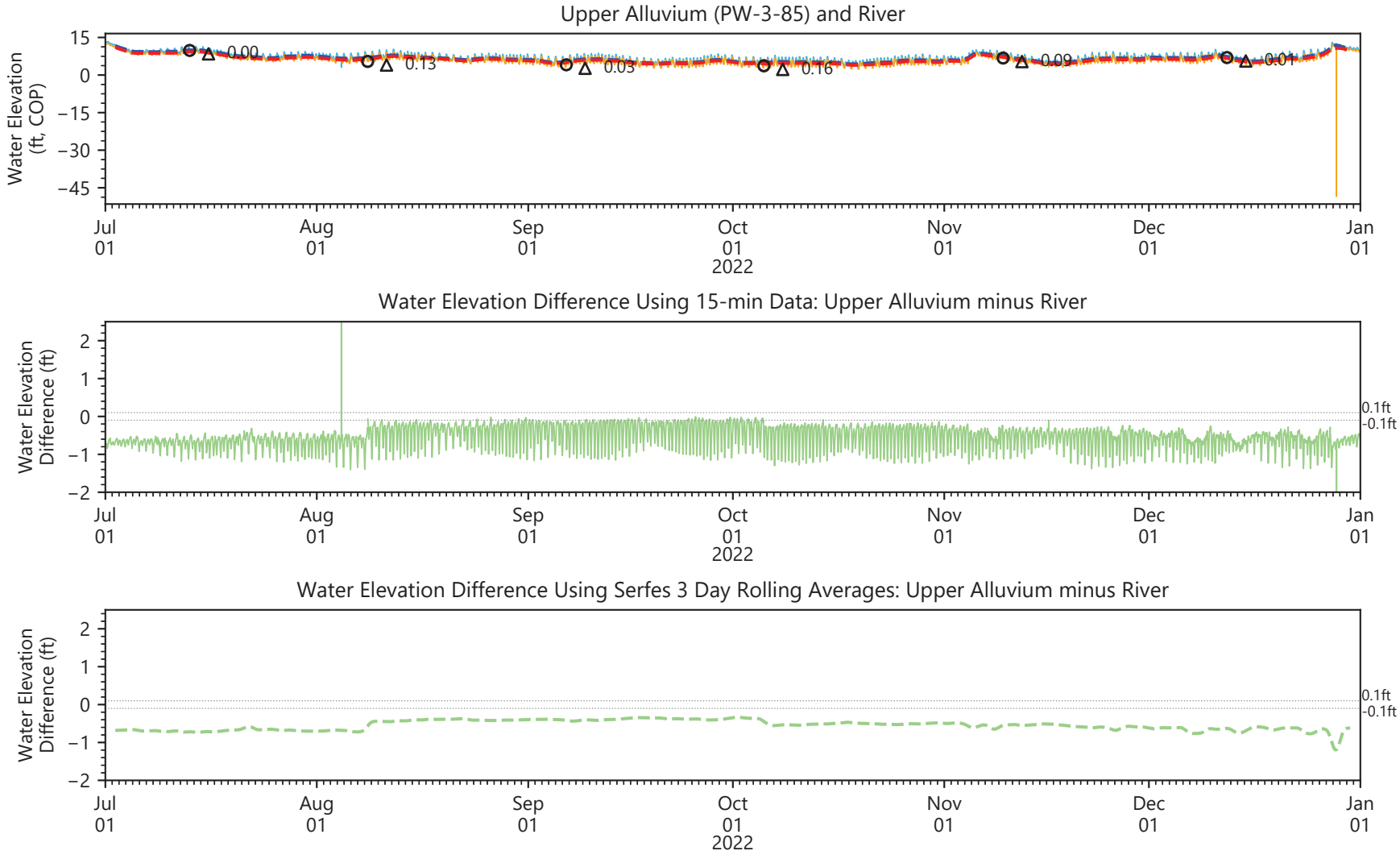
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.43
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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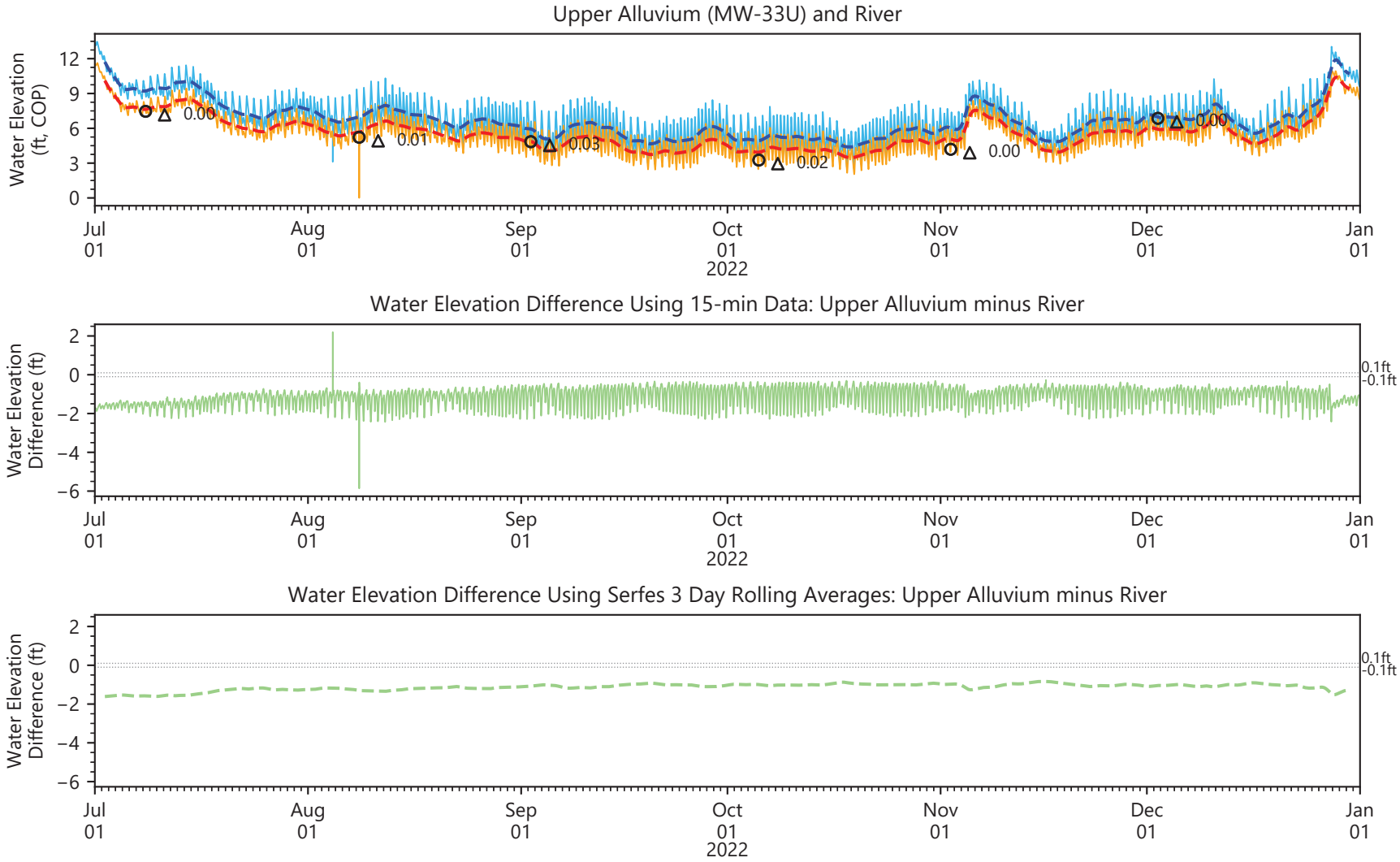
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.44
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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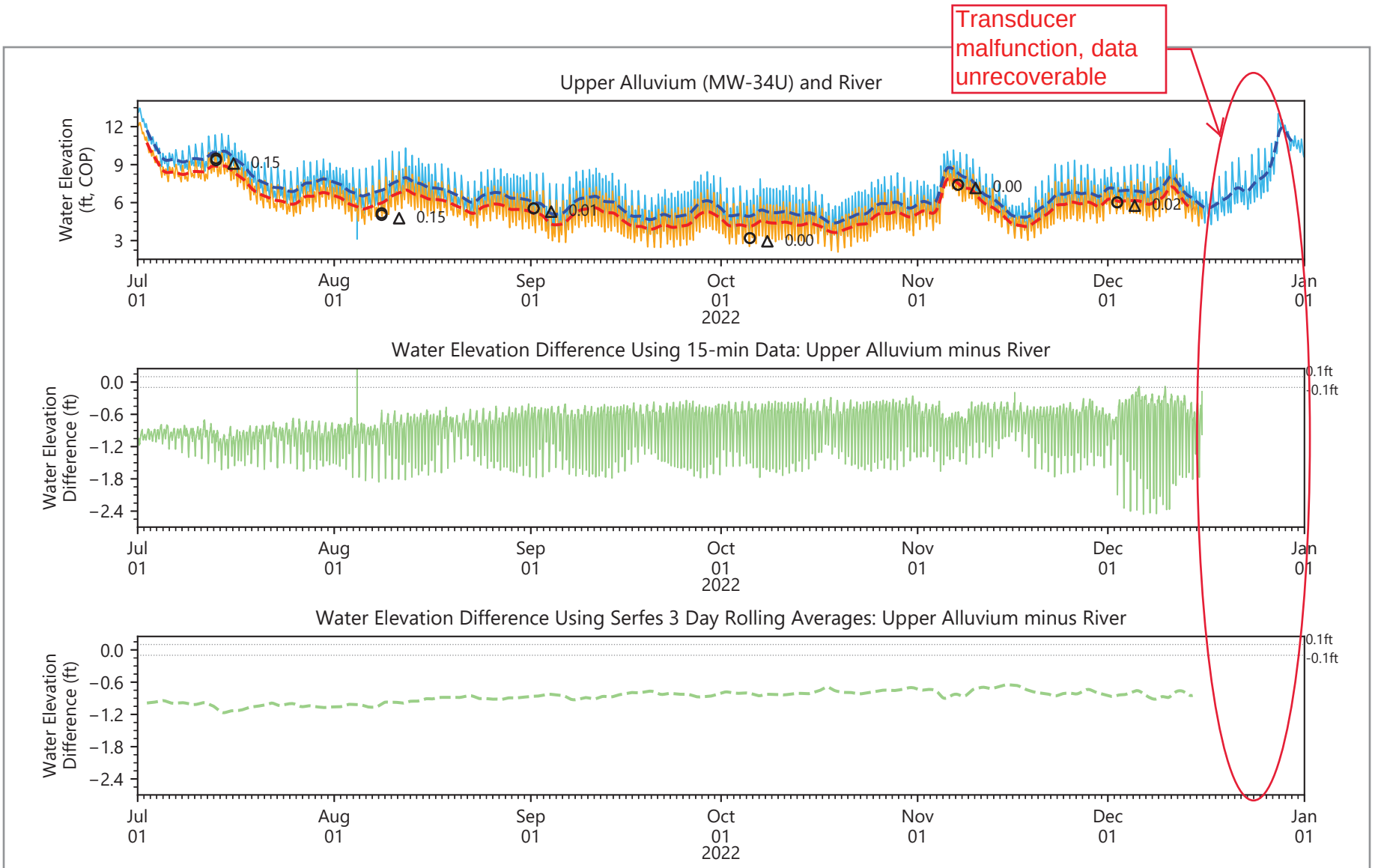
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.45
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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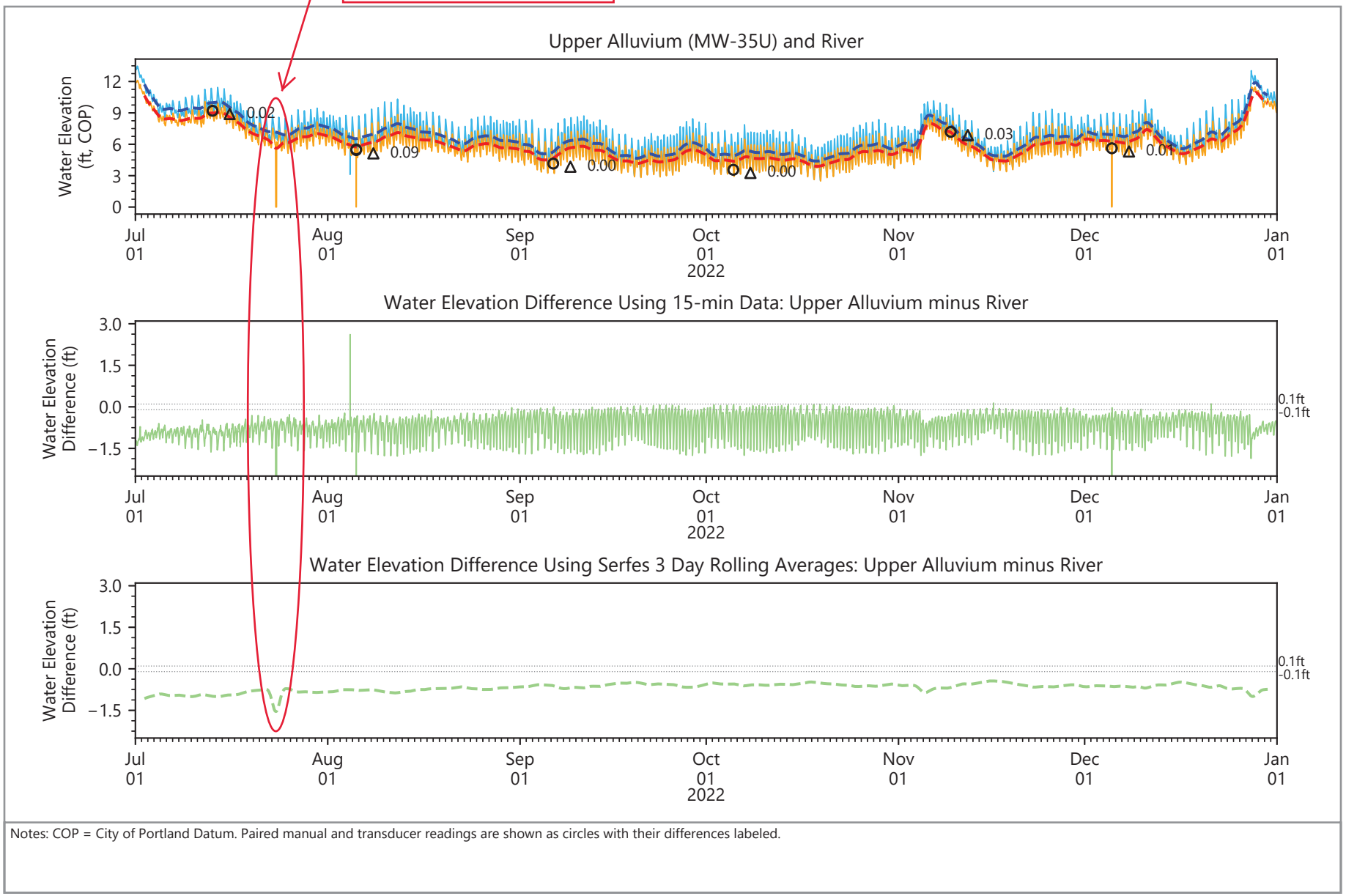
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.46
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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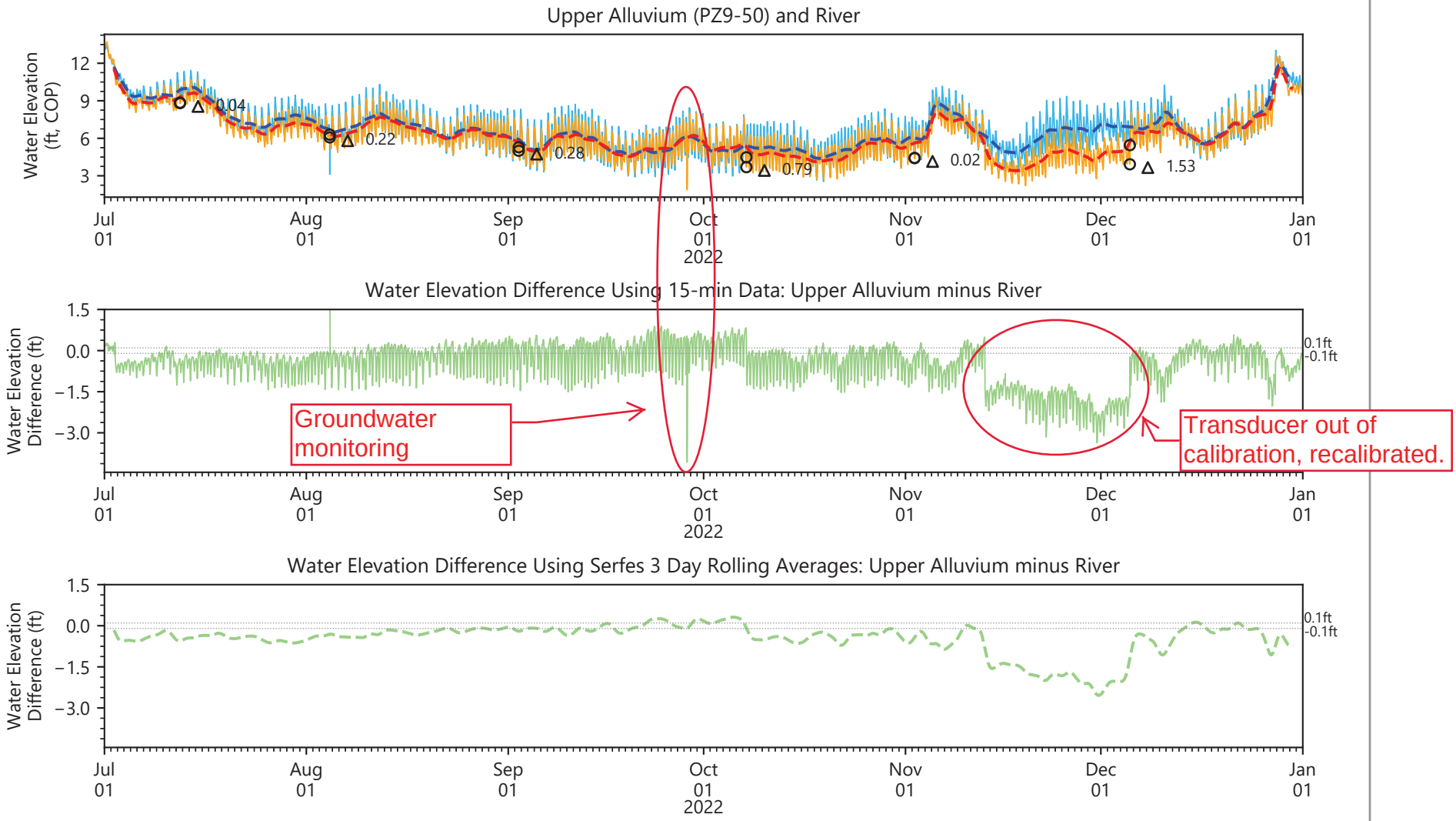
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium: 15-min Data
- Upper Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.47
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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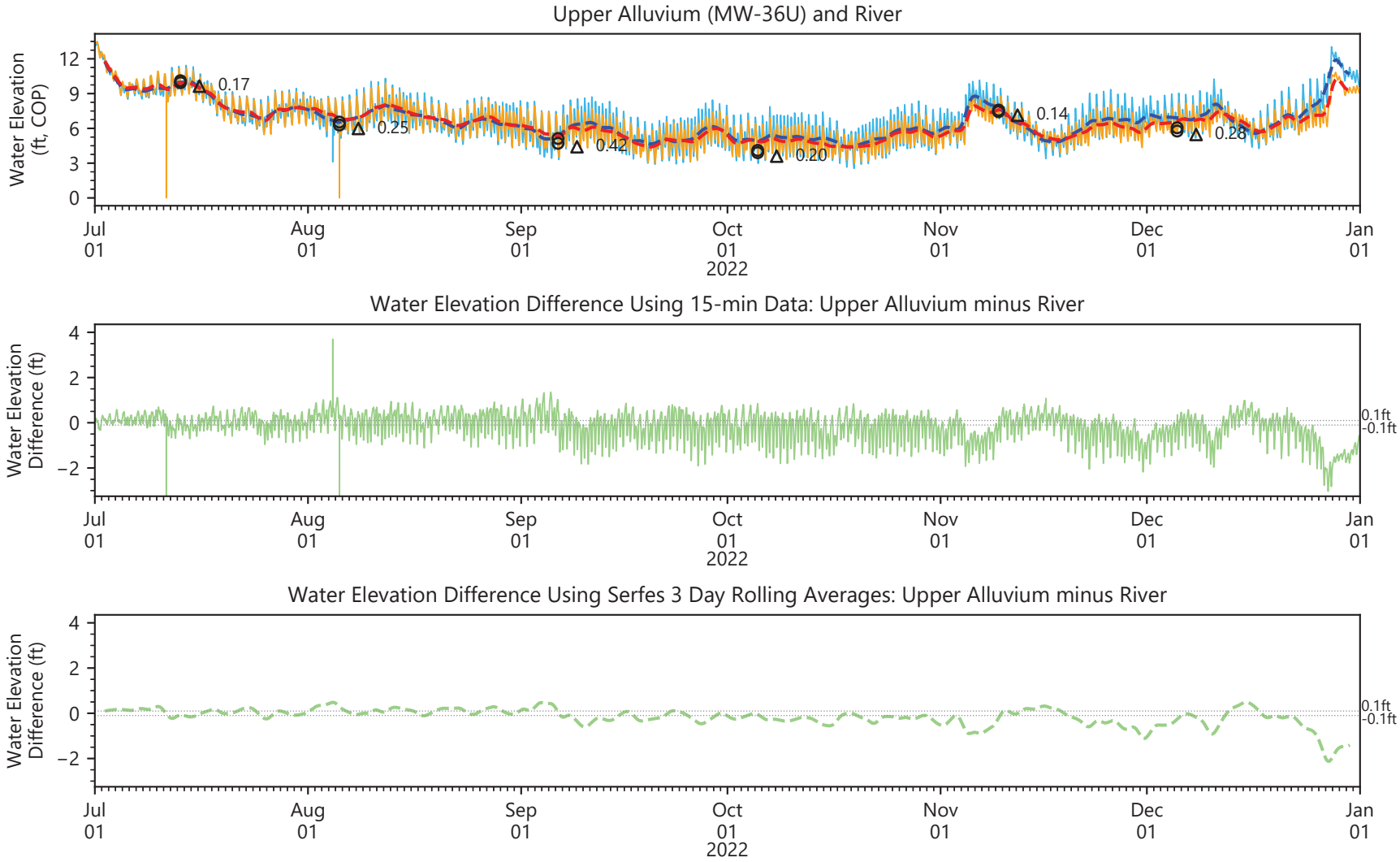
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.48
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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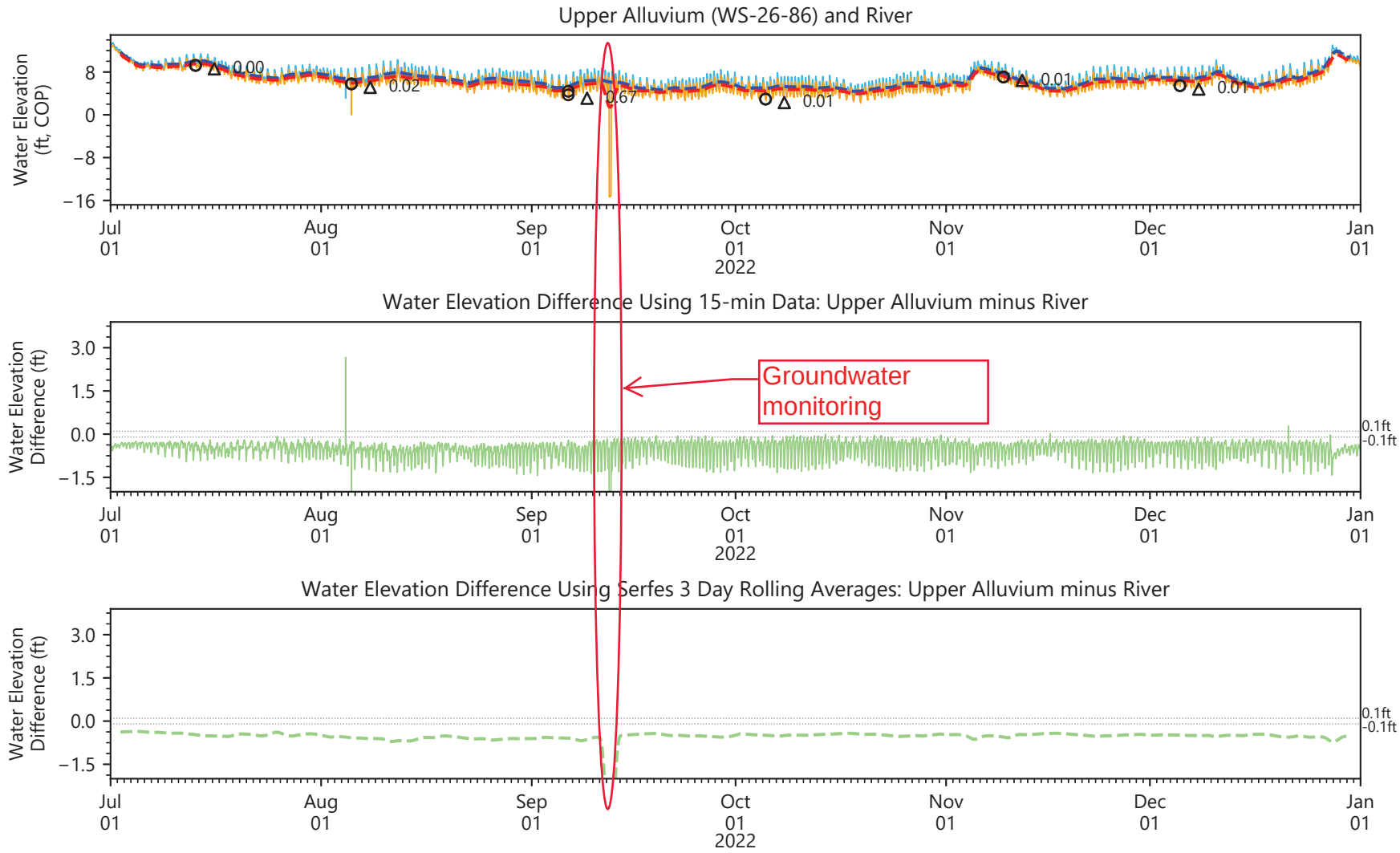
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.49
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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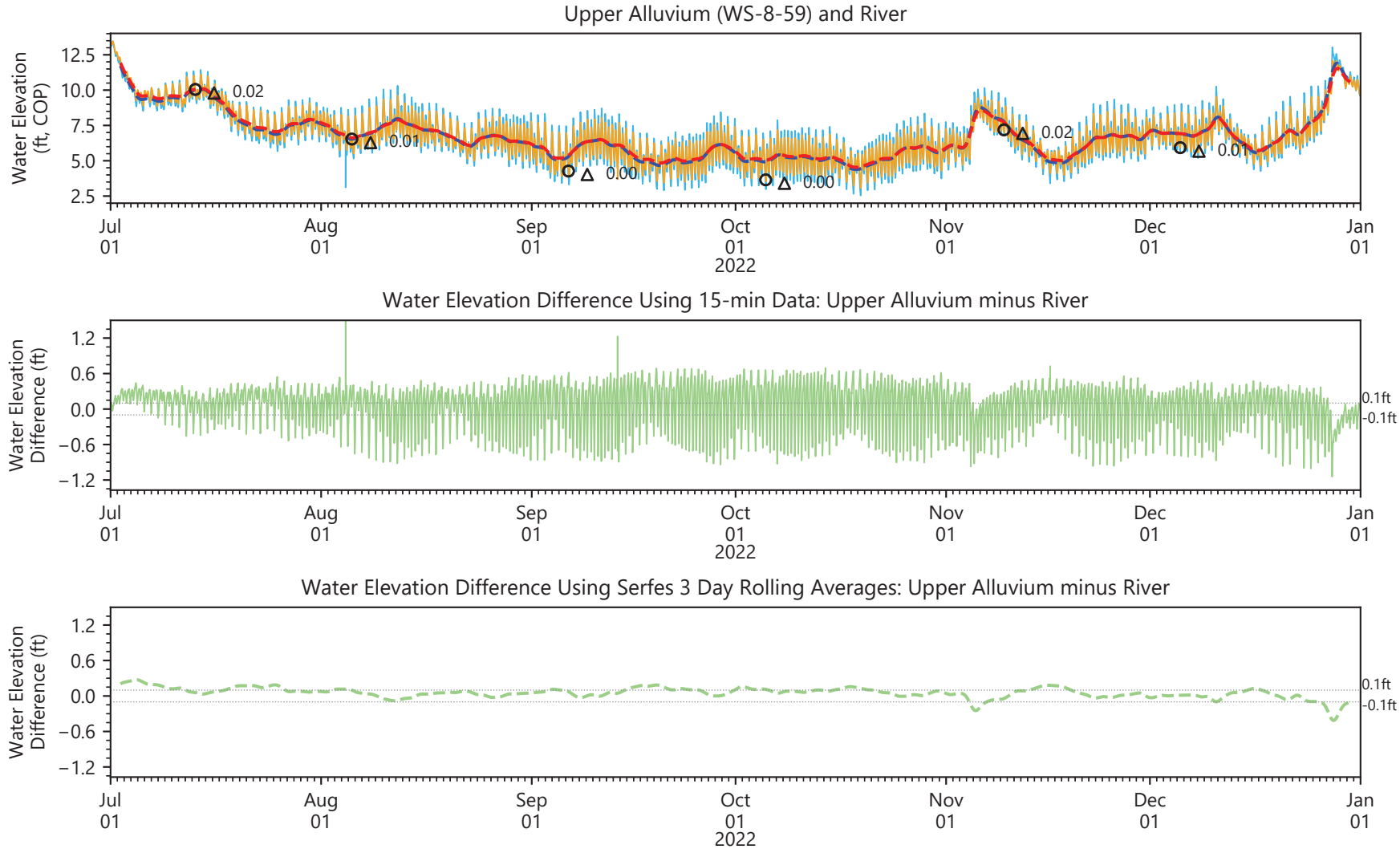
ANCHOR QEA

Figure 4.50
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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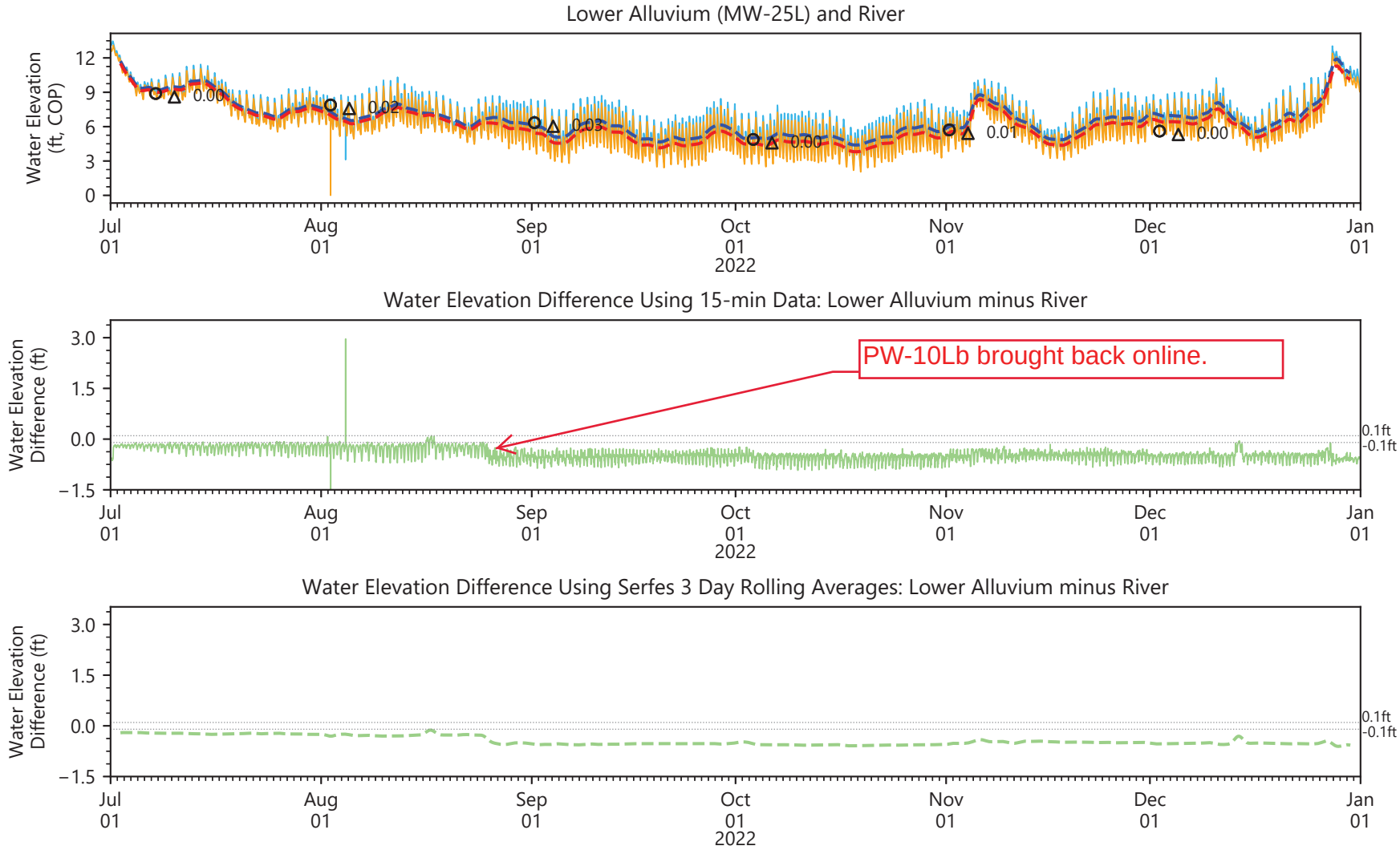
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.51
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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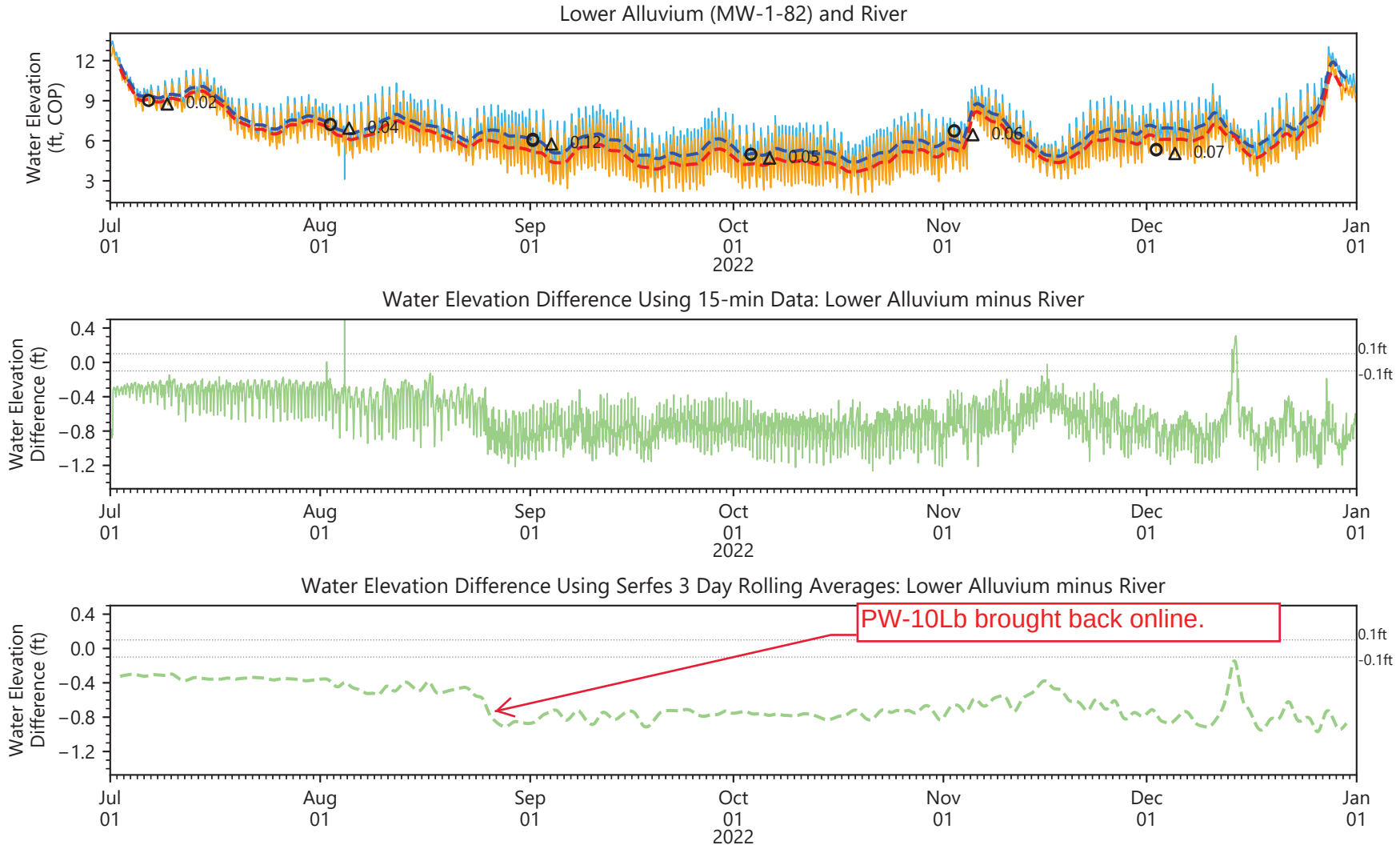
ANCHOR QEA

Figure 4.52
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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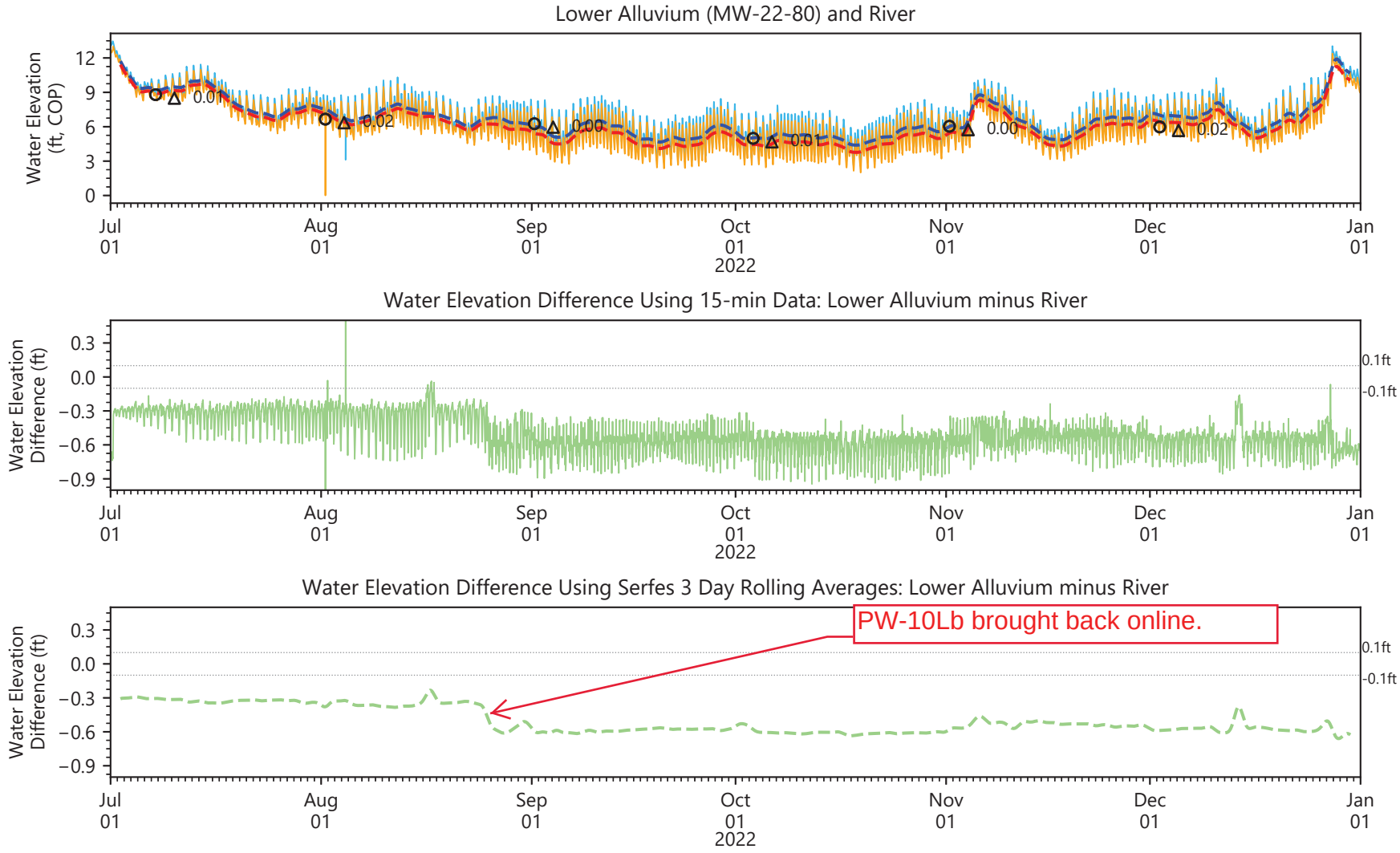
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.53
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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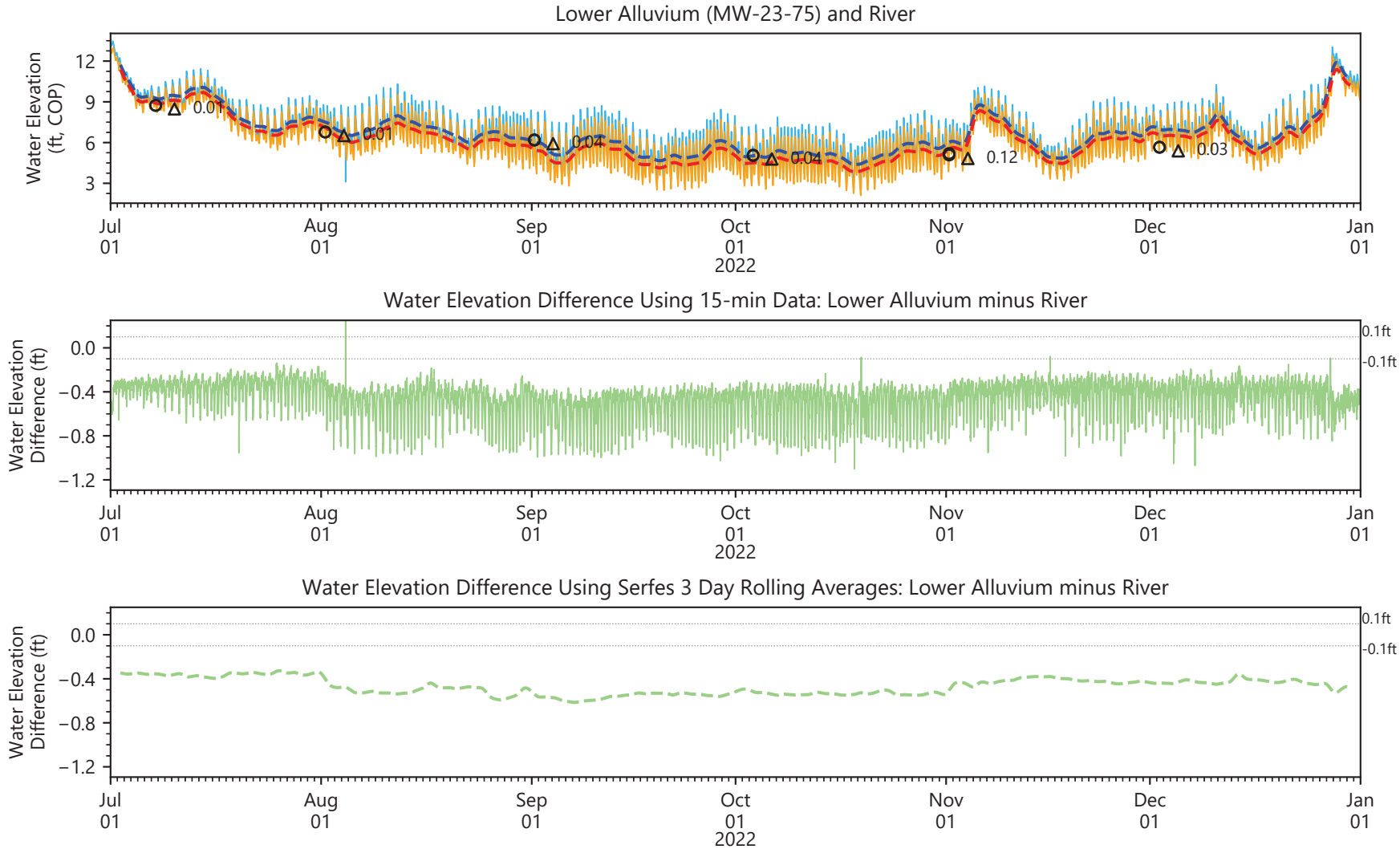
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.54
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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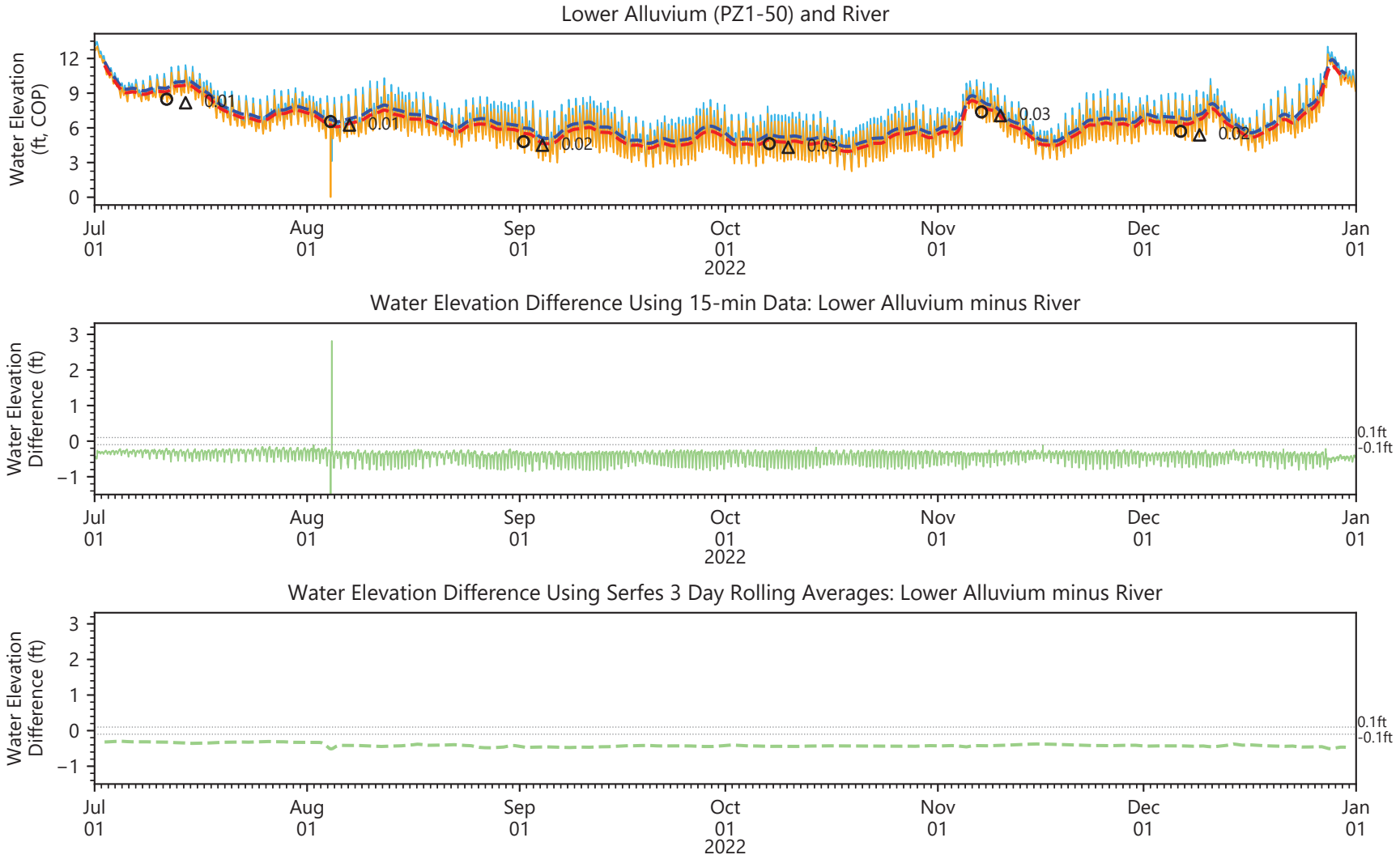
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.55
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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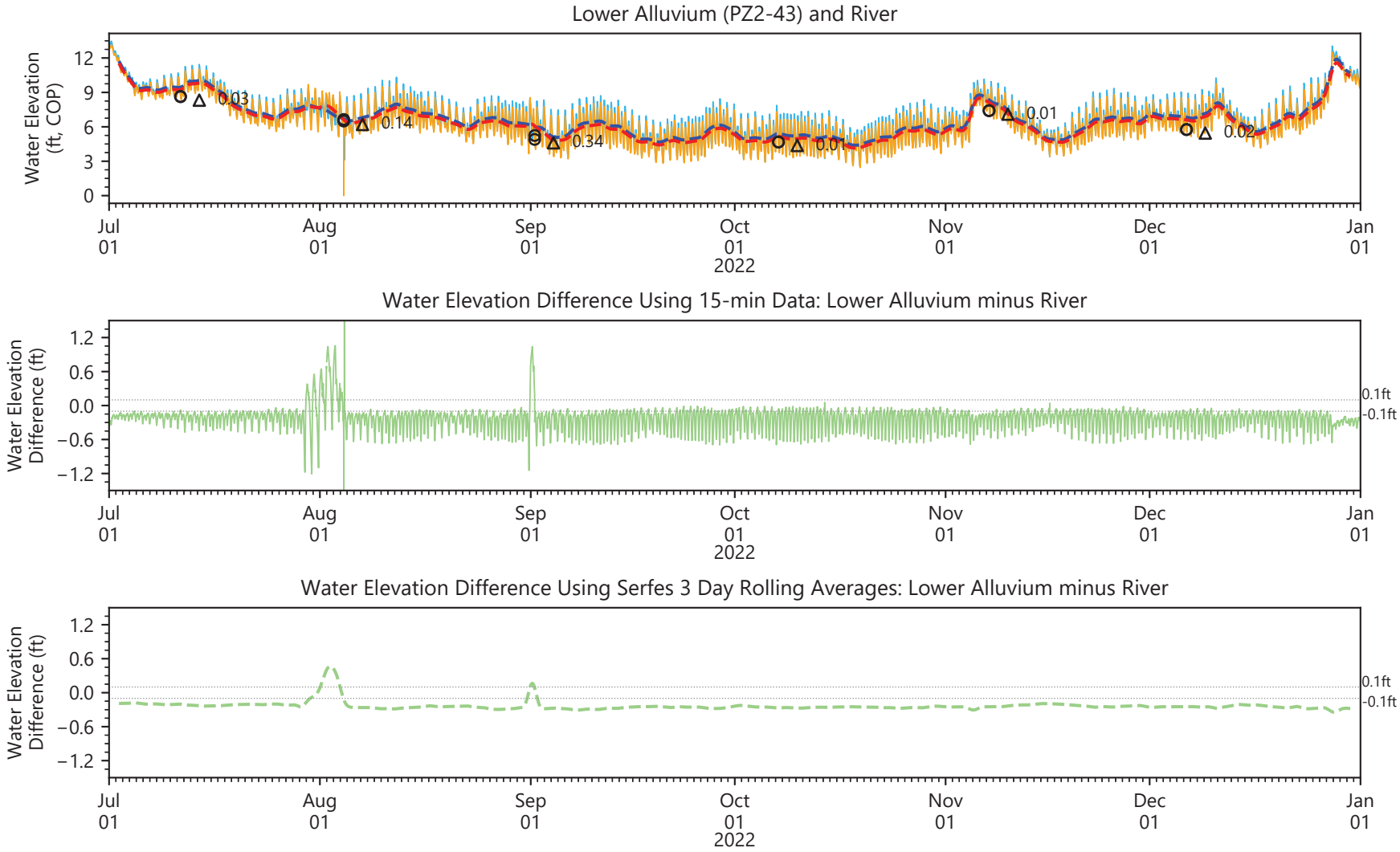
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.56
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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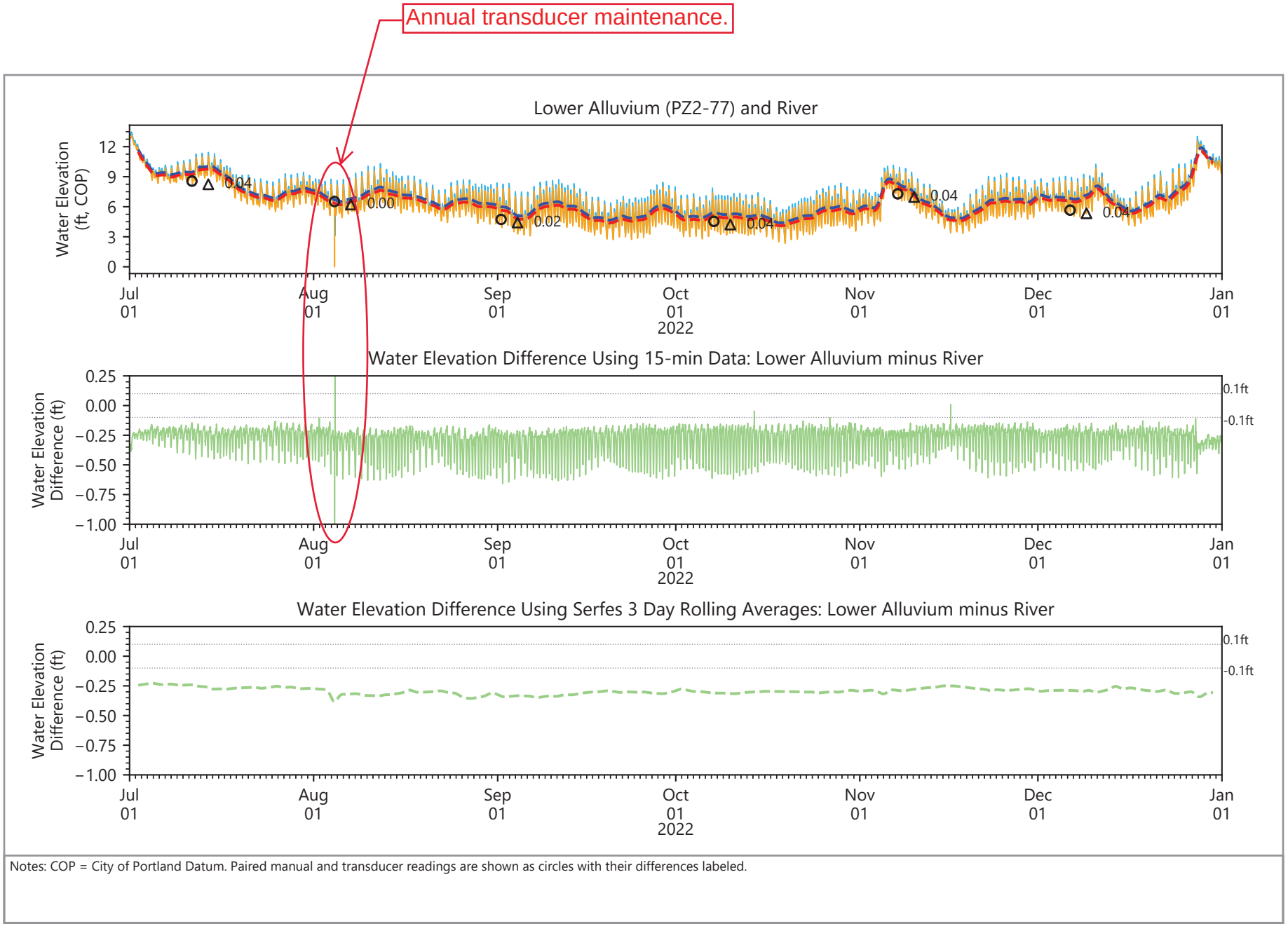
ANCHOR QEA

Figure 4.57
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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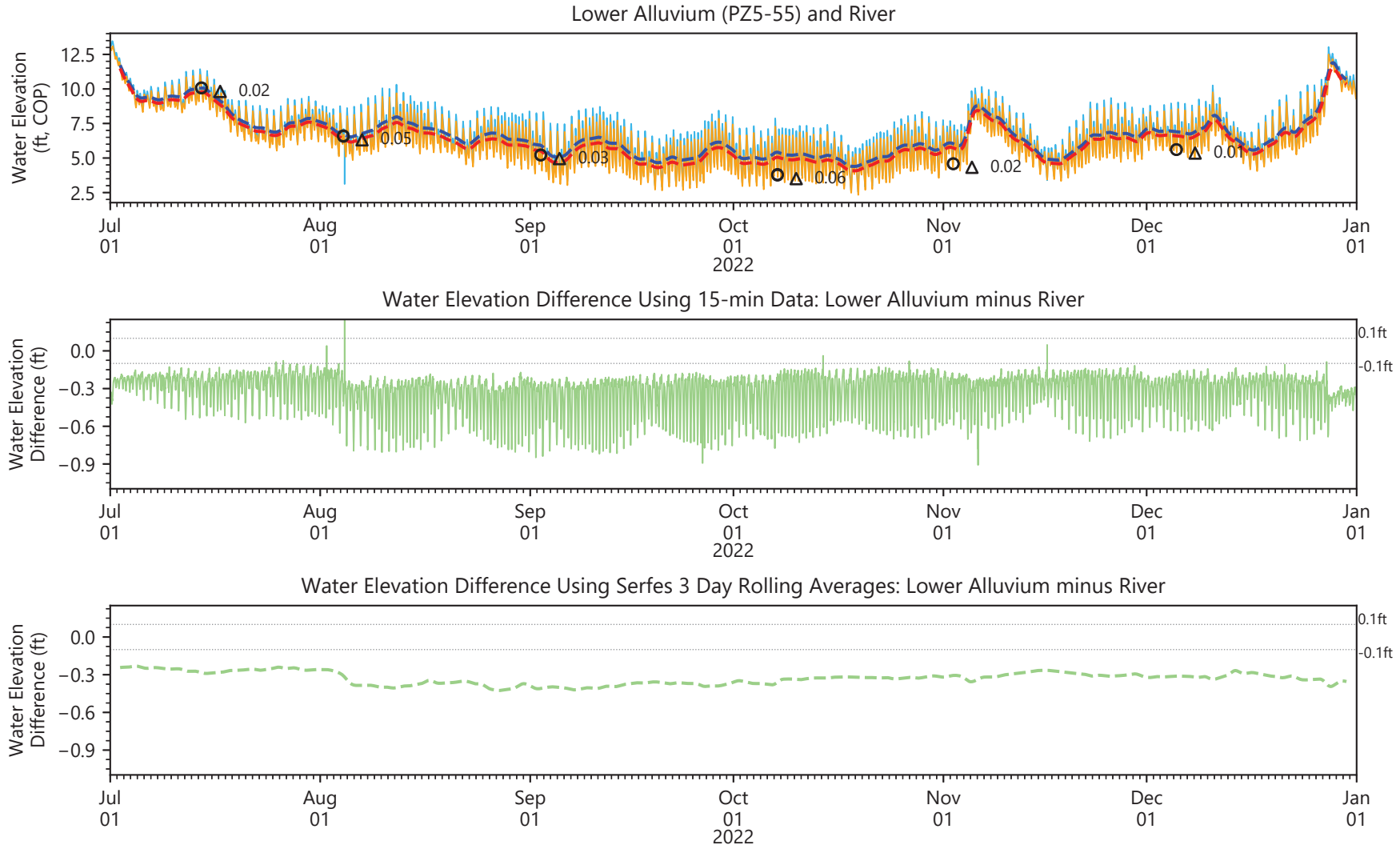
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.58
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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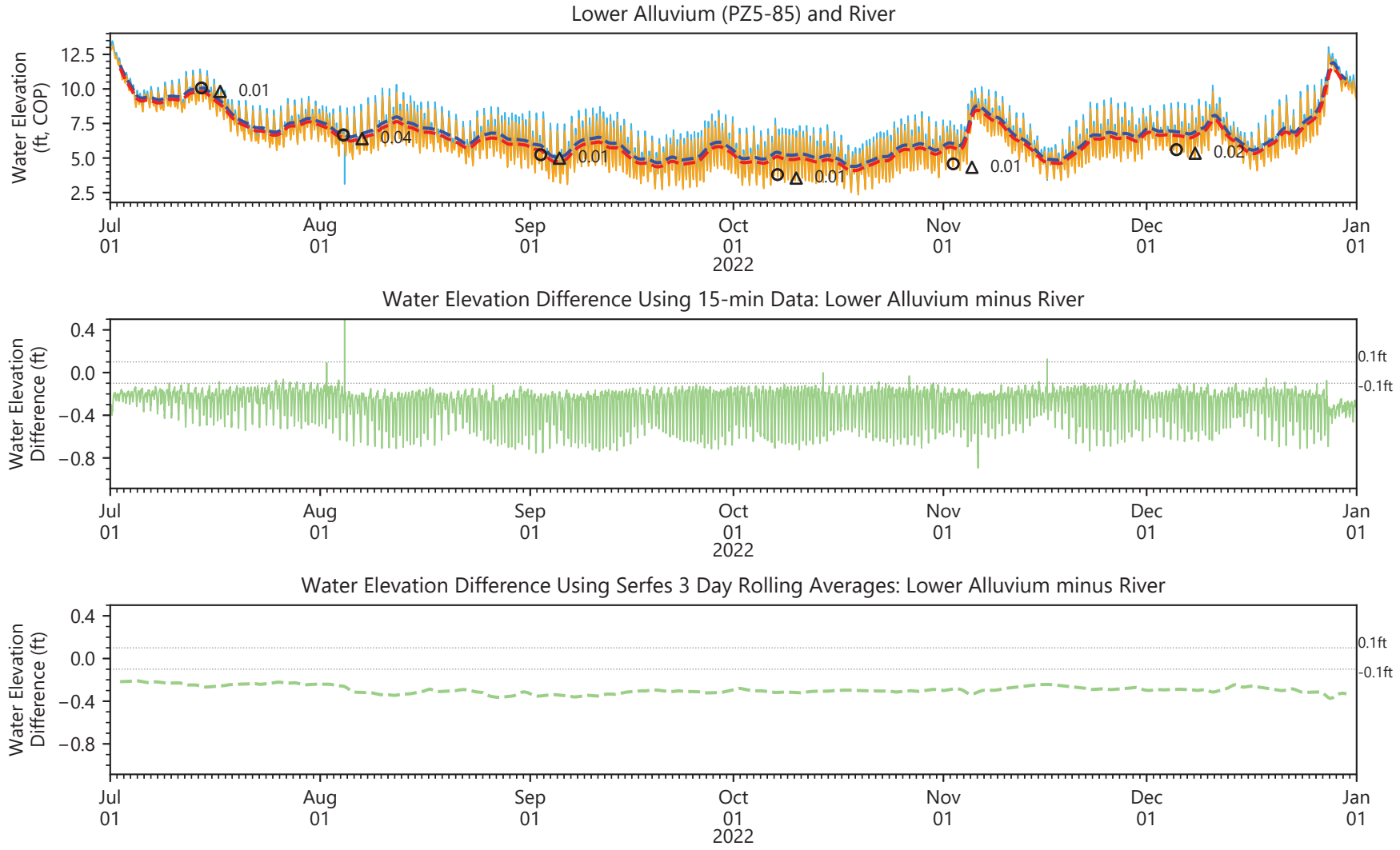
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.59
Groundwater Elevation Differences
NW Natural Gasco Site

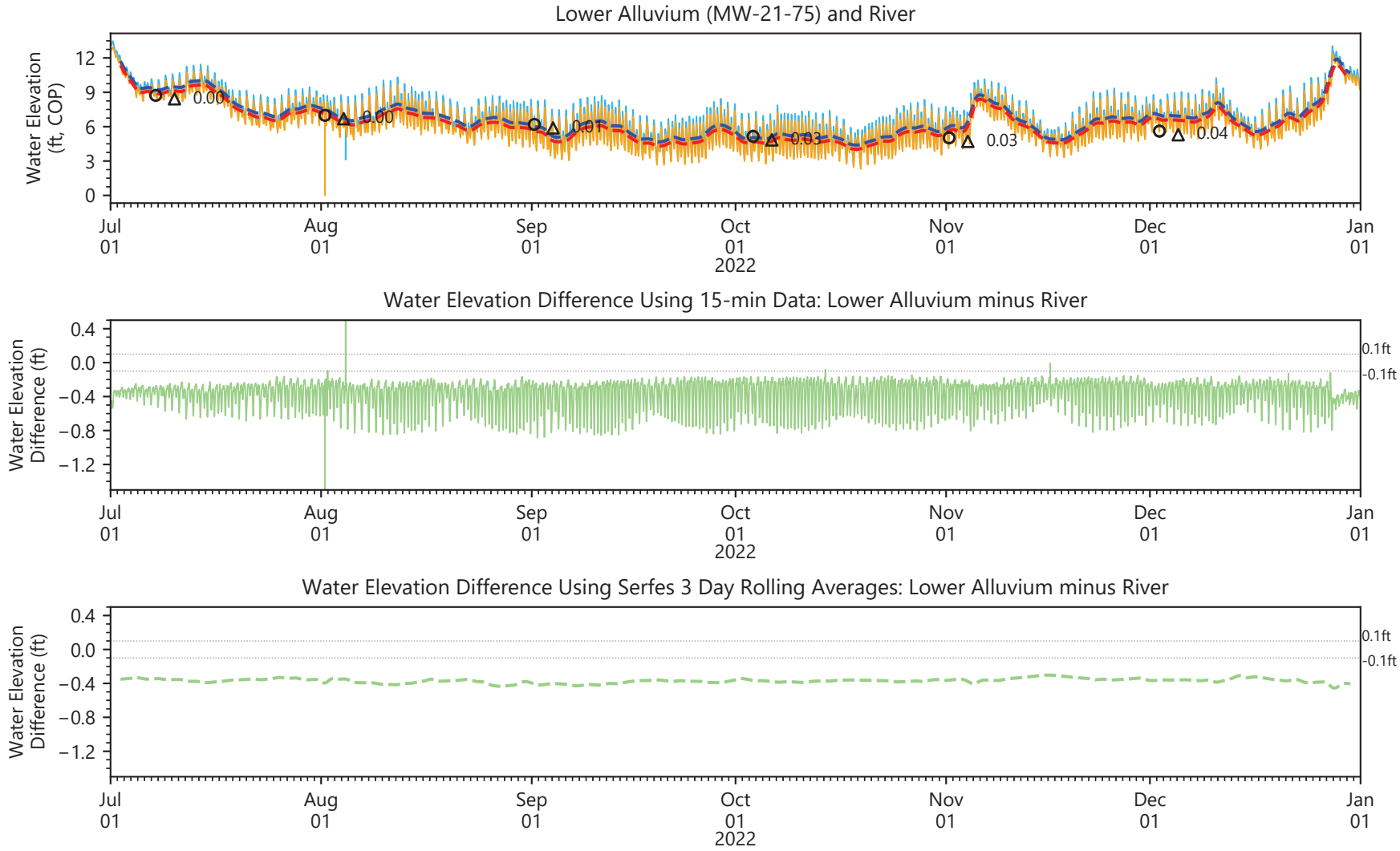


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.60
Groundwater Elevation Differences
NW Natural Gasco Site

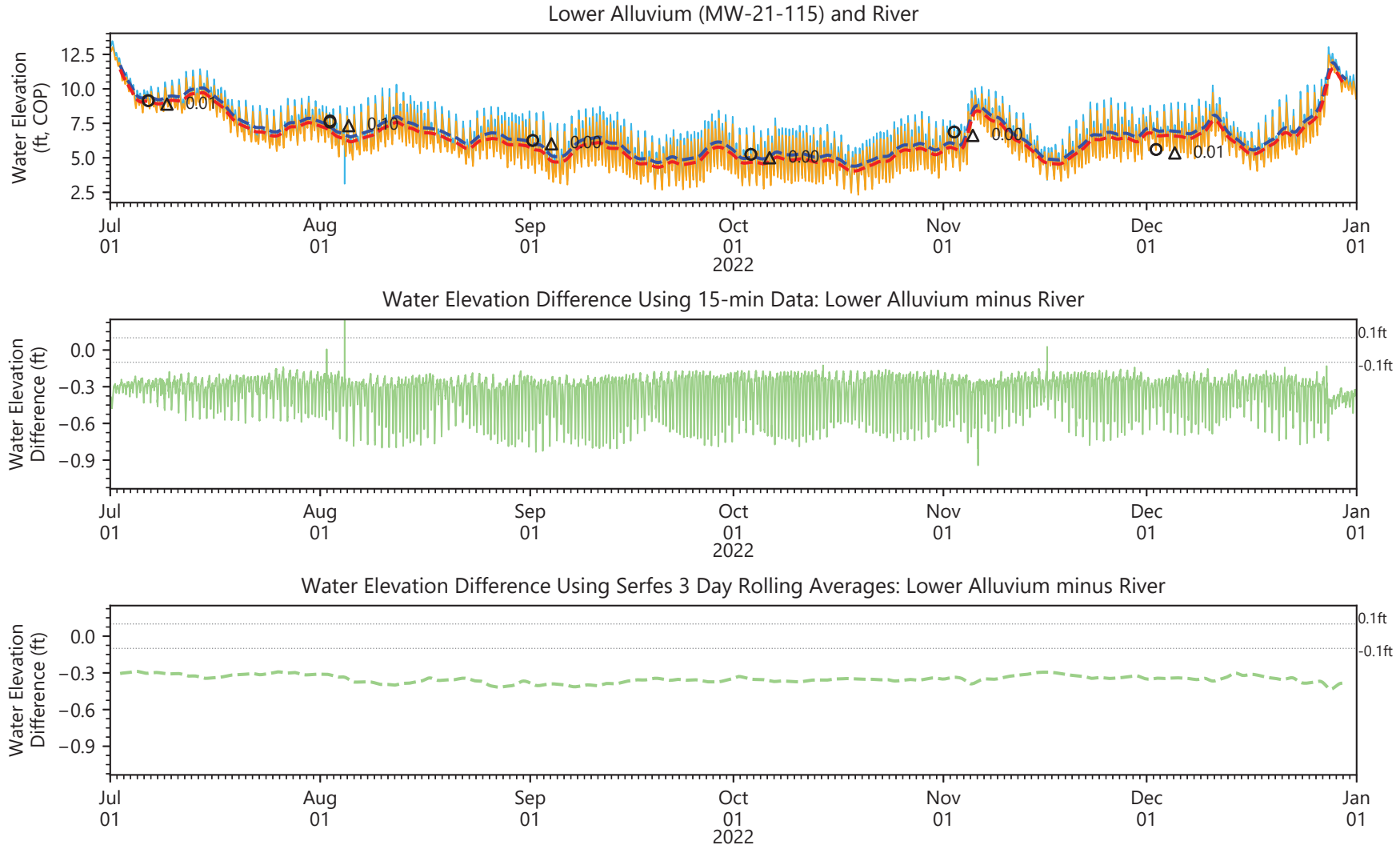


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.61
Groundwater Elevation Differences
NW Natural Gasco Site

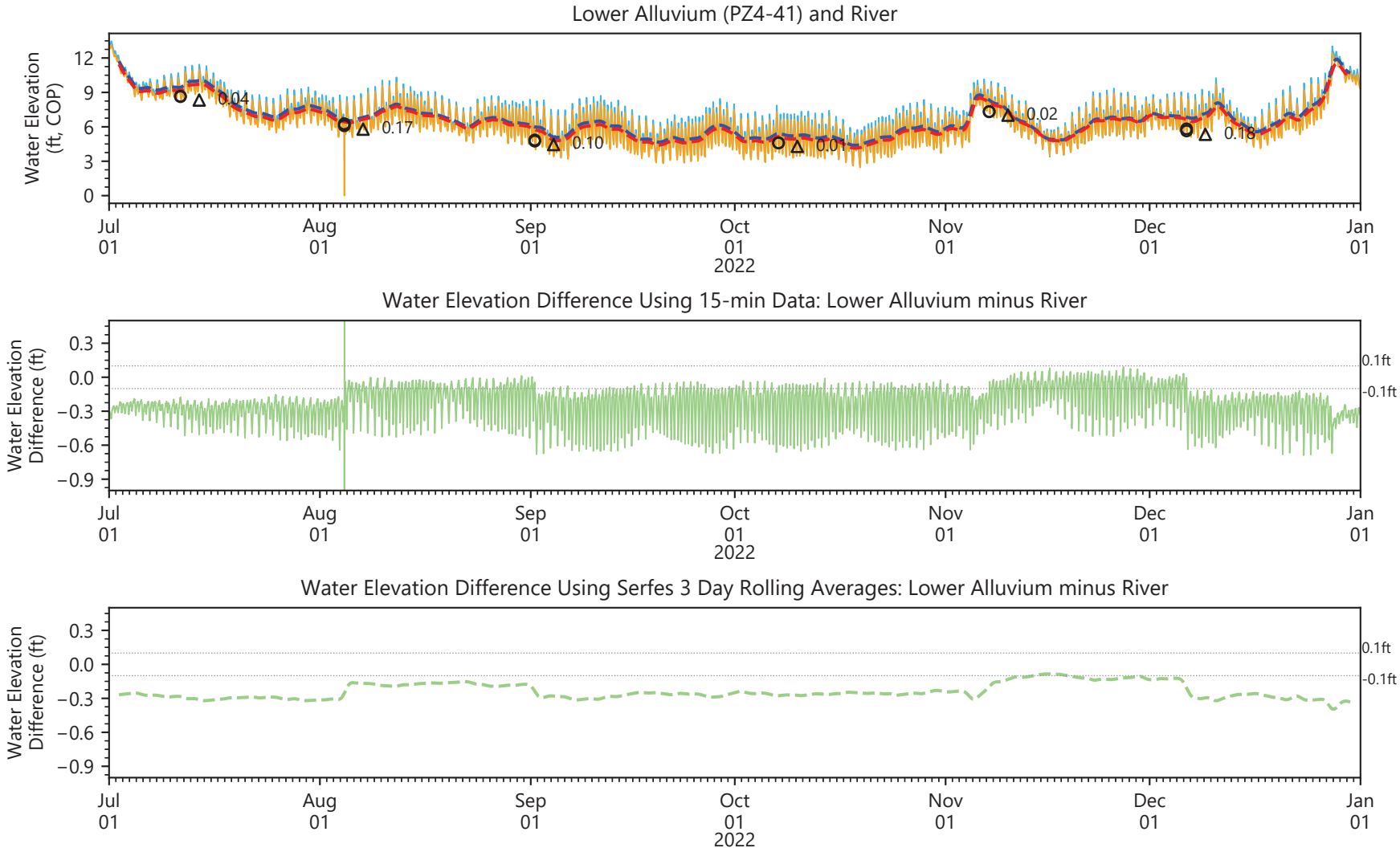


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.62
Groundwater Elevation Differences
NW Natural Gasco Site

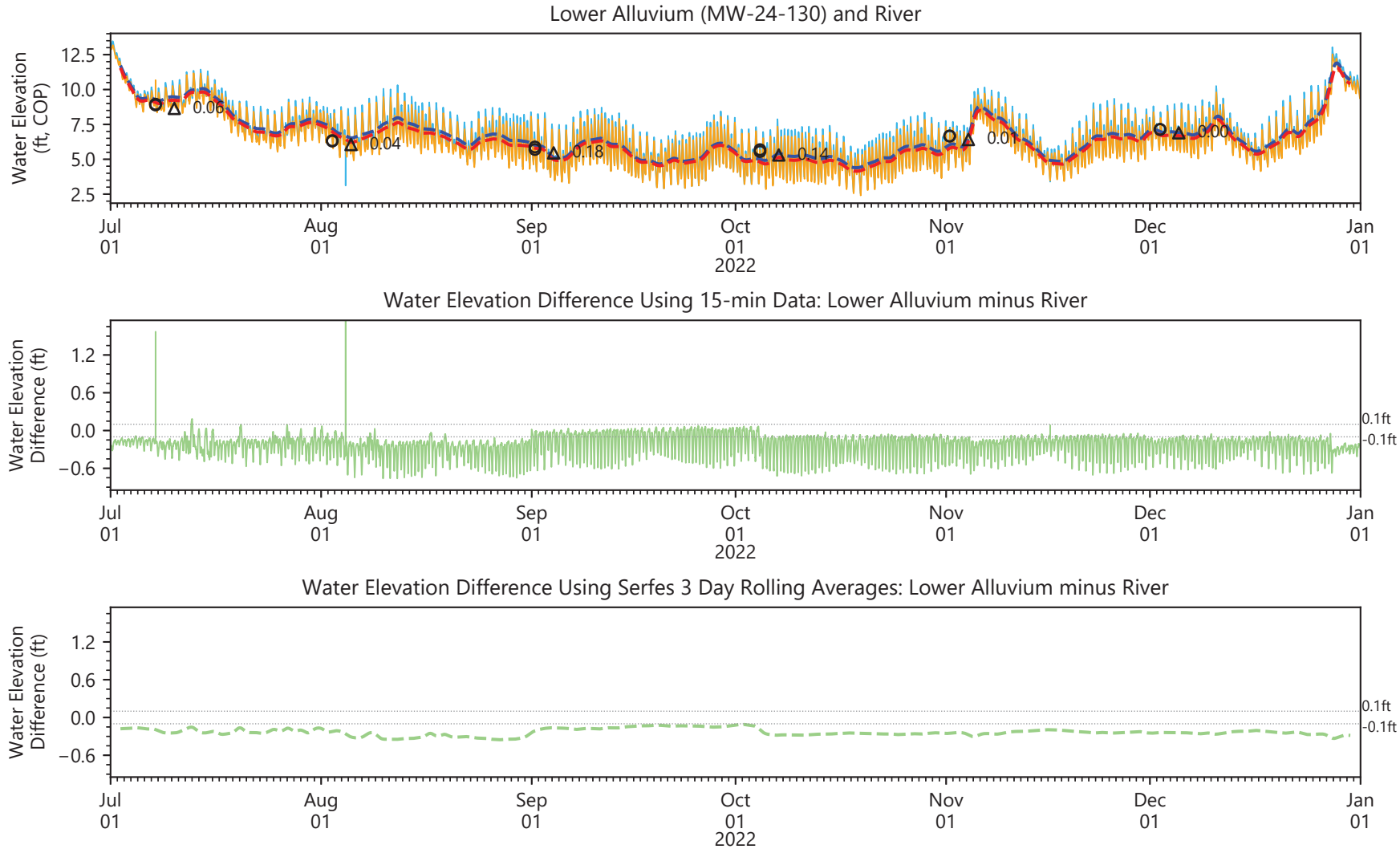


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.63
Groundwater Elevation Differences
NW Natural Gasco Site

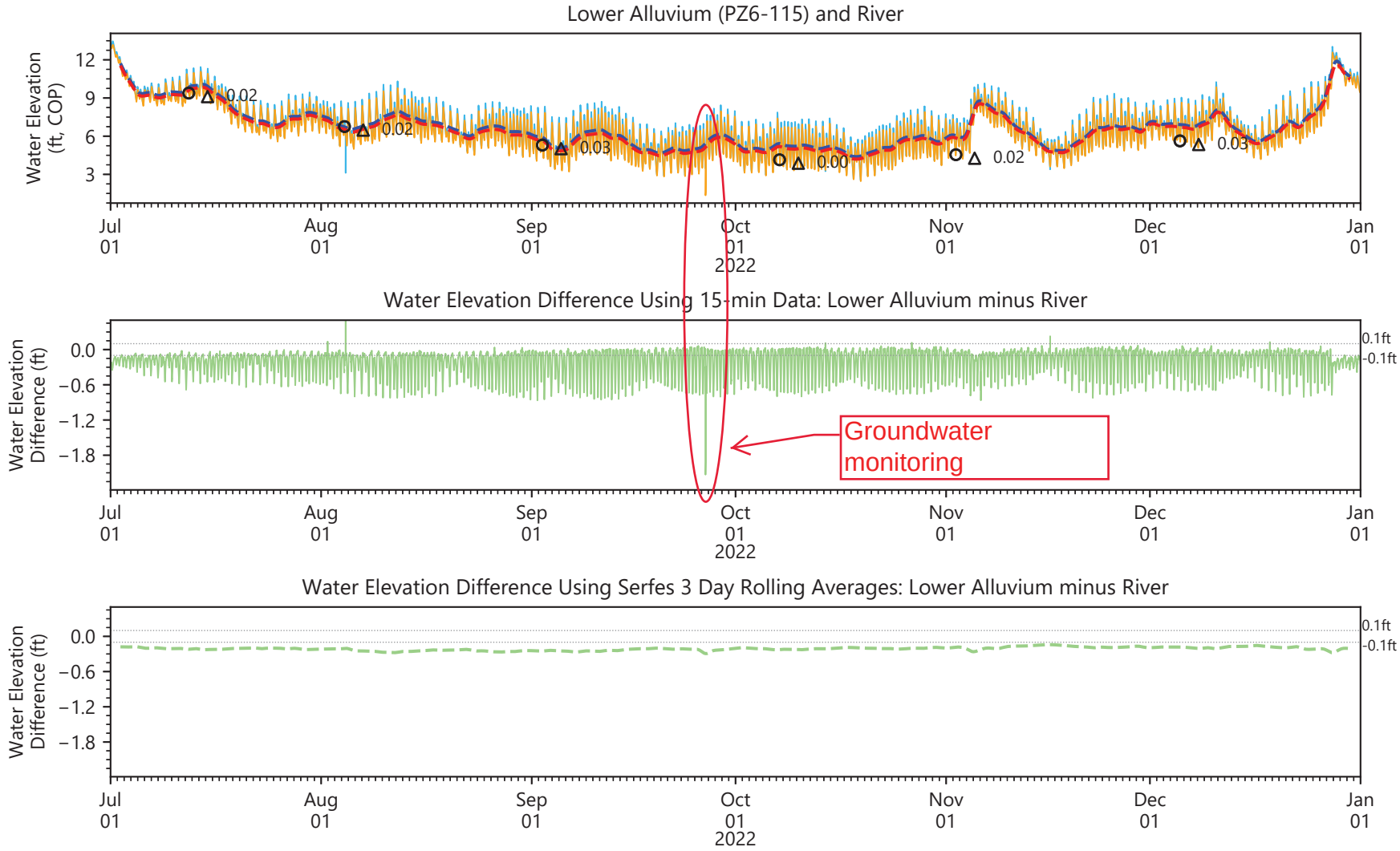


Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Figure 4.64
Groundwater Elevation Differences
NW Natural Gasco Site



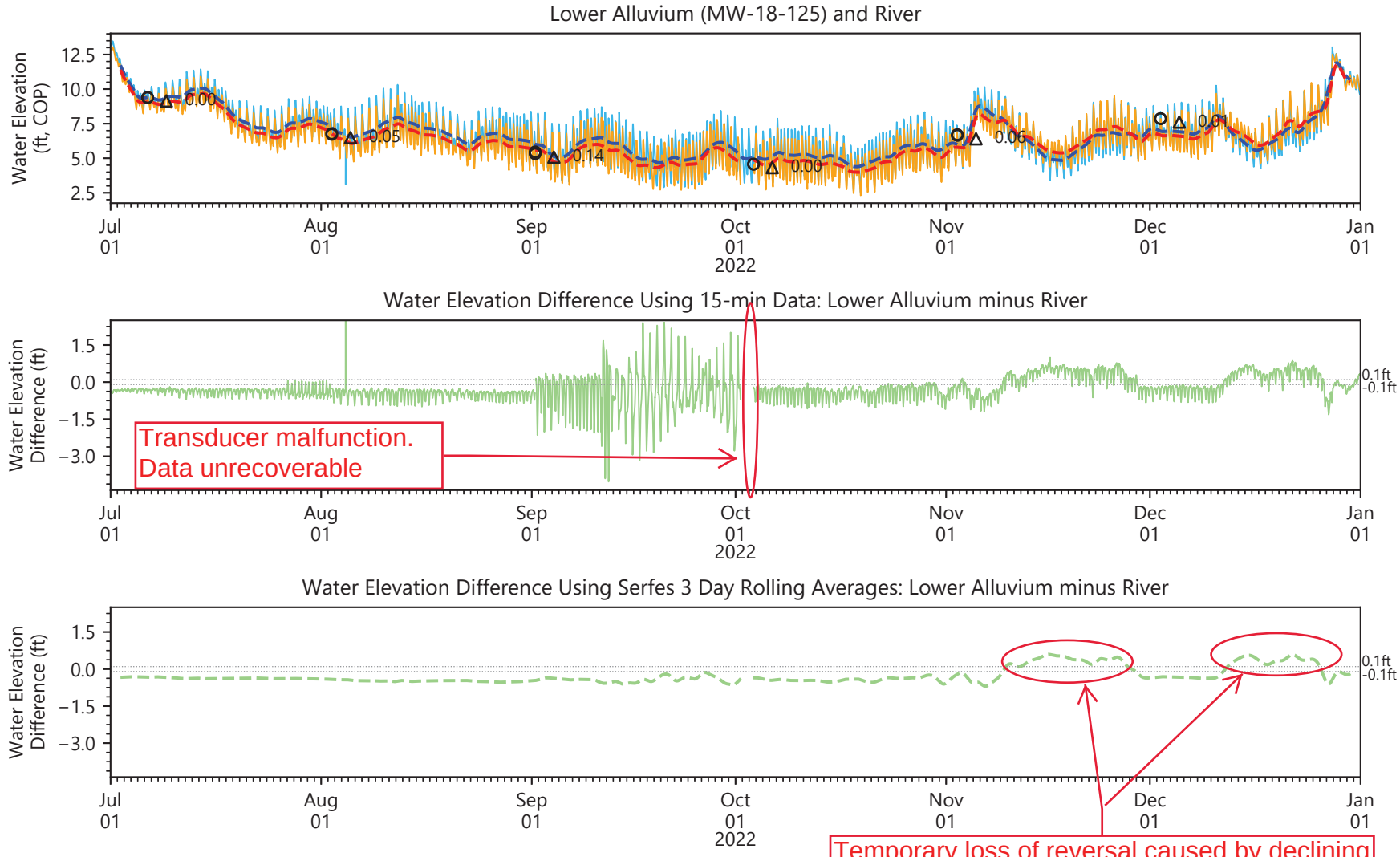
Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.65
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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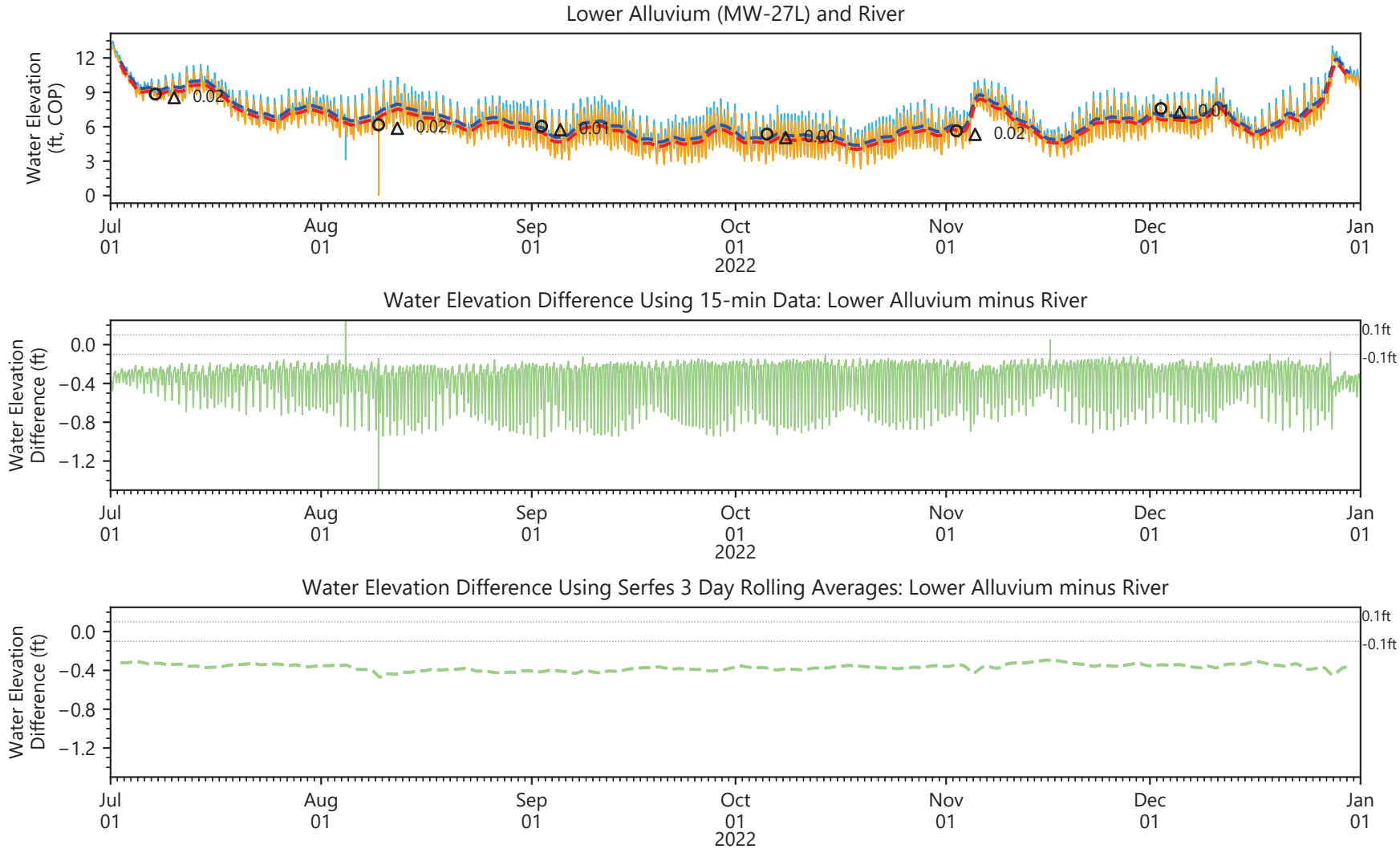
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.66
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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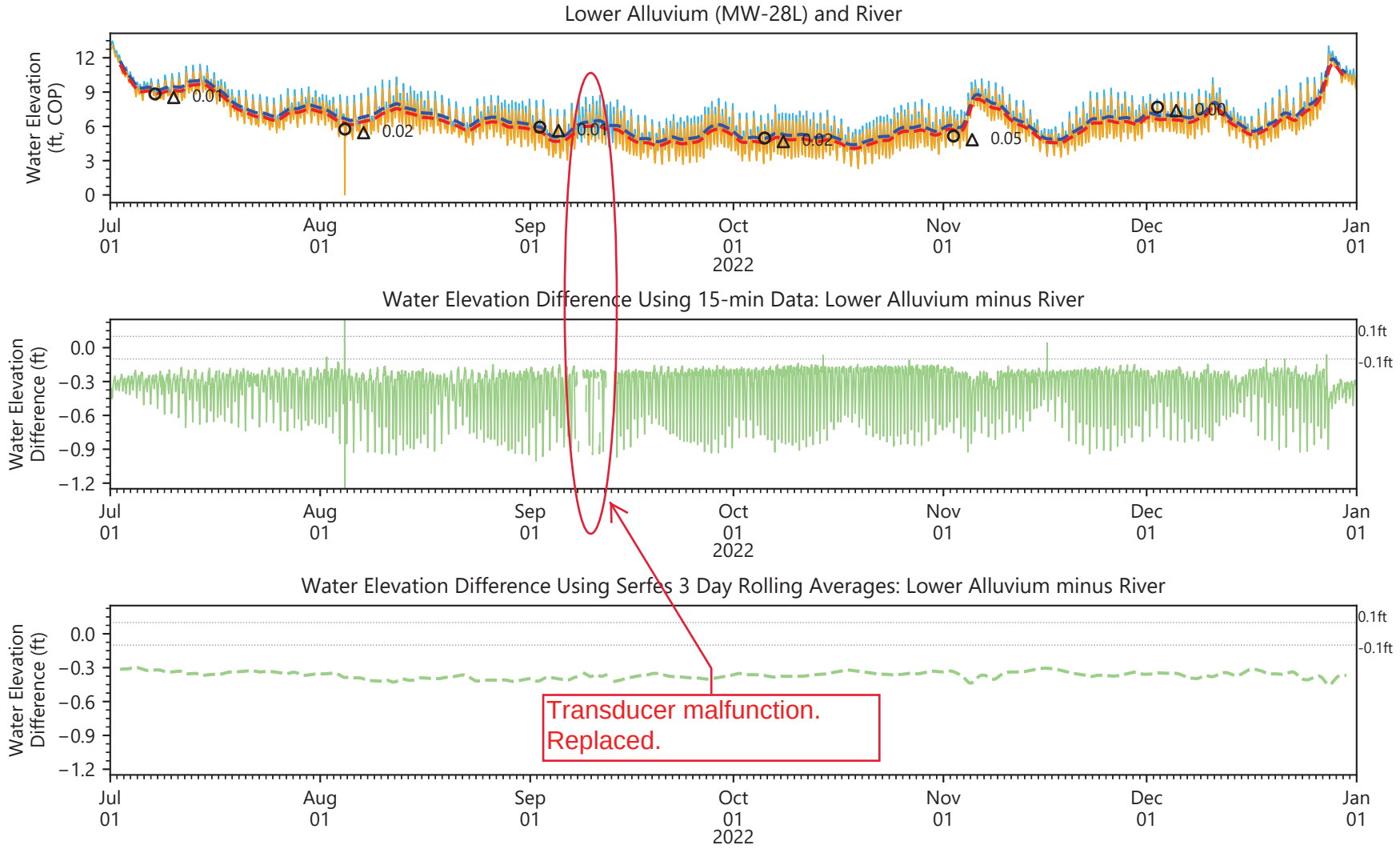
ANCHOR QEA

Figure 4.67
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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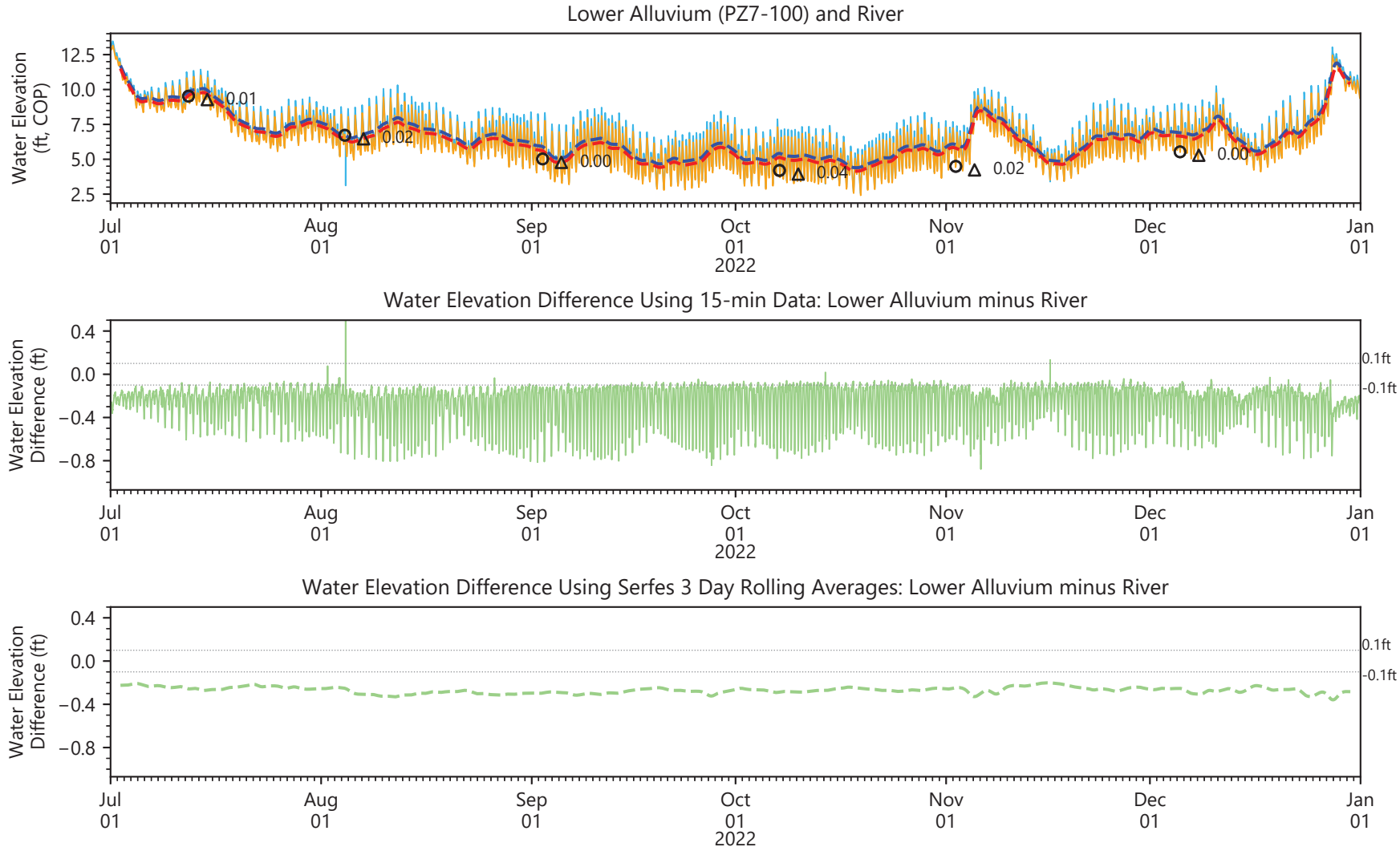
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.68
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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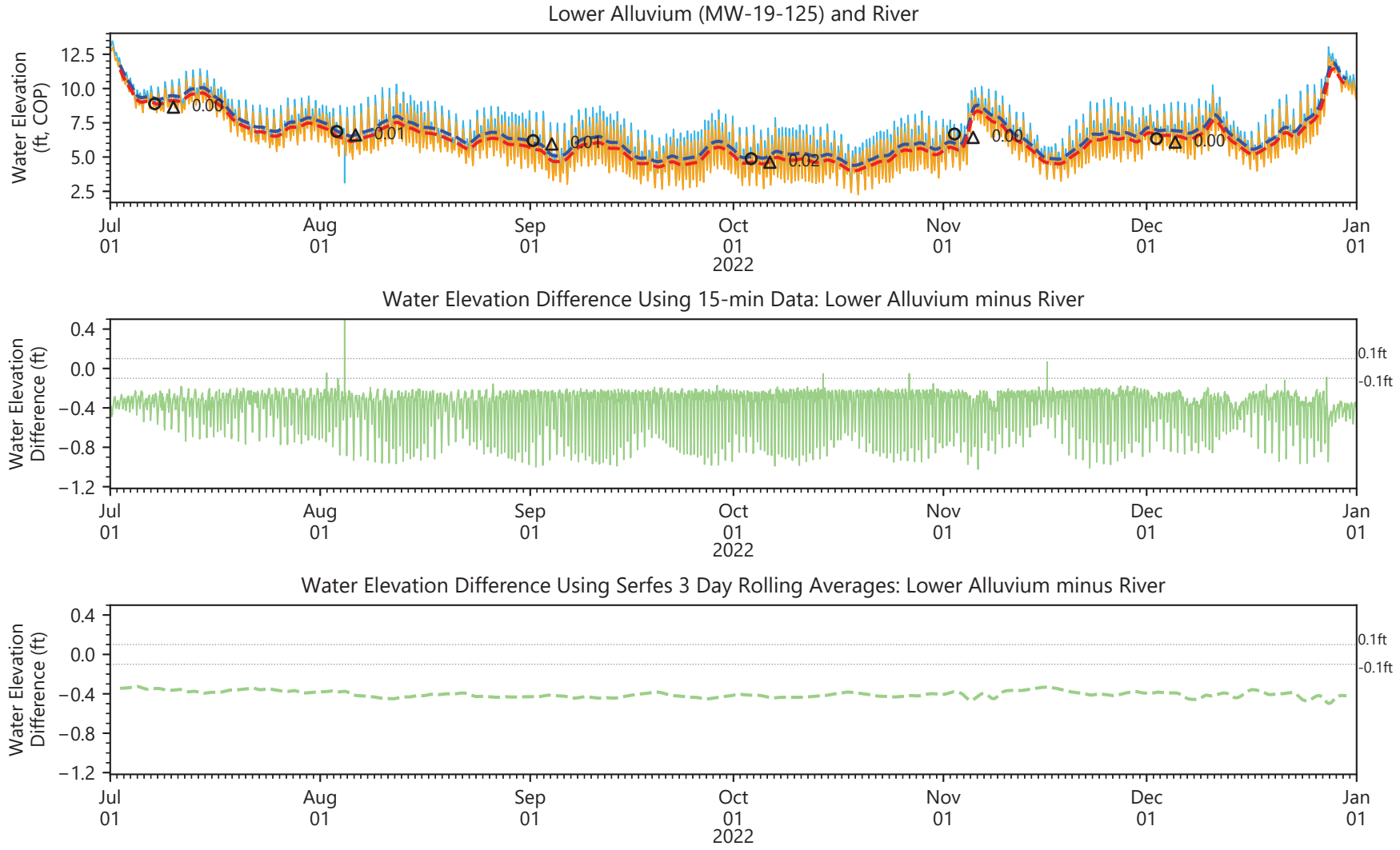
ANCHOR QEA

Figure 4.69
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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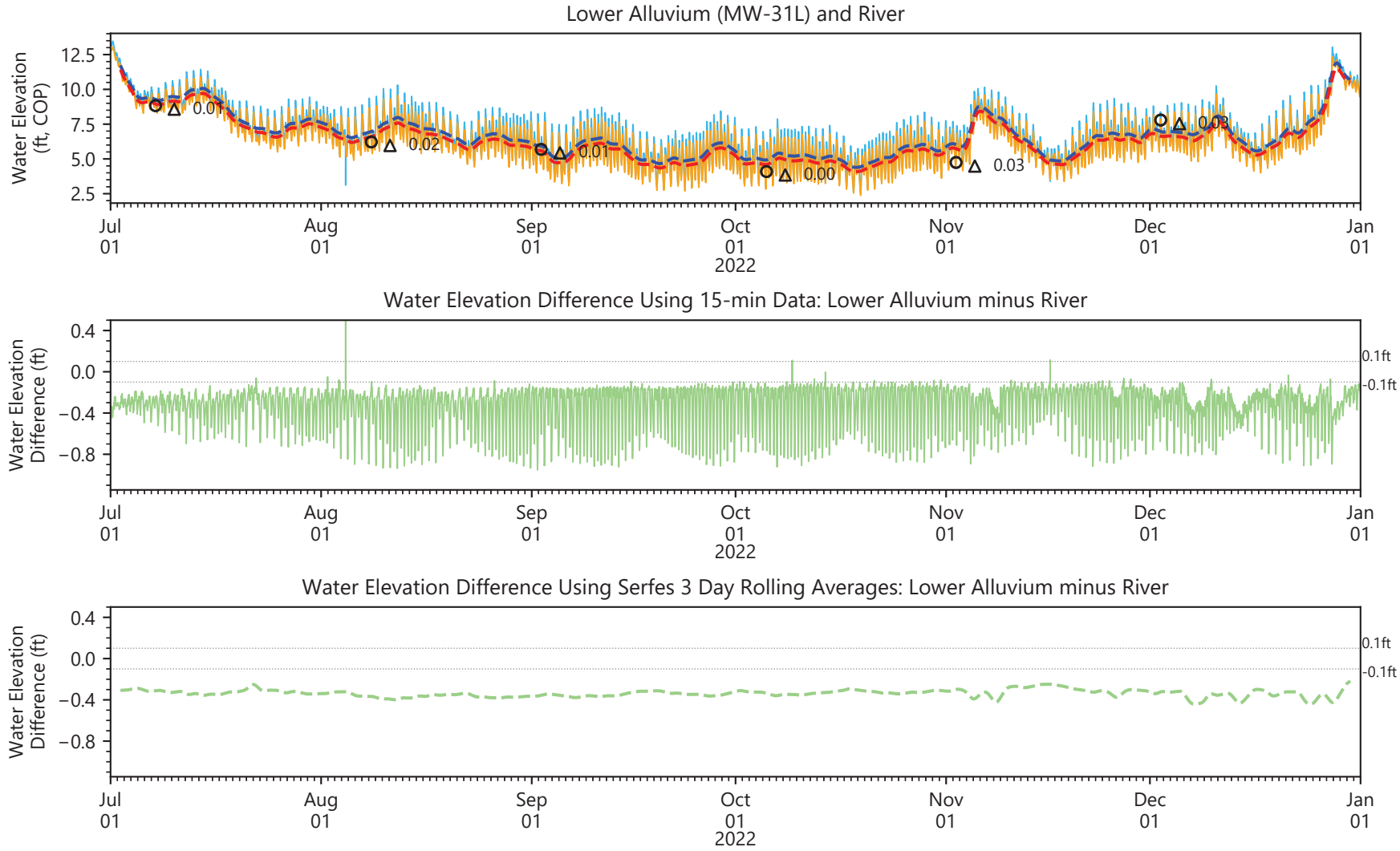
ANCHOR QEA

Figure 4.70
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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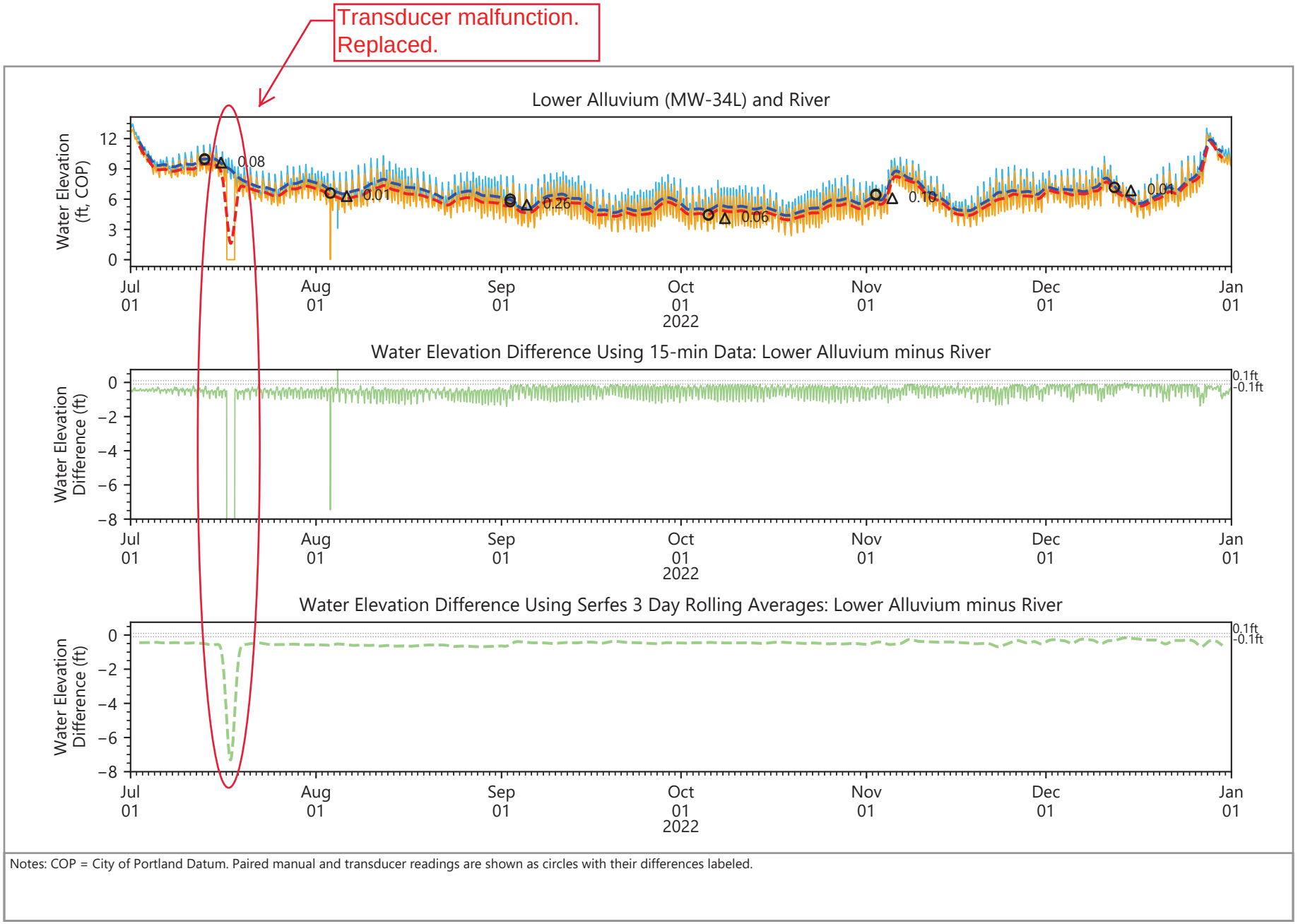
ANCHOR QEA

Figure 4.71
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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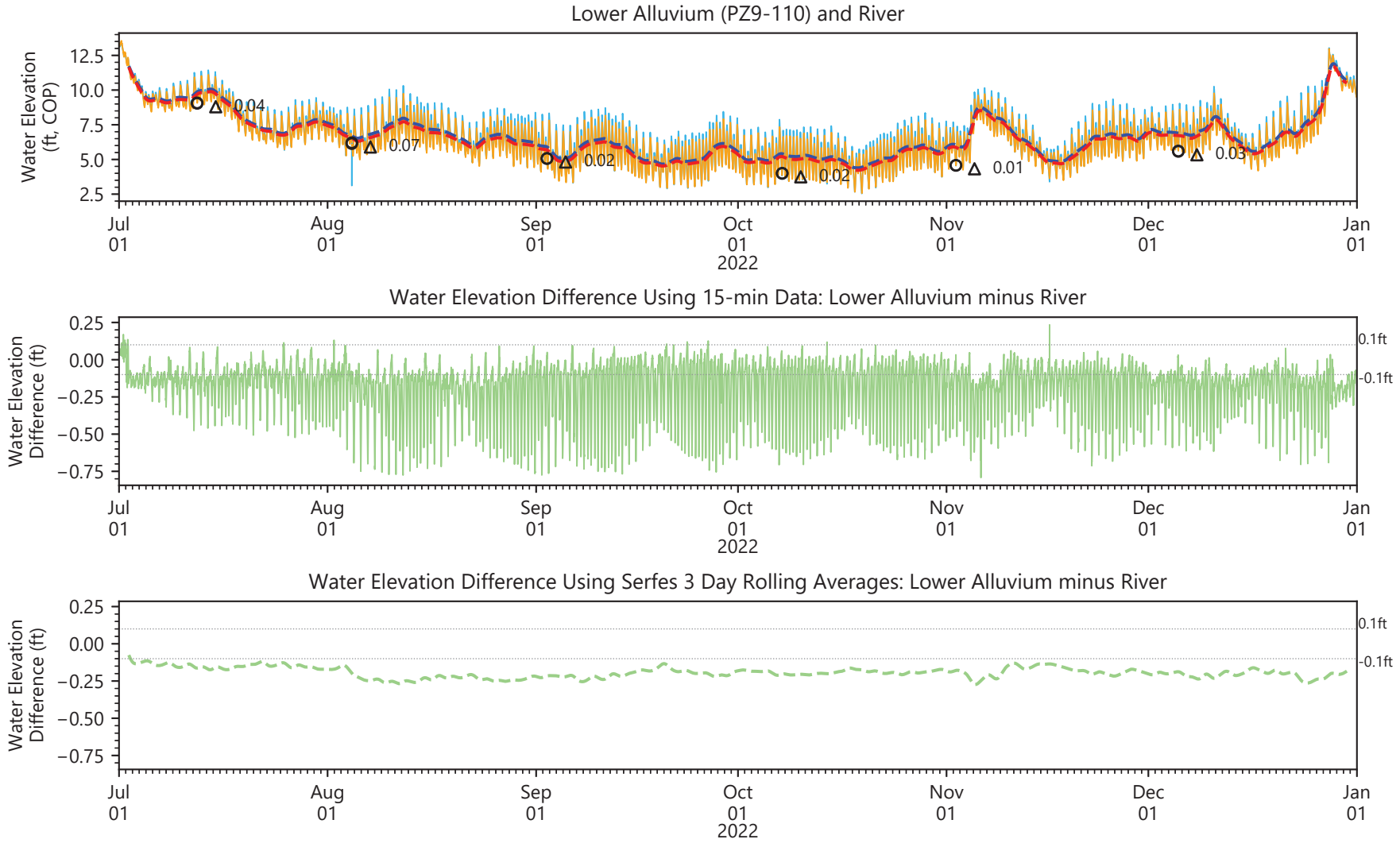
ANCHOR QEA

Figure 4.72
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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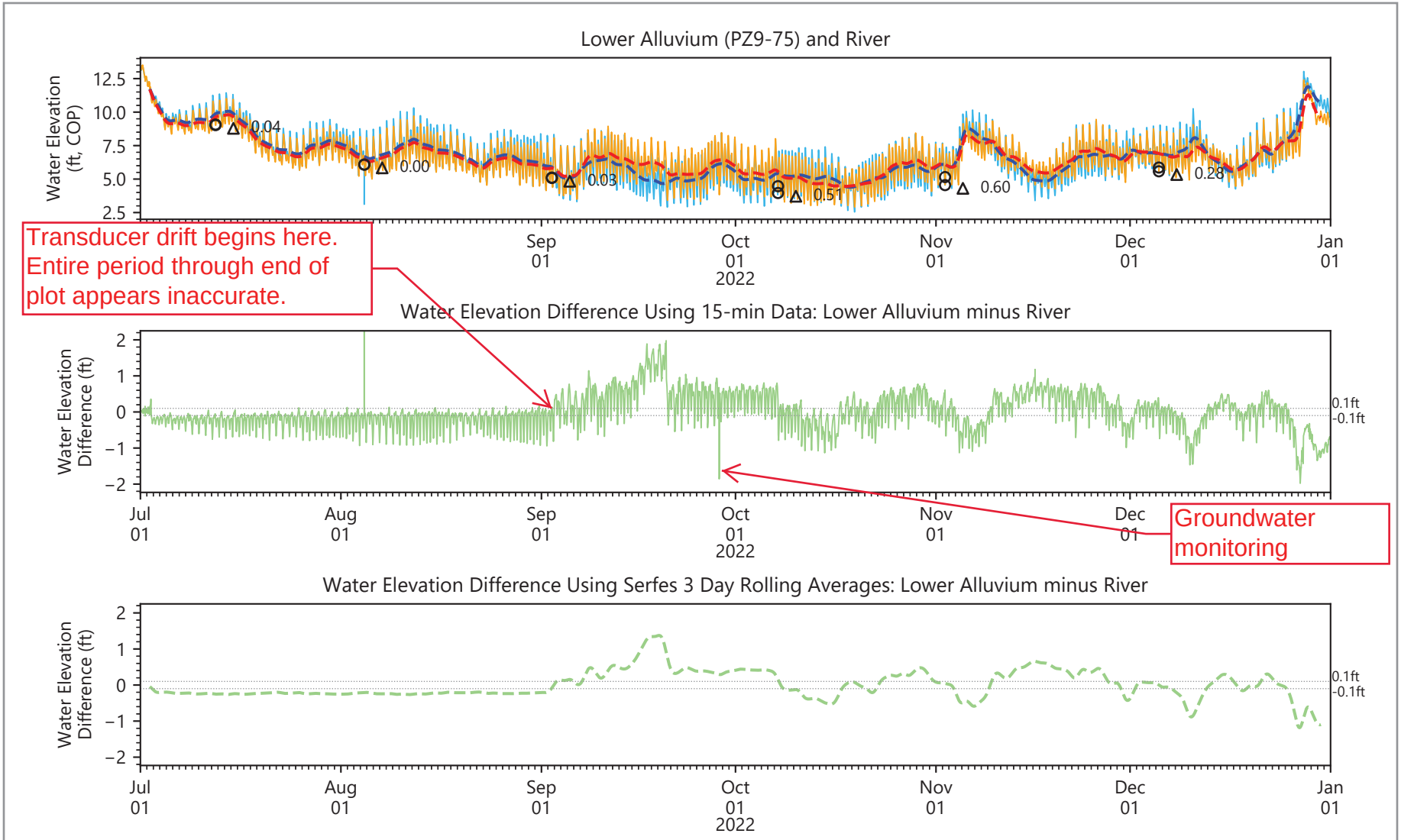
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.73
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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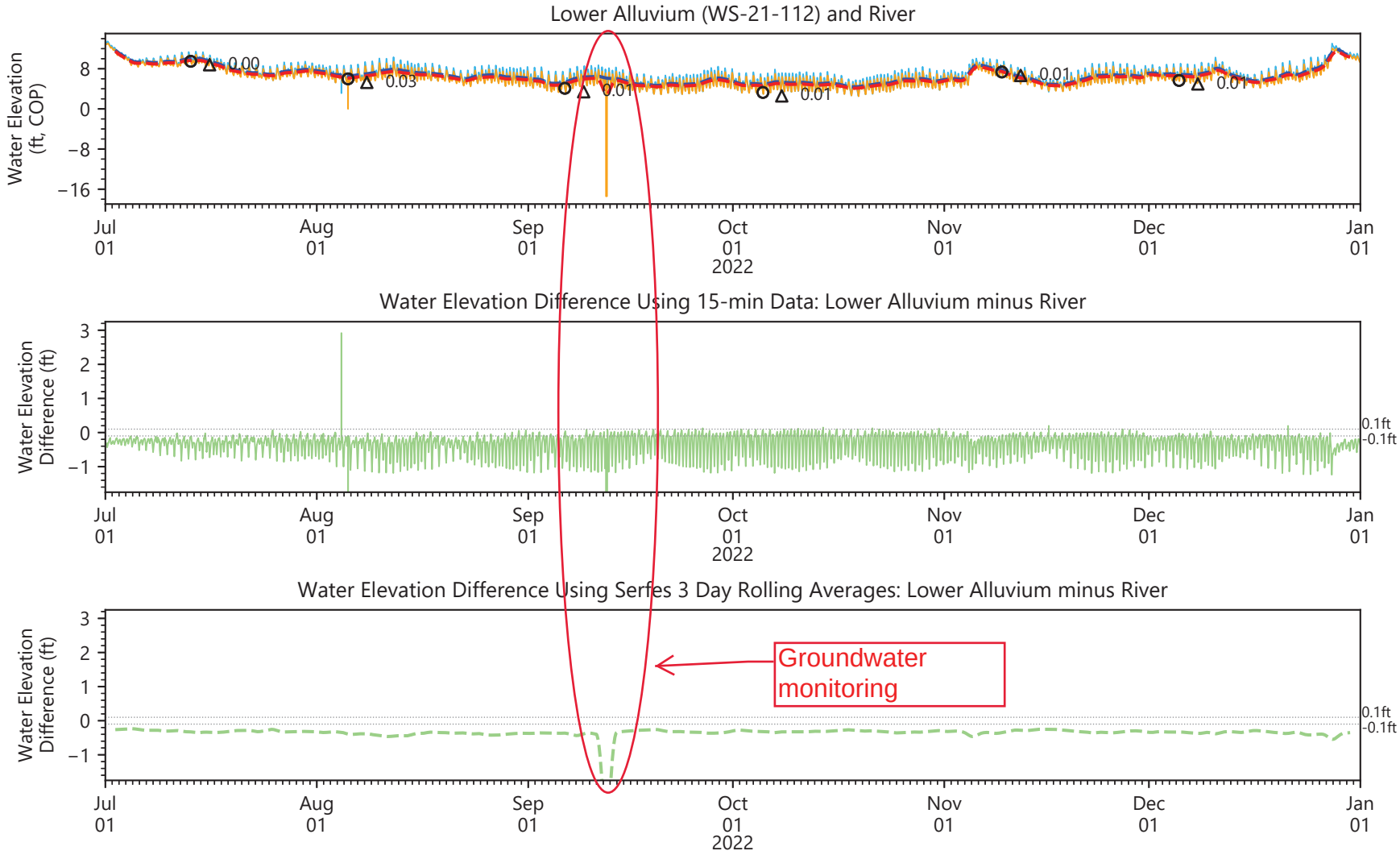
ANCHOR QEA

- Lower Alluvium: 15-min Data
- Lower Alluvium: Serfes Averages
- River: 15-min Data
- River: Serfes Averages
- Water Elevation Difference: 15-min Data
- Water Elevation Difference: Serfes Averages
- 0.1 ft Total Potential Uncertainty

Figure 4.74
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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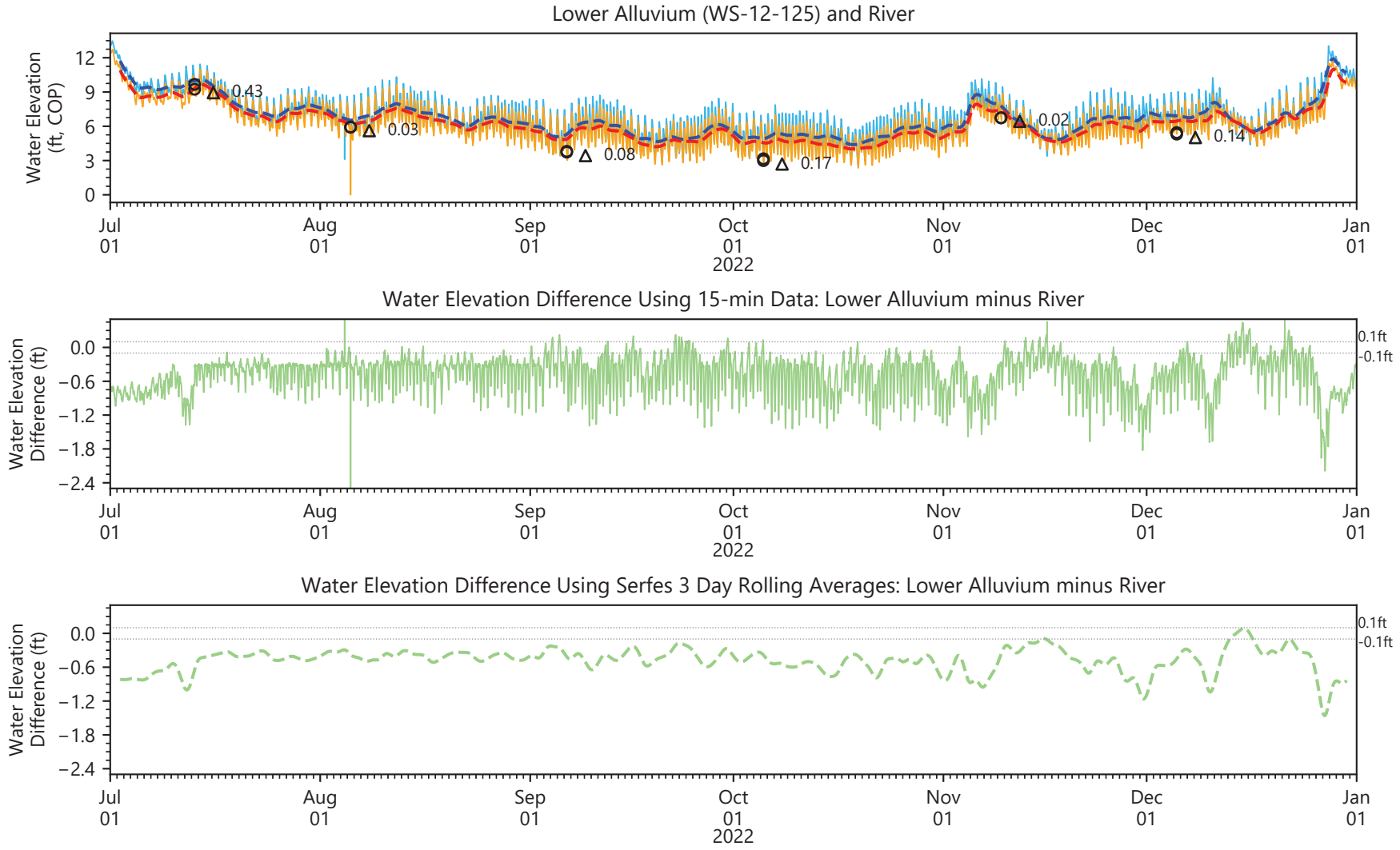
ANCHOR QEA

Figure 4.75
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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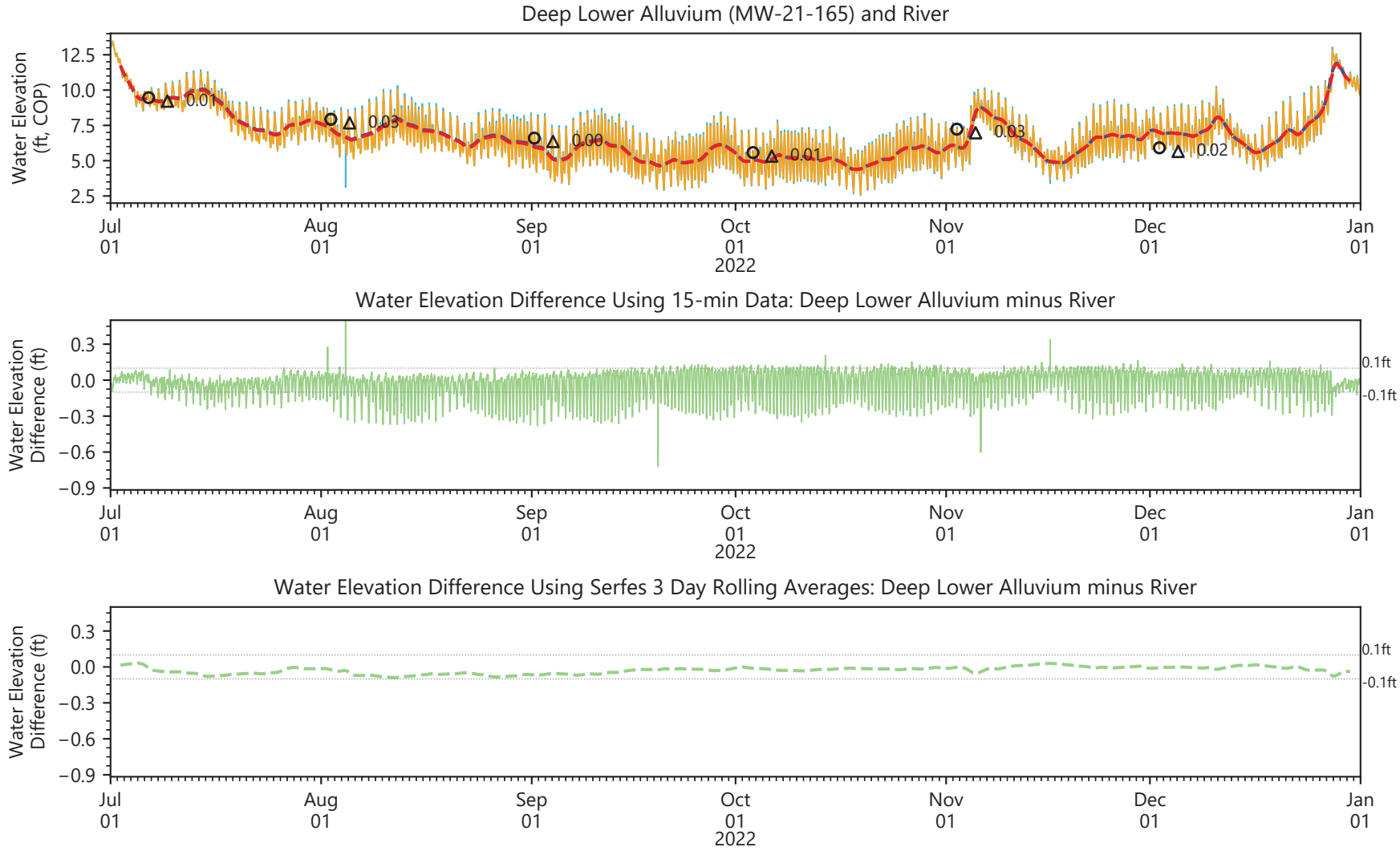
ANCHOR QEA

Figure 4.76
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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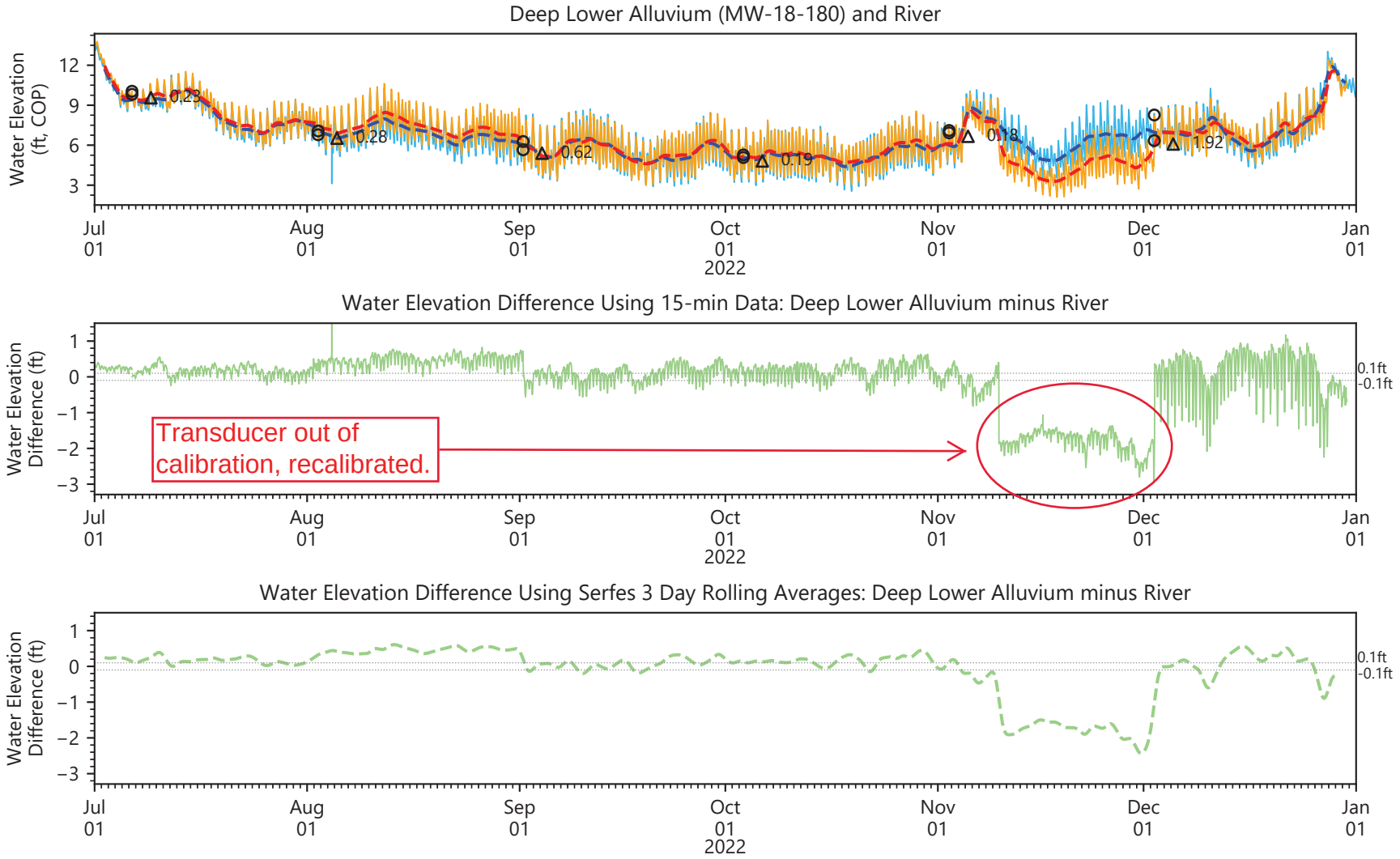
ANCHOR QEA

Figure 4.77
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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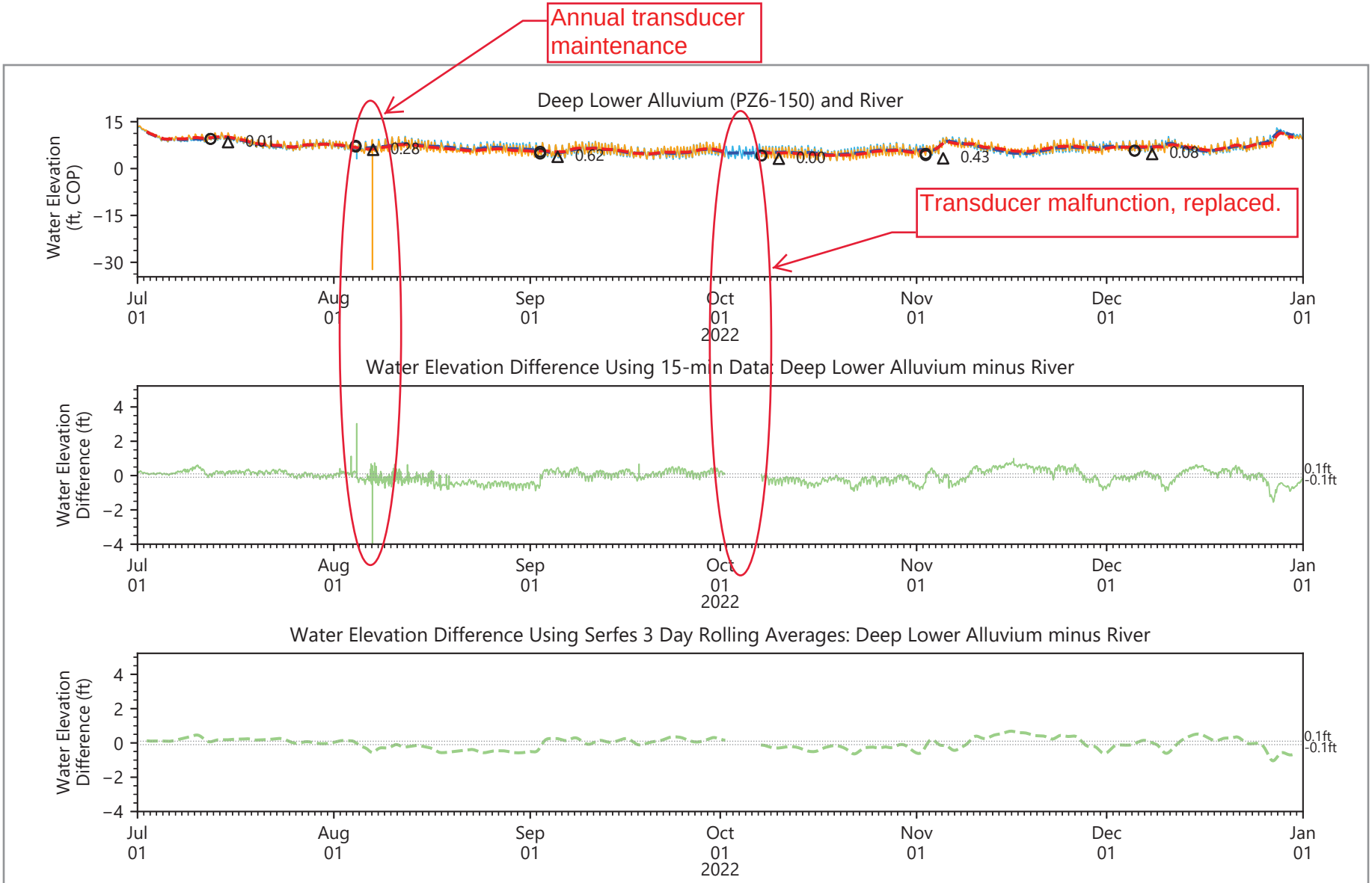
ANCHOR QEA

Figure 4.78
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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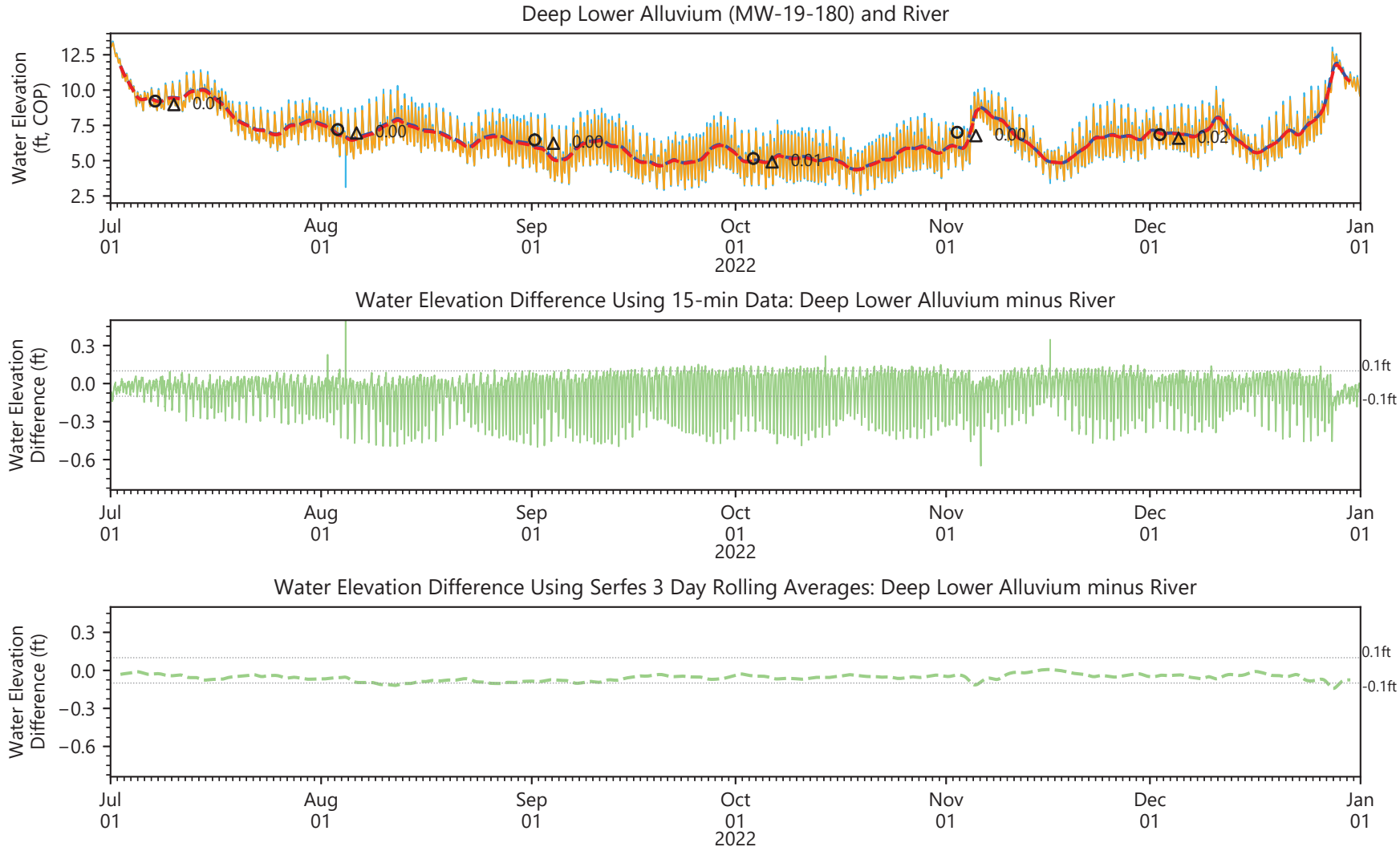
ANCHOR QEA

Figure 4.79
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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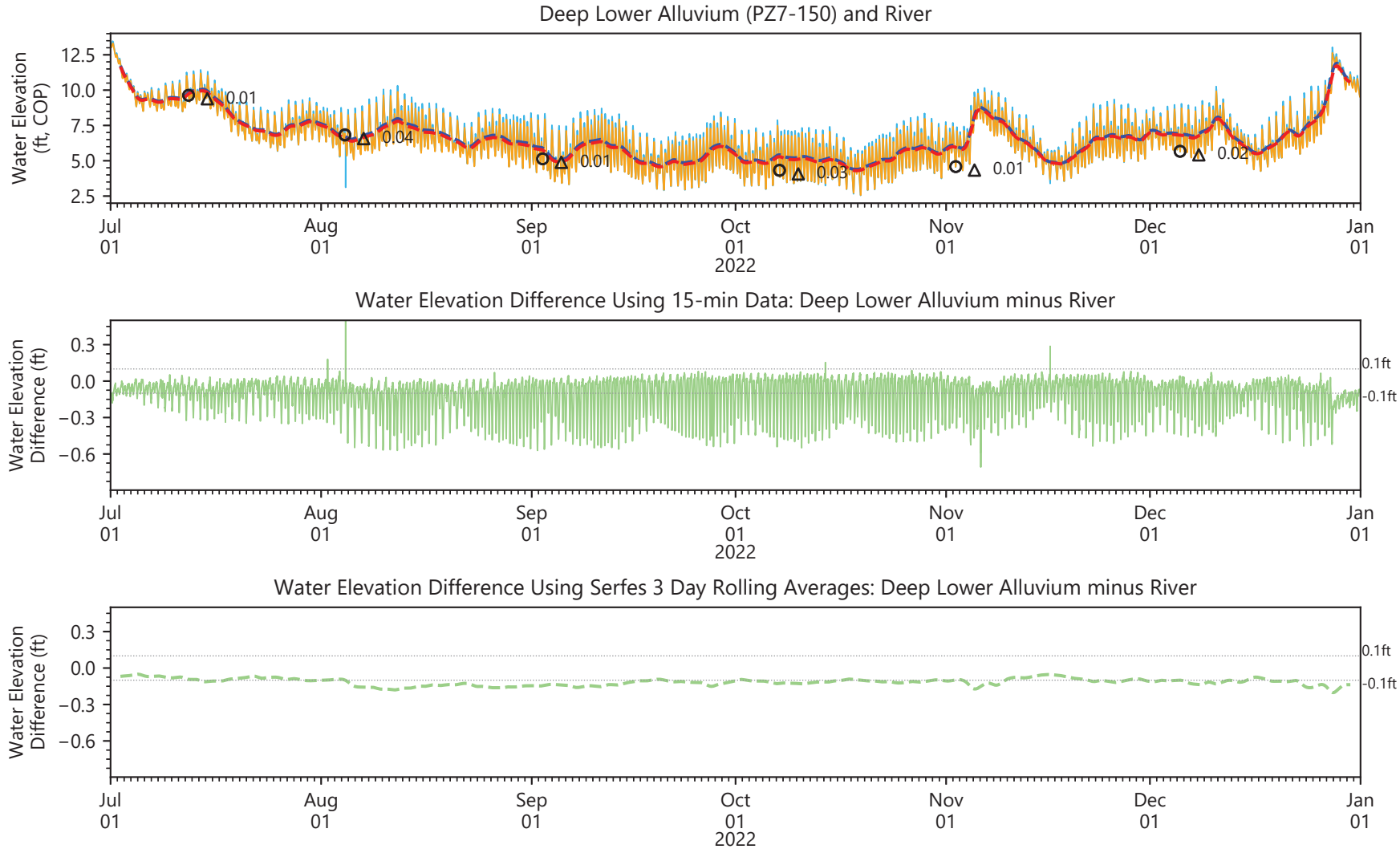
ANCHOR QEA

Figure 4.80
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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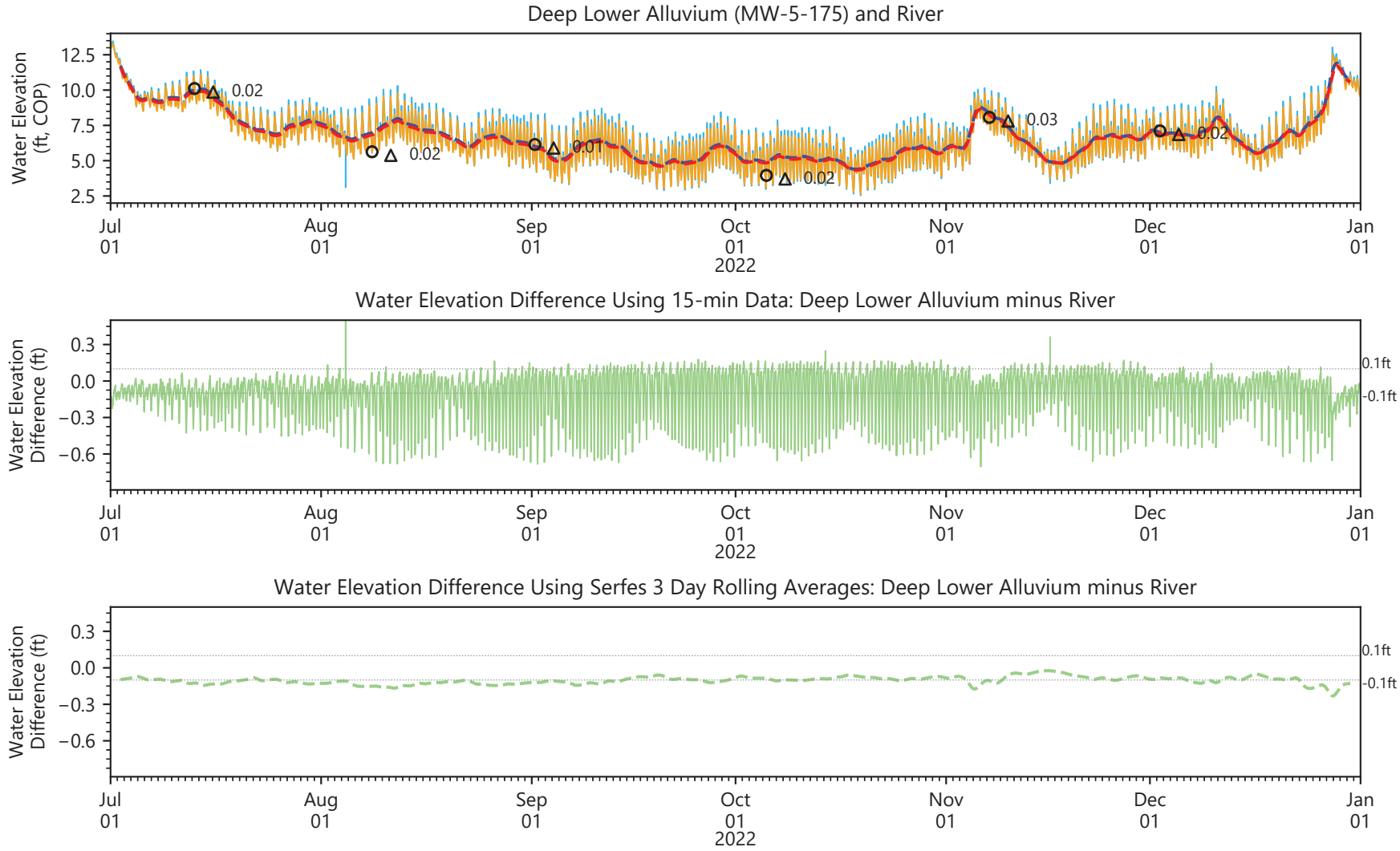
ANCHOR QEA

Figure 4.81
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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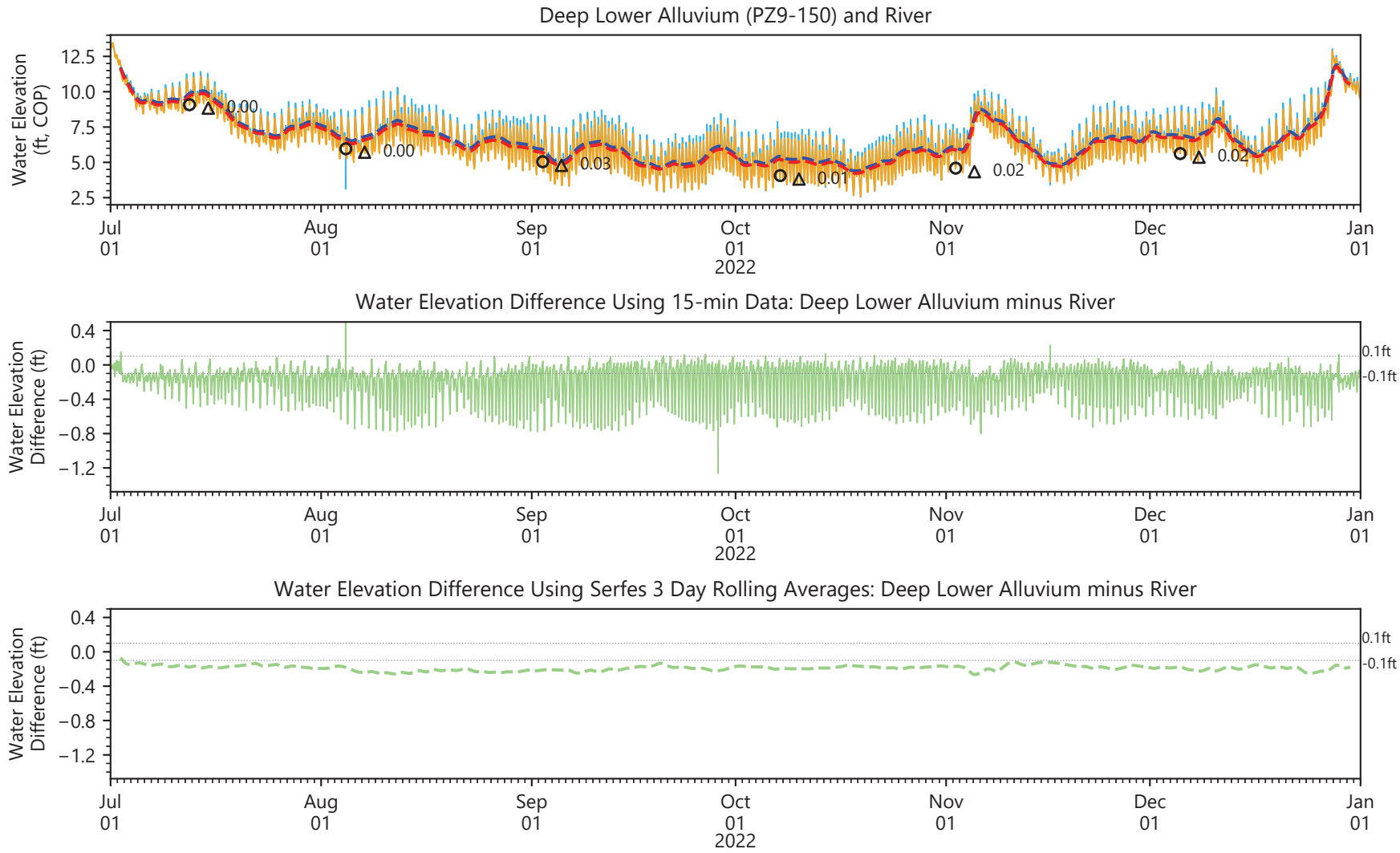
ANCHOR QEA

Figure 4.82
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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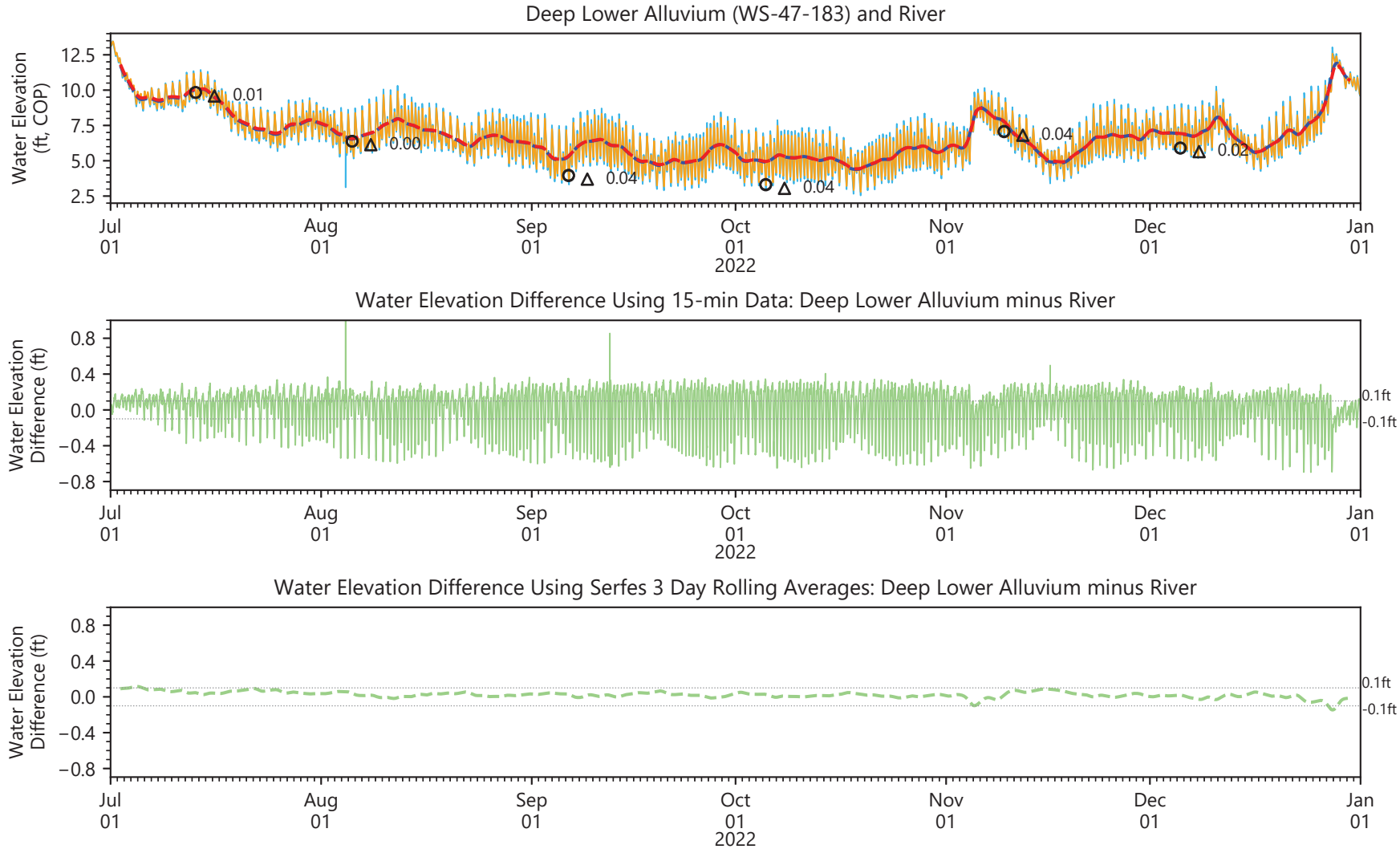
ANCHOR QEA

Figure 4.83
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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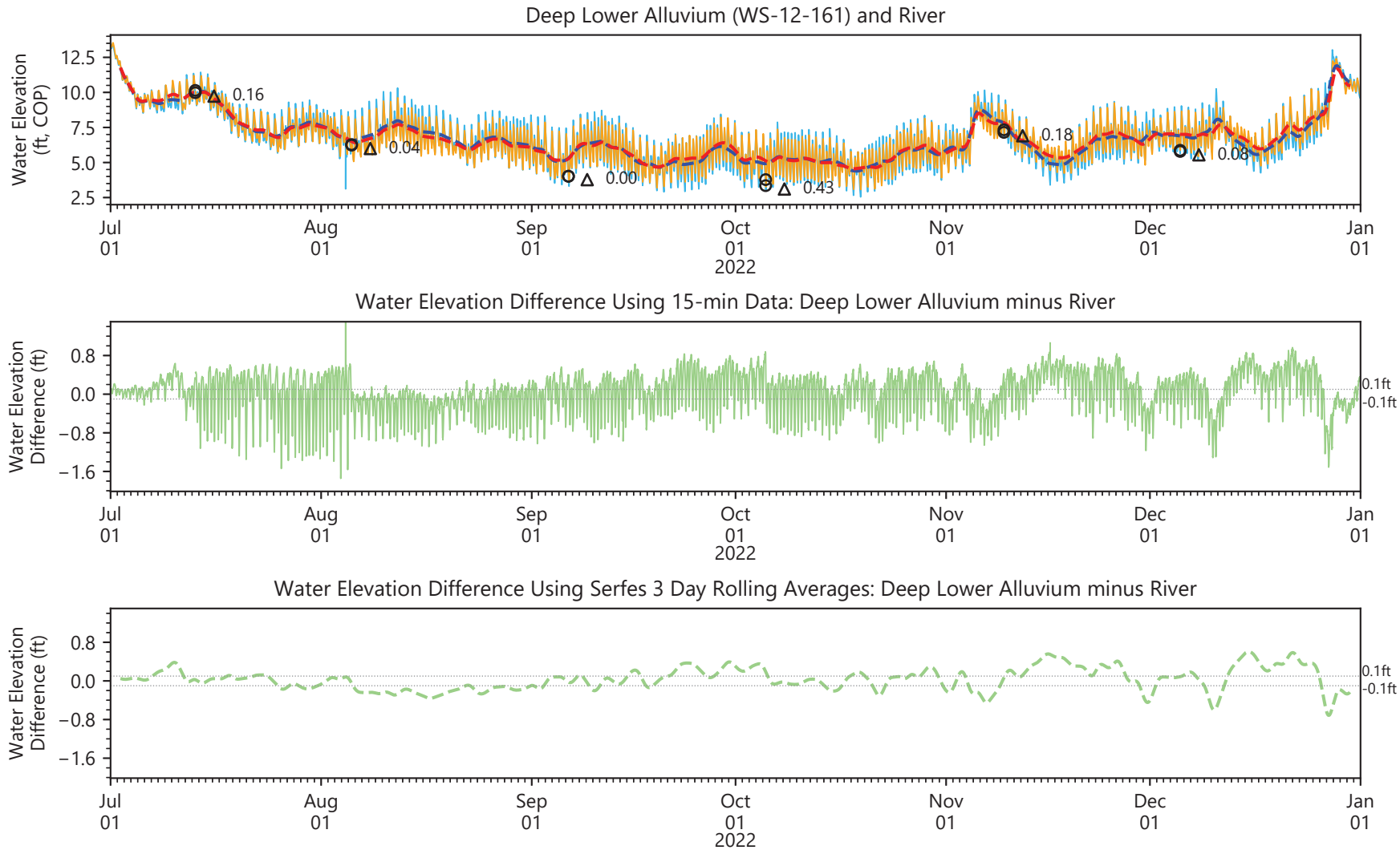
ANCHOR QEA

Figure 4.84
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum. Paired manual and transducer readings are shown as circles with their differences labeled.

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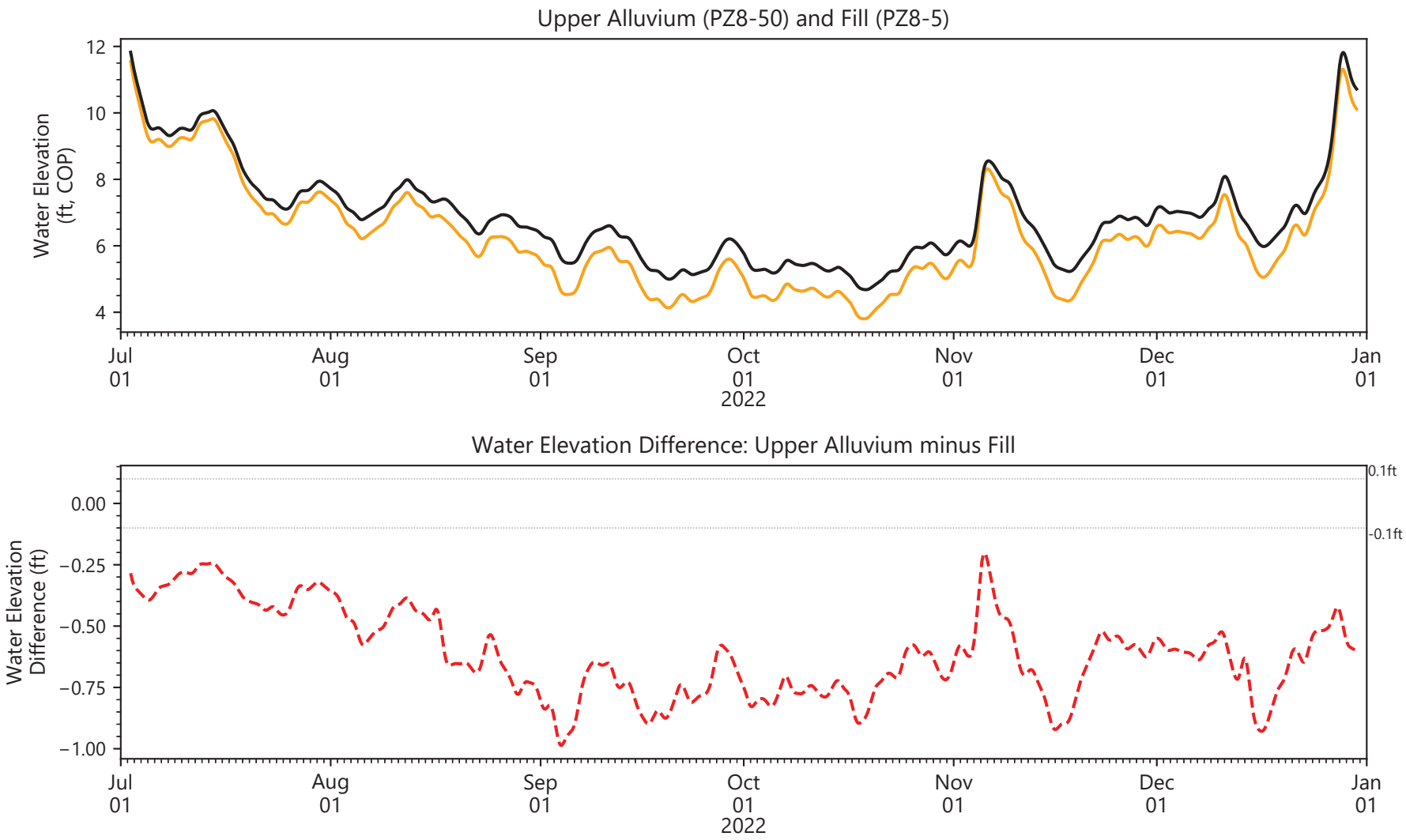
ANCHOR QEA

Figure 4.85
Groundwater Elevation Differences
NW Natural Gasco Site



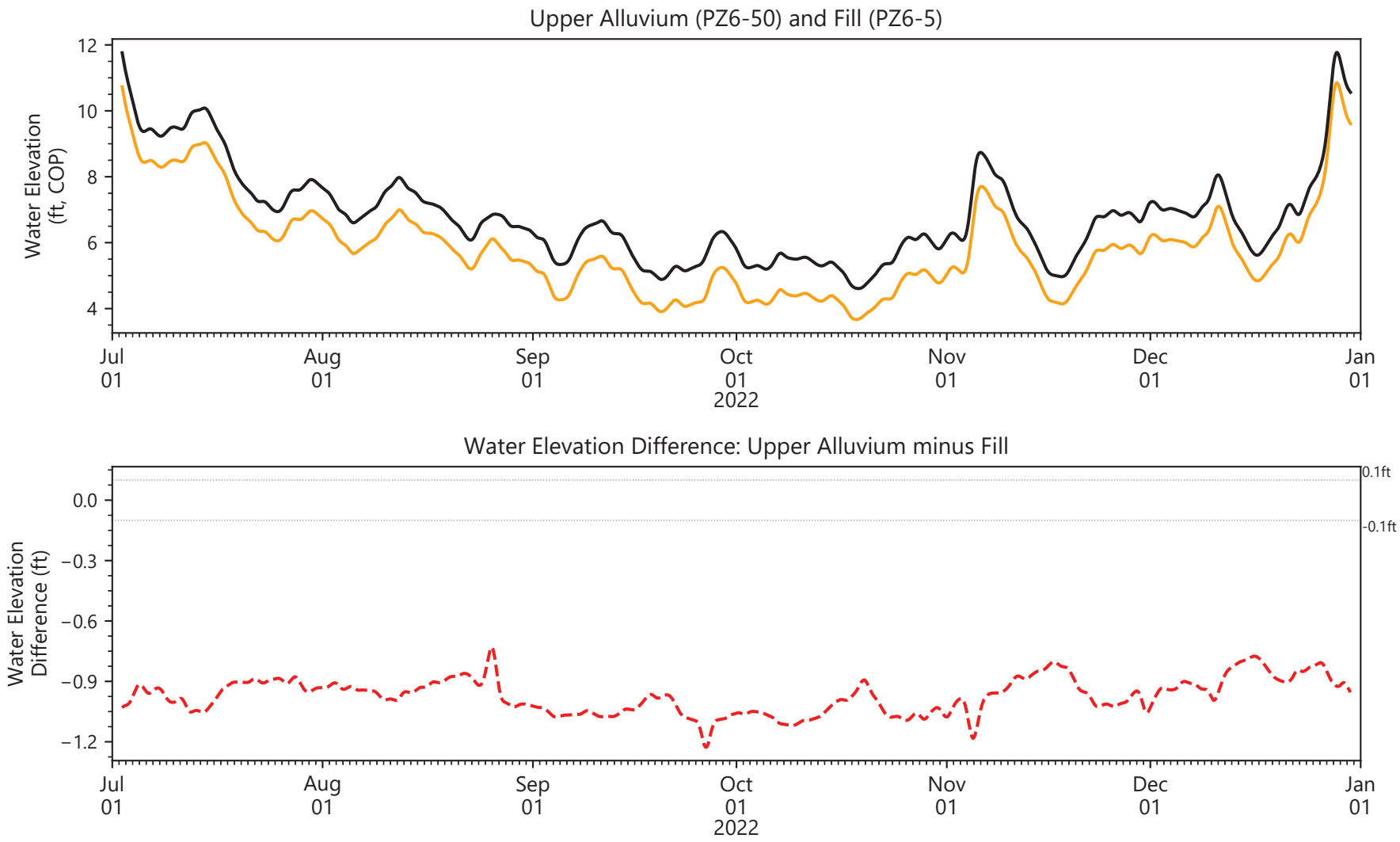
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Upper Alluvium
- Fill
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.1
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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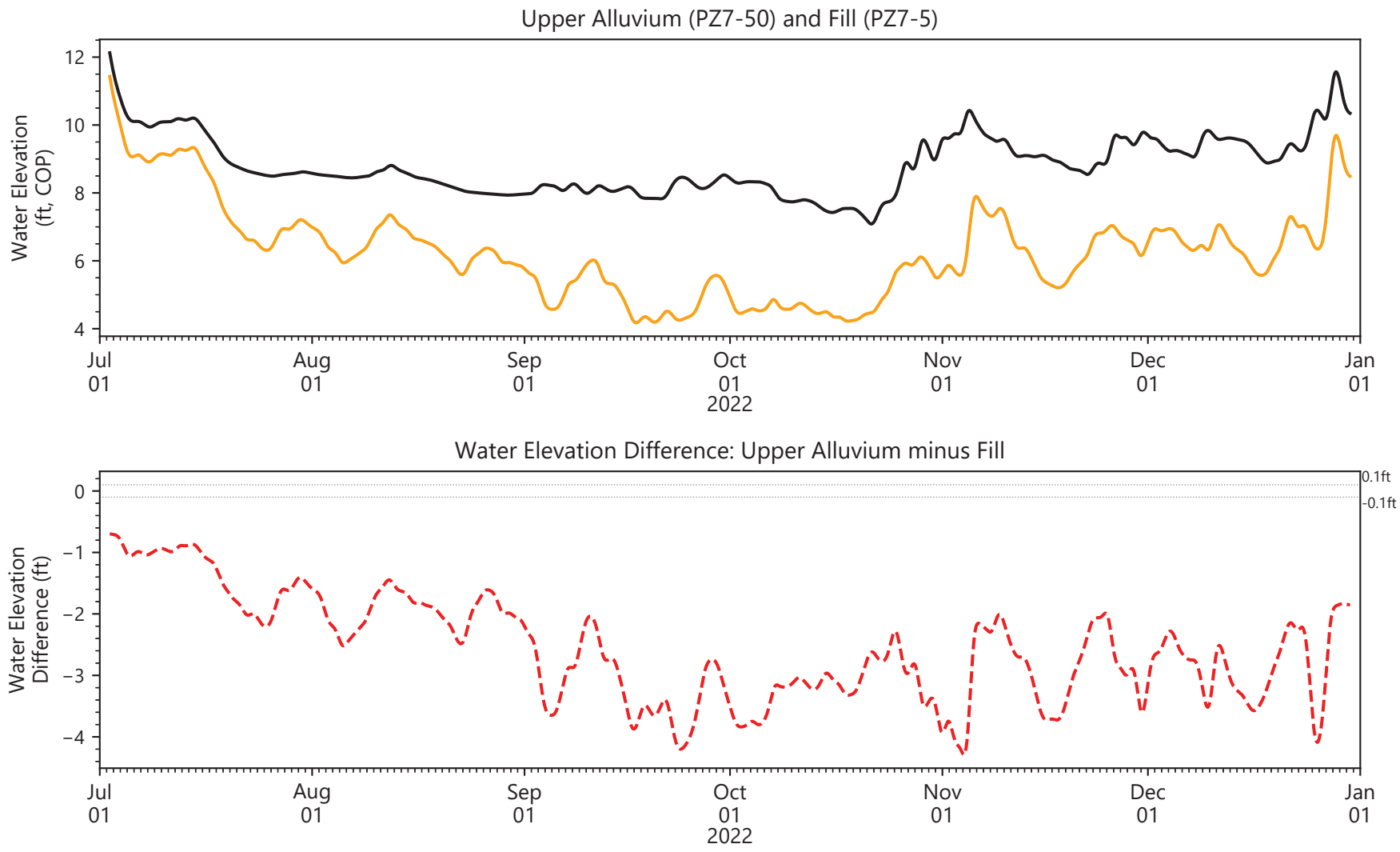
ANCHOR QEA

- Upper Alluvium
- Fill
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.2
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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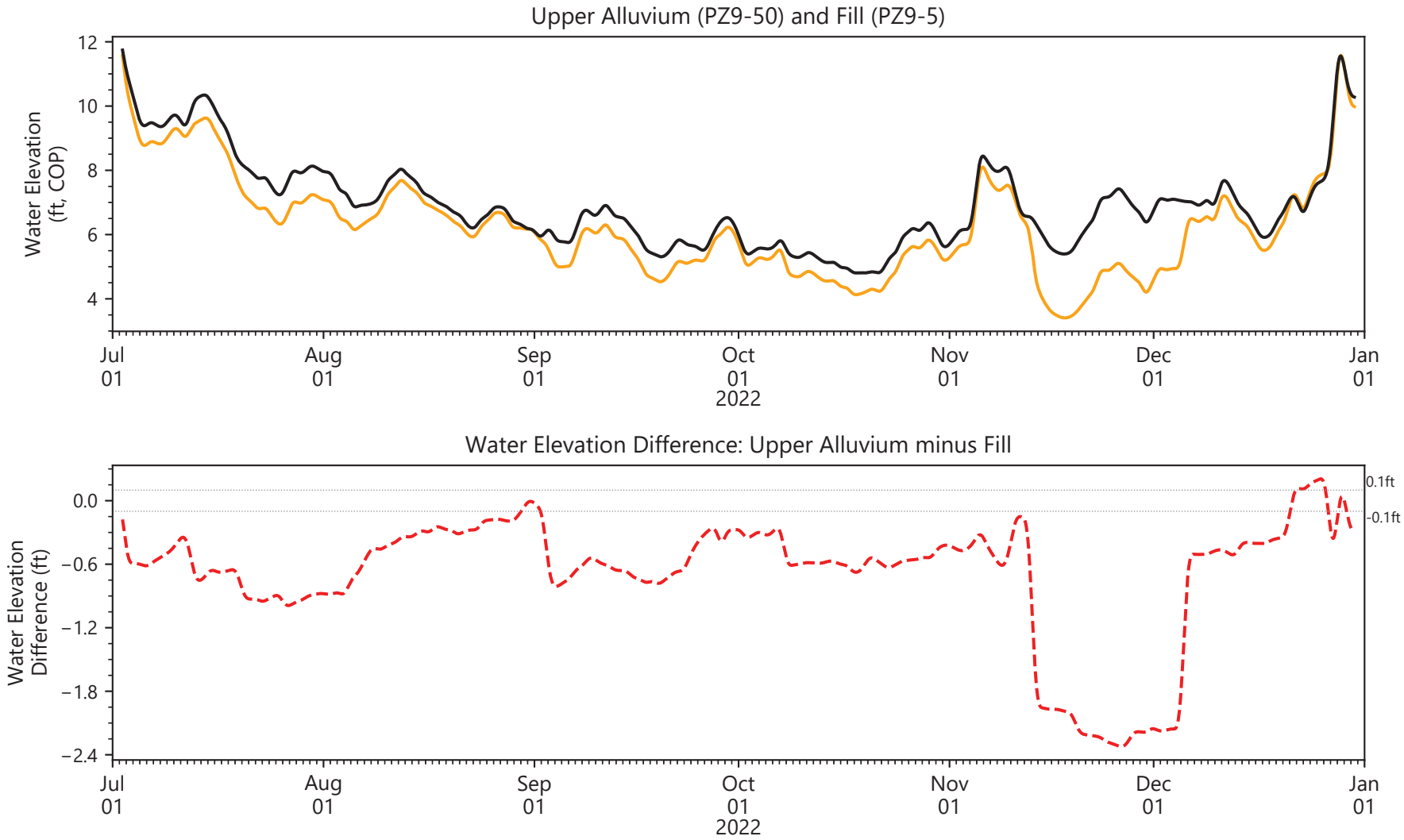
ANCHOR QEA

- Upper Alluvium
- Fill
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.3
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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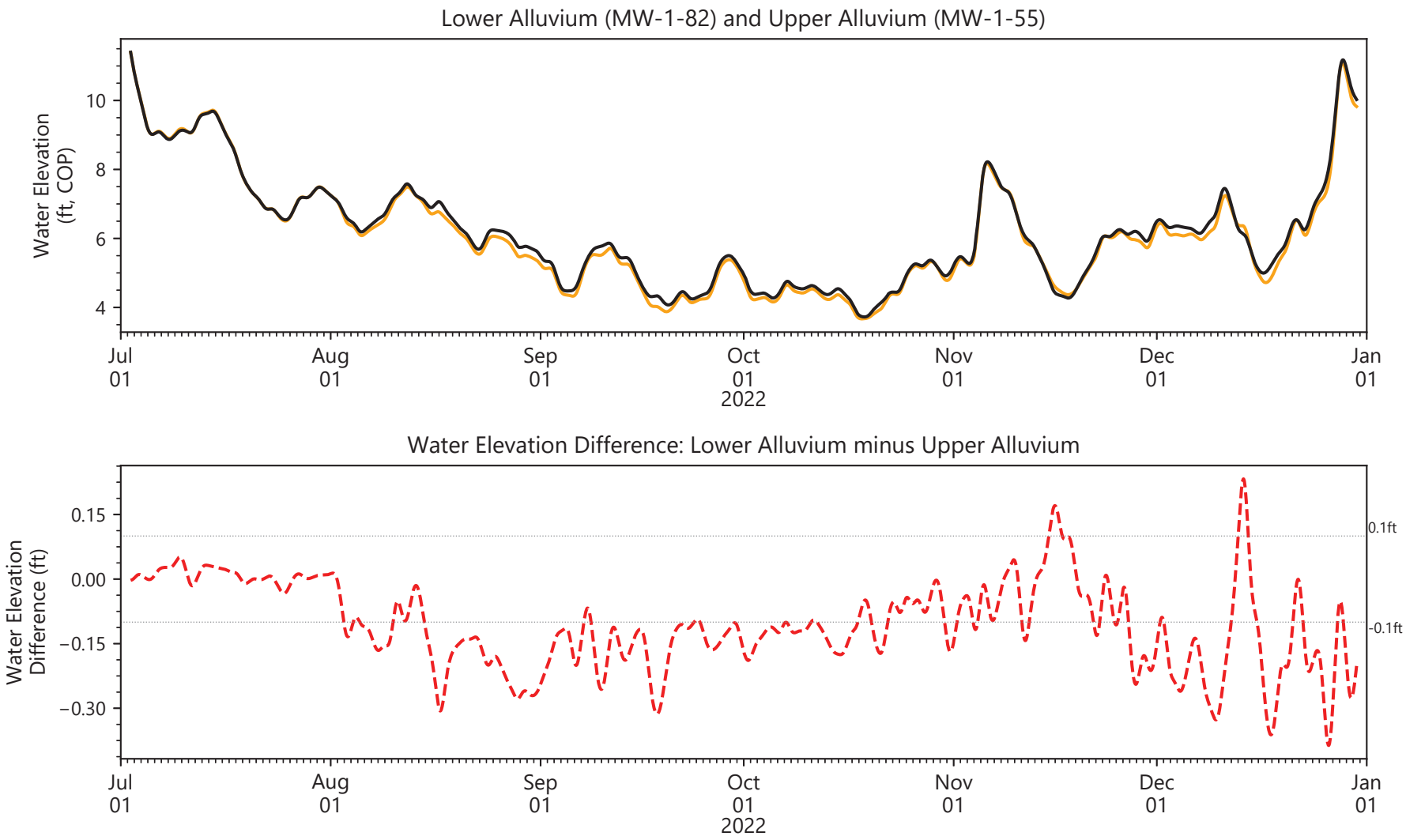
ANCHOR QEA

- Upper Alluvium
- Fill
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.4
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 01/30/2023 10:36 AM | User: ZW
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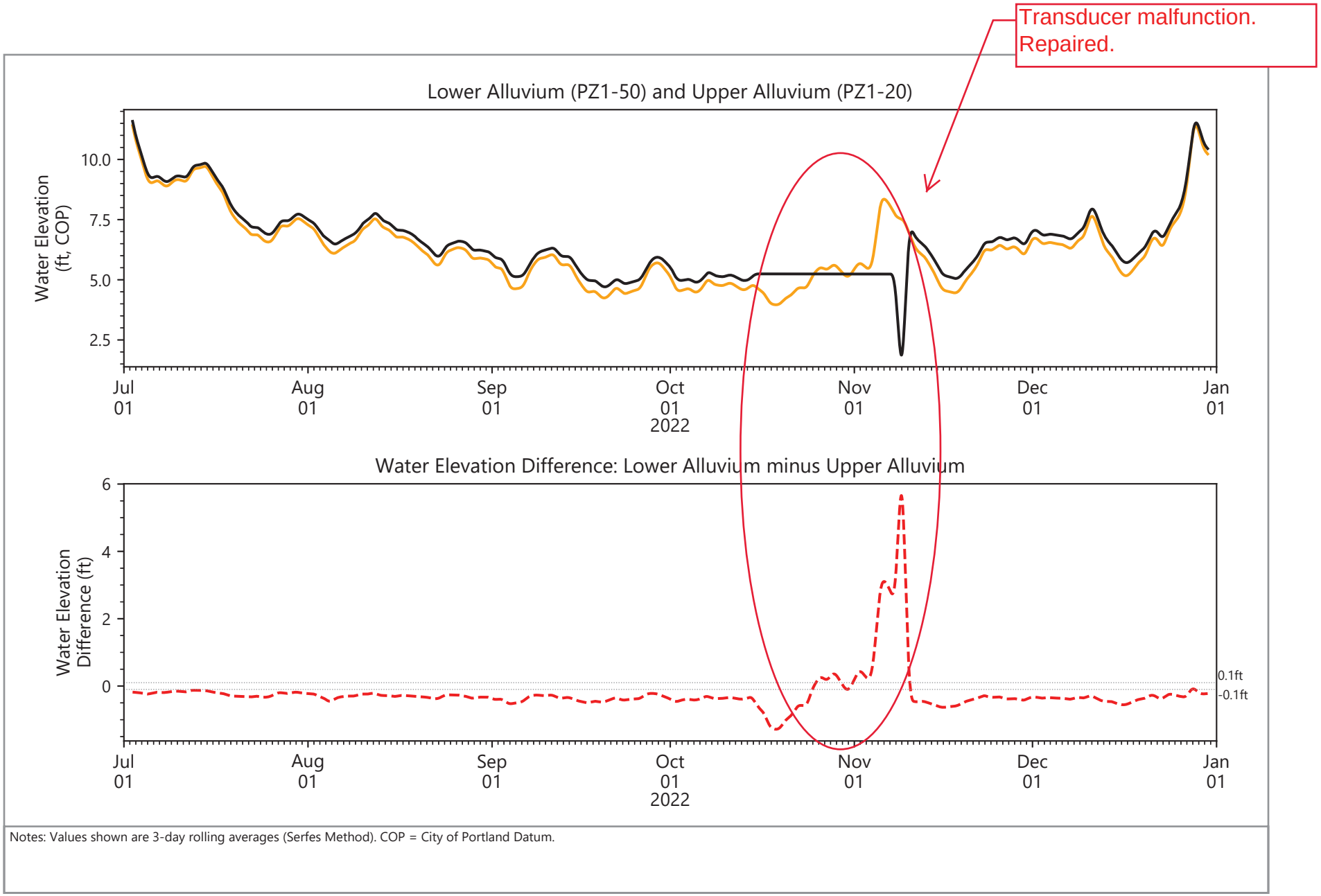
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.5
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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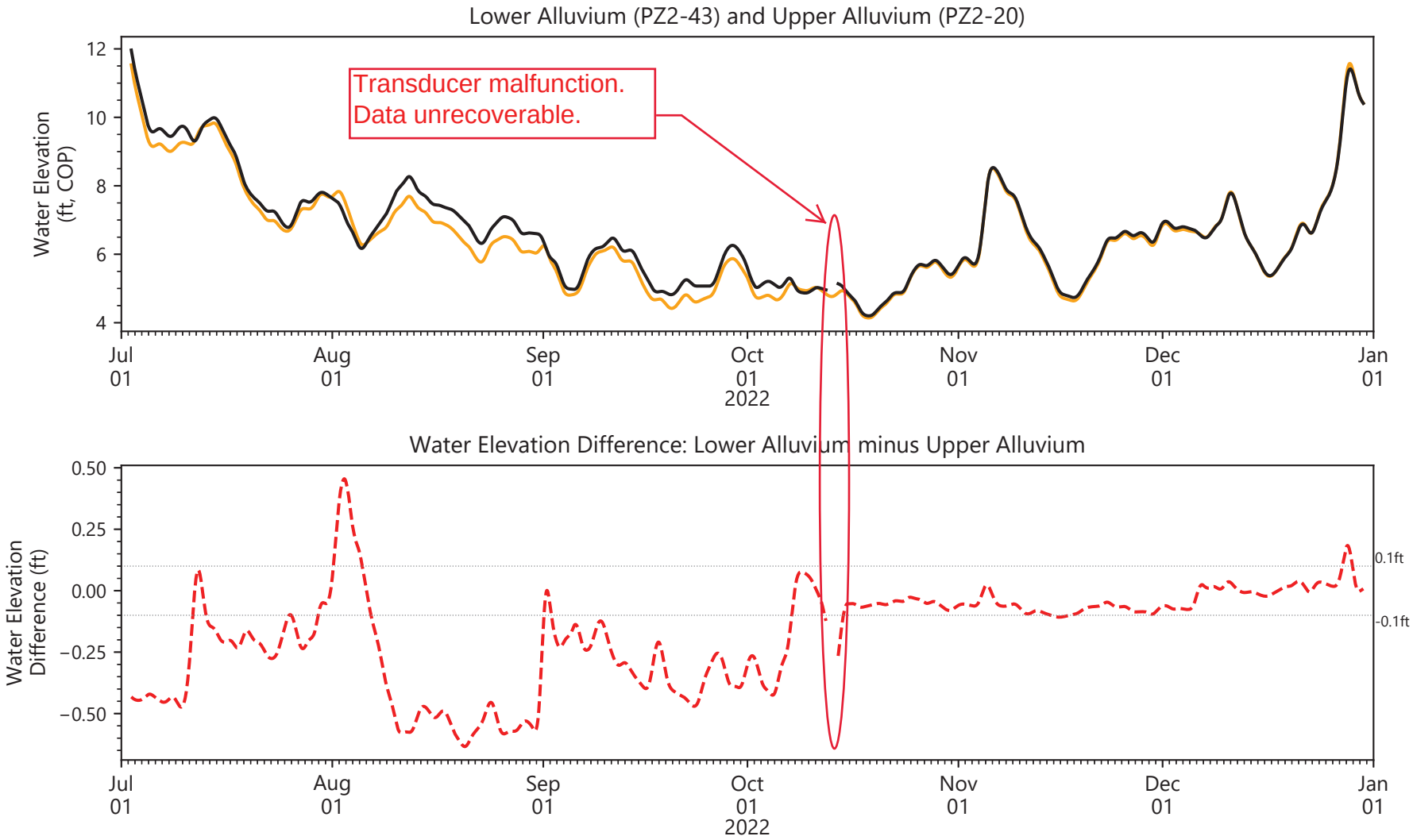
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.6
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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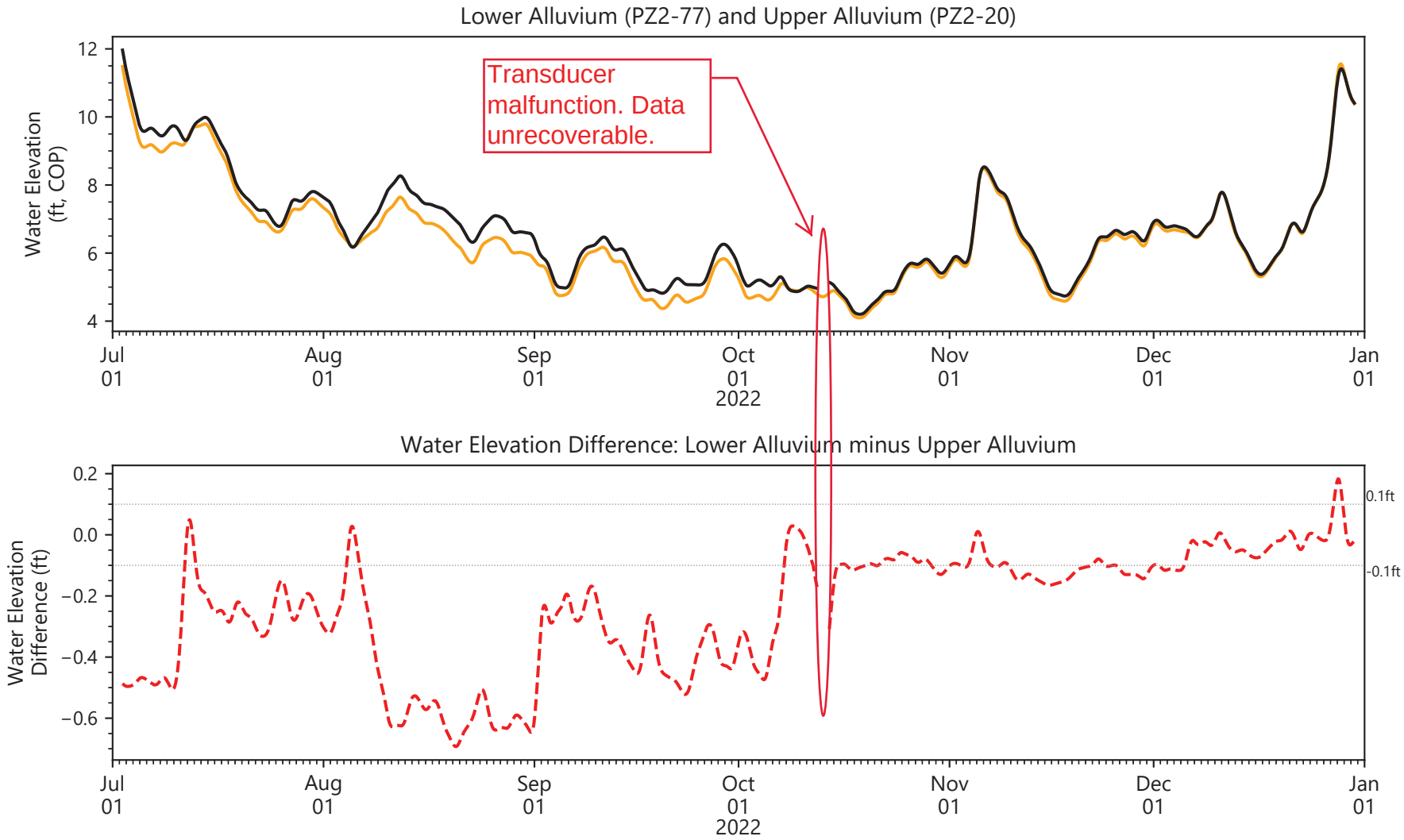
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.7
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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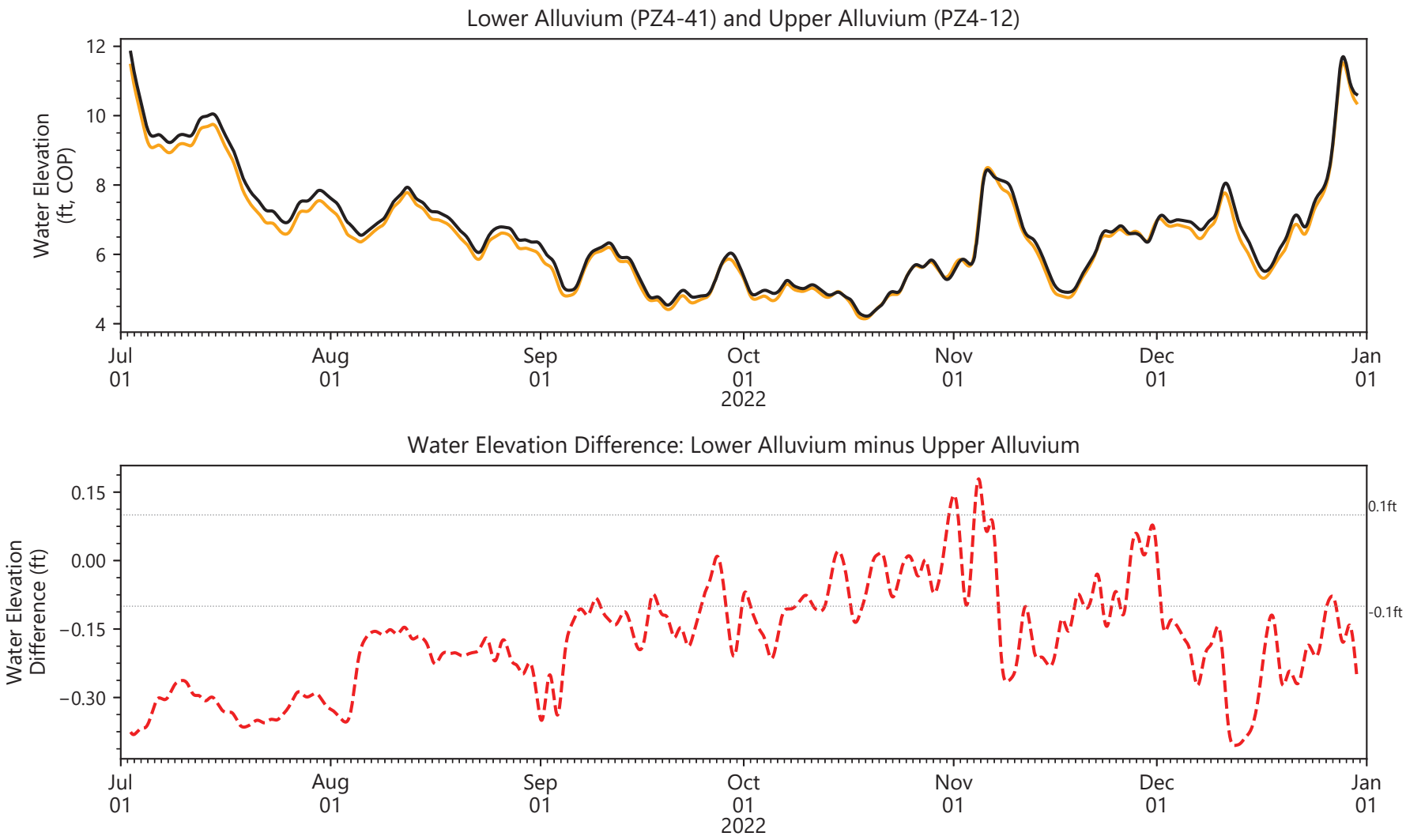
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.8
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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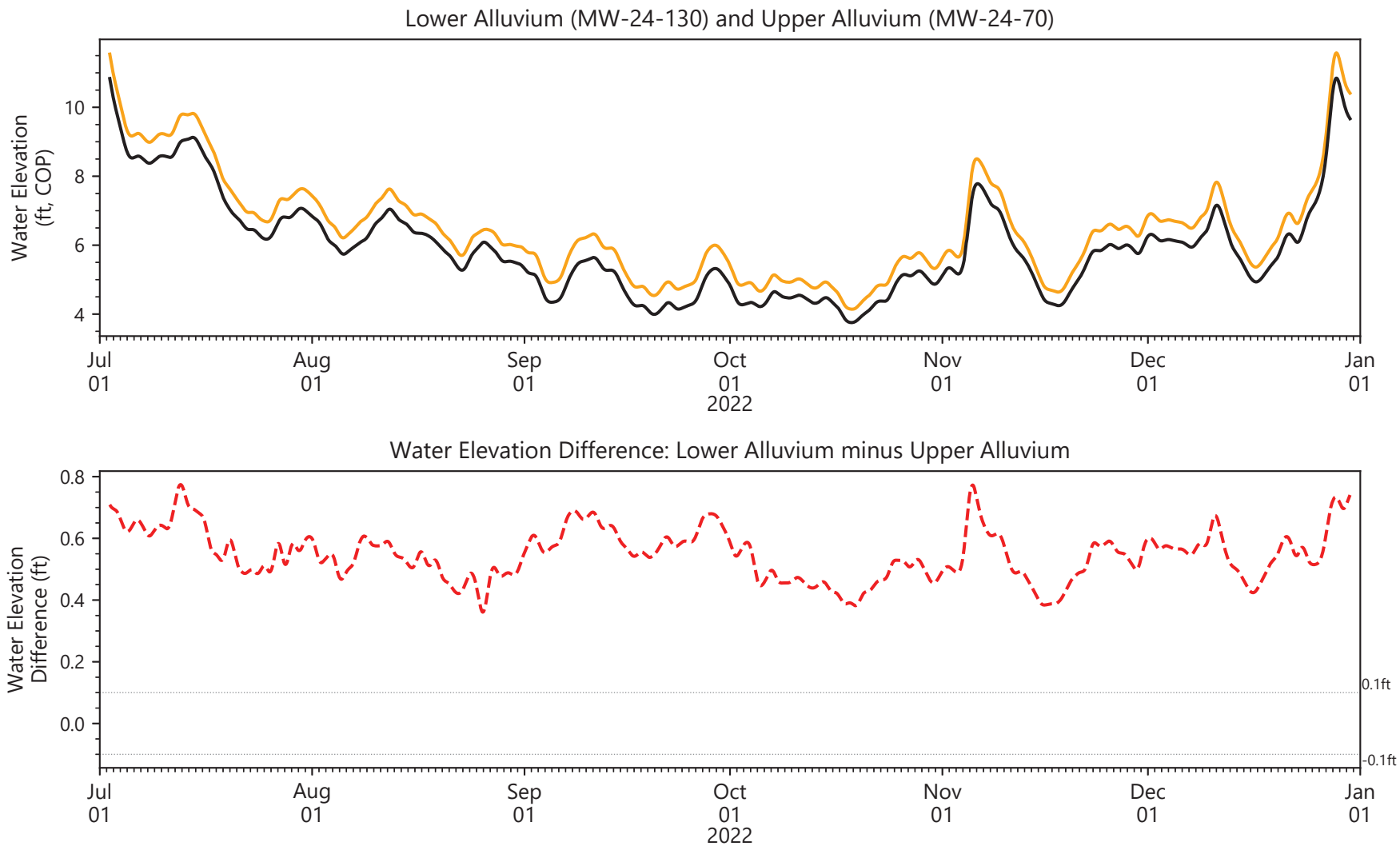
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.9
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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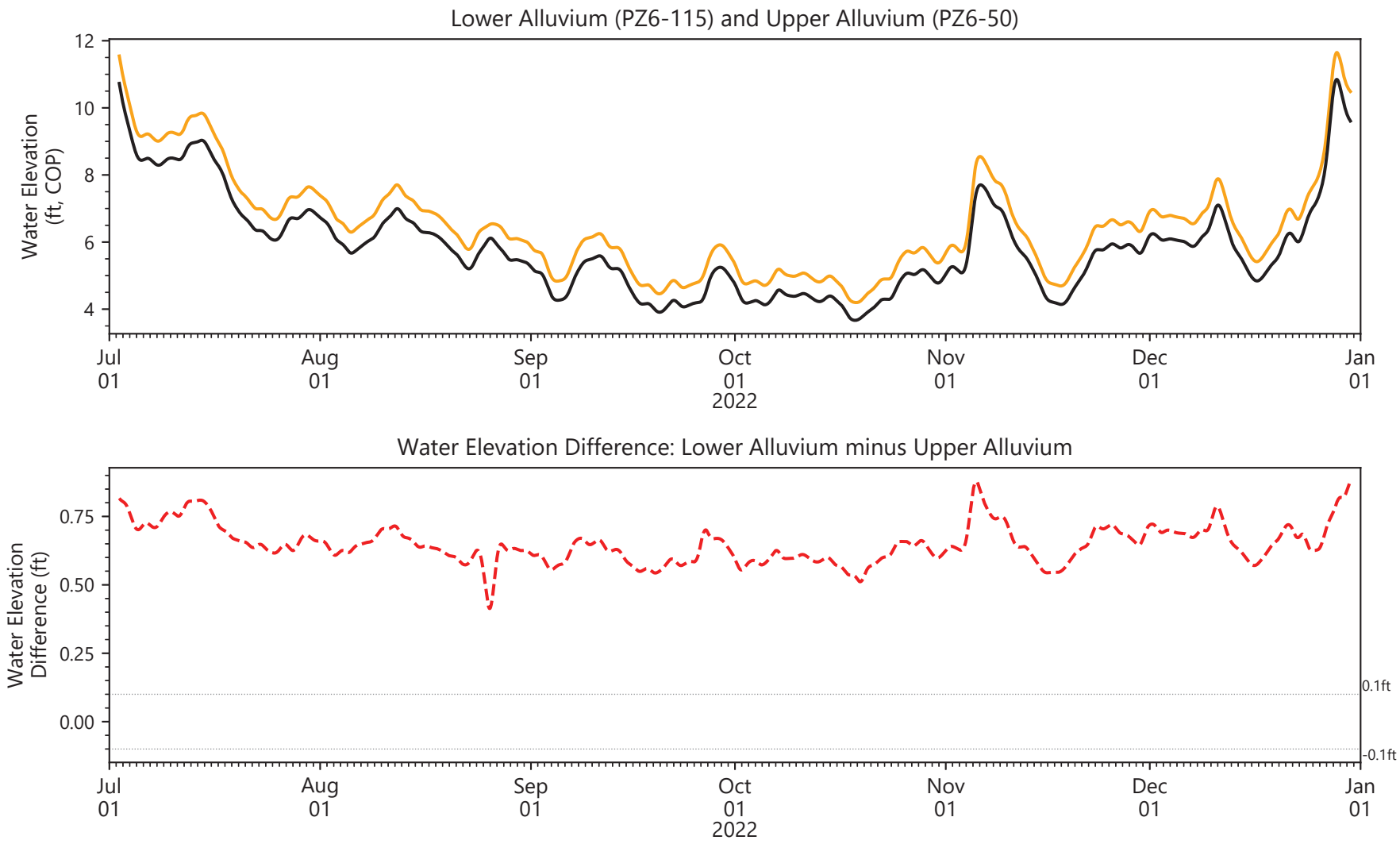
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.10
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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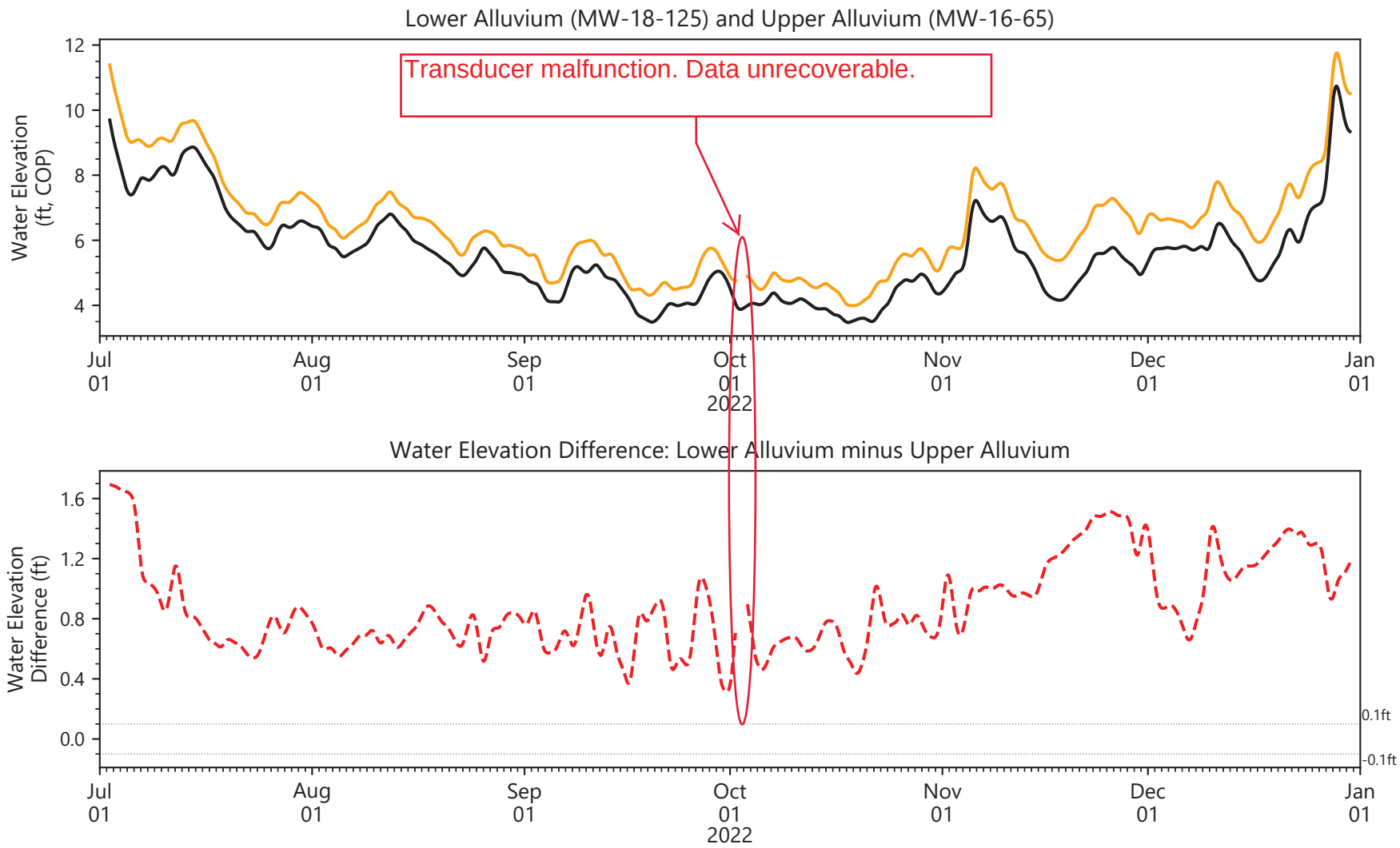
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.11
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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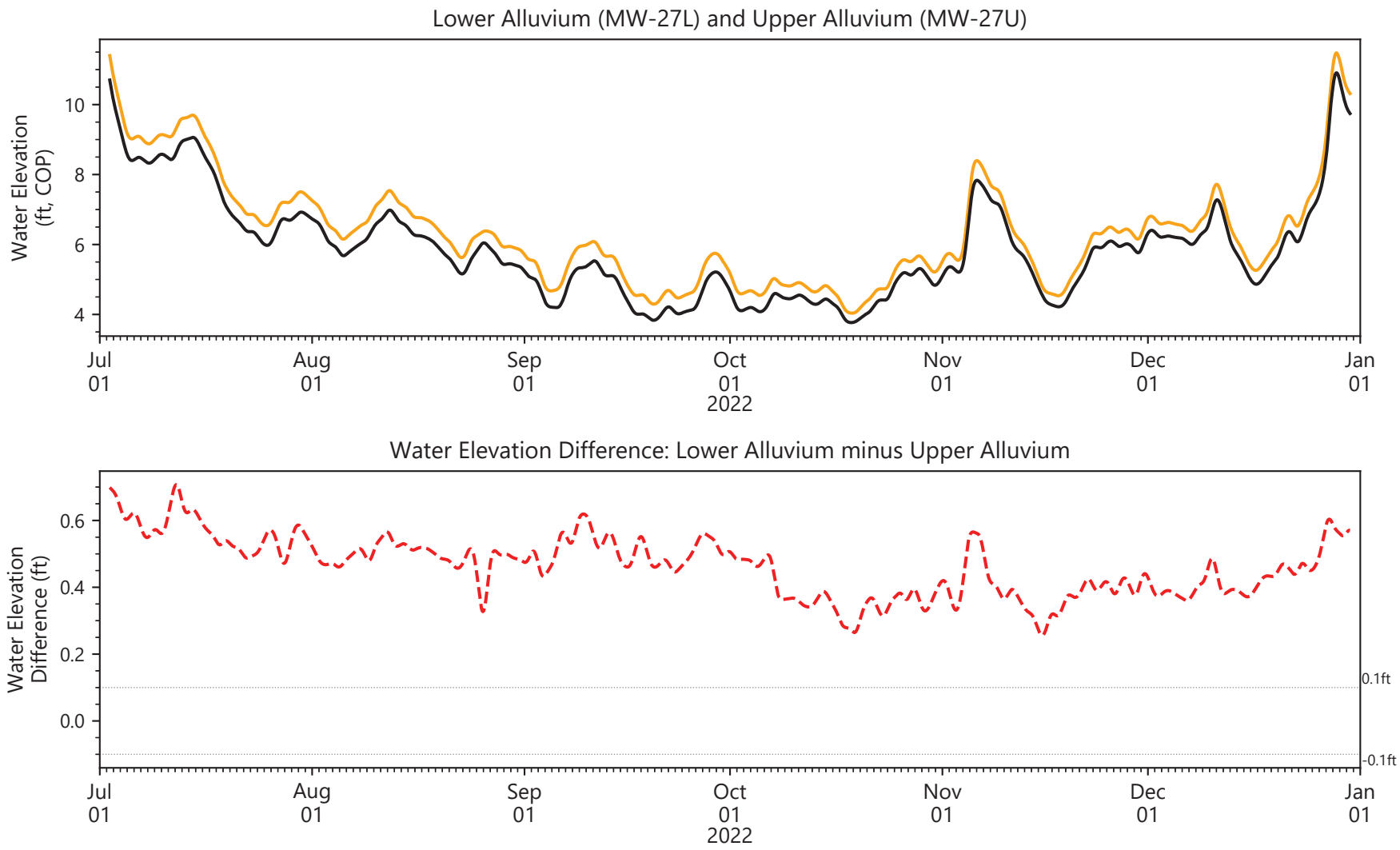
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.12
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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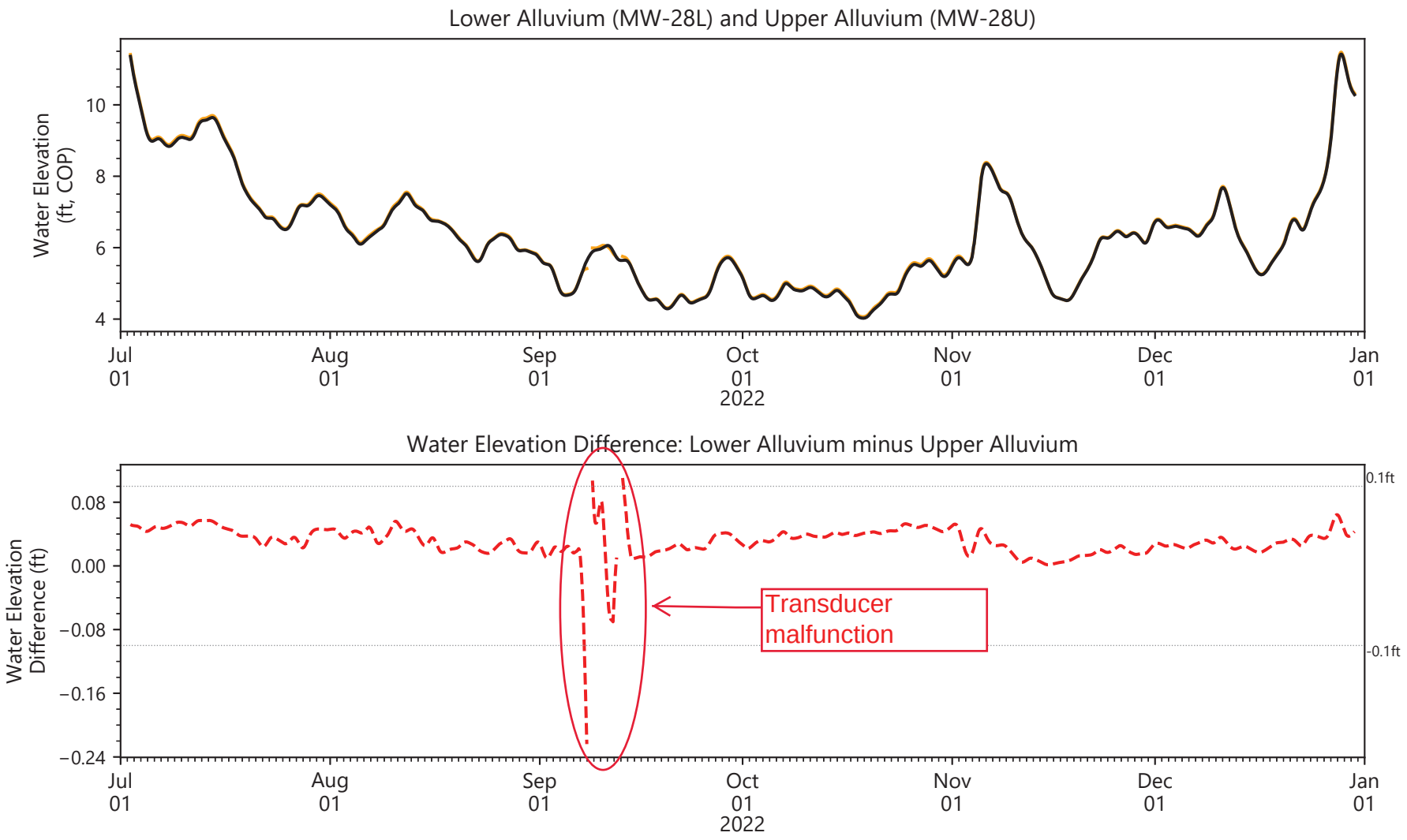
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.13
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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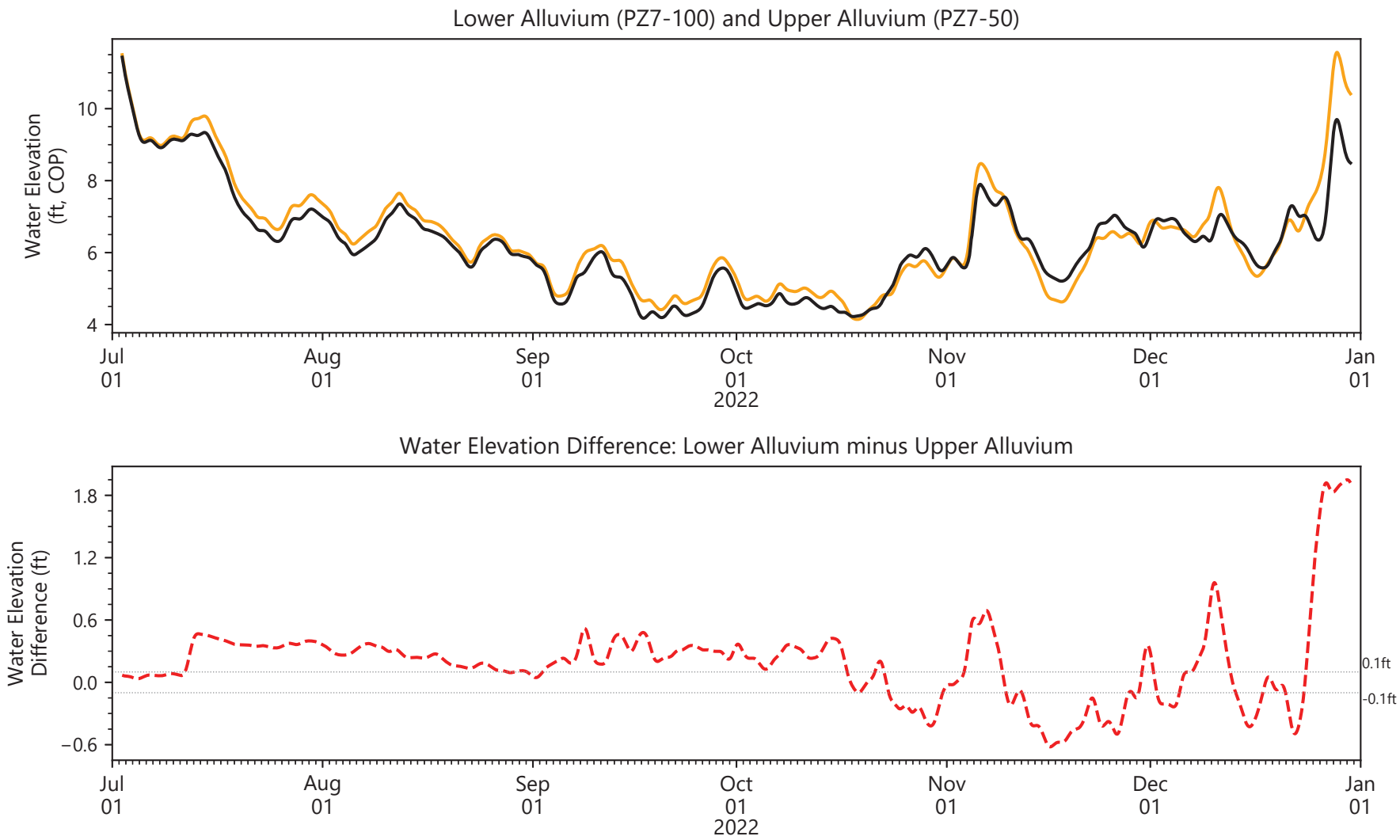
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.14
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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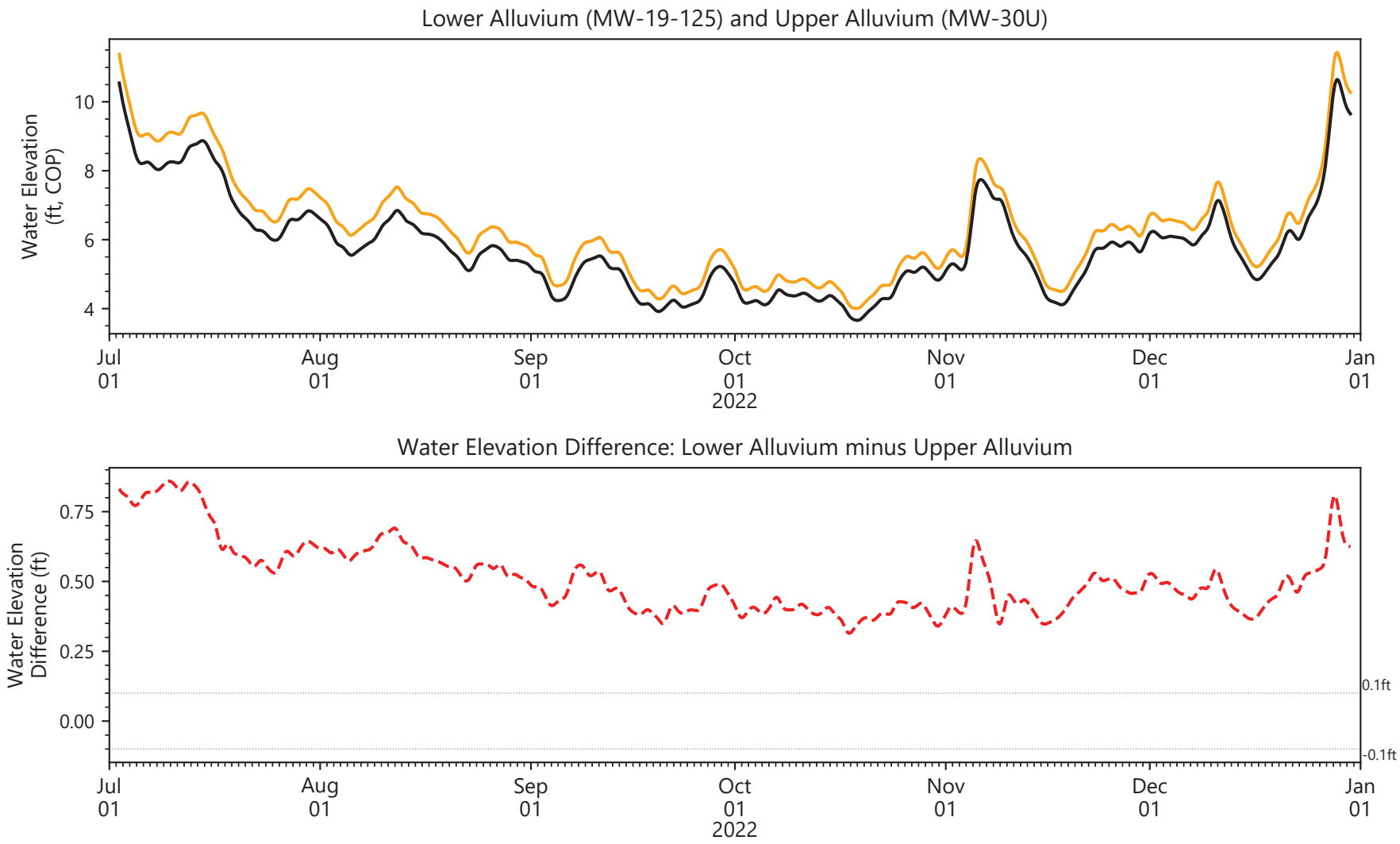
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.15
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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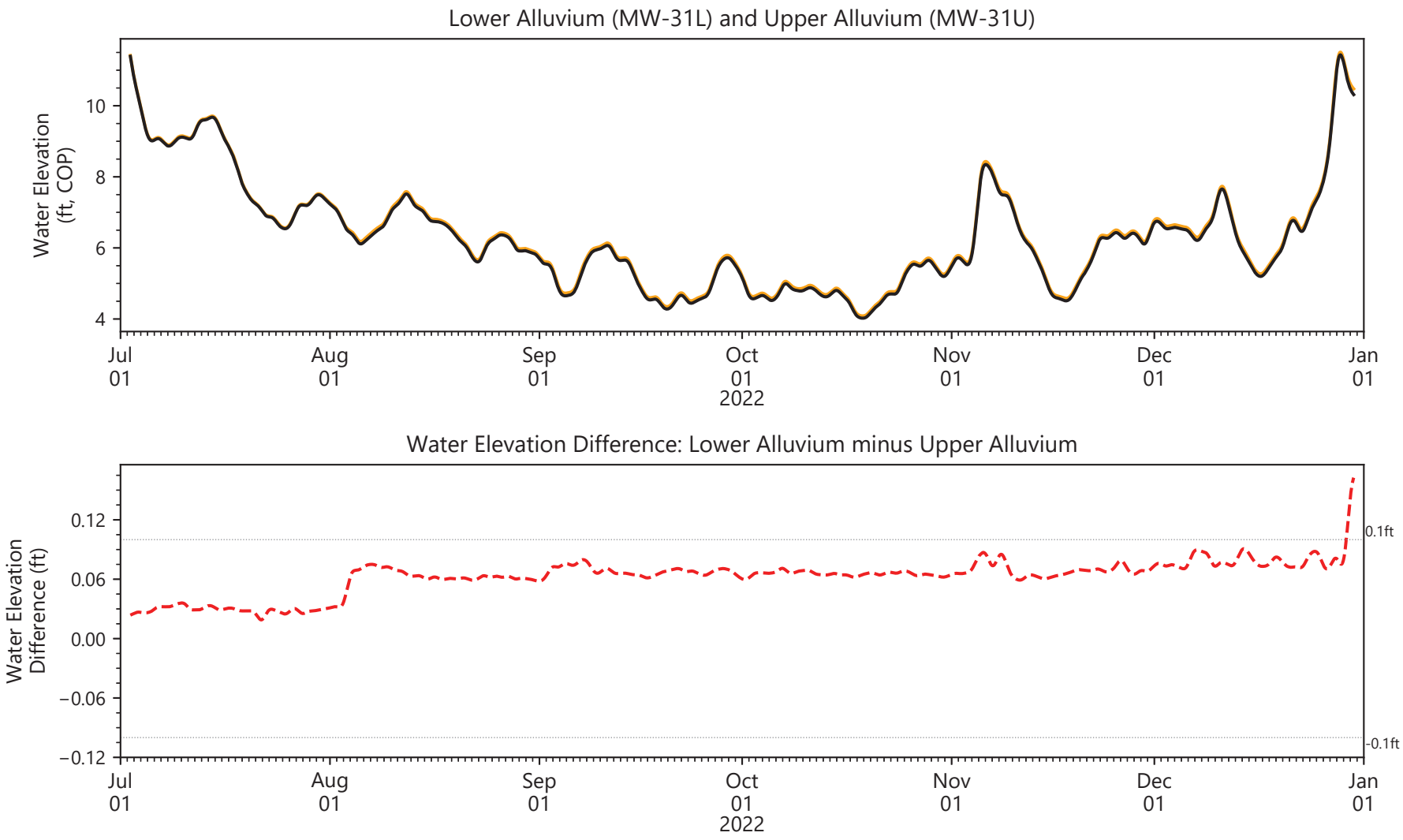
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.16
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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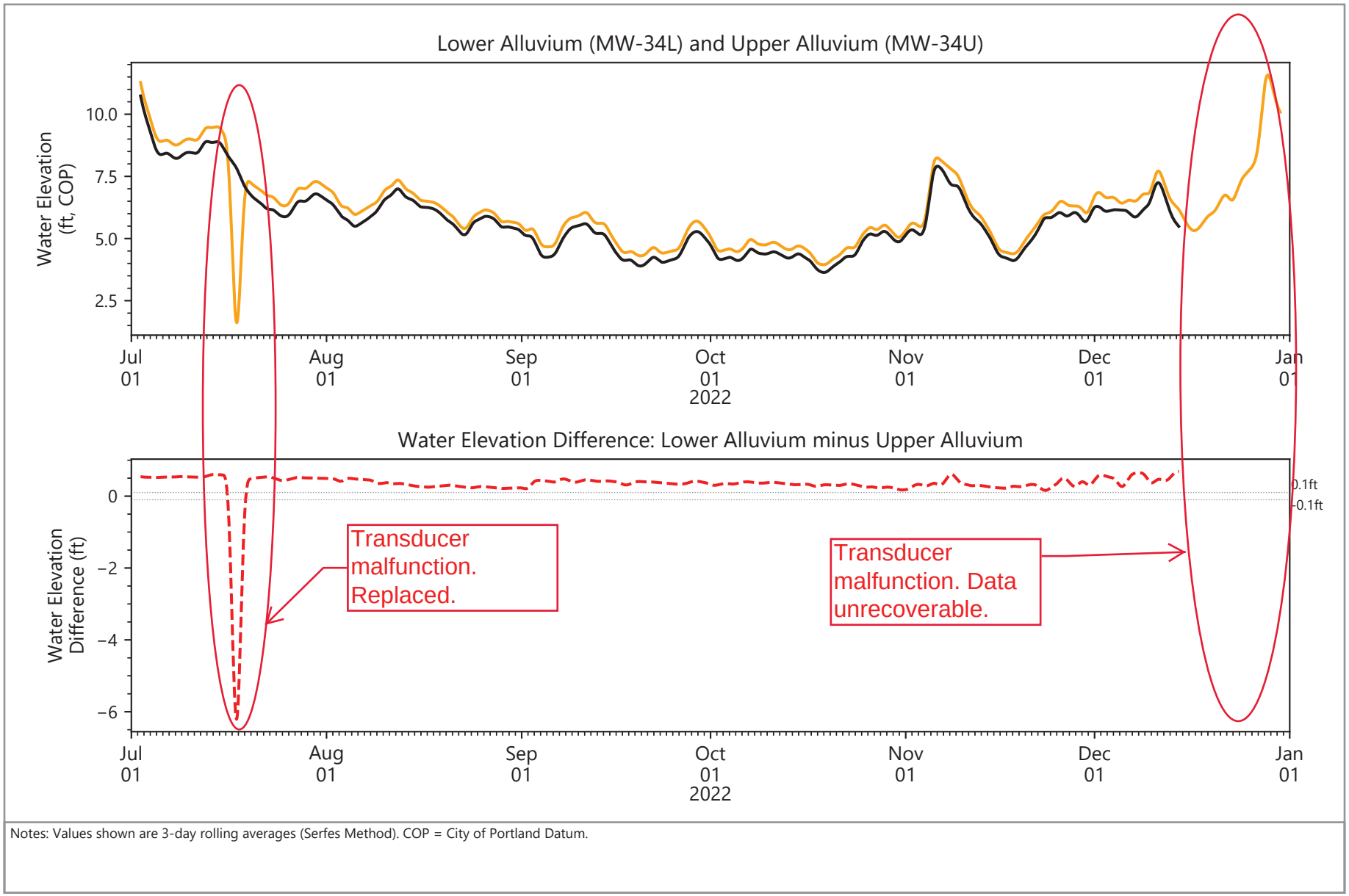
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.17
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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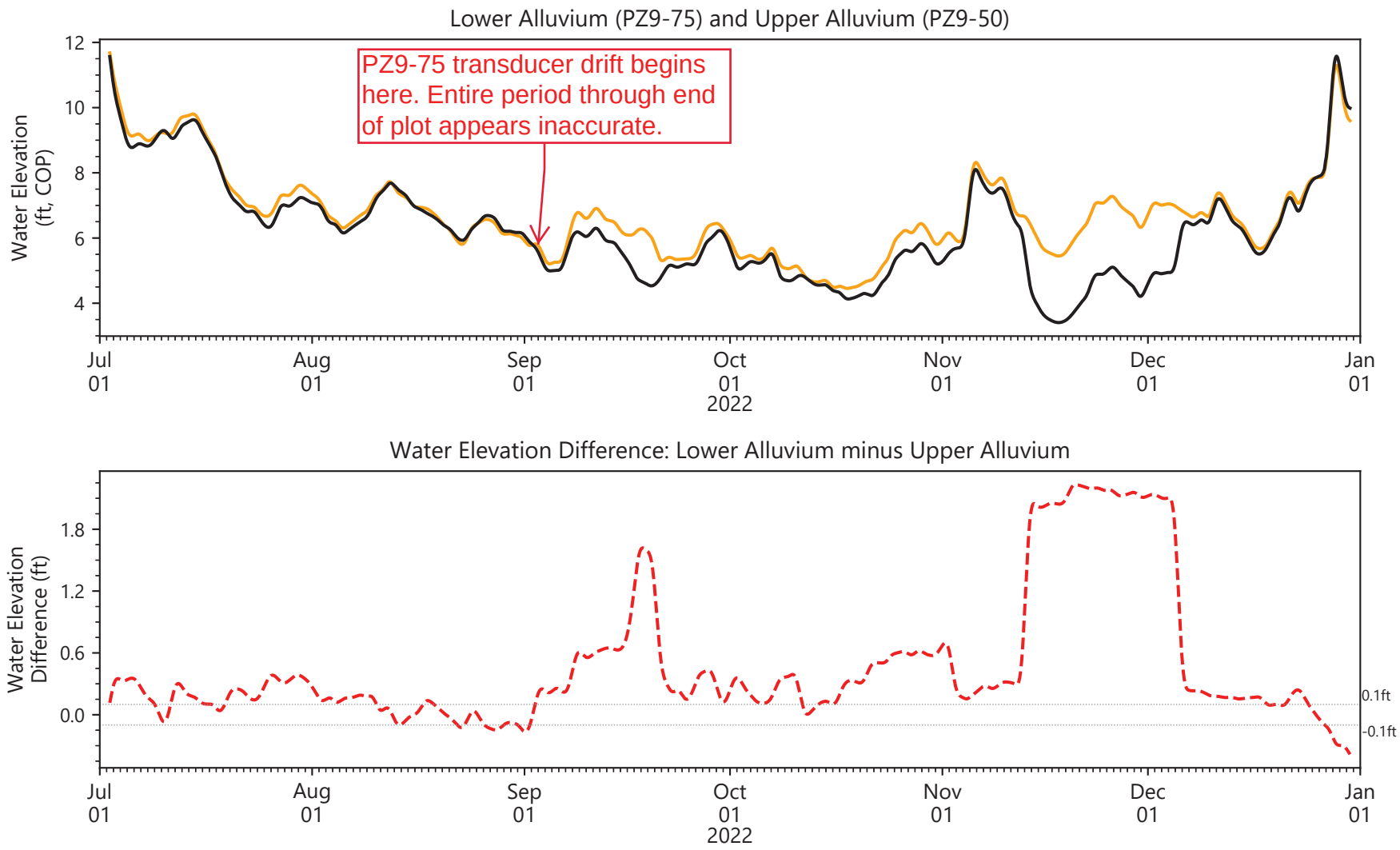
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.18
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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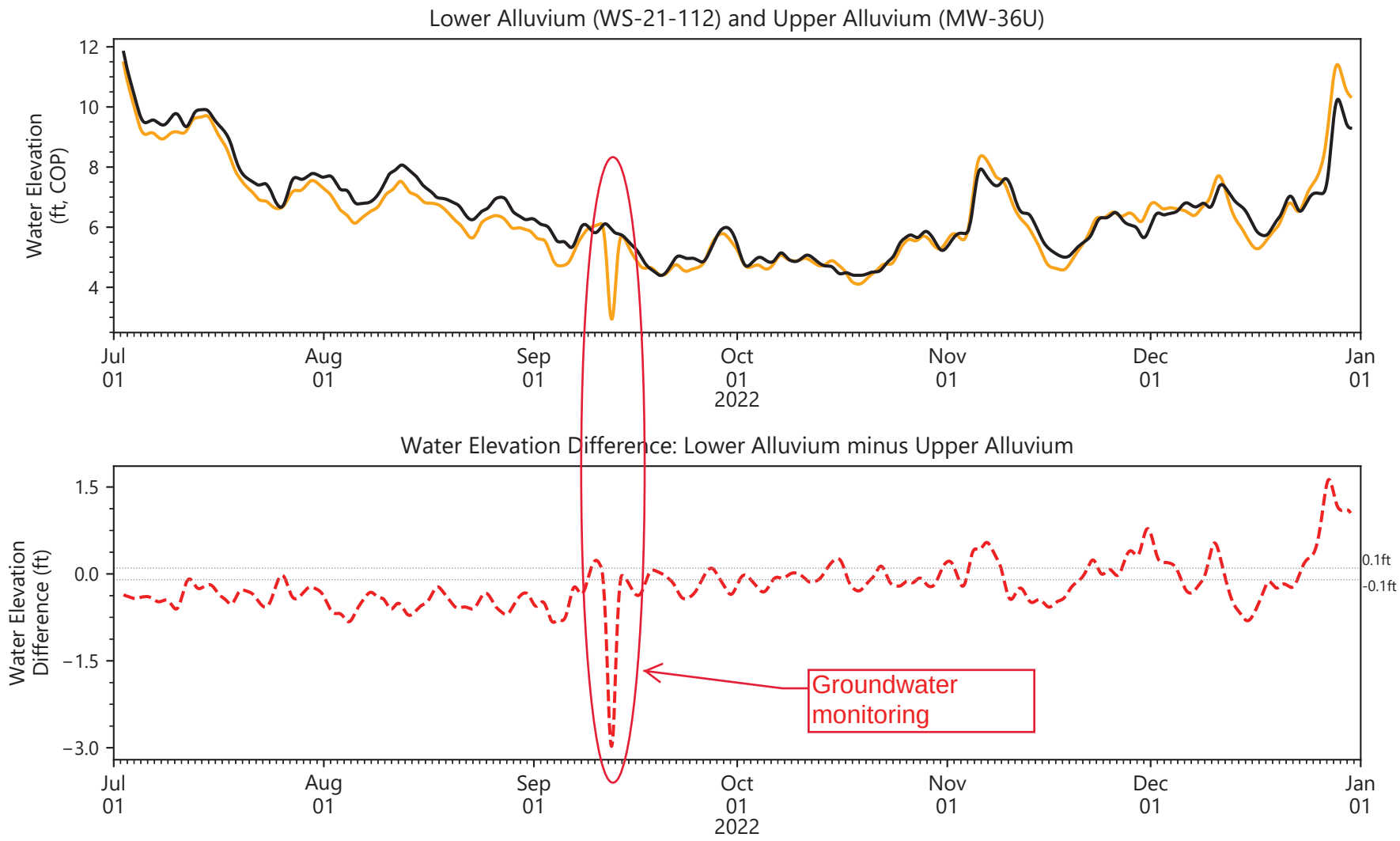
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.19
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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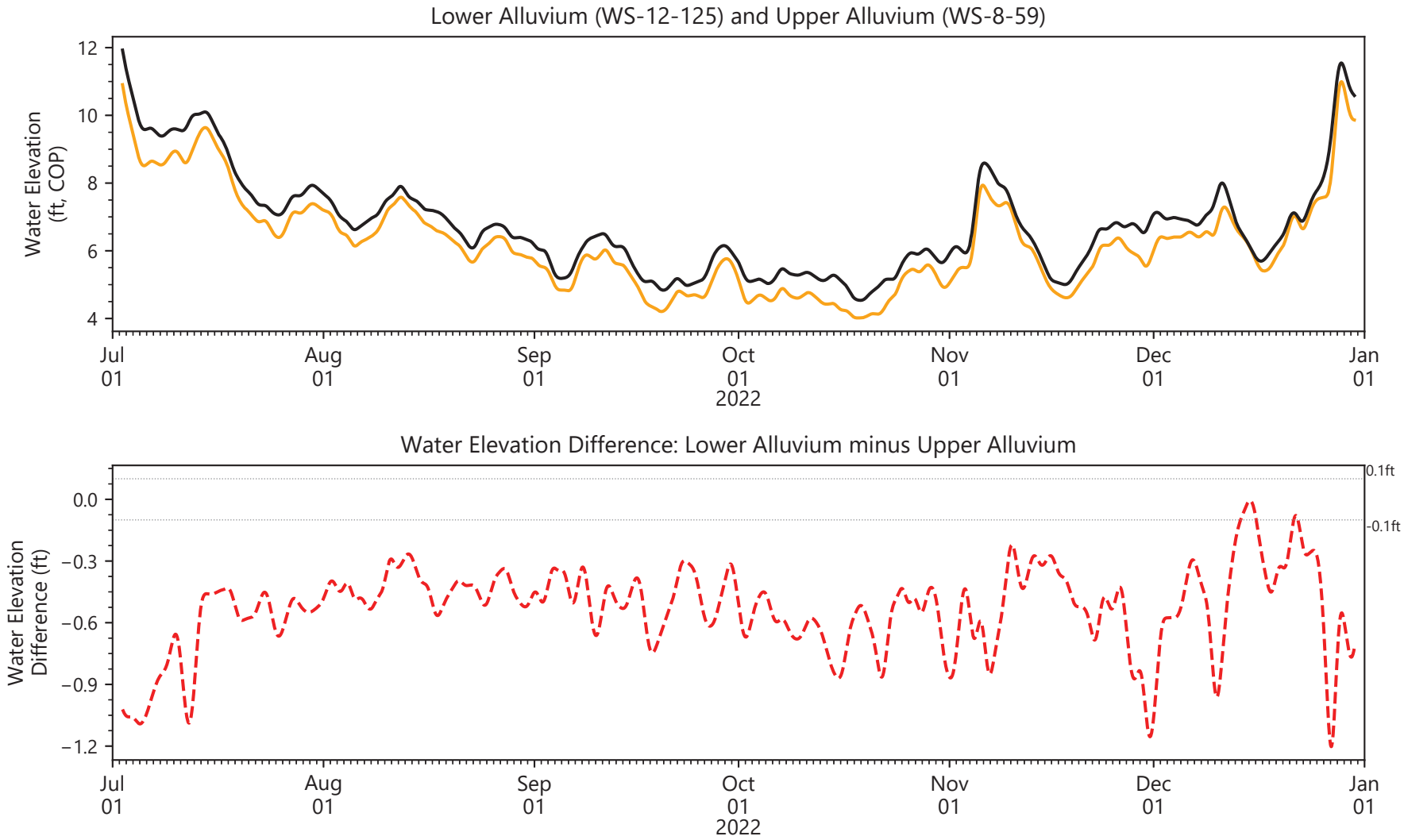
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.20
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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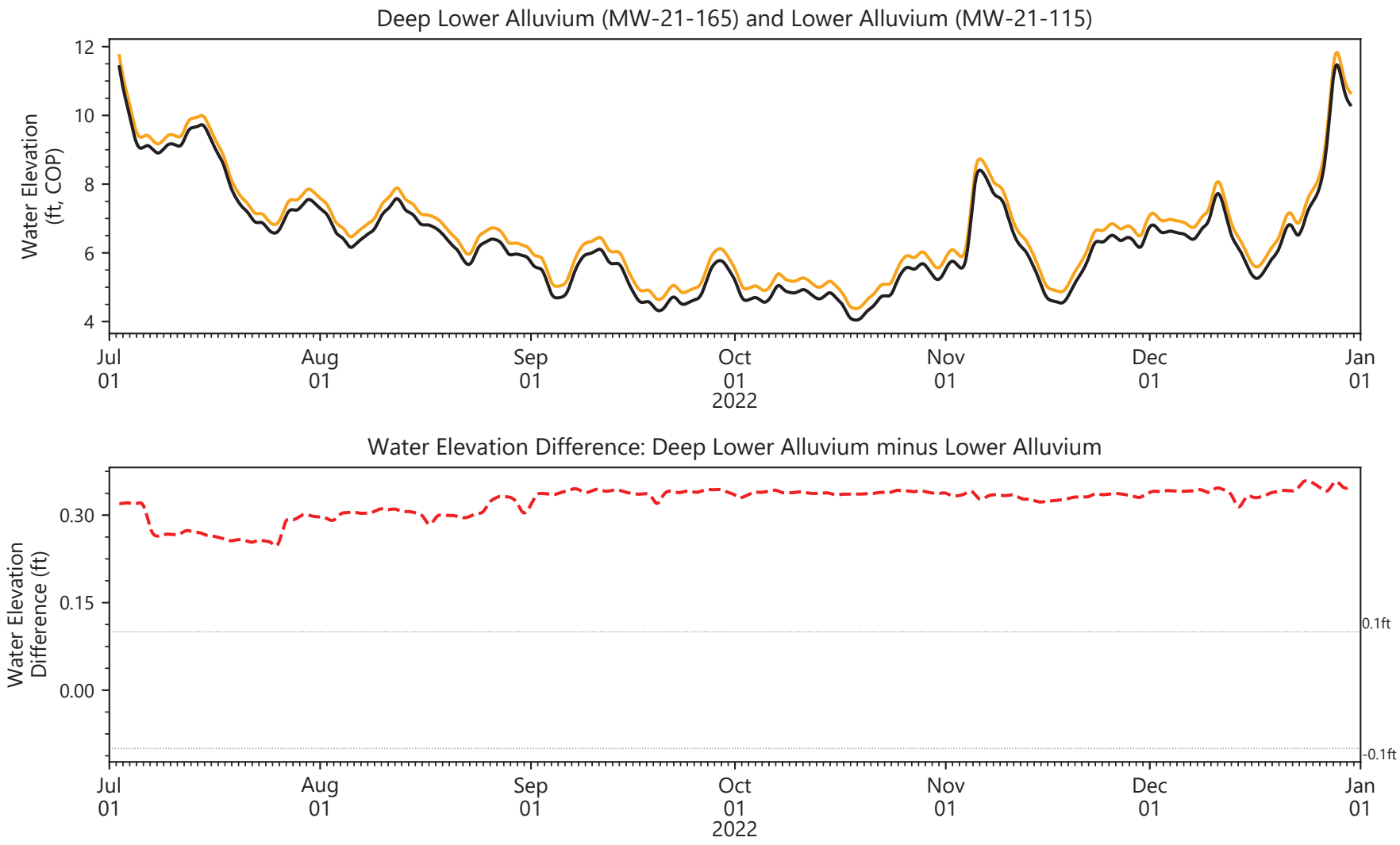
ANCHOR QEA

Lower Alluvium
Upper Alluvium
Water Elevation Difference
0.1 ft Total Potential Uncertainty

Figure 5.21
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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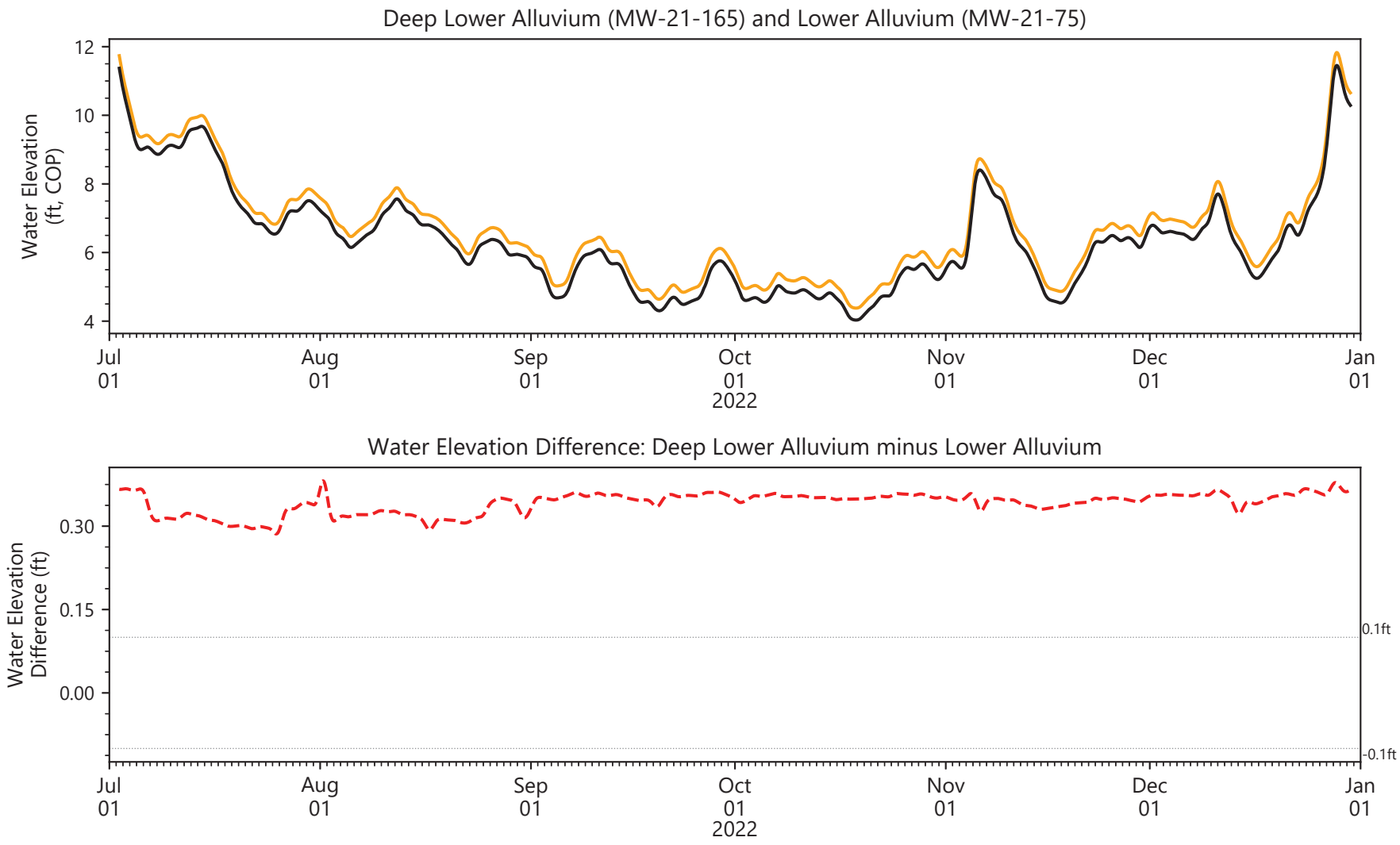
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.22
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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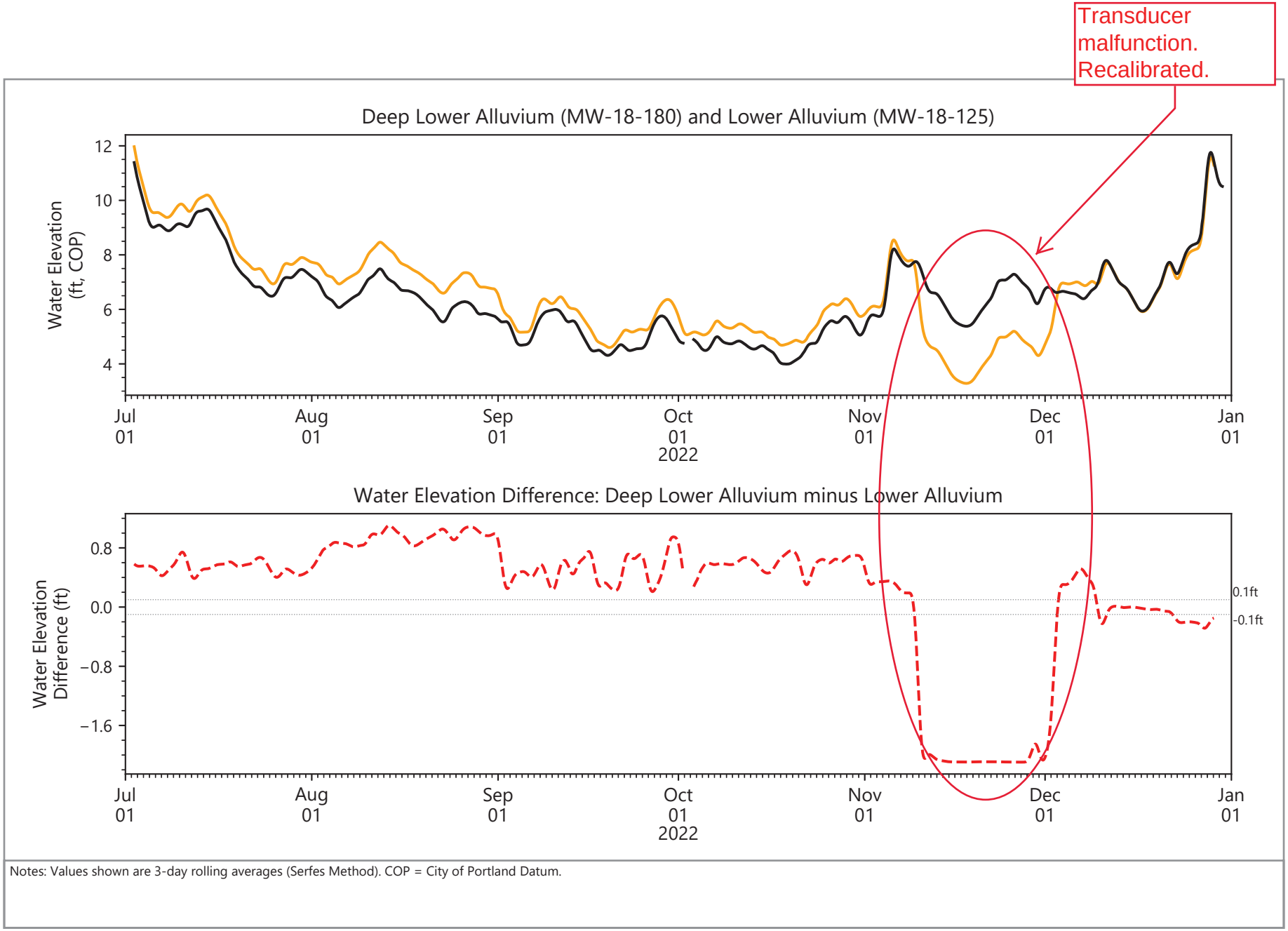
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.23
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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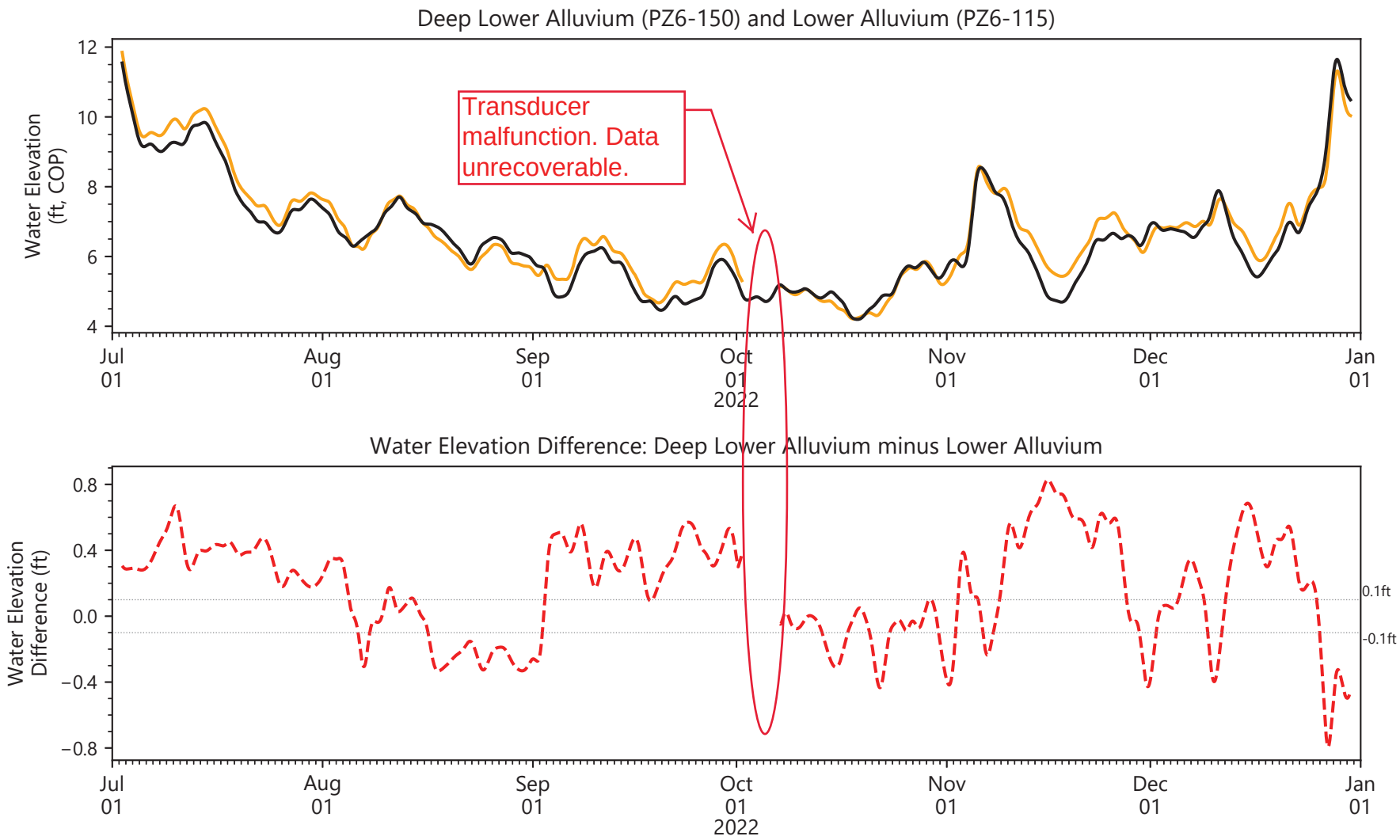
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.24
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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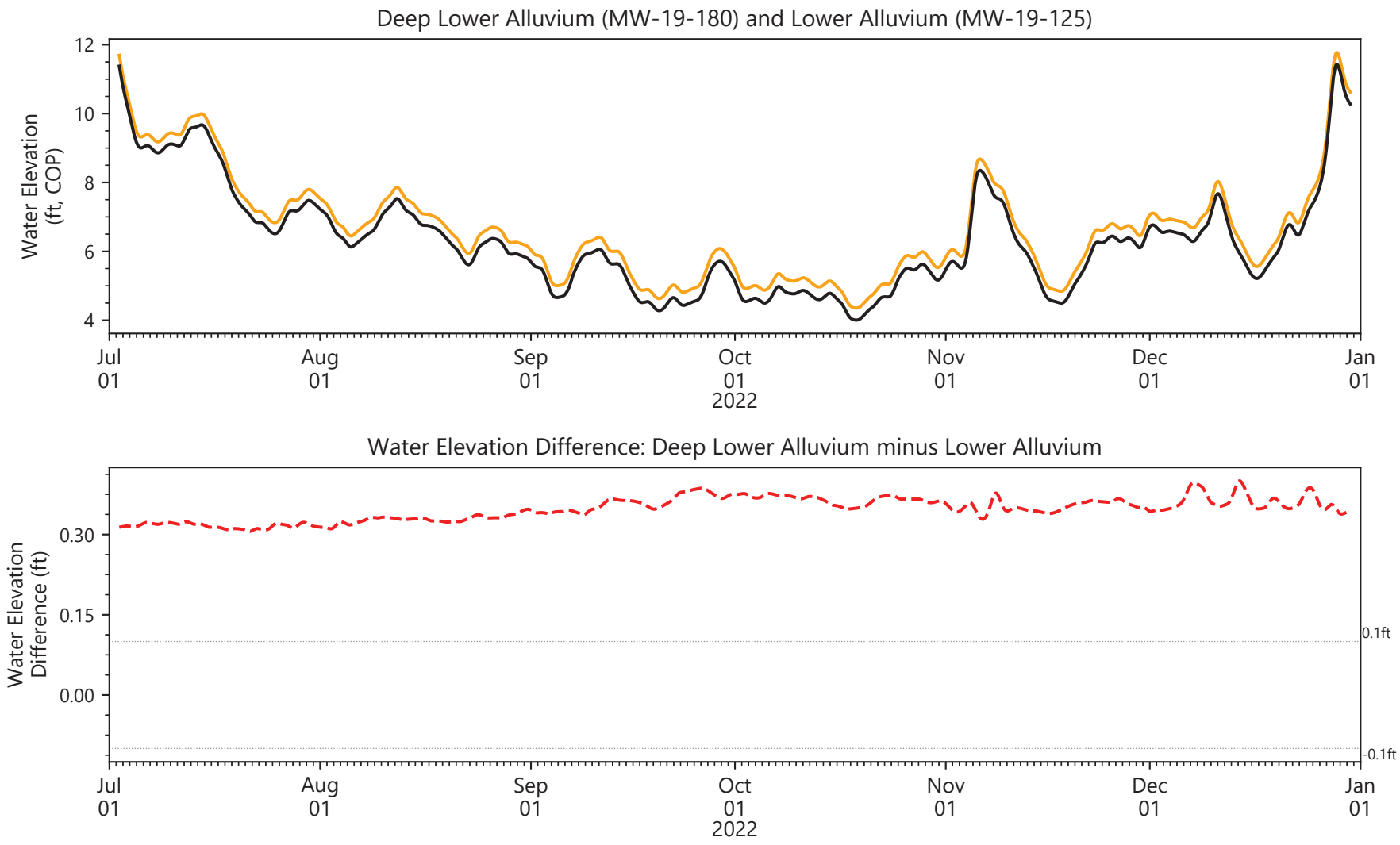
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.25
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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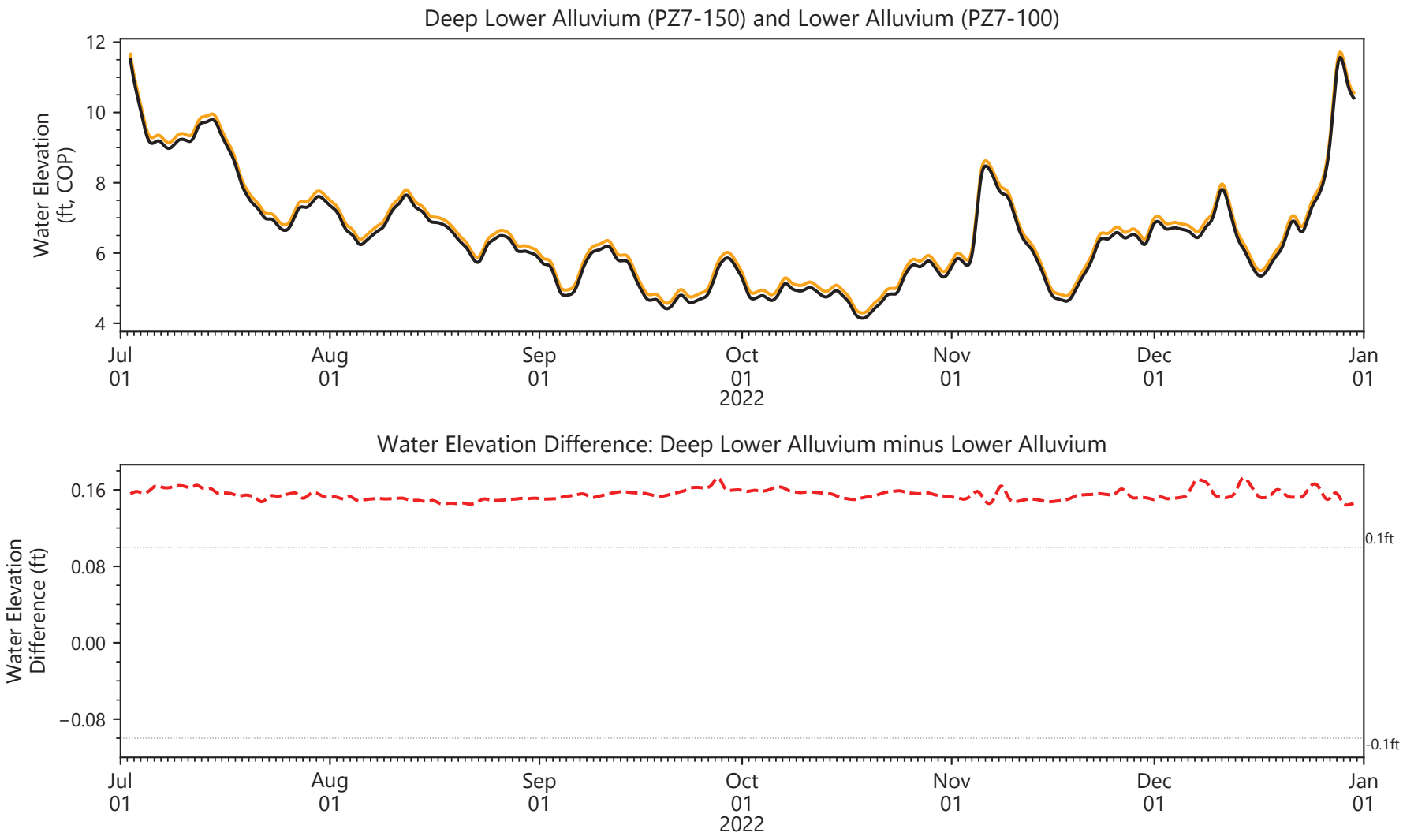
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.26
Groundwater Elevation Differences
NW Natural Gasco Site



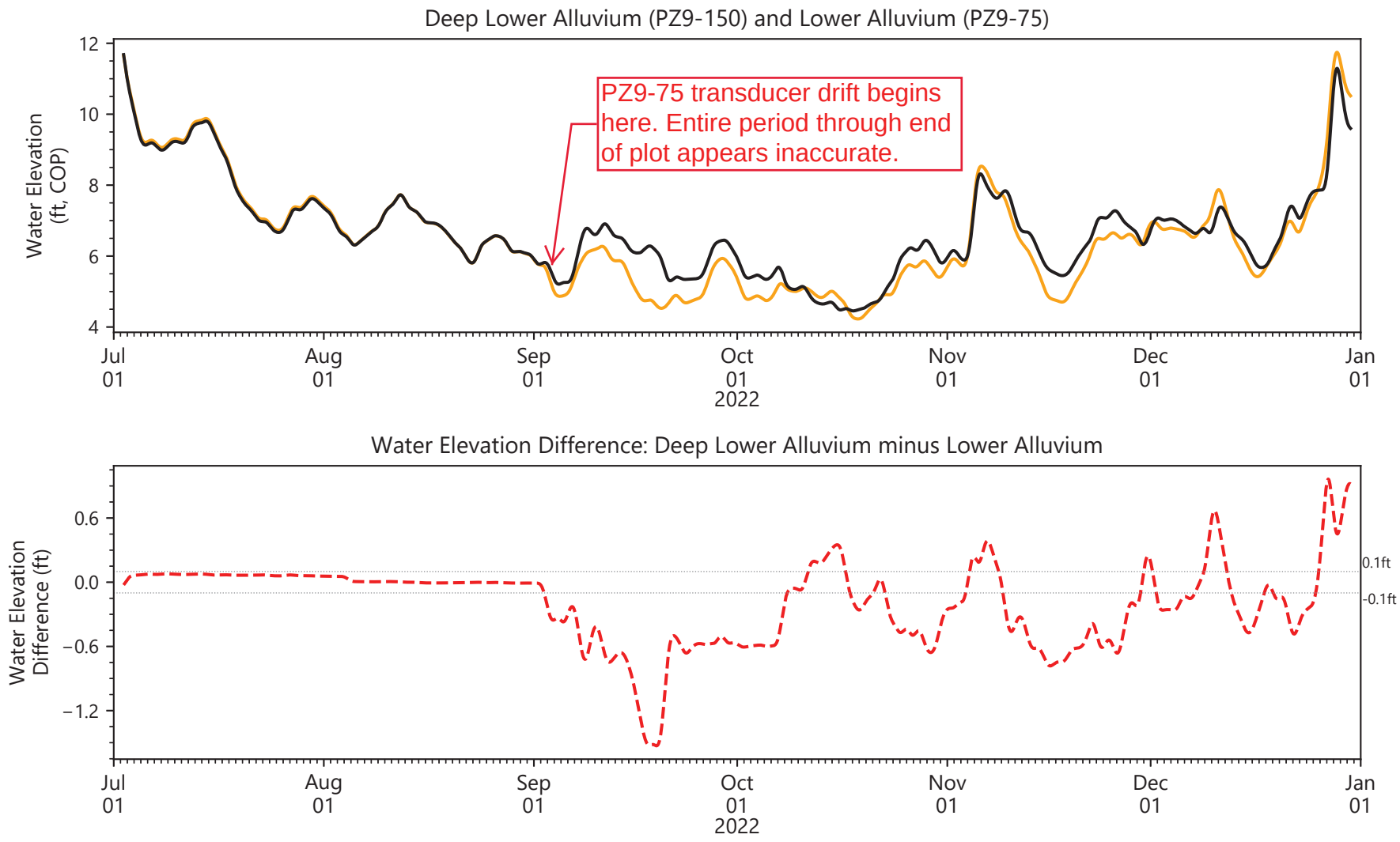
Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

Publish Date: 01/30/2023 10:36 AM | User: ZW
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.27
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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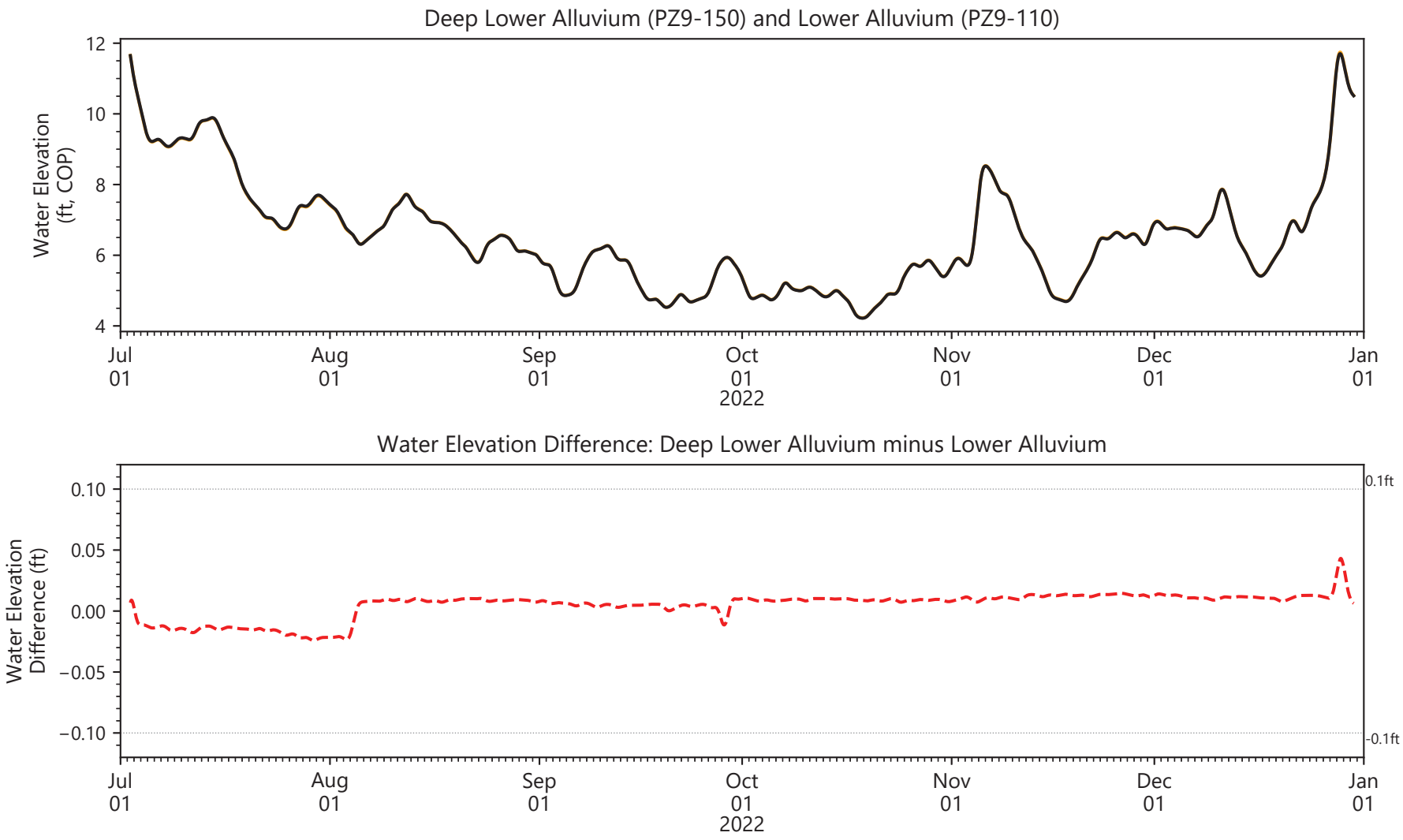
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.28
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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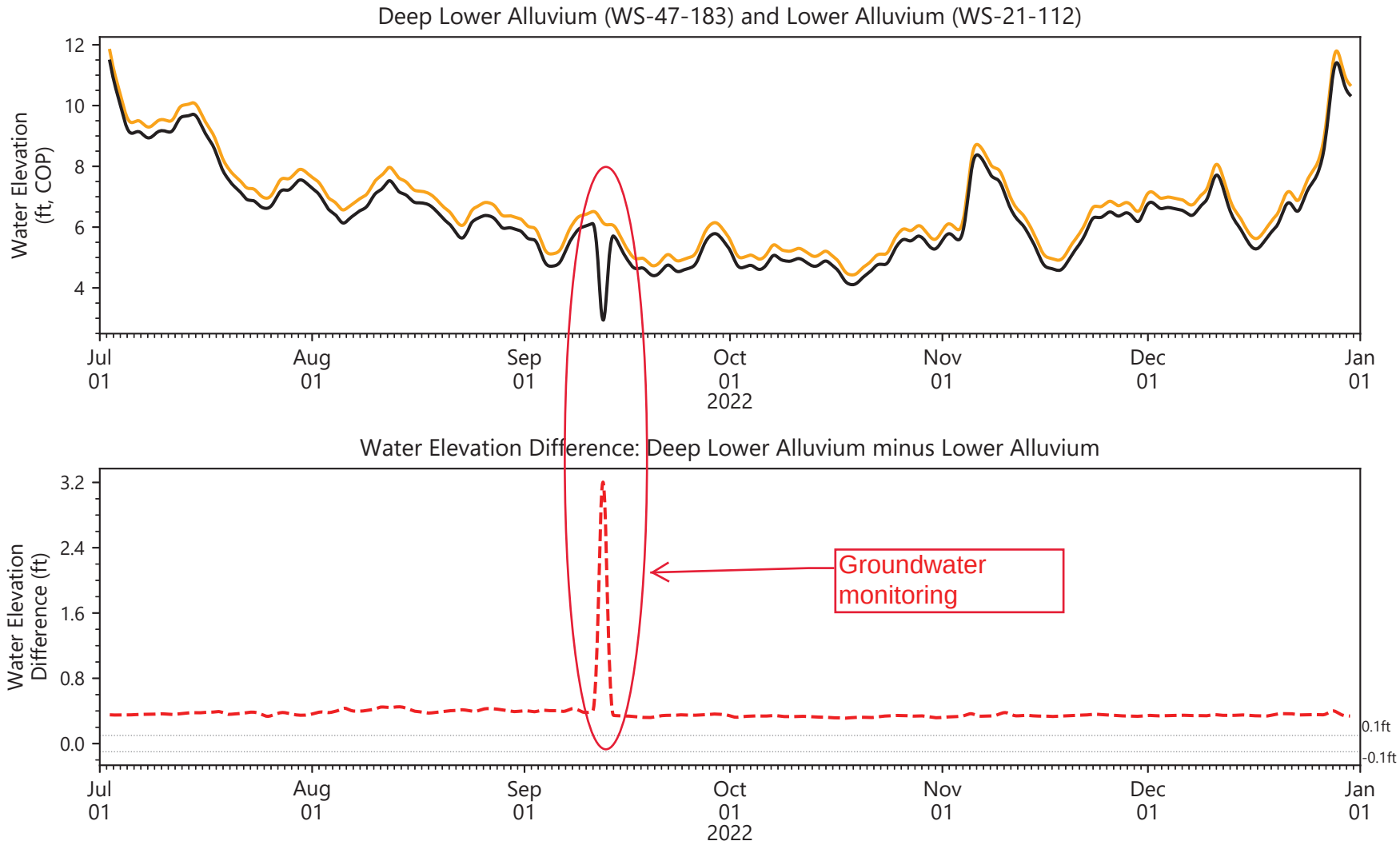
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.29
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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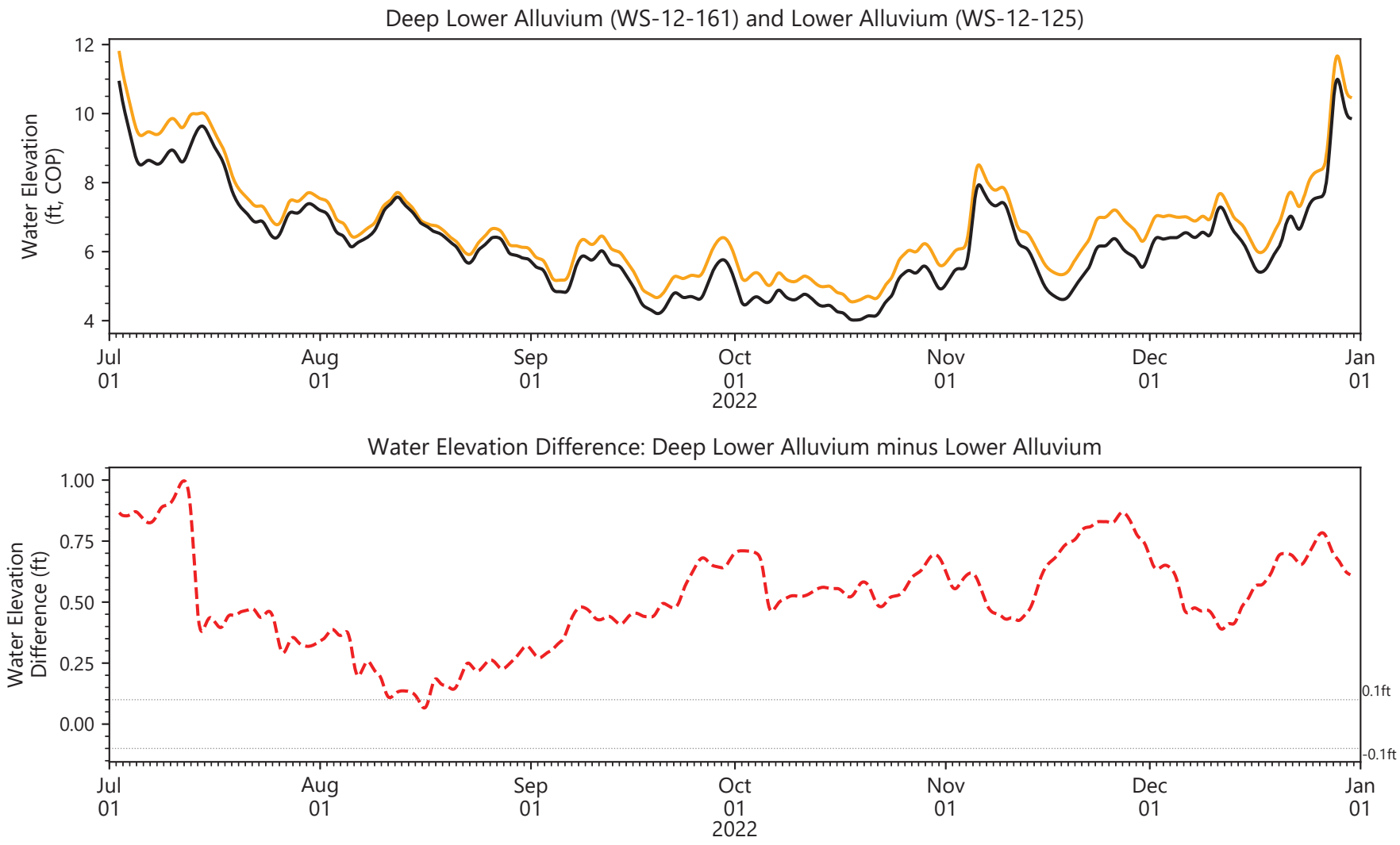
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.30
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- Water Elevation Difference
- 0.1 ft Total Potential Uncertainty

Figure 5.31
Groundwater Elevation Differences
NW Natural Gasco Site

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300

Feet

Publish Date: 2023/01/24, 6:00 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\07 July\Figure_6.1_GW_Elev_Delta_LA_Minus_UA_2022_07_11_13.mxd

ANCHOR QEA

Figure 6.1

Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 7/11/2022-7/13/2022

NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Upward Flow (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Downward Flow (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plane North, International Feet.
6. Aerial imagery from City of Portland 2018.

0 300
Feet

Publish Date: 2023/01/24, 6:01 PM | User: cgardner
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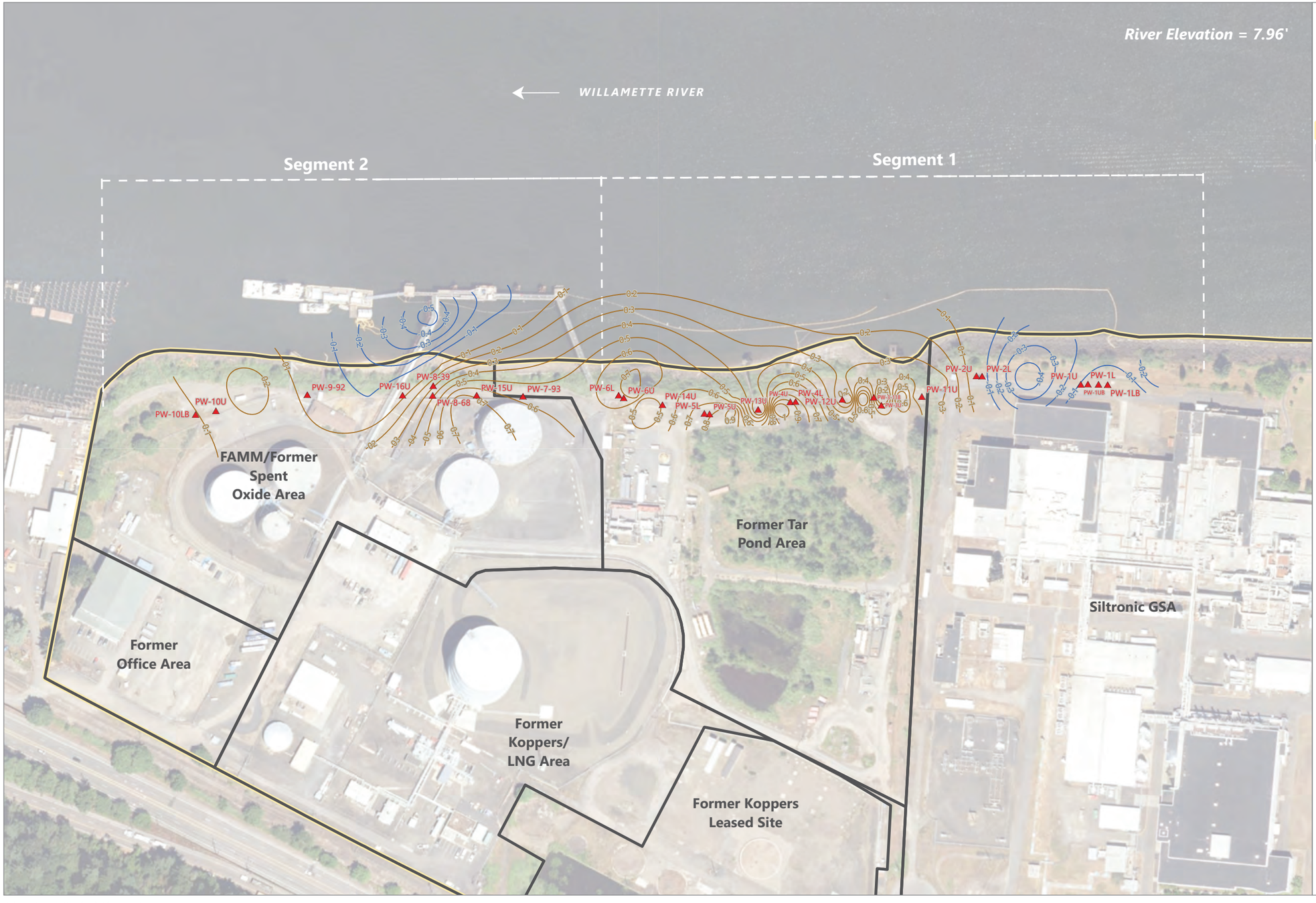
ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 7/24/2022-7/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/19, 10:41 AM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\08 August\NWN_HCC_Maps_EarlyAugust_2022.aprx

ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 8/11/2022-8/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/20, 9:39 AM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\08 August\NWN_HCC_Maps_LaterAugust_2022.aprx

ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 8/24/2022-8/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/20, 4:03 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\09 September\NWN_HCC_Maps_EarlySeptember_2022.aprx

ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 9/11/2022-9/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2022/12/27, 3:34 PM | User: cgardner
Filepath: Q:\Jobs\NW_Natural_Gas_0029\Gasco_Site_Remedy\Analysis\GroundwaterModeling\DataReportAutomation\ScriptOutputMaps\HC and C\2022\09 September\NWN_HCC_Maps_LaterSeptember_2022.aprx

ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 9/24/2022-9/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/11, 10:57 AM | User: cgardner
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ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 10/11/2022-10/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 10/24/2022-10/26/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

Publish Date: 2023/01/12, 6:42 PM | User: cgardner
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ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 11/11/2022-11/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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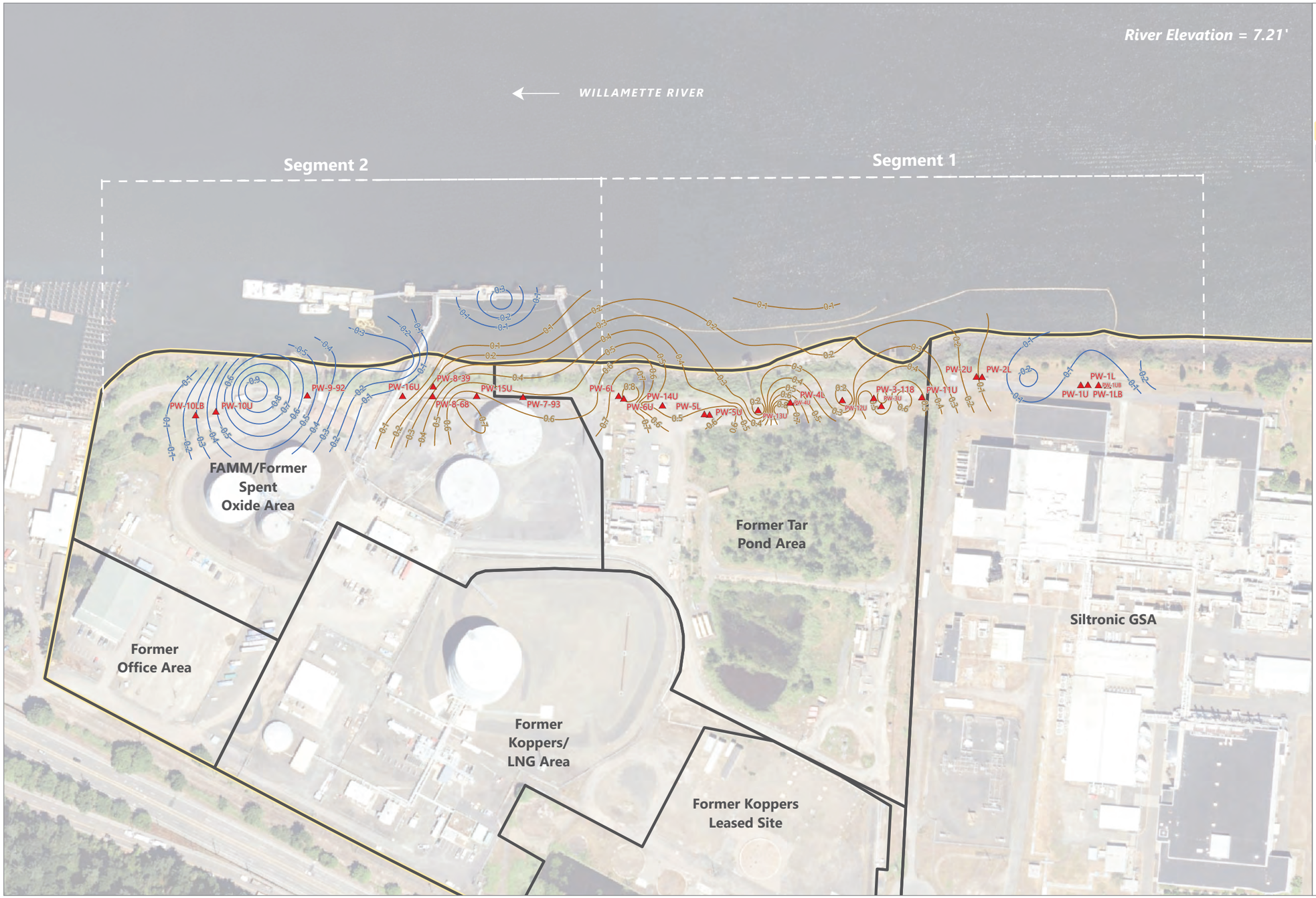
ANCHOR QEA

Figure 6.2
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 11/24/2022-11/26/2022
NWN Gasco Site
Portland, Oregon



LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300
Feet

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ANCHOR QEA

Figure 6.1
Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 12/11/2022-12/13/2022
NWN Gasco Site
Portland, Oregon

LEGEND:

- Groundwater Elevation Difference Contour Lines: Toward River (0.1-foot interval)
- Groundwater Elevation Difference Contour Lines: Toward Upland (0.1-foot interval)
- Pumping Well Location
- Approximate Gasco OU Boundary
- Geographic Subareas

NOTES:

1. Groundwater elevation is reported in reference to City of Portland (COP) datum in units of feet.
2. Water elevation difference is calculated as lower alluvium groundwater elevation minus upper alluvium groundwater elevation.
3. Averaged groundwater elevation contours were created using kriging interpolation method in ArcGIS software.
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 Oregon State Plan North, International Feet.
6. Aerial imagery from City of Portland 2021.

0 300

Feet

Publish Date: 2023/01/24, 5:27 PM | User: cgardner
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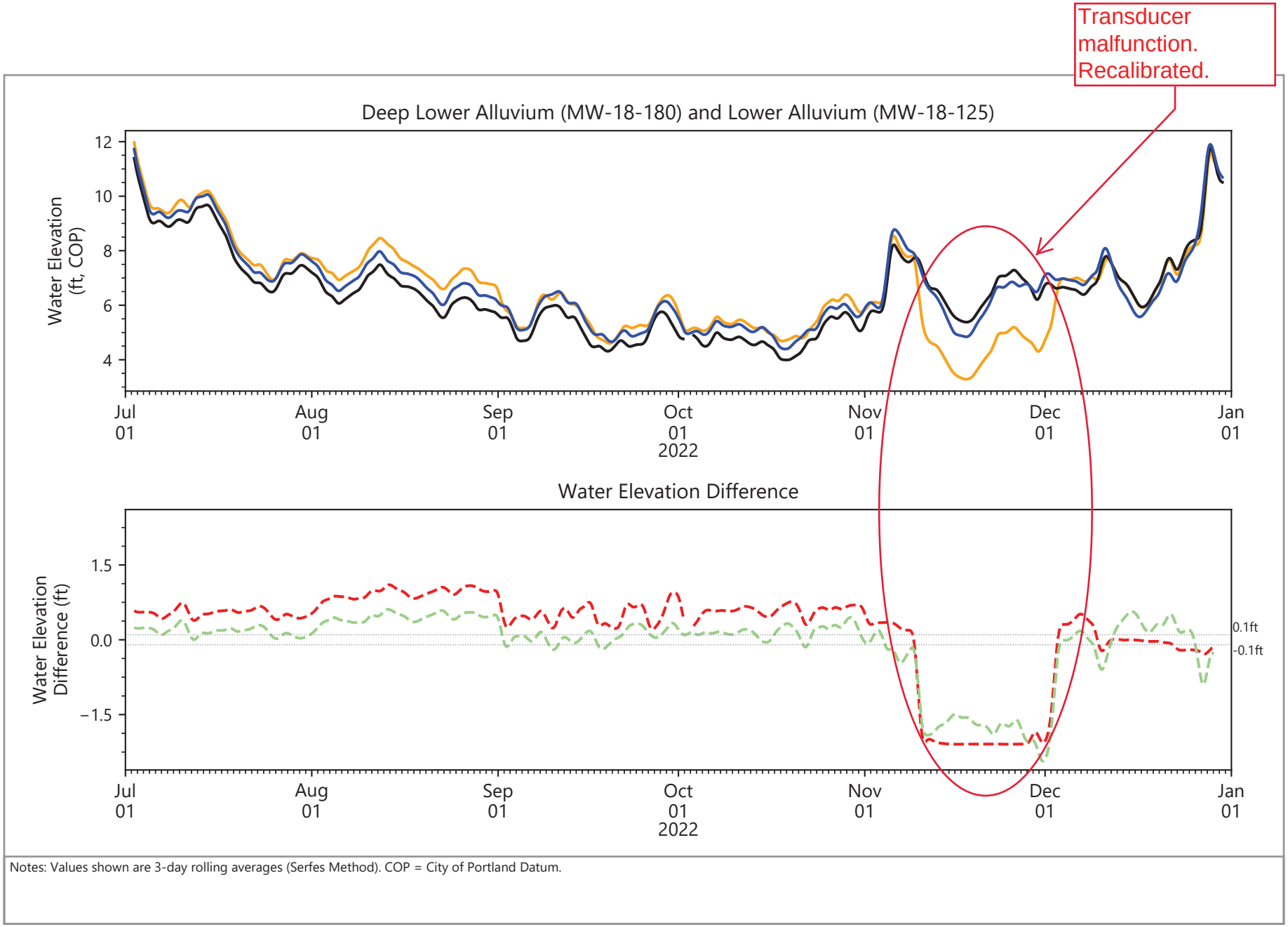
ANCHOR QEA

Figure 6.2

Contours of Water Elevation Difference Between Upper and Lower Alluvium Using Serfes 3-Day Rolling Averages From 12/24/2022-12/26/2022

NWN Gasco Site
Portland, Oregon



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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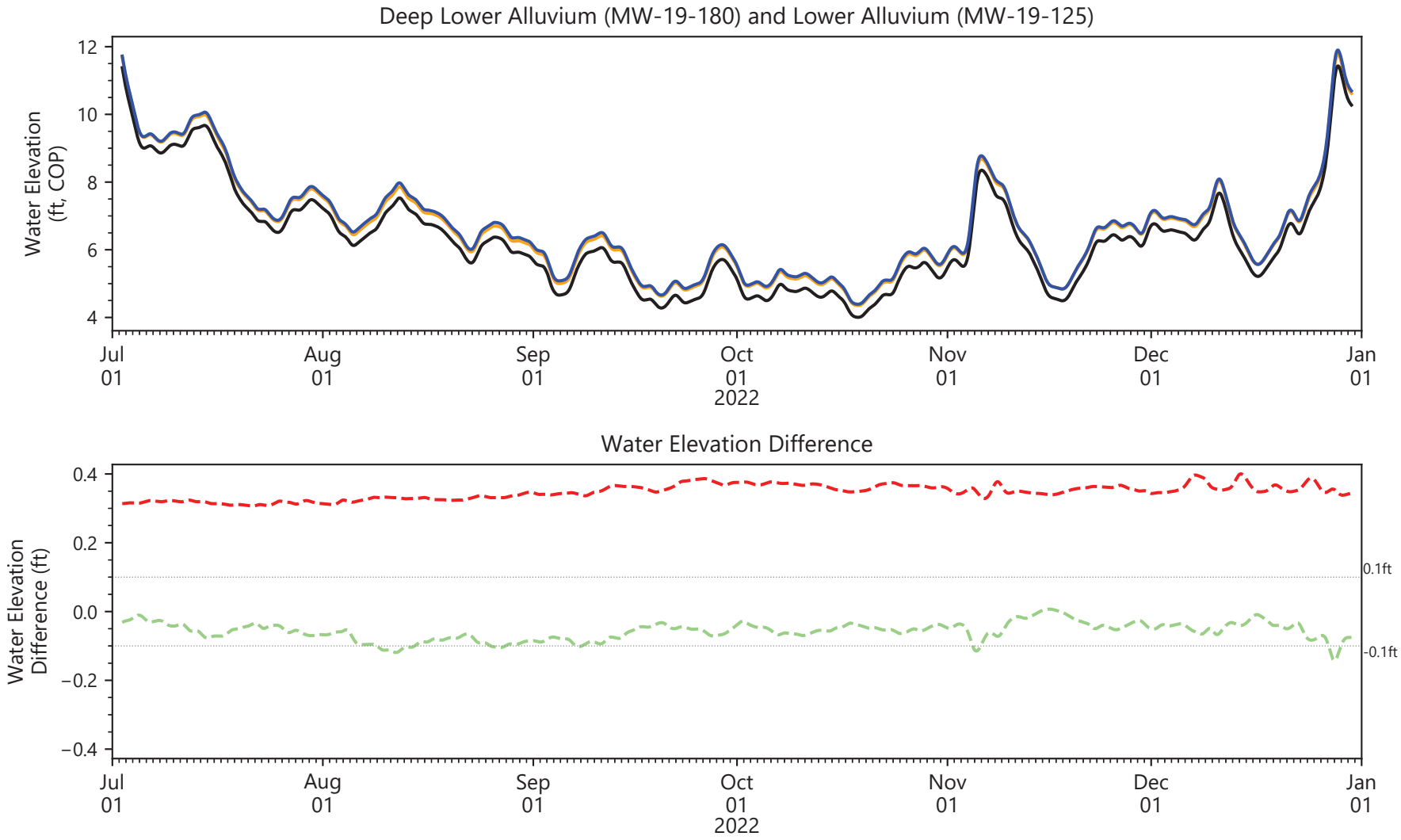
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.1
Groundwater Elevation Differences
NW Natural Gasco Site



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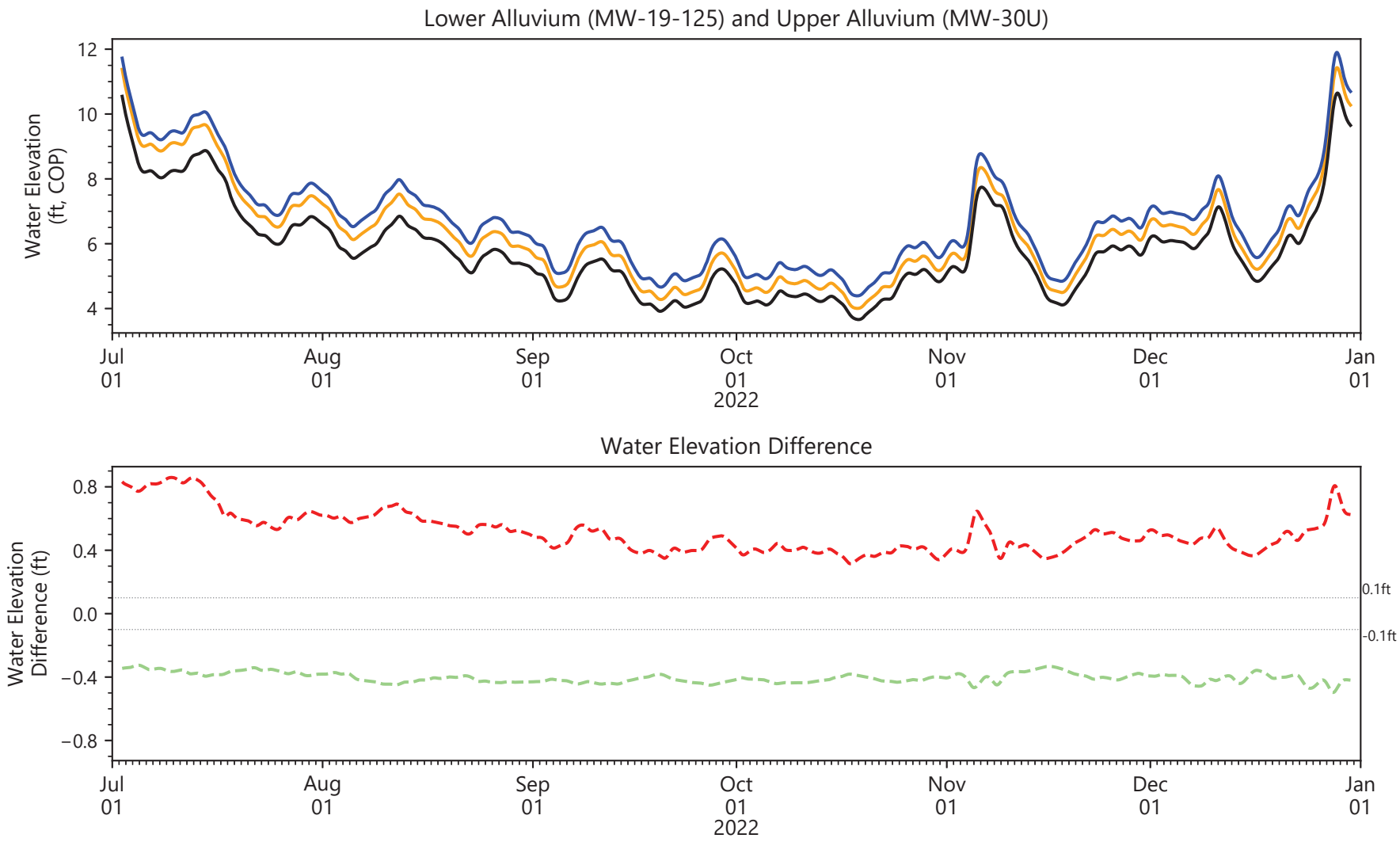
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.2
Groundwater Elevation Differences
NW Natural Gasco Site



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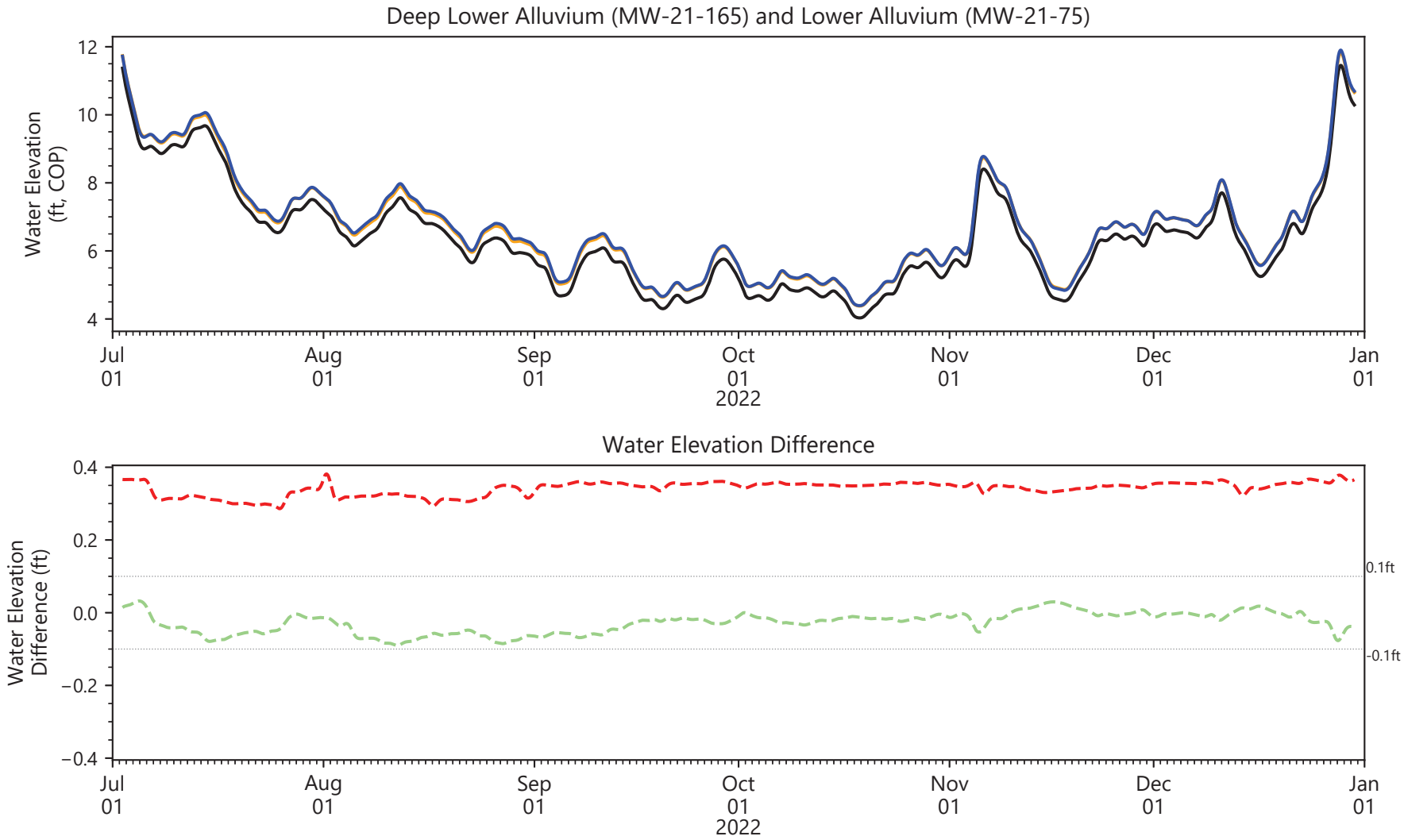
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.3
Groundwater Elevation Differences
NW Natural Gasco Site



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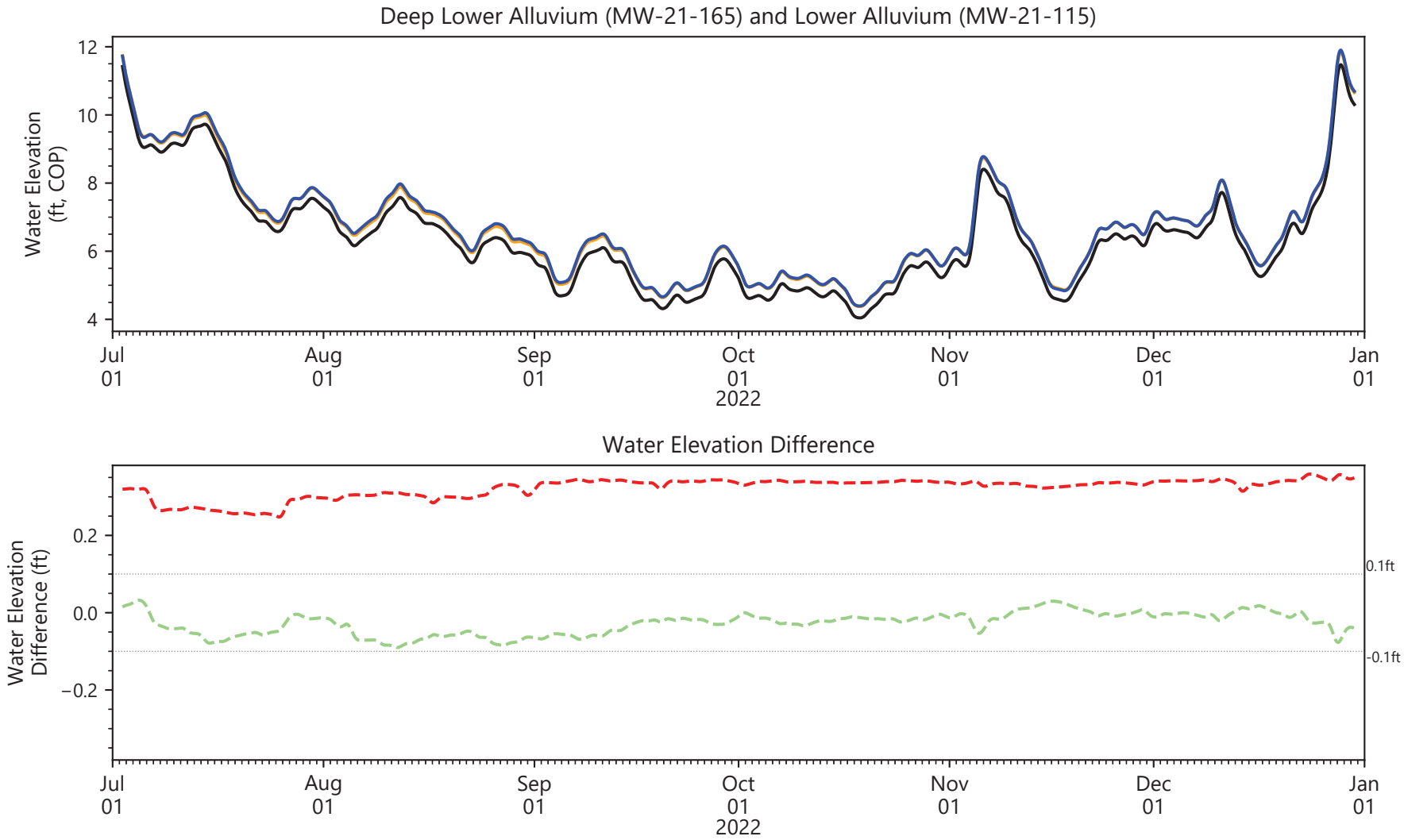
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.4
Groundwater Elevation Differences
NW Natural Gasco Site



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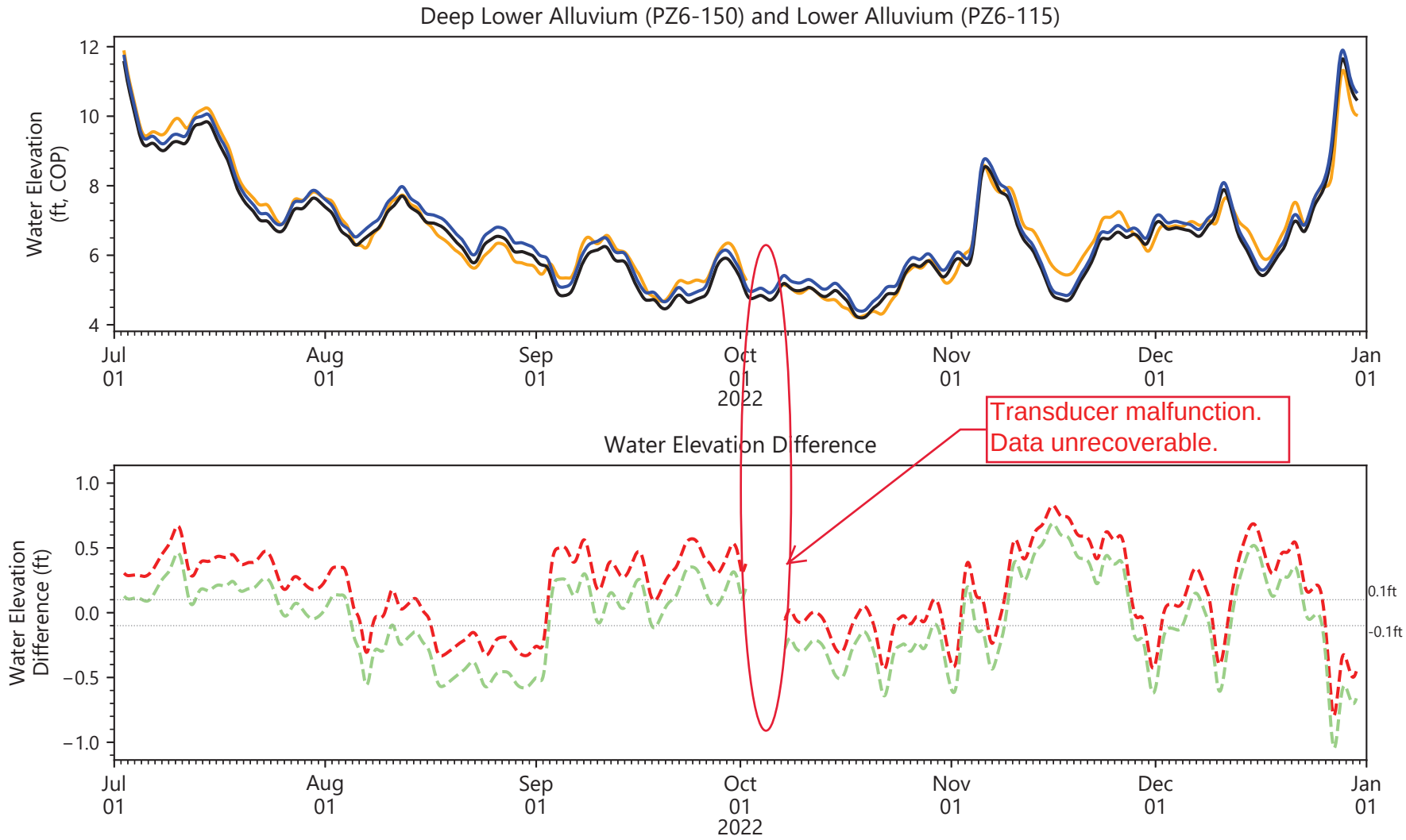
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.5
Groundwater Elevation Differences
NW Natural Gasco Site



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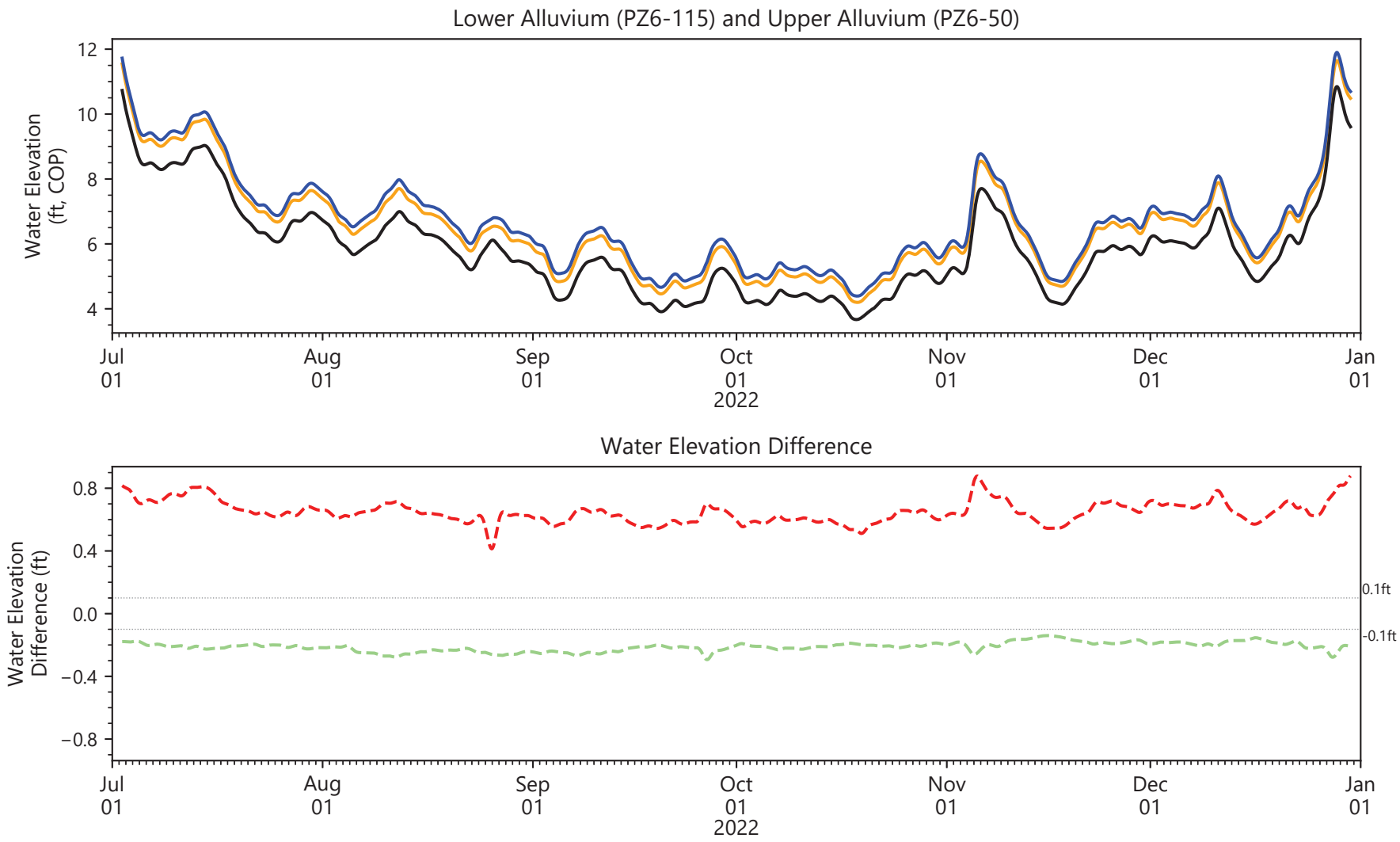
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.6
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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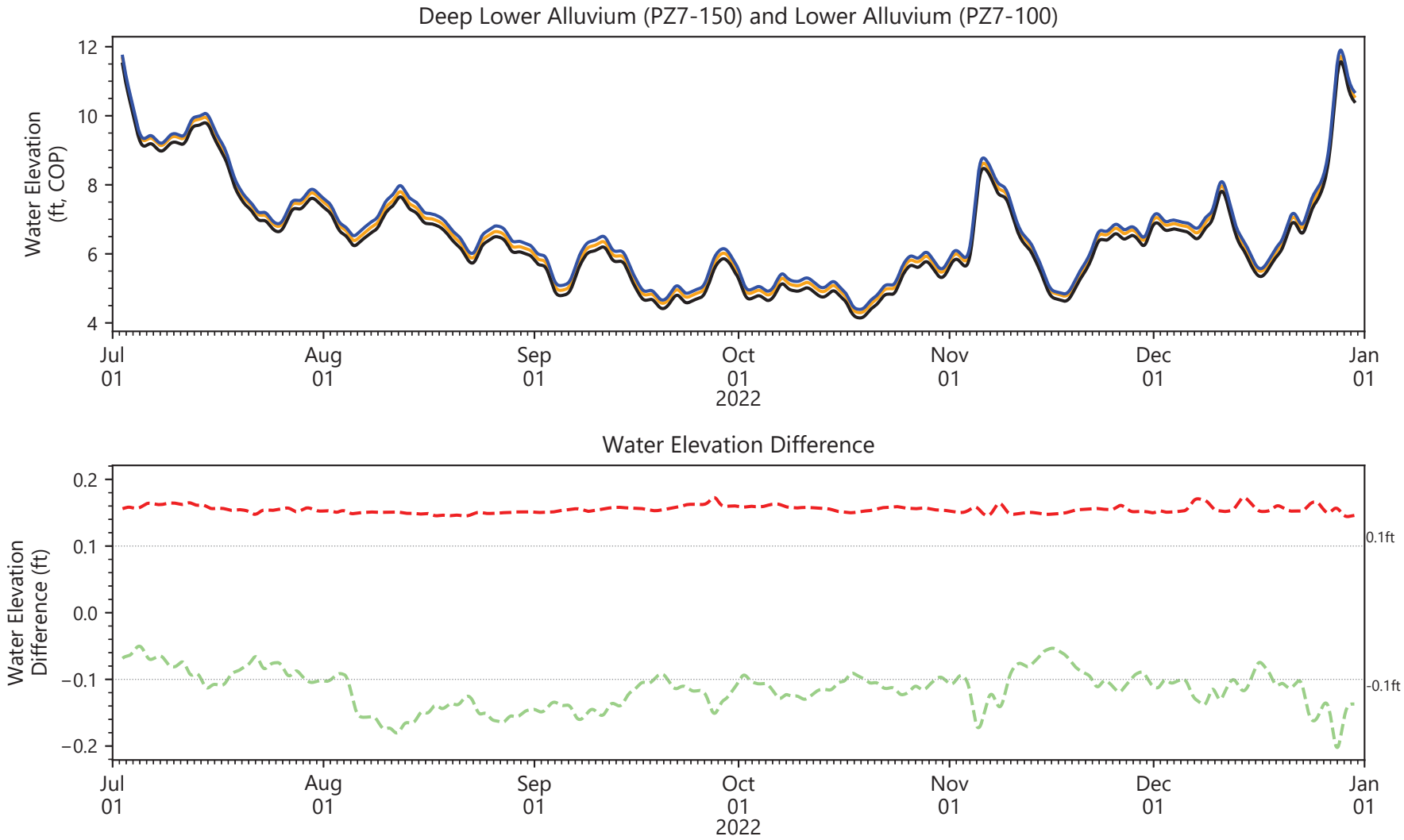
File Path: \\fuji\Anchor\Data Management\Users\Albert\Projects\Gasco\Python\Gasco_SC_DataPlots\elevation_time_series_per6months_EQuIS.py

ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.7
Groundwater Elevation Differences
NW Natural Gasco Site



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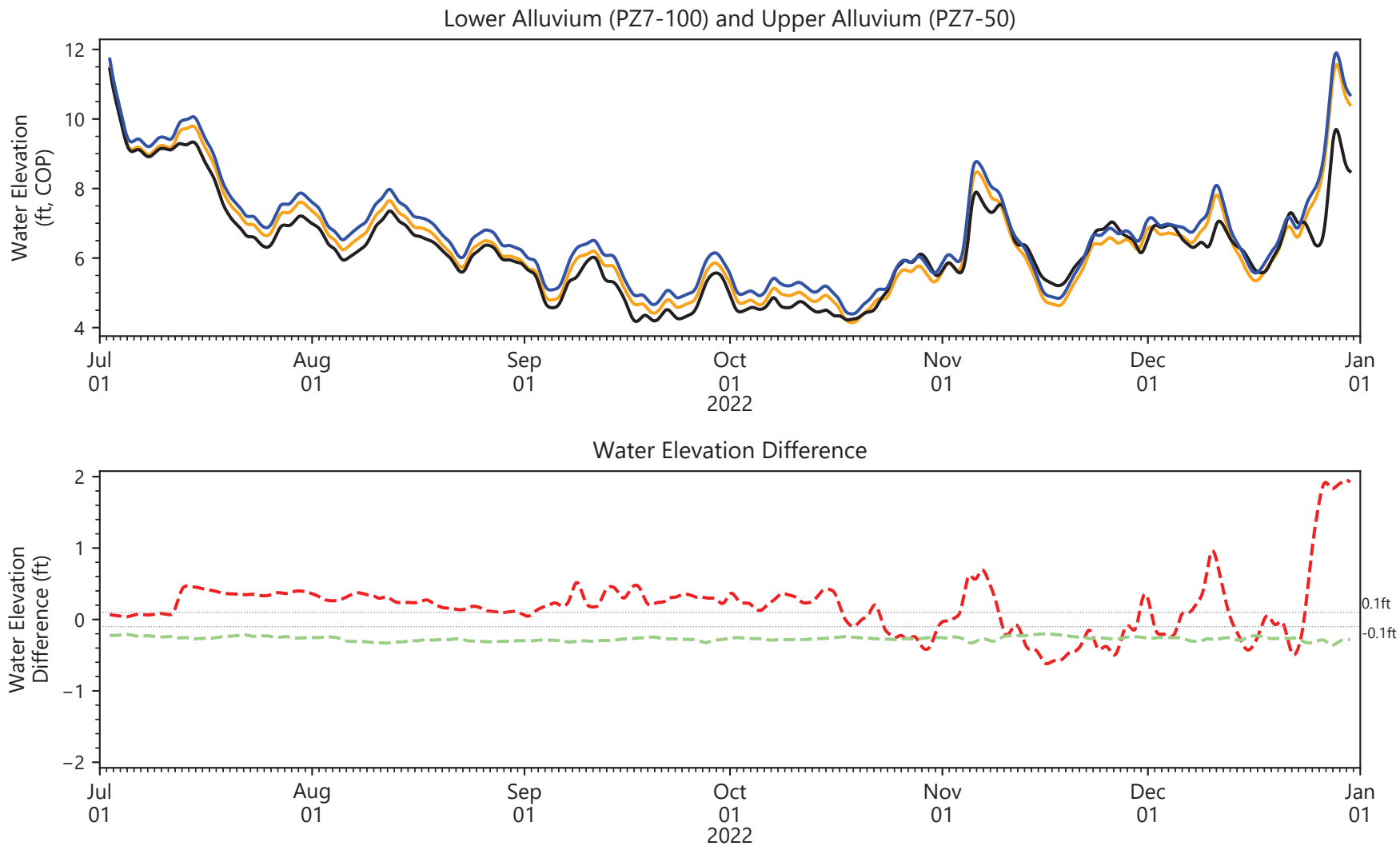
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.8
Groundwater Elevation Differences
NW Natural Gasco Site



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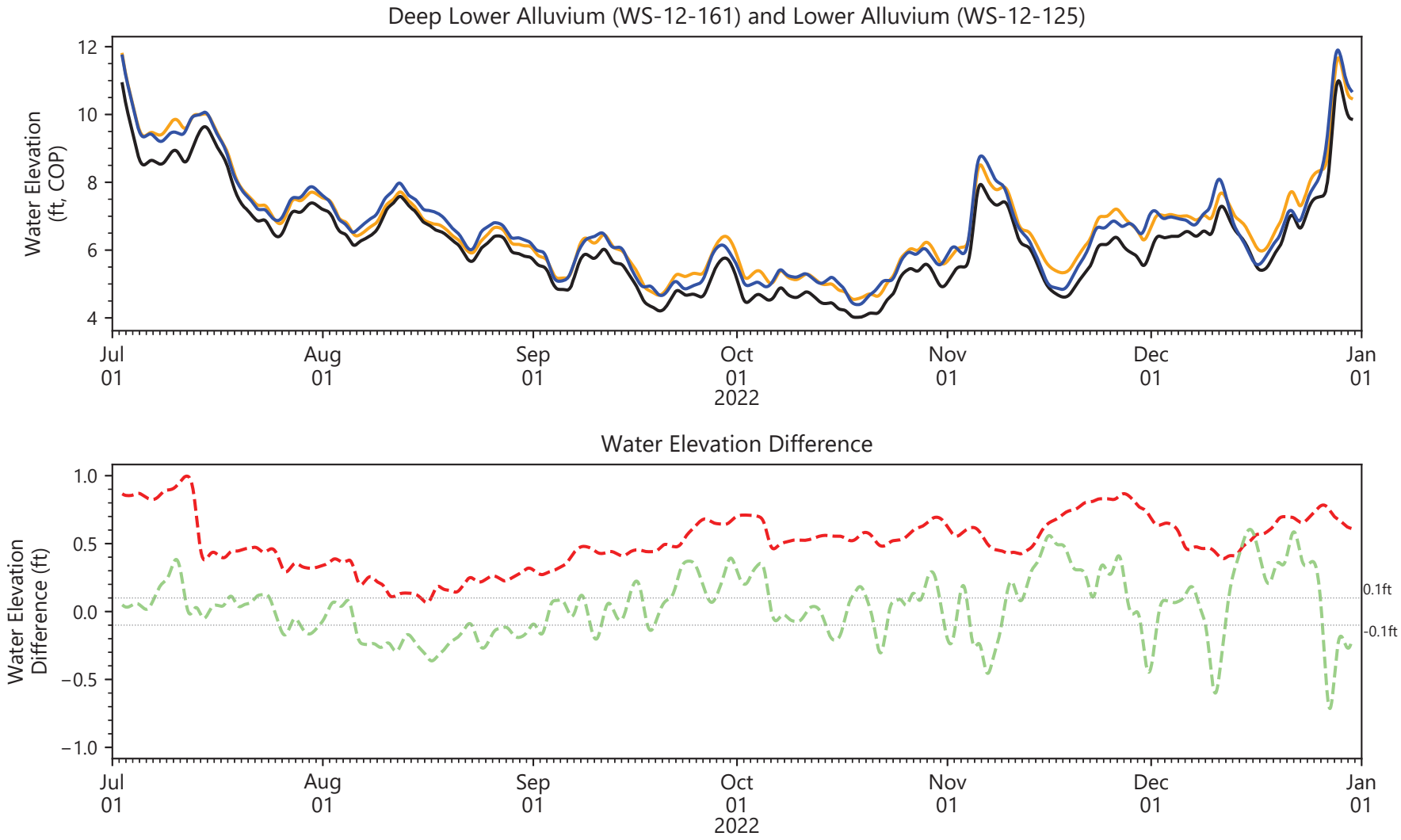
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.9
Groundwater Elevation Differences
NW Natural Gasco Site



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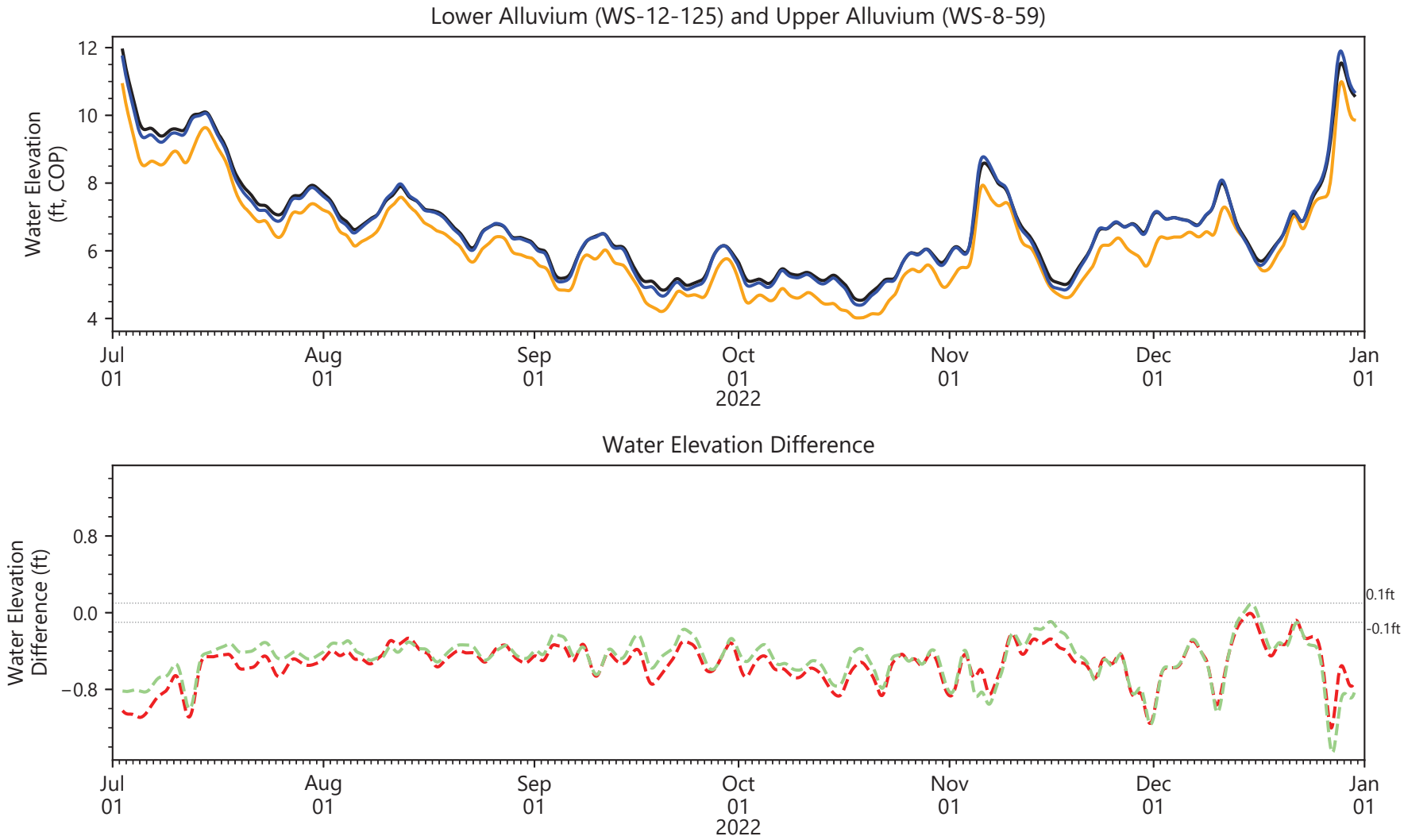
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.10
Groundwater Elevation Differences
NW Natural Gasco Site



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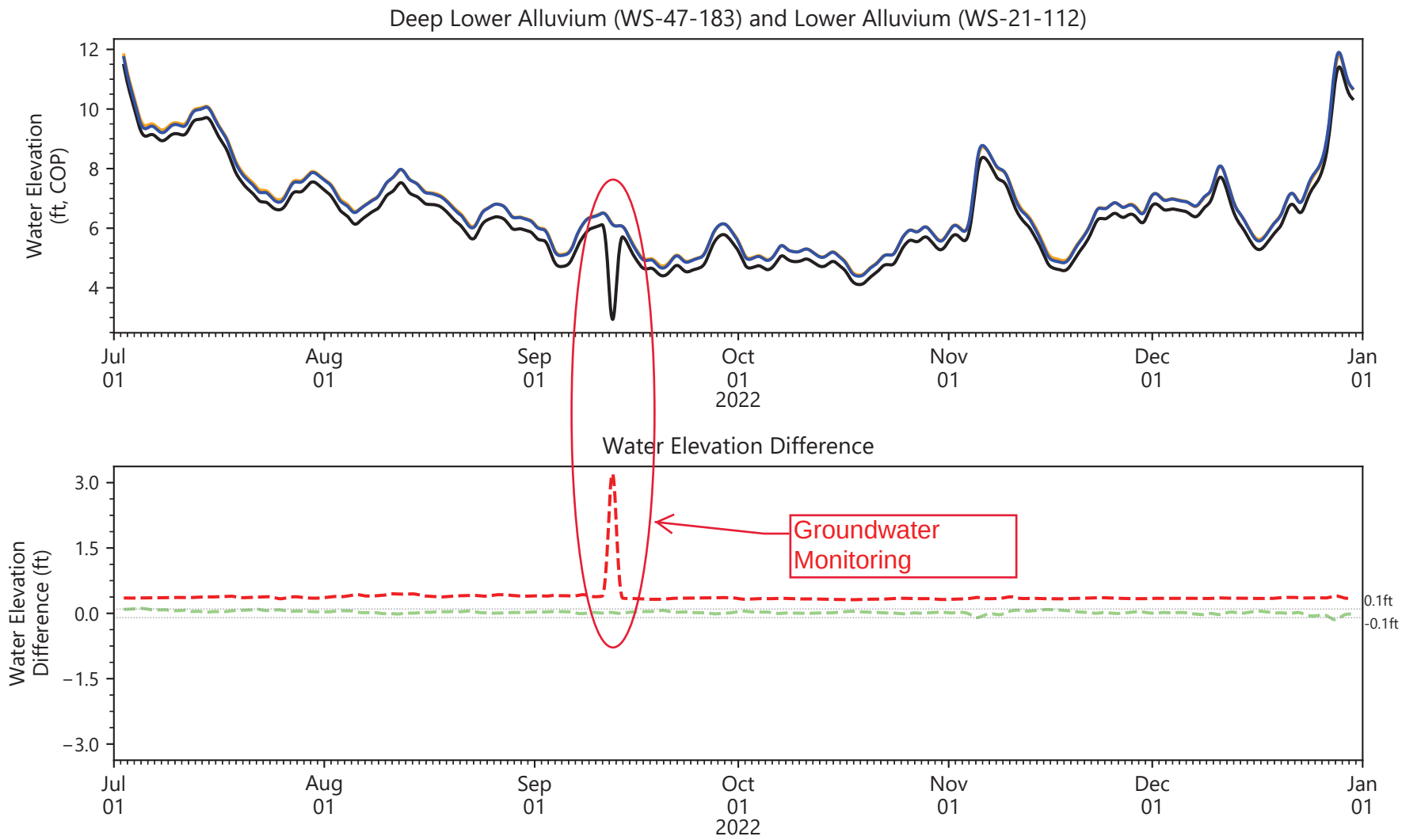
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.11
Groundwater Elevation Differences
NW Natural Gasco Site



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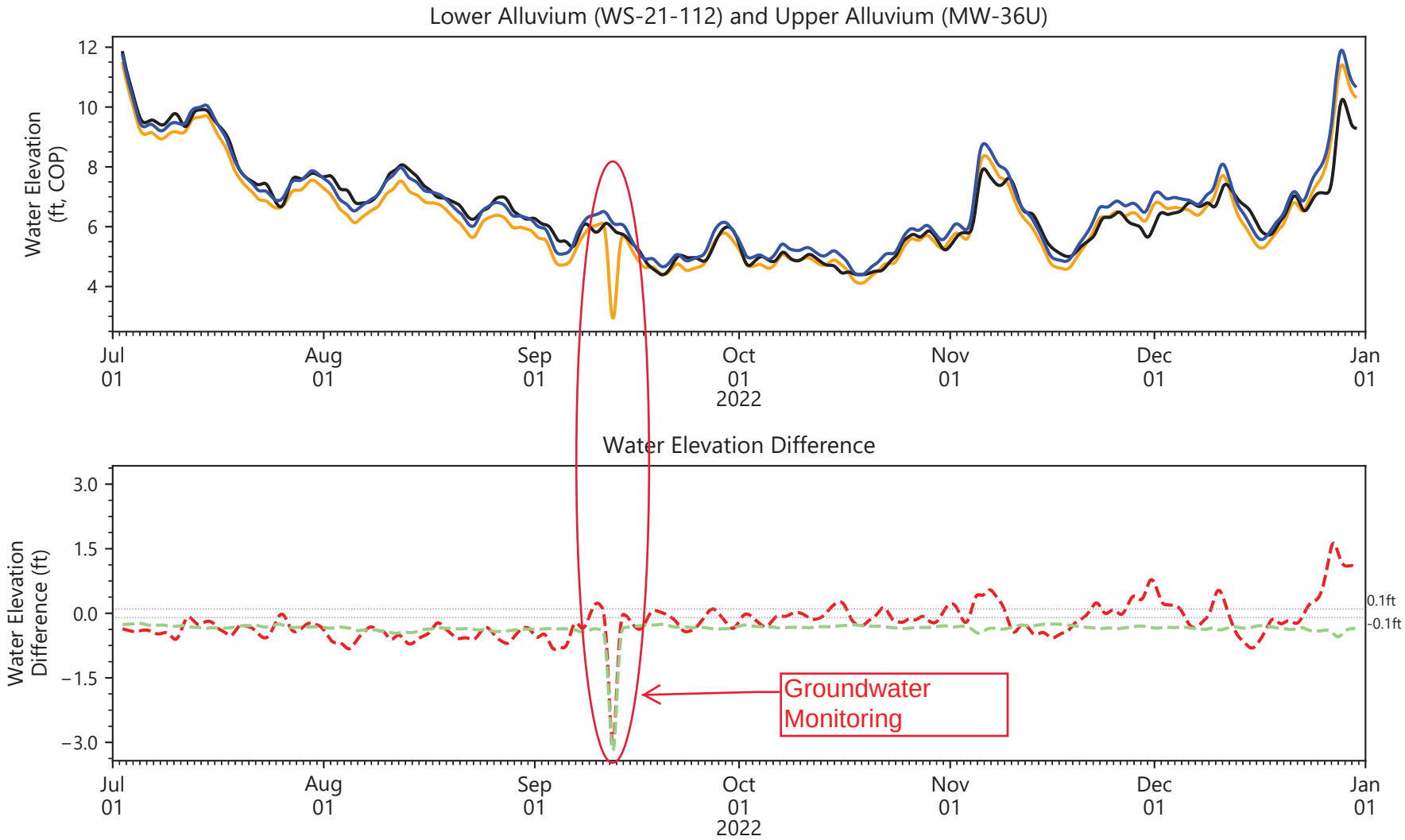
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.12
Groundwater Elevation Differences
NW Natural Gasco Site



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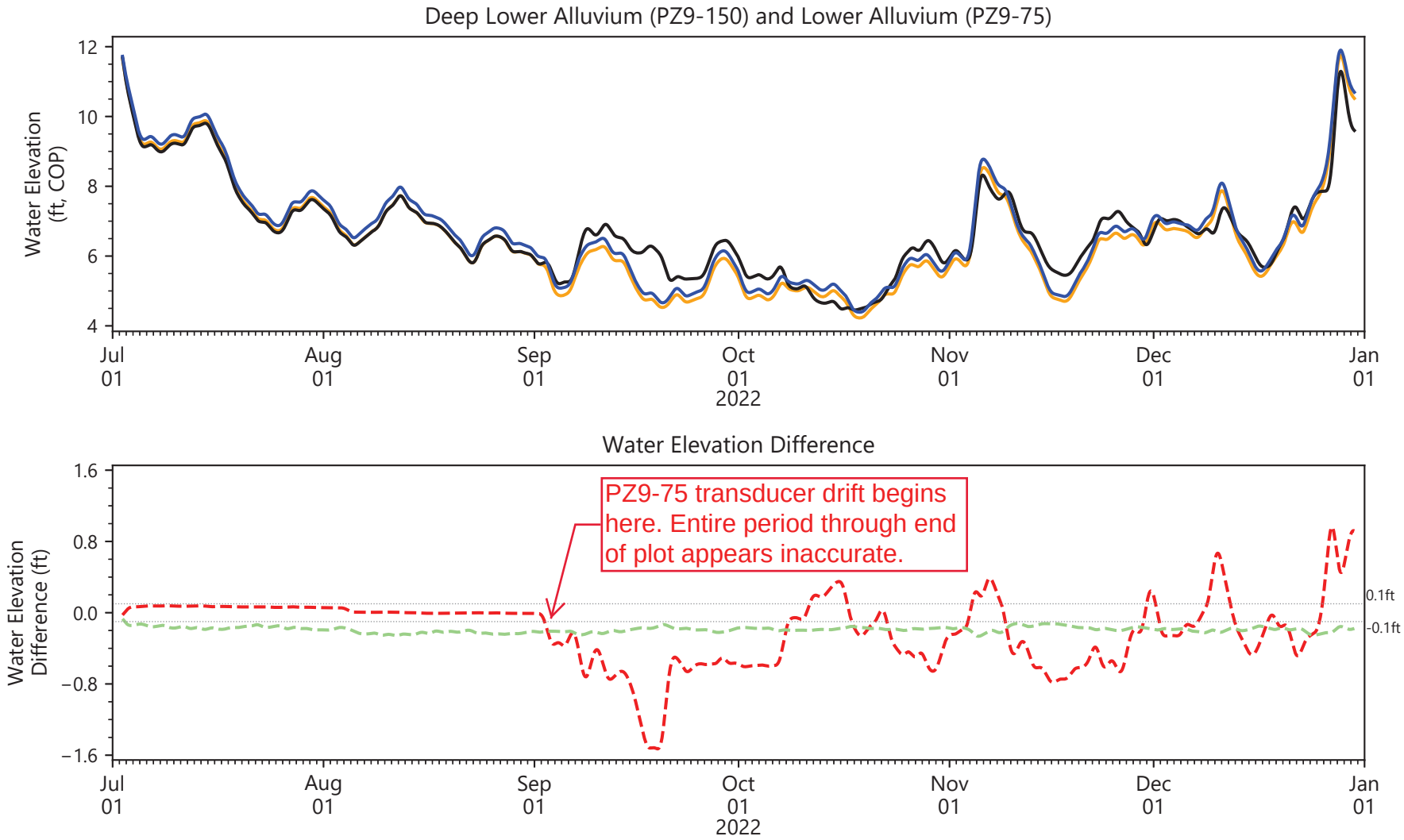
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.13
Groundwater Elevation Differences
NW Natural Gasco Site



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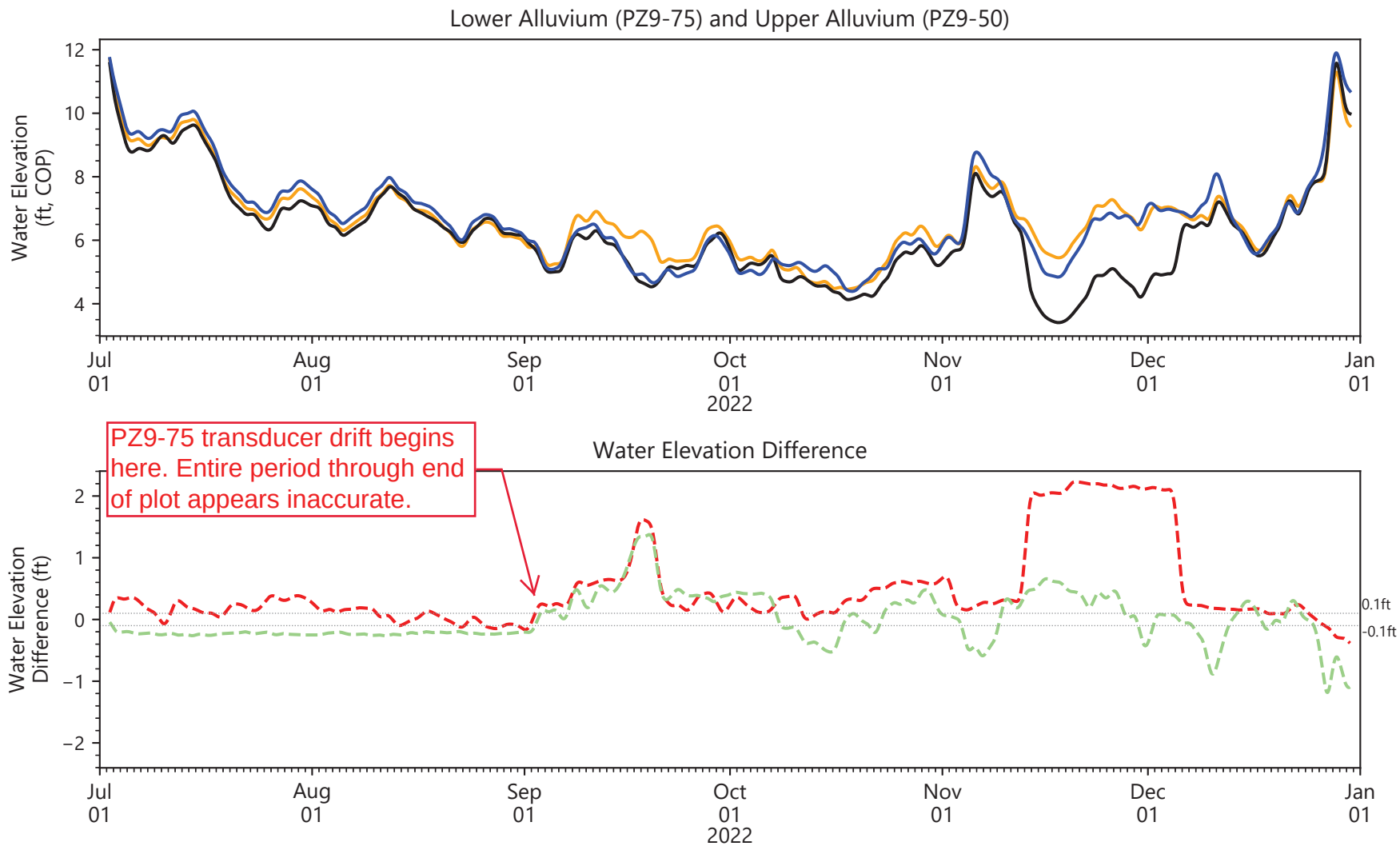
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.14
Groundwater Elevation Differences
NW Natural Gasco Site



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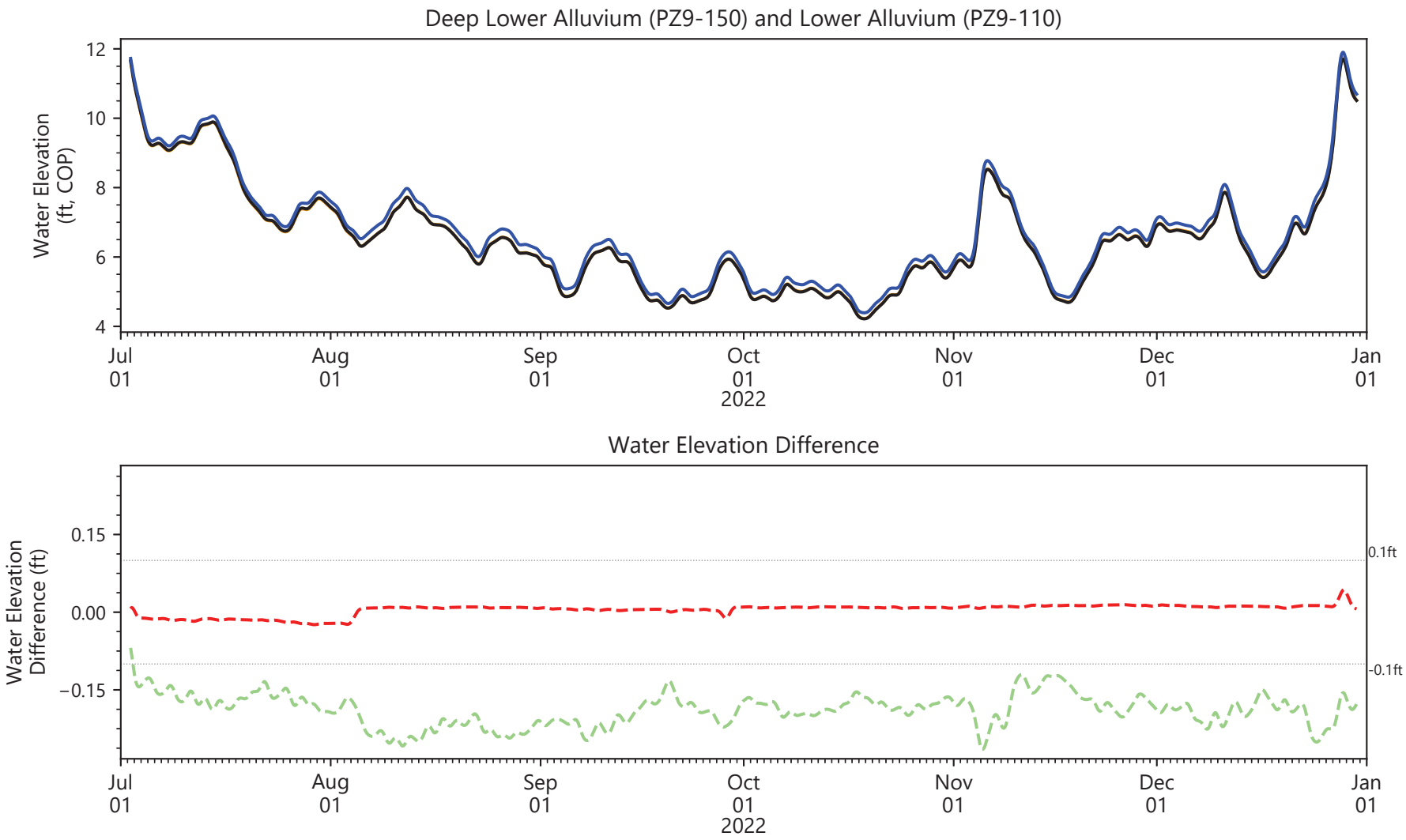
ANCHOR QEA

- Lower Alluvium
- Upper Alluvium
- River
- Water Elevation Difference = Lower Alluvium - Upper Alluvium
- Water Elevation Difference = Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.15
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: Values shown are 3-day rolling averages (Serfes Method). COP = City of Portland Datum.

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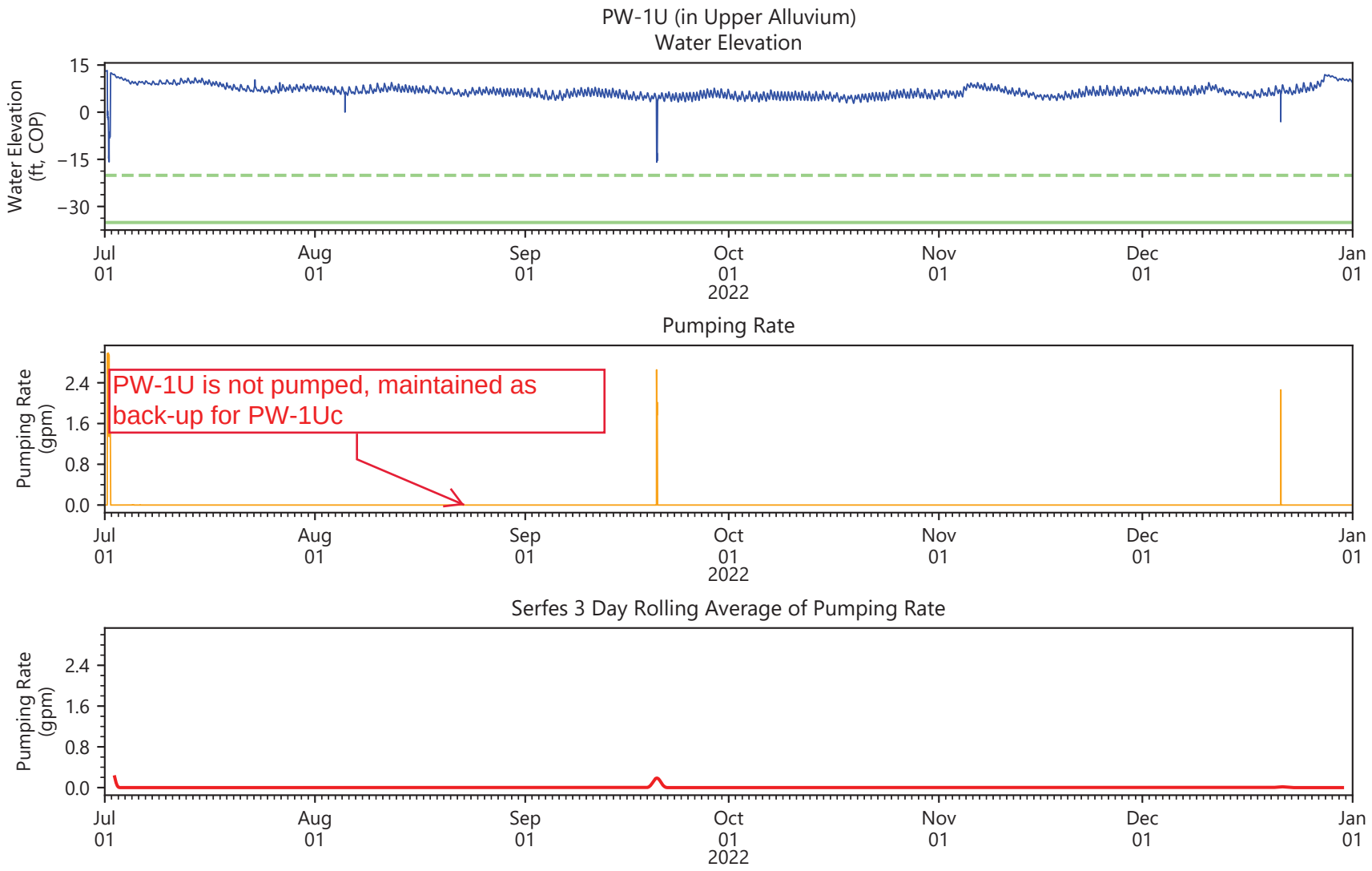
ANCHOR QEA

- Deep Lower Alluvium
- Lower Alluvium
- River
- Water Elevation Difference = Deep Lower Alluvium - Lower Alluvium
- Water Elevation Difference = Deep Lower Alluvium - River
- 0.1 ft Total Potential Uncertainty

Figure 7.16
Groundwater Elevation Differences
NW Natural Gasco Site



Notes: COP = City of Portland Datum.

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ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.1
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

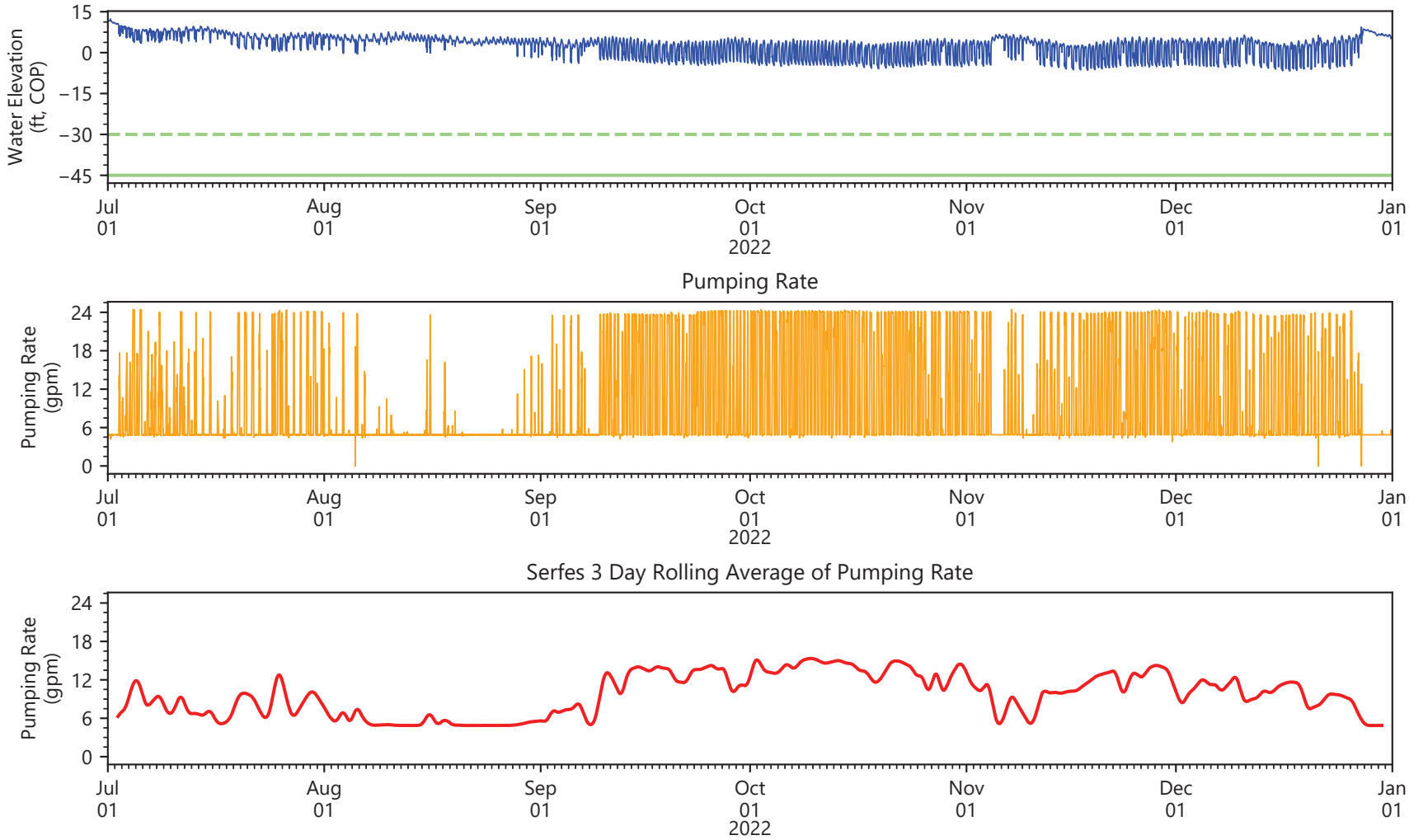

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Figure 8.2
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

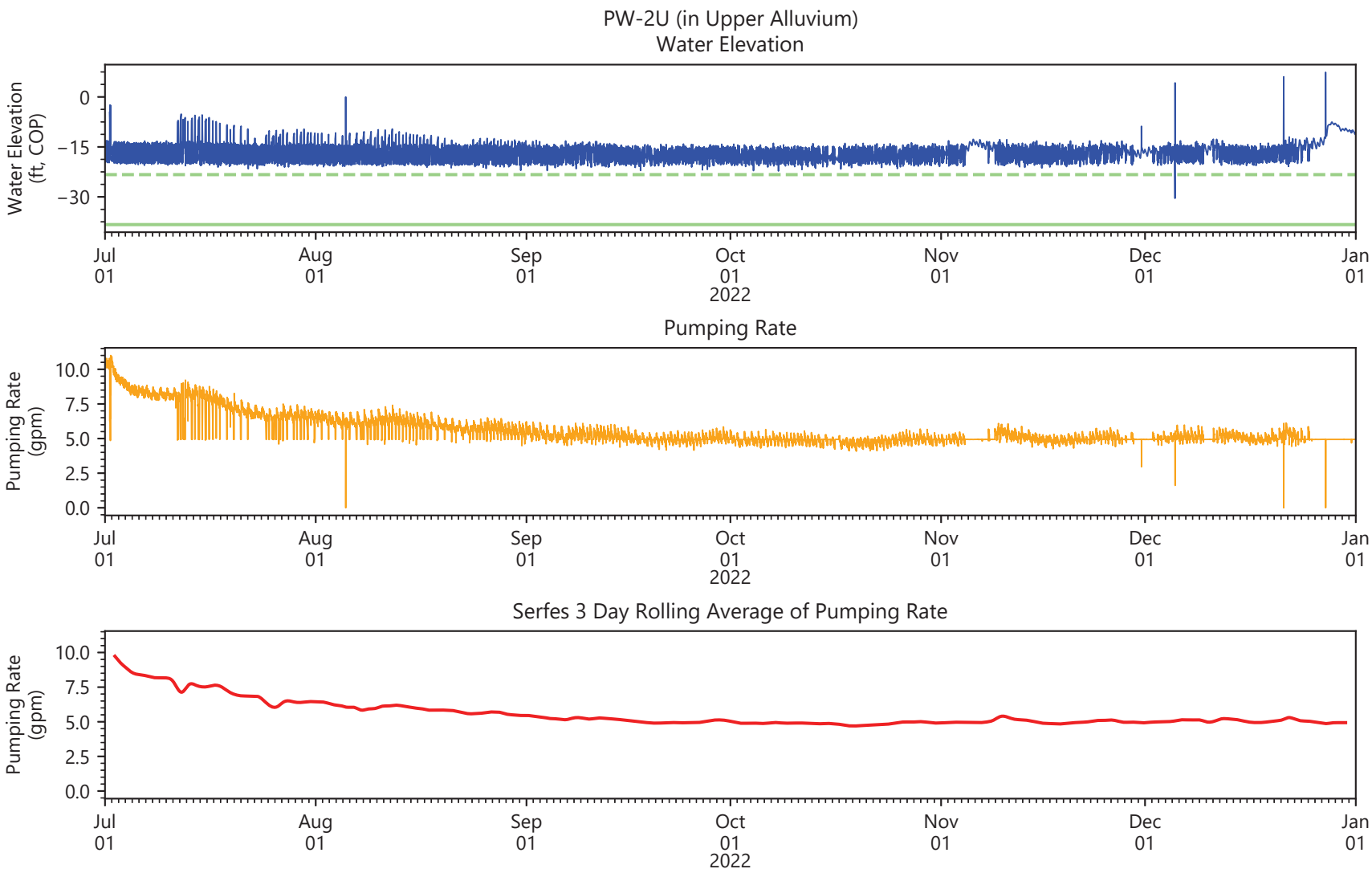

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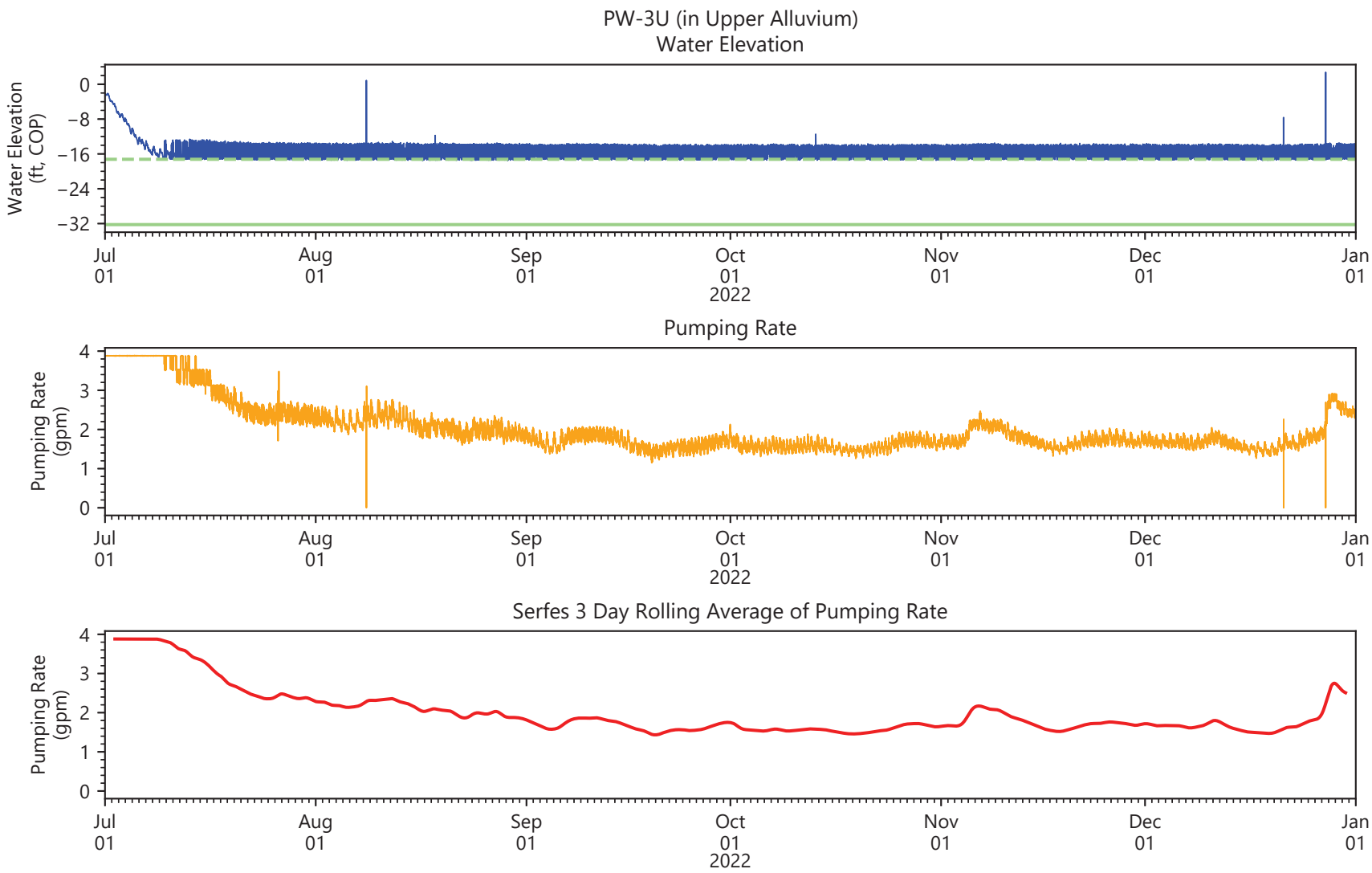
Figure 8.3
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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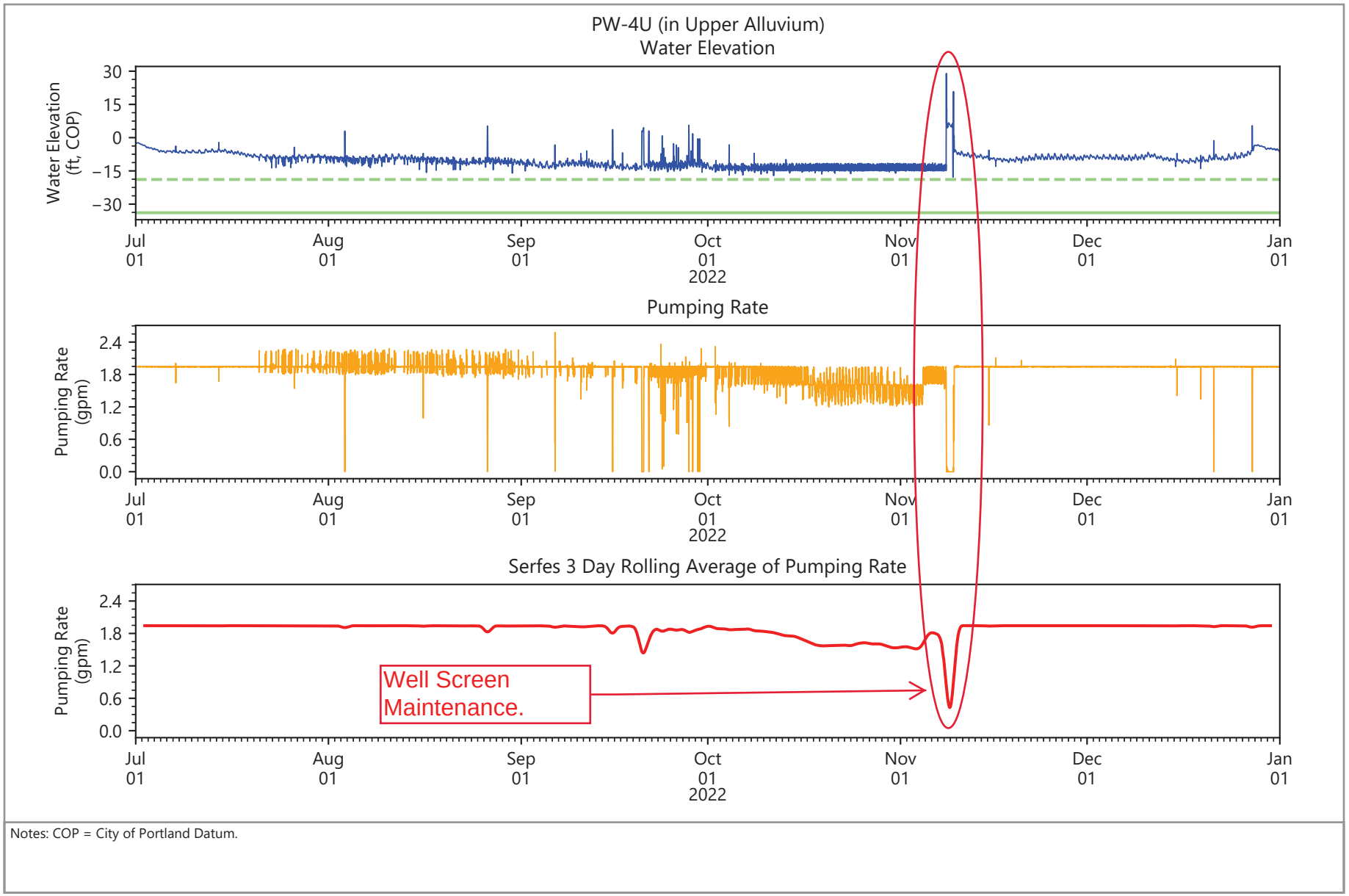
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.4
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.5
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

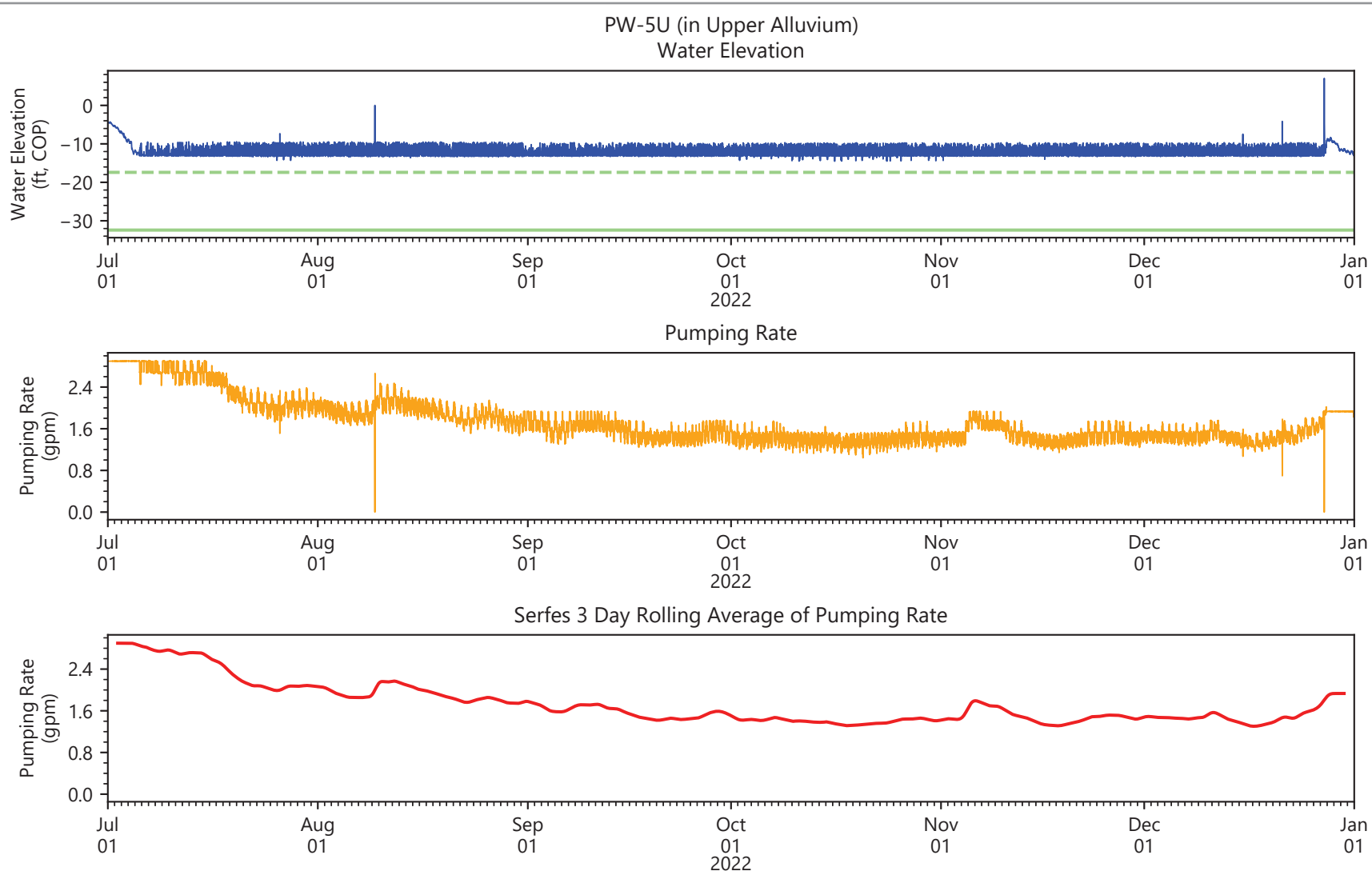

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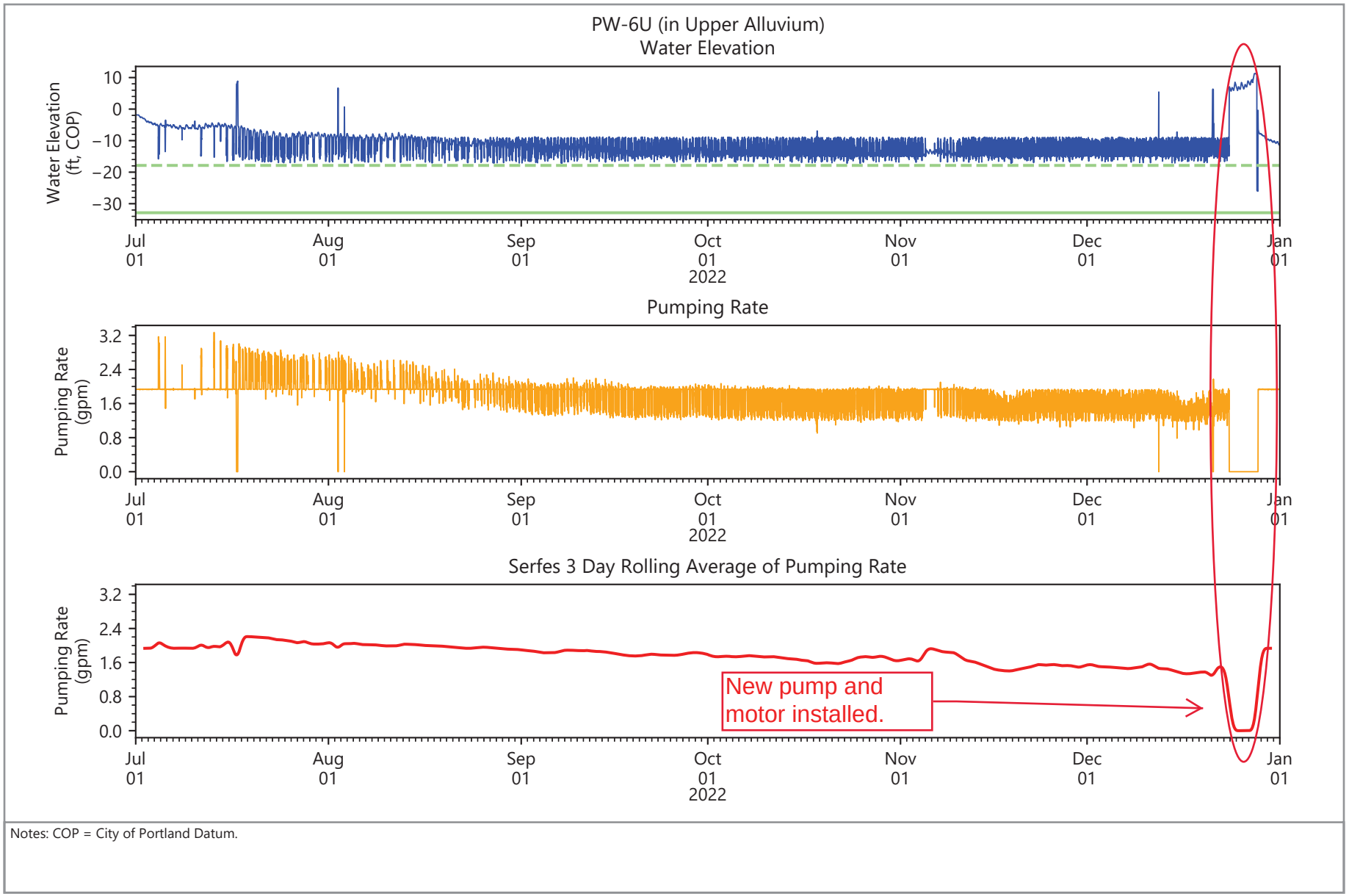
Figure 8.6
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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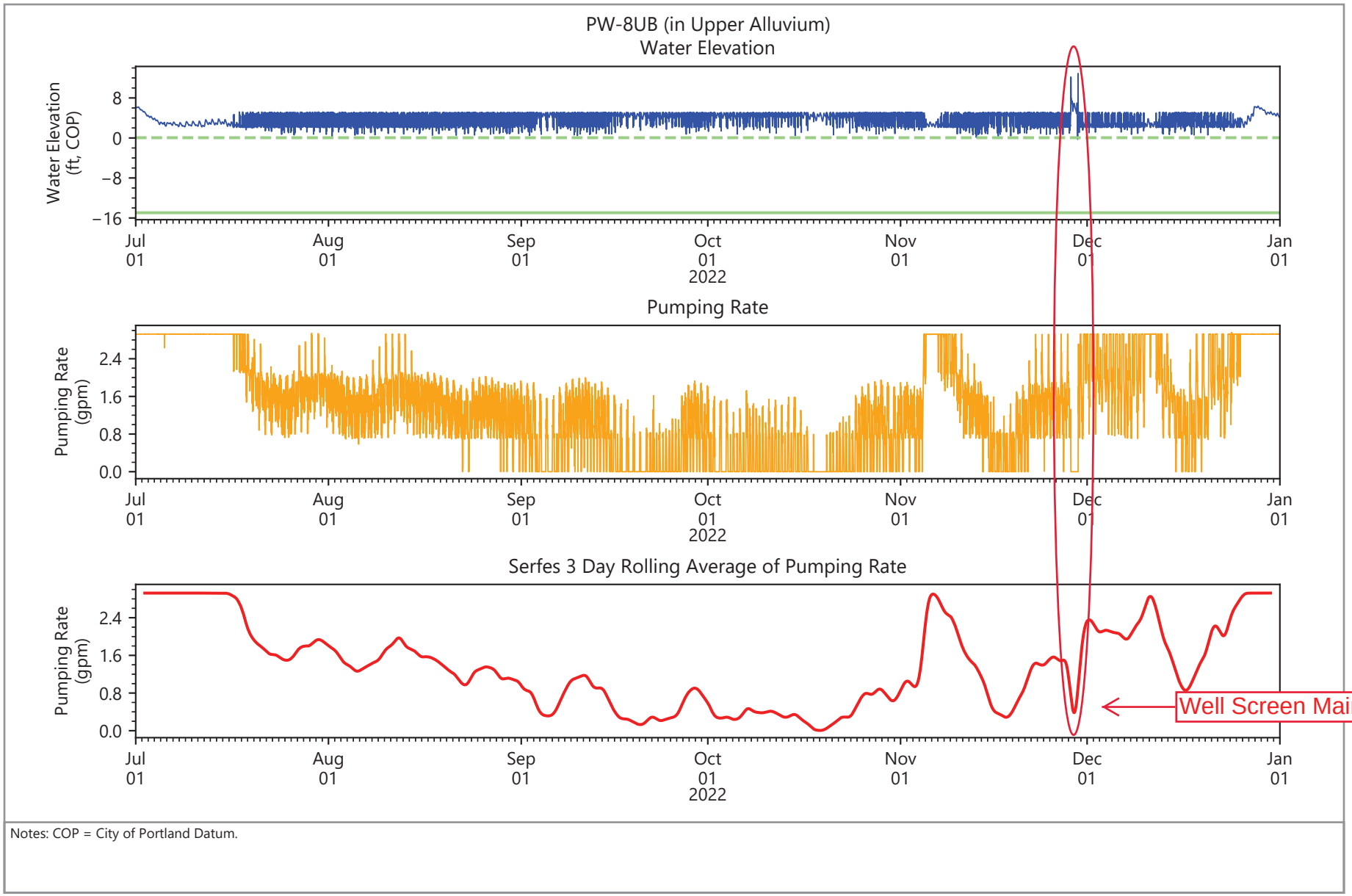
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.7
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.8
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

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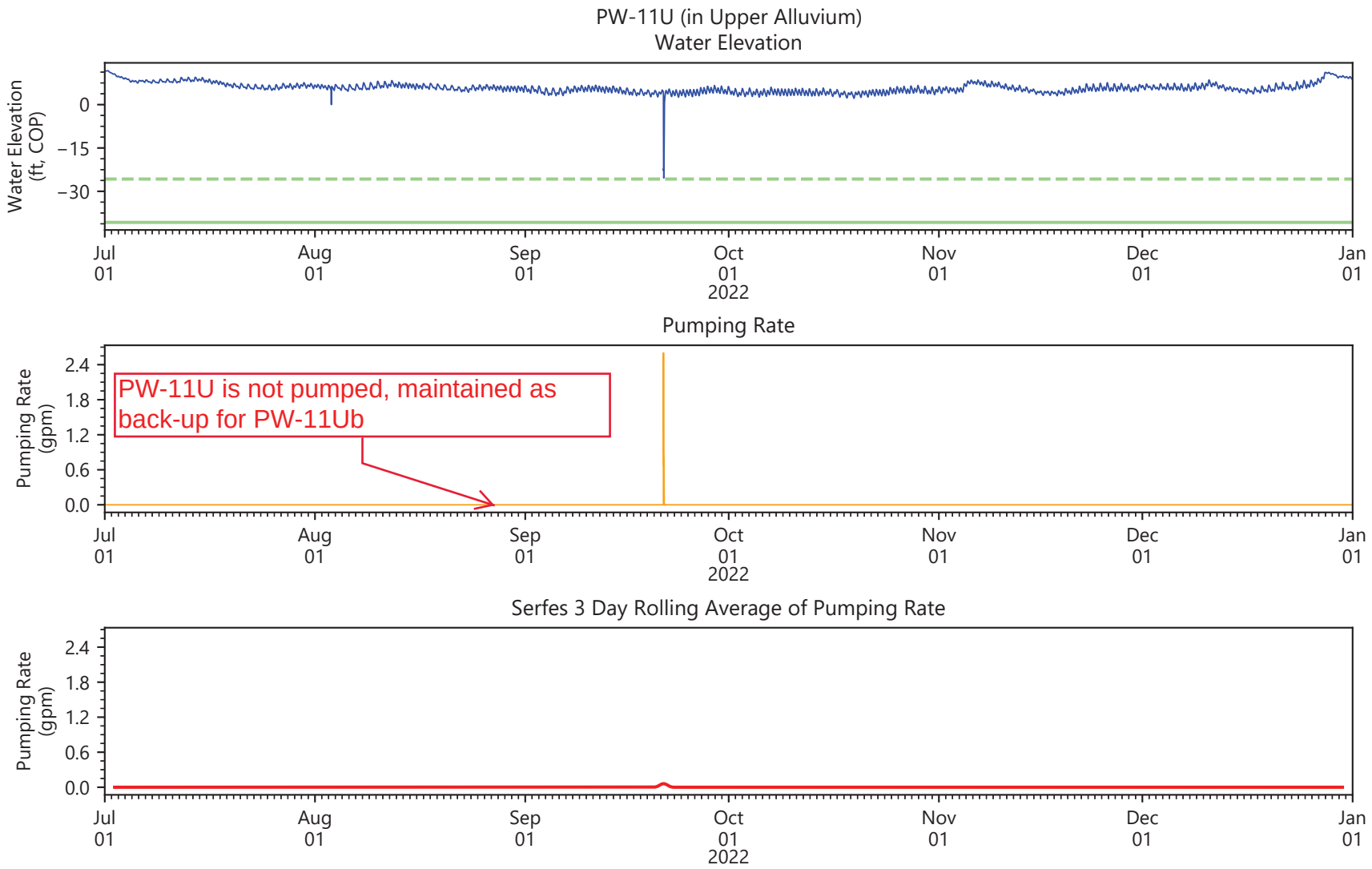
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.9
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.10
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

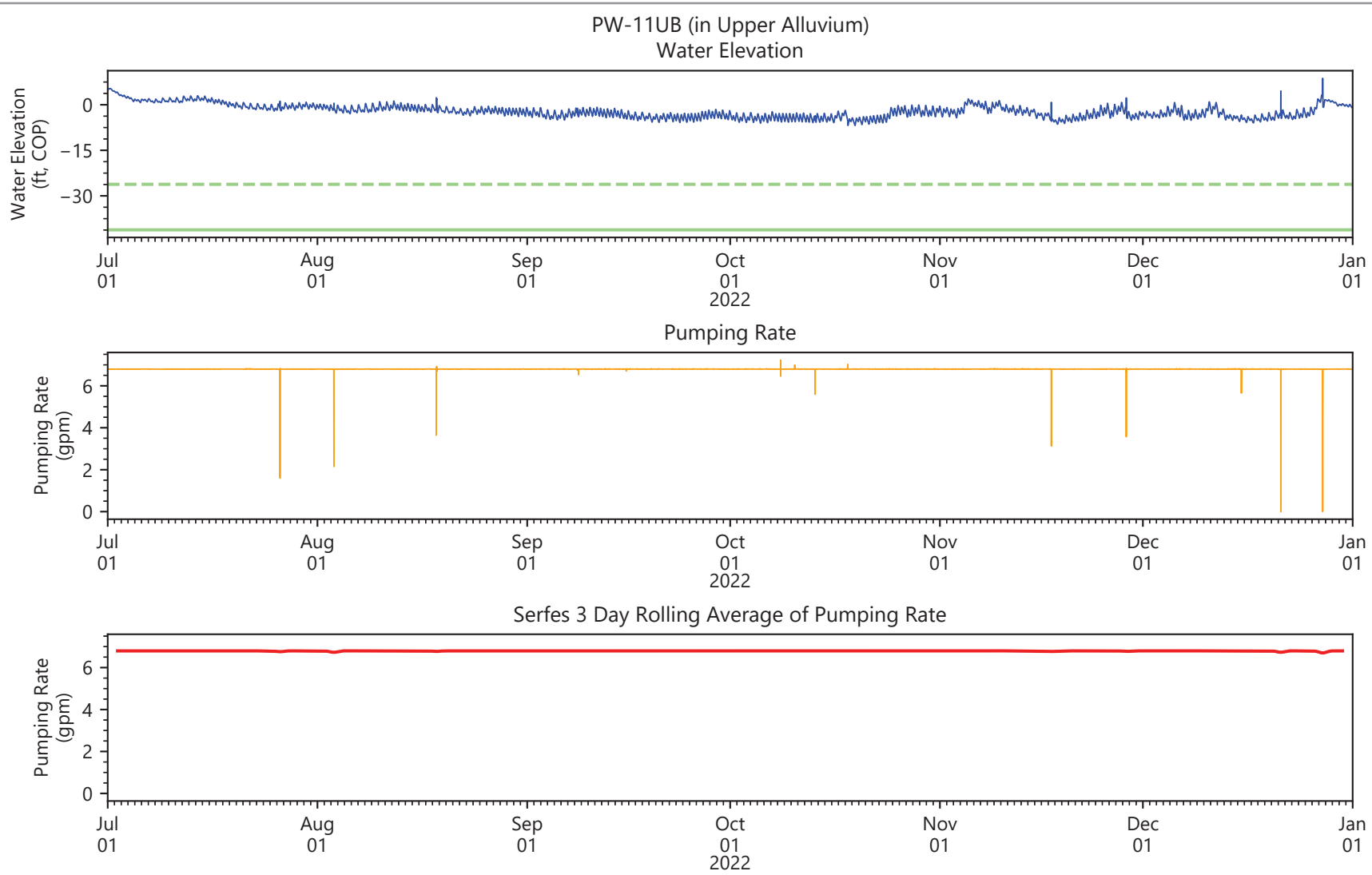

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Figure 8.11
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

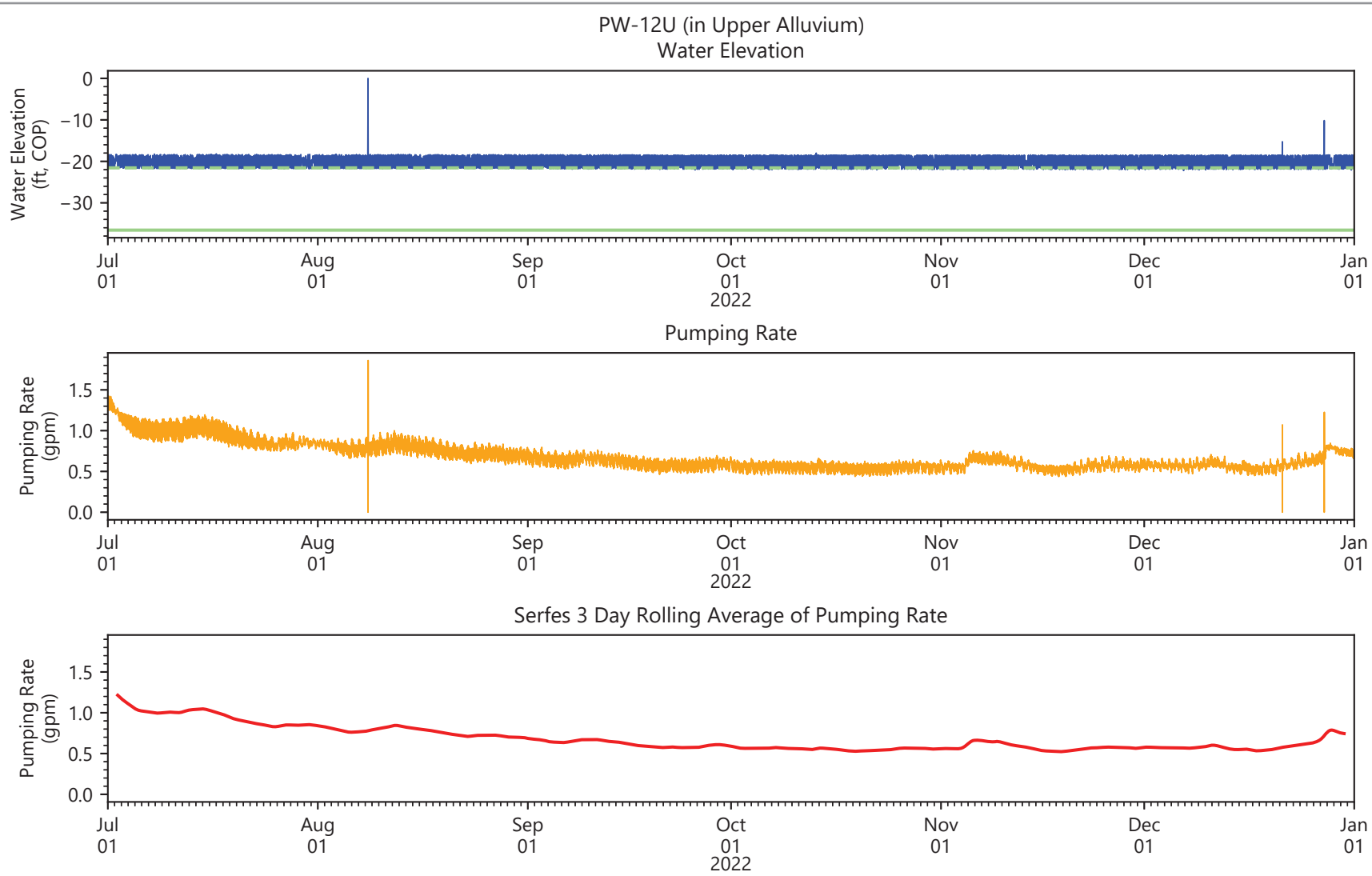

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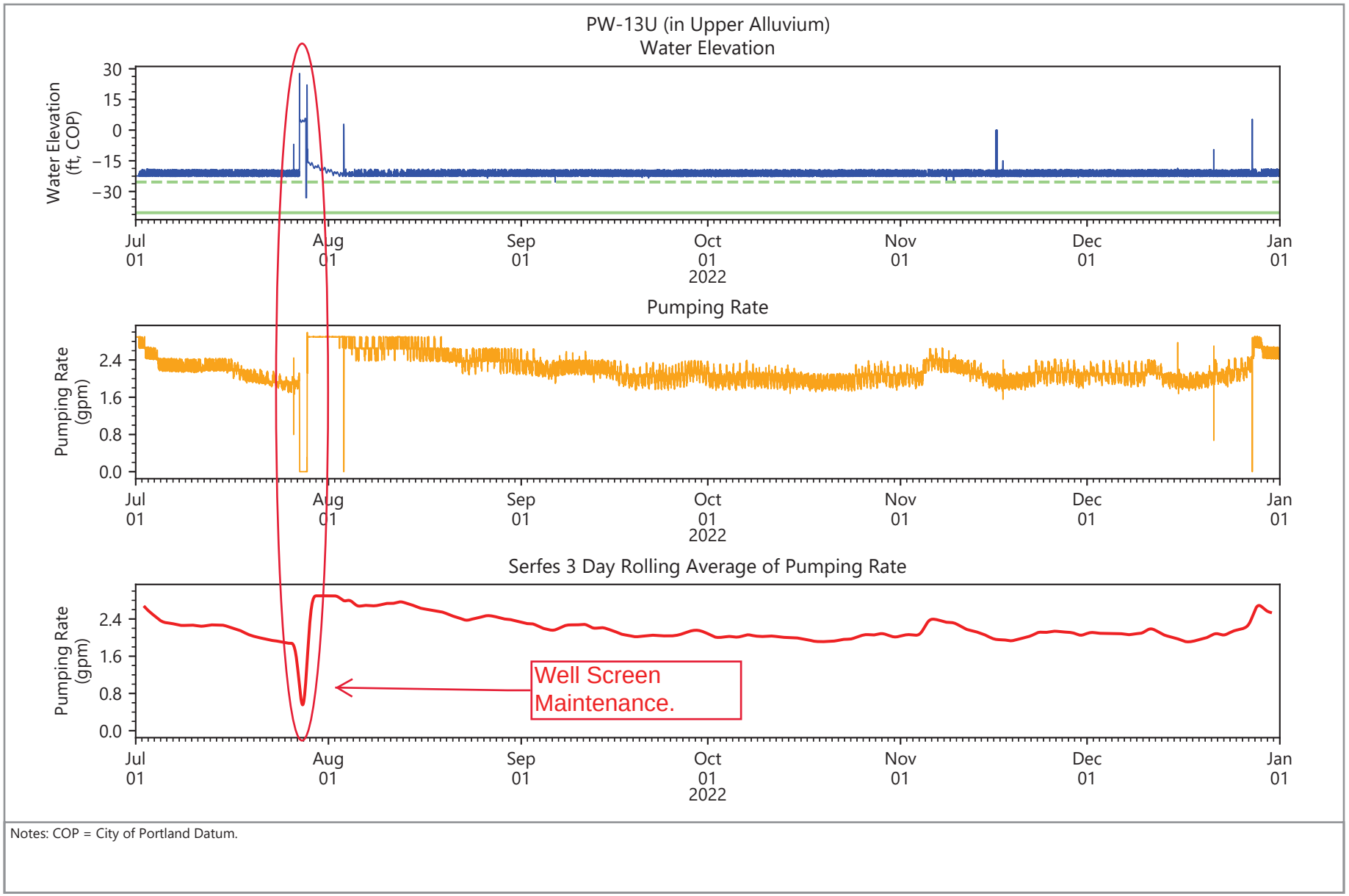
Figure 8.12
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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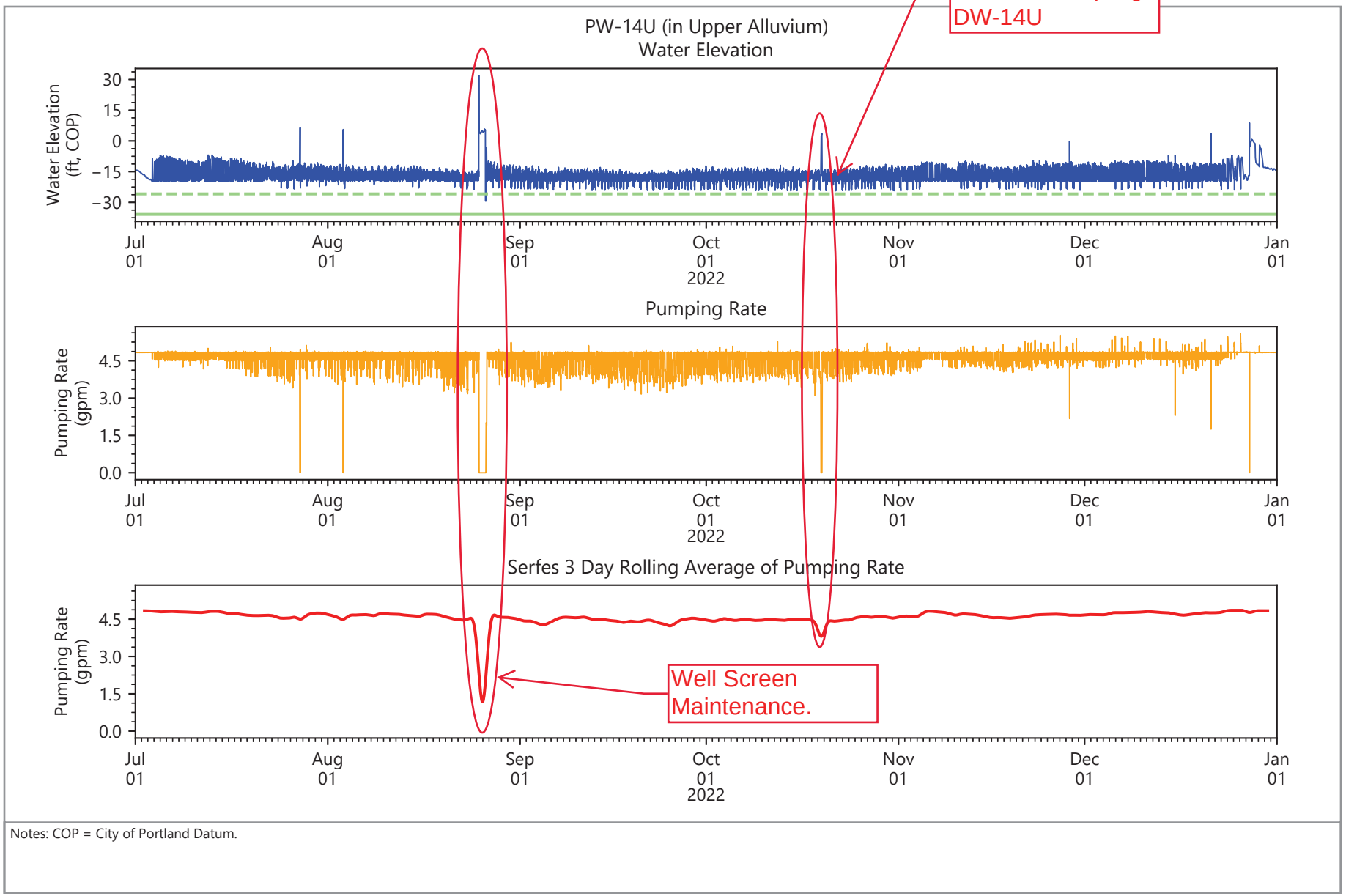
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.13
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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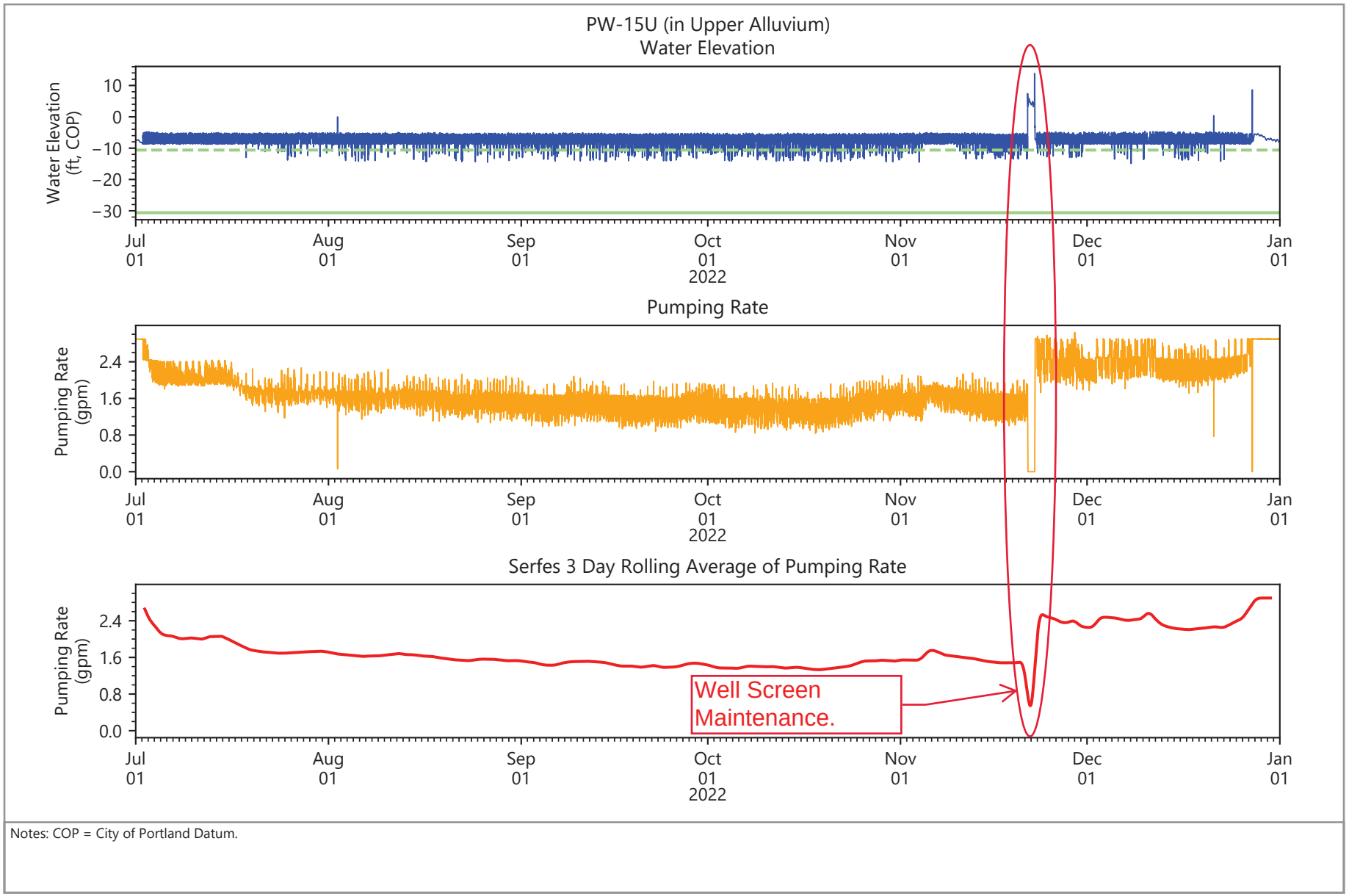
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.14
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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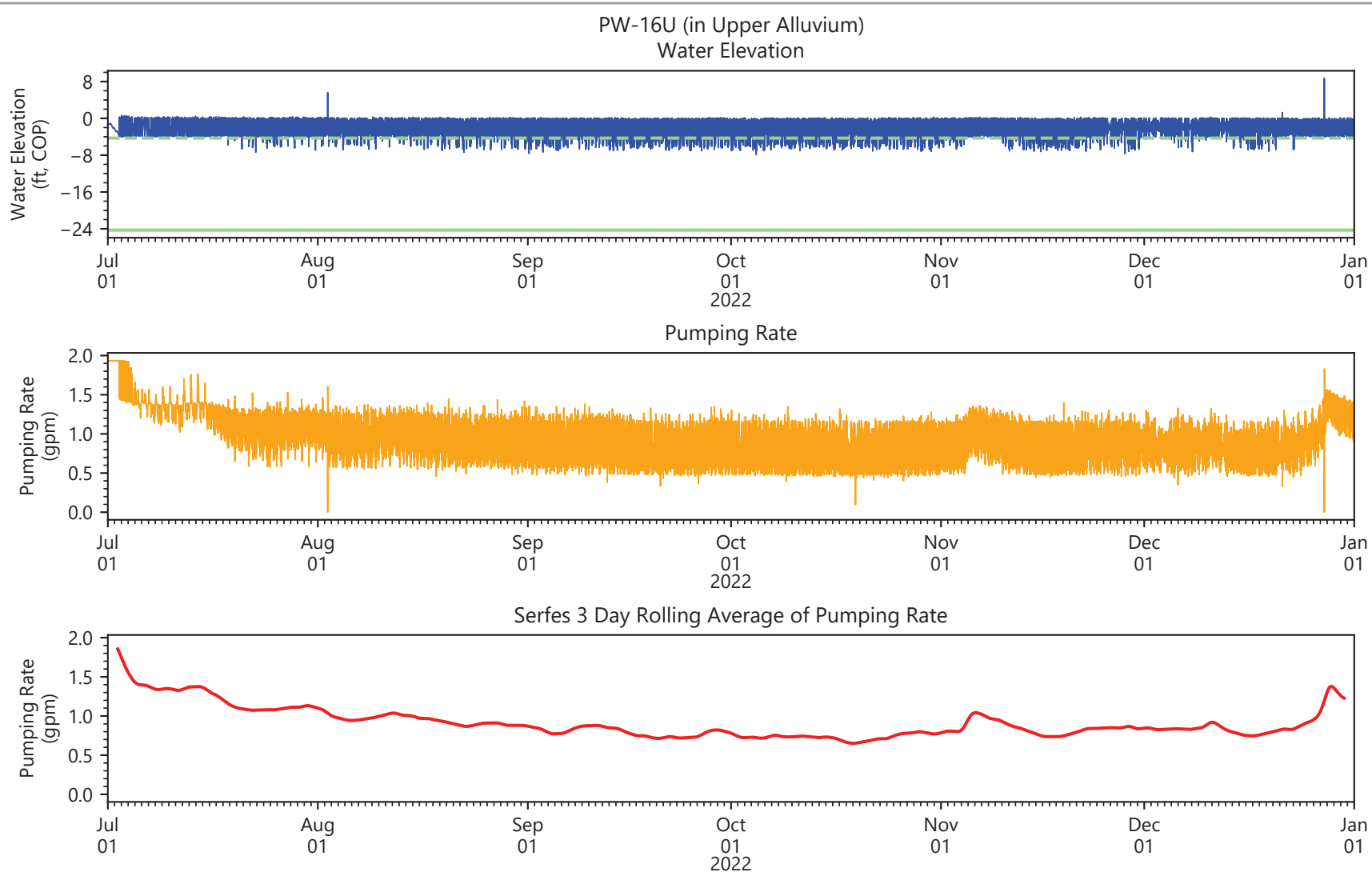
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.15
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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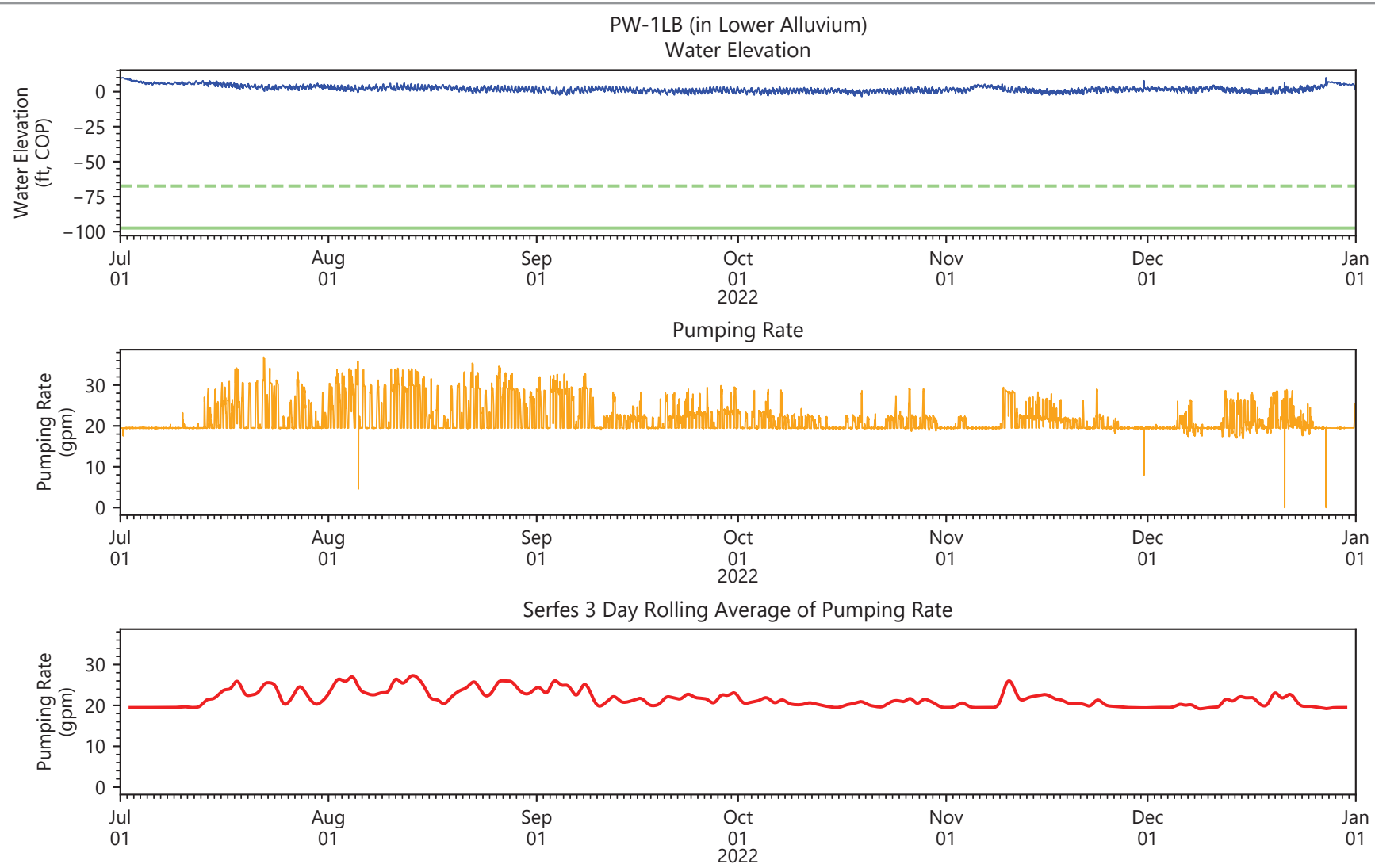
ANCHOR QEA

Figure 8.16
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

Figure 8.17
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

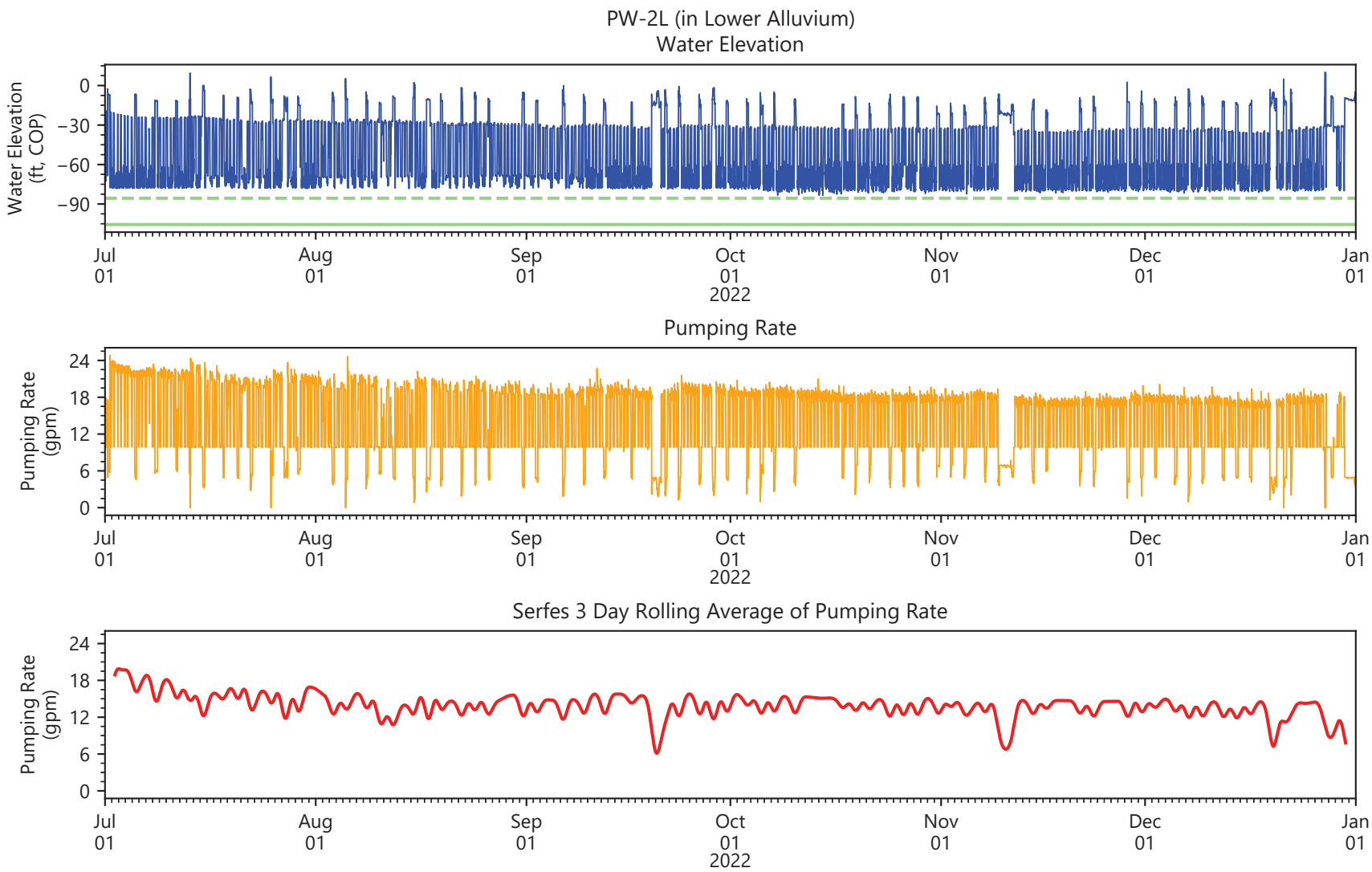

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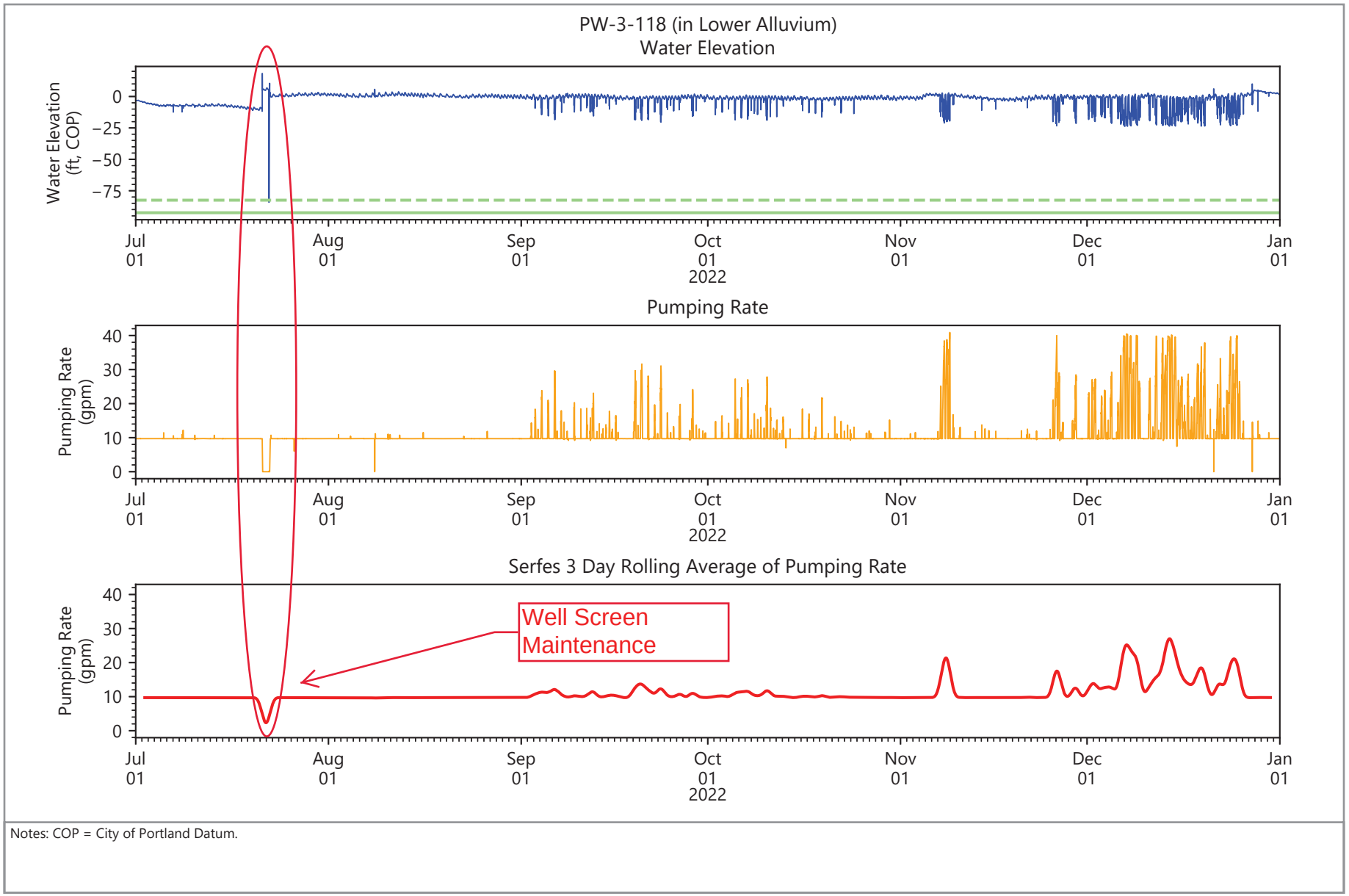
Figure 8.18
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.19
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

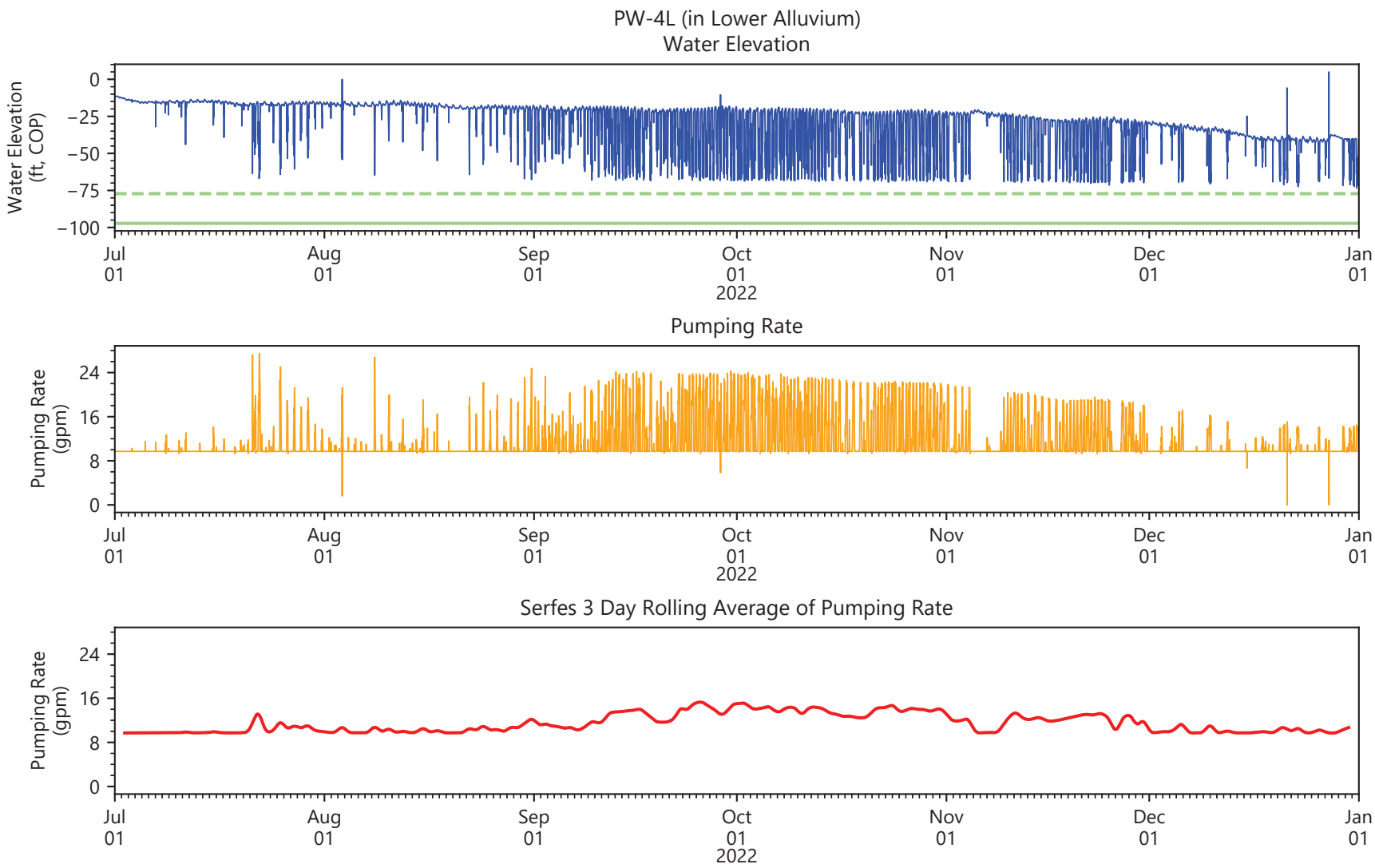

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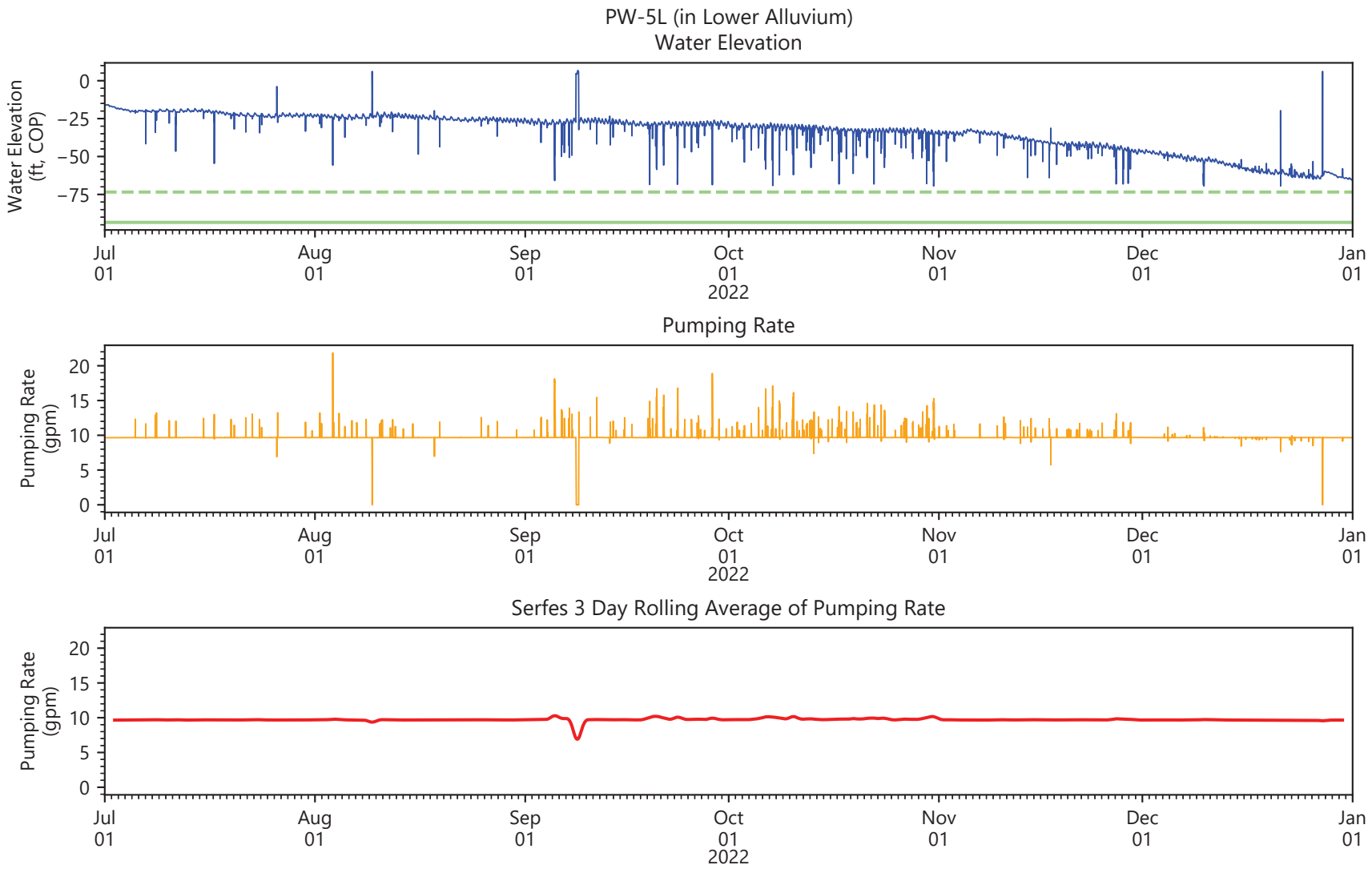
Figure 8.20
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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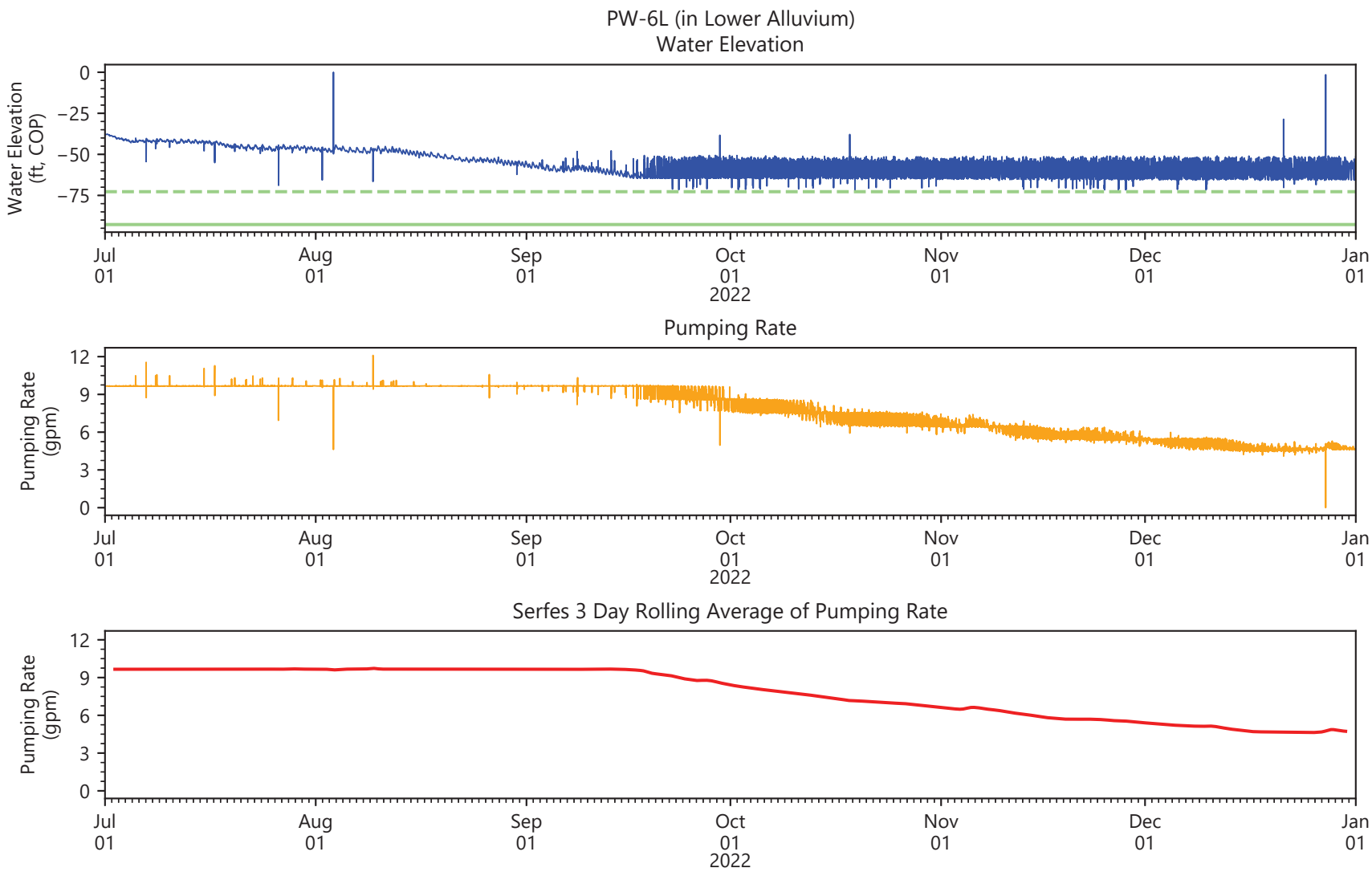
ANCHOR QEA

Figure 8.21
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

Figure 8.22
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

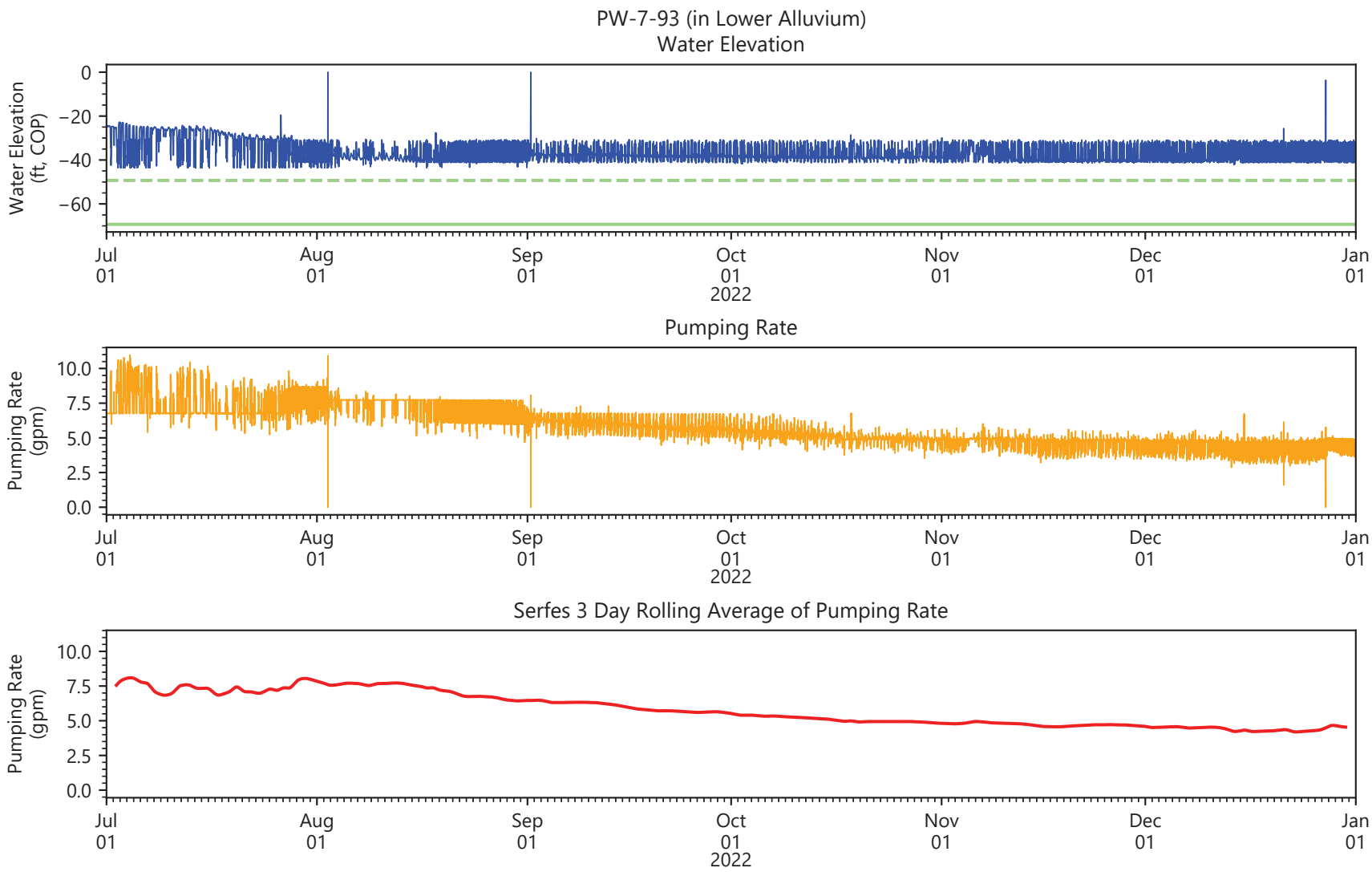

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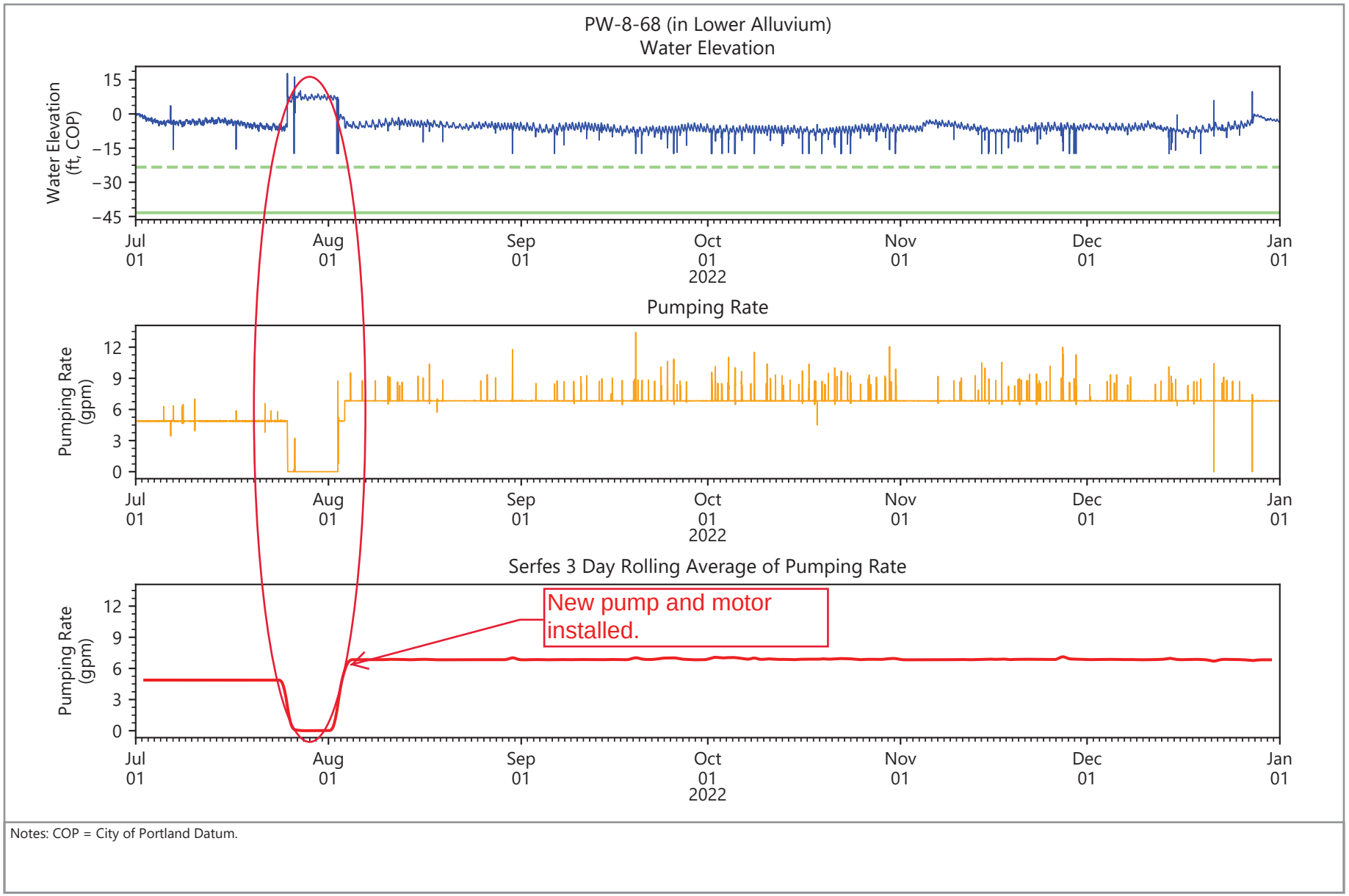
Figure 8.23
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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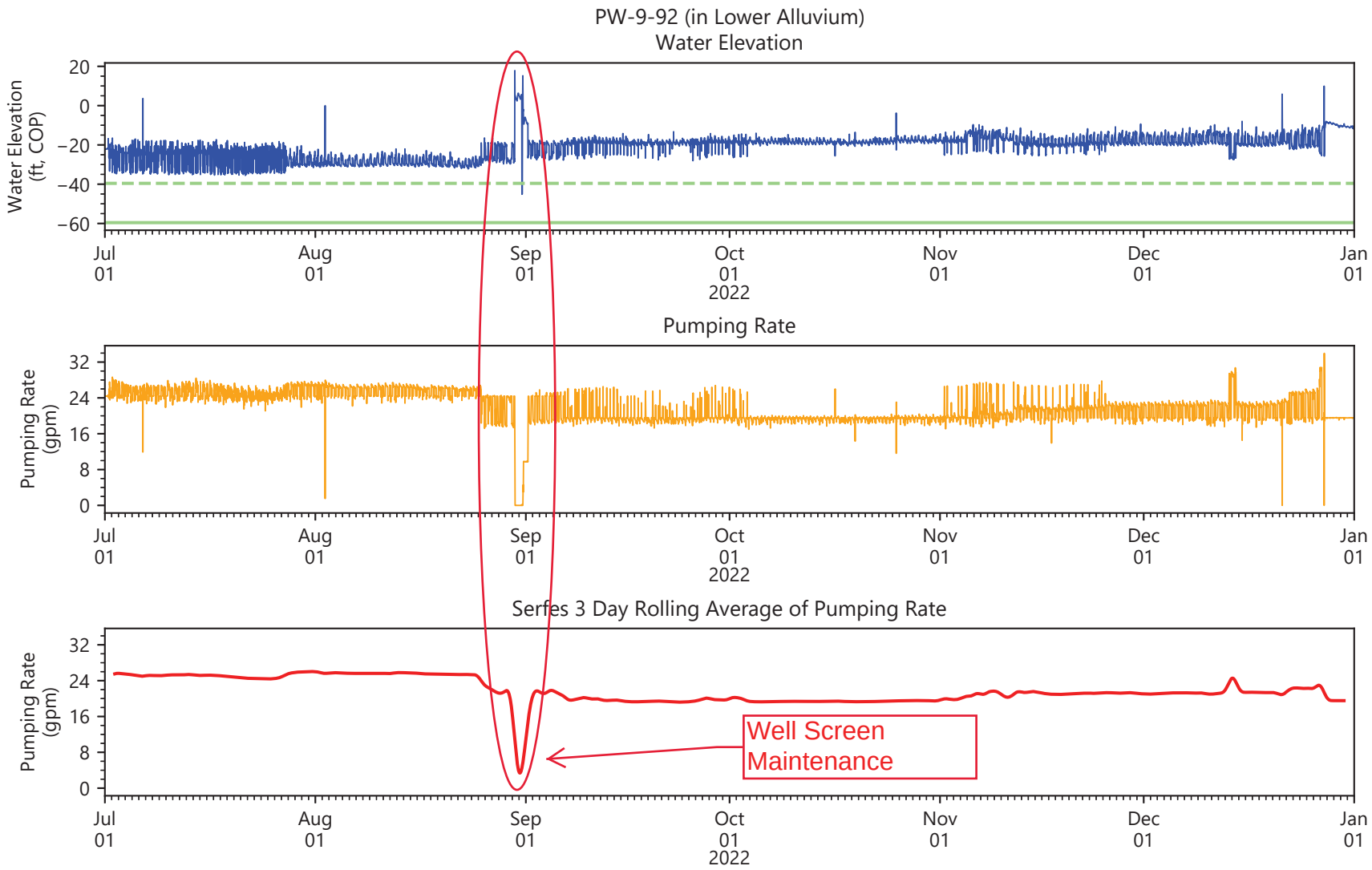
ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.24
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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ANCHOR QEA

- Groundwater Elevation
- Top of Screen Elevation
- Bottom of Screen Elevation
- Pumping Rate: 15-min Data
- Pumping Rate: Serfes Averages

Figure 8.25
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

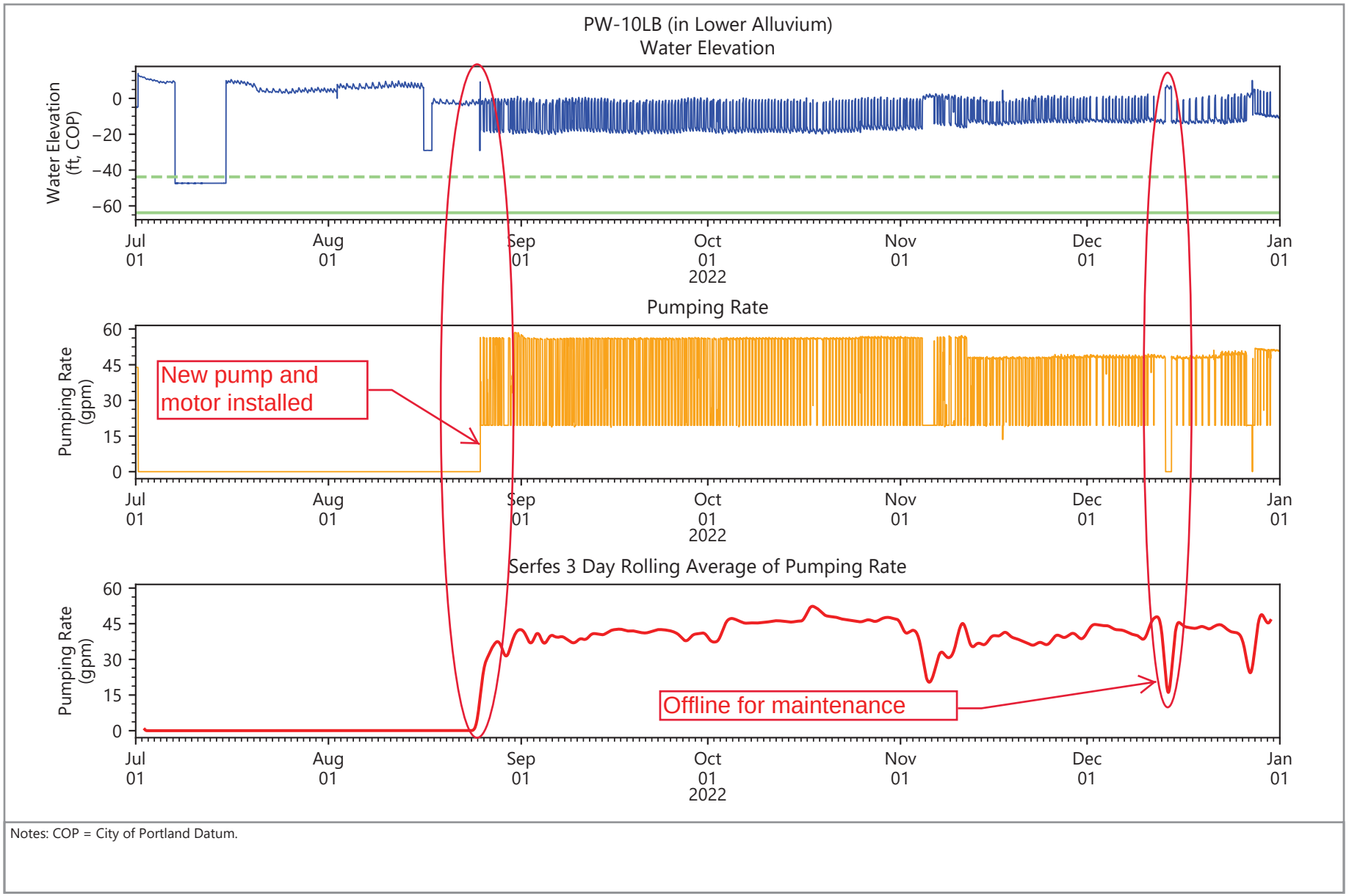

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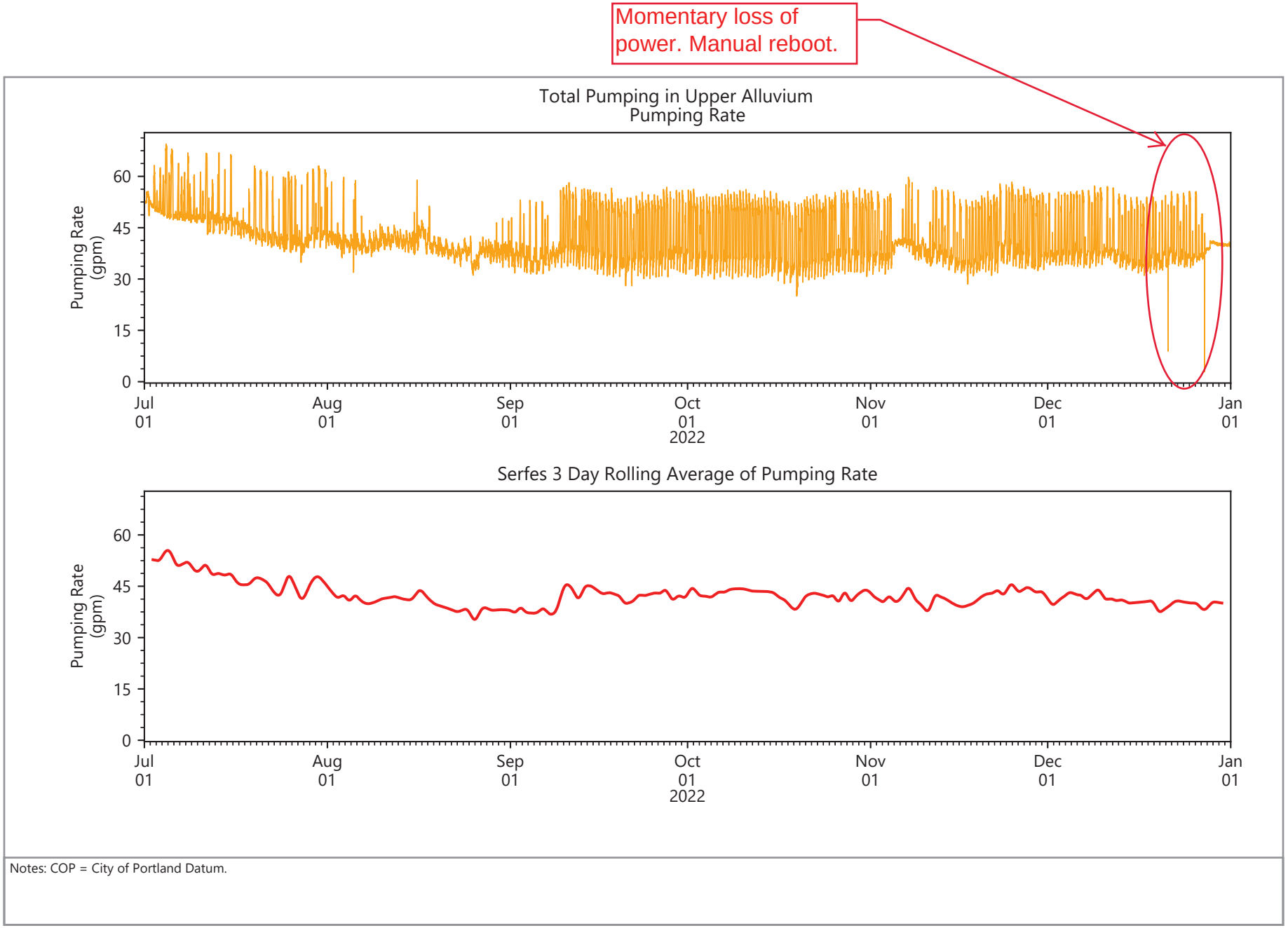
Figure 8.26
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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Pumping Rate: 15-min Data
Pumping Rate: Serfes Averages

Figure 8.27
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

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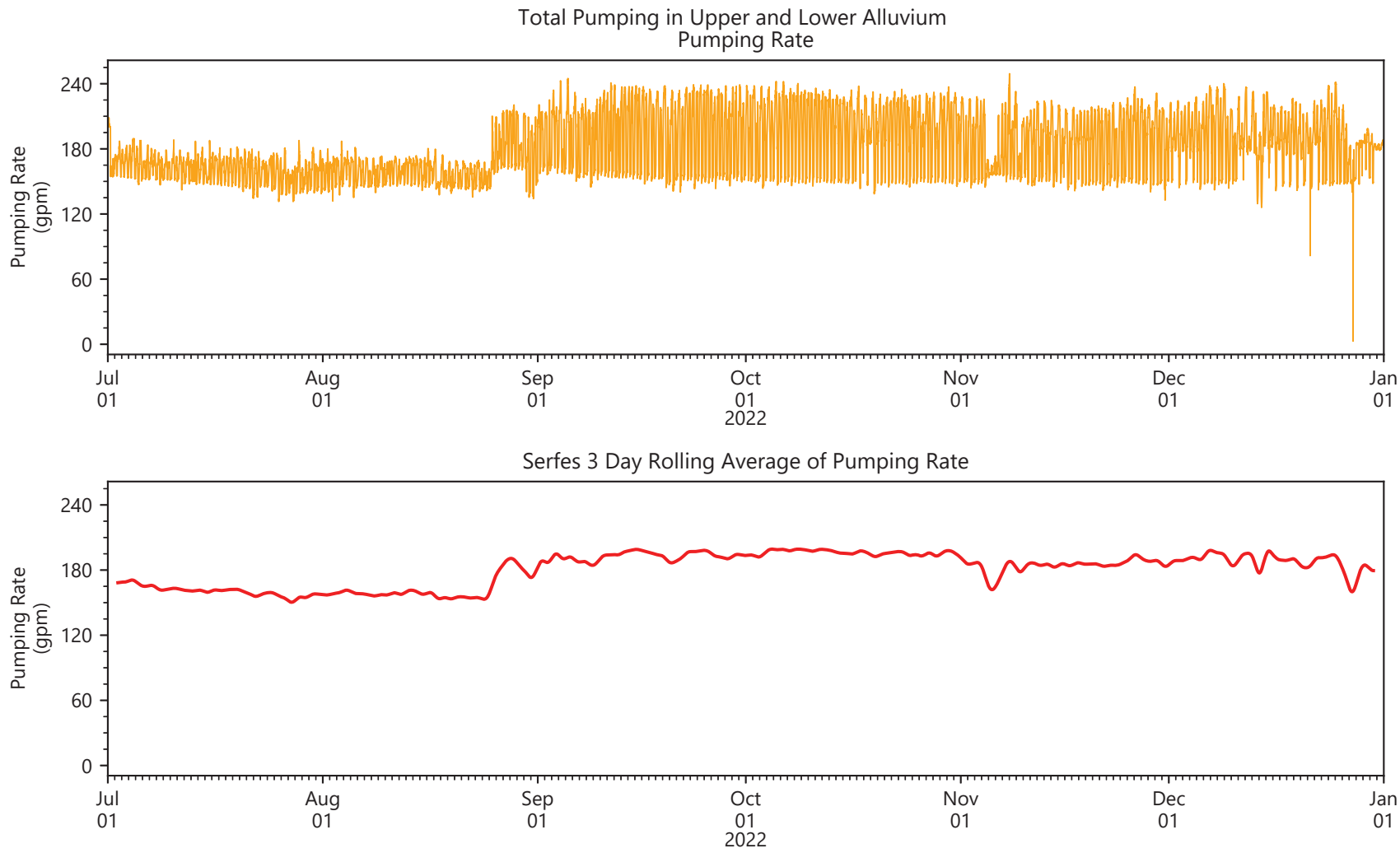
ANCHOR QEA

Pumping Rate: 15-min Data
Pumping Rate: Serfes Averages

Figure 8.28
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site



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Pumping Rate: 15-min Data
Pumping Rate: Serfes Averages

Figure 8.29
Groundwater Elevations and Pumping Rates at Pumping Wells
NW Natural Gasco Site

Appendix C
Groundwater Quality Monitoring

Appendix C1
Comprehensive Groundwater Framework

Comprehensive Well Network Description – NW Natural and Siltronic Properties

Data Collection Program and Sampling Schedule

Revision Date[7]: May 12, 2022

Well Information							NW Natural MGP Data Collection Program					NW Natural Sampling Schedule			
Well ID	Water-Bearing Zone	Nearshore (200 feet)/ Upland/River	Easting[4]	Northing[4]	Screened Interval (feet bgs)		Quarterly GW Measurement: Manual (M)/ Transducer (T)	DNAPL Measurement:	HC&C Control Well	Source Control Monitoring	RI/HERA and Data Trends	TPH-Dx and TPH-Gx	Integrated Monitoring[1]	Integrated Monitoring[1] with TPH-Dx, TPH-Gx	Integrated Monitoring[1] with TPH-Dx, TPH-Gx, EPH, and VPH
Monitoring Wells															
MW-1-22	Fill	Nearshore	7623089.8	705897.6	11	21	M	-	-	X	X	-	-	-	3Q
MW-1-55	Upper Alluvium	Nearshore	7623083.3	705869.1	45	55	T	-	-	X	X	-	-	1Q and 3Q	-
MW-1-82	Lower Alluvium	Nearshore	7623095.0	705868.1	72	82	T	-	-	X	X	-	-	3Q	-
MW-2-32	Fill	Nearshore	7623338.8	705787.9	21.5	31.5	M	-	-	X	X	-	-	-	Quarterly
MW-2-61	Upper Alluvium	Nearshore	7623333.0	705792.2	50	60	M	-	-	X	X	-	-	1Q and 3Q	-
MW-2-104	Lower Alluvium	Nearshore	7623343.6	705784.9	94	104	M	-	-	X	X	-	-	3Q	-
MW-3-26	Fill	Nearshore	7623842.6	705486.8	15	25	M	Quarterly	-	X	X	-	-	-	Quarterly
MW-3-56	Upper Alluvium	Nearshore	7623848.3	705485.4	45	55	T	Quarterly	-	X	X	-	-	-	3Q
MW-4-35	Fill	Nearshore	7624102.6	705378.2	24	34	M	Quarterly	-	X	X	-	-	-	Quarterly
MW-4-57	Upper Alluvium	Nearshore	7624107.4	705375.2	46	56	T	Quarterly	-	X	X	-	-	-	3Q
MW-4-101	Lower Alluvium	Nearshore	7624095.4	705380.3	89.5	99.5	M	Quarterly	-	X	X	-	-	-	3Q
MW-5-32	Upper Alluvium	Nearshore	7624346.9	705217.2	21	31	T	Quarterly	-	X	X	-	-	-	3Q
MW-5-100	Upper Alluvium	Nearshore	7624340.3	705213.1	88	98	M	Quarterly	-	X	X	-	-	-	3Q
MW-5-175	Deep Lower Alluvium	Nearshore	7624347.8	705207.6	163	173	T	Quarterly	-	X	X	-	-	3Q	-
MW-7-60	Upper Alluvium	Upland	7623510.3	705392.9	50.0	60.0	M	-	-	-	X	-	-	3Q	-
MW-8-29	Fill	Upland	7623959.0	705168.7	18.0	28.0	M	-	-	-	X	-	-	3Q	-
MW-8-56	Upper Alluvium	Upland	7623956.1	705170.8	45.0	55.0	M	-	-	-	X	-	-	3Q	-
MW-9-29	Fill/Alluvium	Upland	7623072.8	705017.3	18.0	28.0	M	-	-	-	X	-	-	3Q	-
MW-10-25	Fill	Upland	7623484.2	704943.6	14.0	24.0	M	Quarterly	-	-	-	-	-	-	-
MW-10-61	Upper Alluvium	Upland	7623481.4	704946.0	50.0	60.0	M	-	-	-	X	-	-	3Q	-
MW-11-32	Fill	Upland	7623854.1	704790.0	21.0	31.0	M	Quarterly	-	-	-	-	-	-	-
MW-12-36	Fill/Alluvium	Upland	7623621.3	704130.4	25.0	35.0	M	-	-	-	X	-	-	3Q	-
MW-14-110	Lower Alluvium	Upland	7623751.3	704881.7	98.0	108.0	M	-	-	-	X	-	-	3Q	-
MW-15-50	Upper Alluvium	Upland	7623699.5	704648.7	40.0	50.0	M	-	-	-	X	-	-	3Q	-
MW-15-66	Upper Alluvium	Upland	7623705.5	704639.7	60.5	65.5	M	-	-	-	X	-	-	3Q	-
MW-16-45	Upper Alluvium	Nearshore	7623944.8	705482.9	30	45	T	Monthly	-	-	X	-	-	-	-
MW-16-65	Upper Alluvium	Nearshore	7623950.4	705478.8	55	65	T	Quarterly	-	X	X	-	-	-	3Q
MW-18-30	Fill	Nearshore	7623922.4	705446.9	19	29	T	Monthly	-	-	X	-	-	-	-
MW-18-125	Lower Alluvium	Nearshore	7623935.8	705436.8	115	125	T	Quarterly	-	X	X	-	-	-	3Q
MW-18-180	Deep Lower Alluvium	Nearshore	7623930.4	705444.2	170	180	T	Quarterly	-	X	X	-	-	3Q	-
MW-19-22	Fill	Nearshore	7624251.0	705292.0	12	22	T	Quarterly	-	X	X	-	-	-	3Q
MW-19-125	Lower Alluvium	Nearshore	7624246.0	705295.0	115	125	T	Quarterly	-	X	X	-	-	-	3Q
MW-19-180	Deep Lower Alluvium	Nearshore	7624240.0	705298.0	170	180	T	Quarterly	-	X	X	-	-	3Q	-
MW-20-120	Lower Alluvium	Nearshore	7624360.0	705233.0	110	120	M	Quarterly	-	X	X	-	-	-	3Q
MW-21-12	Fill	Nearshore	7623633.5	705643.0	7	12	M	-	-	X	X	-	-	-	Quarterly
MW-21-75	Lower Alluvium	Nearshore	7623645.9	705635.6	65	75	T	-	X	X	X	-	-	-	3Q
MW-21-115	Lower Alluvium	Nearshore	7623653.4	705631.1	105.0	115.0	T	-	-	X	X	-	-	-	3Q
MW-21-165	Deep Lower Alluvium	Nearshore	7623661.9	705626.6	156.0	166.0	T	-	-	X	X	-	-	-	3Q
MW-21U	Upper Alluvium	Nearshore	7623643.7	705645.9	25	35	T	-	X	X	-	-	-	-	3Q
MW-22-80	Lower Alluvium	Nearshore	7623312.7	705869.2	69.9	79.9	T	-	X	-	X	-	-	-	-
MW-22U	Upper Alluvium	Nearshore	7623306.2	705875.4	45.0	55.0	T	-	X	X	-	-	-	1Q and 3Q	-
MW-23-27	Fill	Nearshore	7623498.5	705734.9	17.7	27.7	M	-	-	X	X	-	-	-	Quarterly

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Well Information							NW Natural MGP Data Collection Program					NW Natural Sampling Schedule			
Well ID	Water-Bearing Zone	Nearshore (200 feet)/ Upland/River	Easting[4]	Northing[4]	Screened Interval (feet bgs)		Quarterly GW Measurement: Manual (M)/ Transducer (T)	DNAPL Measurement:	HC&C Control Well	Source Control Monitoring	RI/HERA and Data Trends	TPH-Dx and TPH-Gx	Integrated Monitoring[1]	Integrated Monitoring[1] with TPH-Dx, TPH-Gx	Integrated Monitoring[1] with TPH-Dx, TPH-Gx, EPH, and VPH
MW-23-75	Lower Alluvium	Nearshore	7623494.4	705738.2	64.7	74.7	T	-	X	-	X	-	-	-	-
MW-23-123	Lower Alluvium	Nearshore	7623490.4	705740.6	113.3	123.3	M	-	-	X	X	-	-	3Q	-
MW-23U	Upper Alluvium	Nearshore	7623490.3	705734.9	40.0	50.0	T	-	X	X	X	-	-	3Q	-
MW-24-70	Upper Alluvium	Nearshore	7623865.8	705515.5	60.1	70.1	T	Quarterly	-	X	X	-	-	-	-
MW-24-130	Lower Alluvium	Nearshore	7623868.1	705513.3	120.1	130.1	T	Quarterly	X	-	-	-	-	-	-
MW-25L	Lower Alluvium	Nearshore	7623074.4	705972.6	54.0	64.0	T	-	-	-	-	-	-	-	-
MW-26U	Upper Alluvium	Nearshore	7623954.2	705459.8	38.5	48.5	T	Weekly	X	-	-	-	-	-	-
MW-27L	Lower Alluvium	Nearshore	7624002.7	705428.4	106.0	116.0	T	Quarterly	X	-	-	-	-	-	-
MW-27U	Upper Alluvium	Nearshore	7623998.7	705431.2	66.1	76.1	T	Monthly	-	X	-	-	-	-	-
MW-28L	Lower Alluvium	Nearshore	7624153.1	705328.7	109.8	119.8	T	Quarterly	X	-	-	-	-	-	-
MW-28U	Upper Alluvium	Nearshore	7624150.1	705330.3	75.0	85.0	T	Quarterly	-	X	-	-	-	-	3Q
MW-29U	Upper Alluvium	Nearshore	7624175.9	705316.5	46.0	56.0	T	Quarterly	X	-	-	-	-	-	-
MW-30U	Upper Alluvium	Nearshore	7624247.3	705280.1	40.1	50.1	T	Monthly	X	-	-	-	-	-	-
MW-31L	Lower Alluvium	Nearshore	7624307.8	705260.7	105.0	115.0	T	Quarterly	X	-	-	-	-	-	-
MW-31U	Upper Alluvium	Nearshore	7624310.6	705259.0	84.9	94.9	T	Quarterly	-	X	-	-	3Q	-	-
MW-32U	Upper Alluvium	Nearshore	7624331.6	705247.5	39.9	49.9	T	Quarterly	X	-	-	-	-	-	-
MW-33U	Upper Alluvium	Nearshore	7624399.1	705212.2	38.0	48.0	T	Quarterly	X	-	-	-	-	-	-
MW-34L	Lower Alluvium	Nearshore	7624426.8	705198.0	99.0	109.0	T	Quarterly	X	-	-	-	-	-	-
MW-34U	Upper Alluvium	Nearshore	7624423.0	705199.7	63.3	73.3	T	Quarterly	-	X	-	-	3Q	-	-
MW-35U	Upper Alluvium	Nearshore	7624487.2	705194.3	54.0	64.0	T	Quarterly	X	-	-	-	-	-	-
MW-36U	Upper Alluvium	Nearshore	7624629.6	705117.8	44.0	54.0	T	Quarterly	X	-	-	-	-	-	-
MW-37U	Upper Alluvium	Nearshore	7624028.0	705410.2	40.1	50.1	T	Quarterly	X	-	-	-	-	-	-
MW-38U	Upper Alluvium	Nearshore	7624100.8	705356.9	50.1	60.1	T	Weekly	X	-	-	-	-	-	-
MW-39F	Fill	Nearshore	7623063.6	705973.0	11.8	16.8	M	-	-	-	X	-	-	-	1Q and 3Q
MW-40F	Fill	Upland	7622894.1	705792.6	21.6	26.6	M	-	-	-	X	-	-	-	1Q and 3Q
MW-41U	Upper Alluvium	Upland	7622721.4	705601.2	17.6	27.6	M	-	-	-	X	-	-	3Q	-
MW-42F	Fill	Nearshore	7624617.5	705151.9	26.0	31.0	M	Quarterly	-	-	X	-	-	-	1Q and 3Q
MW-43F	Fill	Upland	7623148.6	705258.5	7.0	17.0	T	Monthly	-	-	-	-	-	-	-
MW-44F	Fill	Upland	7623328.7	704799.5	6.0	16.0	T	Monthly	-	-	-	-	-	-	-
MW-45F	Fill	Upland	7623563.4	704499.7	7.0	17.0	T	Monthly	-	-	-	-	-	-	-
MW-46F	Fill	Upland	7623476.0	704733.0	6.1	16.1	T	-	-	-	-	-	-	Quarterly	-
MW-47F	Fill	Upland	7623719.2	705298.7	22.0	32.0	T	-	-	-	-	-	-	Quarterly	-
MW-48F	Fill	Upland	7623850.1	705158.8	15.6	25.6	T	-	-	-	-	-	-	Quarterly	-
MW-49F	Fill	Upland	7623476.8	705461.6	19.0	29.0	T	-	-	-	-	-	-	Quarterly	-
MW-50F	Fill	Upland	7623318.6	705313.8	14.1	23.8	T	-	-	-	-	-	-	Quarterly	-
MW-51F	Fill	Upland	7623427.4	705385.2	15.5	25.2	T	-	-	-	-	-	-	Quarterly	-
MW-52F	Fill	Upland	7623610.6	705430.3	5.8	10.5	T	-	-	-	-	-	-	Quarterly	-
MW-53F	Fill	Upland	7623770.1	705433.3	3.8	8.6	T	-	-	-	-	-	-	Quarterly	-
MW-PW-2L	Lower Alluvium	Nearshore	7624540.9	705179.9	119.8	139.8	-	Monthly	-	-	-	-	-	-	-
NWN-1-20	Fill	Upland	7623946.7	704240.4	10.0	20.0	M	-	-	-	X	-	-	3Q	-
NWN-2-20	Fill	Upland	7623940.1	703958.0	10.0	20.0	M	-	-	-	X	-	-	-	1Q and 3Q
NWN-3-17	Fill	Upland	7624165.6	703613.0	7.0	17.0	M	-	-	-	X	-	-	1Q and 3Q	-
NWN-4-15	Fill	Upland	7624417.0	703176.5	5.0	15.0	M	-	-	-	X	-	-	-	-
NWN-5-20	Fill	Upland	7624797.3	702900.2	10.0	20.0	M	-	-	-	X	-	-	-	-
NWN-6-31	Fill	Upland	7625094.4	702865.2	21.0	31.0	M	-	-	-	X	-	-	-	-
NWN-7-30	Fill	Upland	7624543.0	703893.5	20.0	30.0	M	-	-	-	X	-	-	1Q and 3Q	-

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Well Information							NW Natural MGP Data Collection Program					NW Natural Sampling Schedule			
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NWN-8-30	Fill	Upland	7625491.7	703329.4	15.0	30.0	M	-	-	-	X	-	-	-	-
NWN-9-31	Fill	Nearshore	7625000.8	704896.3	16.0	31.0	M	-	-	-	X	-	-	-	1Q and 3Q
NWN-10-26	Fill	Nearshore	7625813.7	704369.3	11.0	26.0	M	-	-	-	X	-	-	-	-
NWN-11-24	Fill	Upland	7625080.5	704323.5	14.0	24.0	M	-	-	-	X	-	-	1Q and 3Q	-
NWN-12-20	Fill	Upland	7625552.3	704097.9	10.0	20.0	M	-	-	-	X	-	-	-	-
NWN-13-23	Fill	Upland	7624041.9	704353.4	13.0	23.0	M	-	-	-	X	-	-	1Q and 3Q	-
NWN-13-73	Upper Alluvium	Upland	7624031.8	704361.5	63.0	73.0	M	-	-	-	X	-	-	1Q and 3Q	-
NWN-13-106	Lower Alluvium	Upland	7624023.9	704368.0	96.0	106.0	M	-	-	-	X	-	-	1Q and 3Q	-
PW-01-80	Upper Alluvium	Nearshore	7624095.8	705353.7	39.5	79.5	M	Monthly	-	-		-	-	-	-
PW-3-85	Upper Alluvium	Nearshore	7624367.0	705229.0	75.0	85.0	T	Quarterly	-	-		-	-	-	-
WS-8-33	Fill	Nearshore	7624854.1	704987.9	22.5	32.5	T	-	-	-	X	-	-	-	1Q and 3Q
WS-8-59	Upper Alluvium	Nearshore	7624858.3	704990.2	48.5	58.5	T	-	-	-	X	-	-	1Q and 3Q	-
WS-9-34	Fill	Nearshore	7625261.8	704714.1	23.5	33.5	M	-	-	-	X	-	-	-	1Q and 3Q
WS-10-27	Fill	Upland	7624393.1	704306.6	11.0	26.0	M	-	-	-		-	-	-	-
WS-12-125	Lower Alluvium	Nearshore	7624836.2	704998.7	109.0	124.0	M	-	X	-	X	-	-	-	1Q and 3Q
WS-12-161	Deep Lower Alluvium	Nearshore	7624836.2	704998.7	145.0	160.0	T	-	-	-	X	-	-	1Q and 3Q	-
WS-13-69	Upper Alluvium	Upland	7624575.1	704633.4	52.6	67.6	M	-	-	-	X	-	-	3Q	-
WS-13-105	Lower Alluvium	Upland	7624575.1	704633.4	89.0	104.0	M	-	-	-	X	-	-	3Q	-
WS-16-125	Lower Alluvium	Upland	7624326.8	704965.0	109.0	124.0	M	-	-	-		-	-	-	-
WS-16-161	Deep Lower Alluvium	Upland	7624326.8	704965.0	145.0	160.0	M	-	-	-	X	-	-	1Q and 3Q	-
WS-17-52	Upper Alluvium	Upland	7624607.5	704484.3	41.0	51.0	M	-	-	-	X	-	-	3Q	-
WS-17-94	Lower Alluvium	Upland	7624607.5	704484.3	78.0	93.0	M	-	-	-	X	-	-	3Q	-
WS-19-71	Upper Alluvium	Upland	7624579.5	704675.8	60.0	70.0	M	-	-	-	-	-	-	-	-
WS-19-101	Lower Alluvium	Upland	7624575.9	704678.6	92.0	102.0	-	-	-		-	-	-	-	-
WS-21-112	Lower Alluvium	Nearshore	7624617.9	705091.1	94.5	109.5	T	Quarterly	X	-	X	-	-	-	-
WS-21-131	Lower Alluvium	Nearshore	7624622.6	705086.1	115.0	130.0	-	-	-	-	-	-	-	-	-
WS-23-116	Lower Alluvium	Upland	7624452.6	705097.3	100.0	115.0	-	-	-	-	-	-	-	-	-
WS-24-111	Lower Alluvium	Upland	7624532.1	705032.9	100.0	110.0	M	-	-	-	-	-	-	-	-
WS-24-155	Lower Alluvium	Upland	7624538.3	705037.4	99.0	109.6	-	-	-	-	-	-	-	-	-
WS-25-96	Upper Alluvium	Nearshore	7624670.2	705040.6	85.0	95.0	-	-	-	-	-	-	-	-	-
WS-25-111	Lower Alluvium	Nearshore	7624667.3	705042.8	100.0	110.0	M	-	-	-	-	-	-	-	-
WS-26-86	Upper Alluvium	Nearshore	7624747.8	704984.7	75.0	85.0	T	-	X	-	-	-	-	-	-
WS-26-116	Lower Alluvium	Nearshore	7624750.4	704982.4	105.0	115.0	-	-	-	-	-	-	-	-	-
WS-27-86	Upper Alluvium	Upland	7624754.5	704902.1	70.0	85.0	-	-	-	-	-	-	-	-	-
WS-30-96	Upper Alluvium	Upland	7624472.5	704758.7	85.0	95.0	-	-	-	-	-	-	-	-	-
WS-32-76	Upper Alluvium	Upland	7624524.7	704718.5	65.0	75.0	-	-	-	-	-	-	-	-	-
WS-34-71	Upper Alluvium	Upland	7624559.1	704675.8	60.0	70.0	-	-	-	-	-	-	-	-	-
WS-34-106	Lower Alluvium	Upland	7624563.5	704679.8	95.0	105.0	-	-	-	-	-	-	-	-	-
WS-35-76	Upper Alluvium	Upland	7624562.0	704701.3	65.0	75.0	-	-	-	-	-	-	-	-	-
WS-35-106	Lower Alluvium	Upland	7624561.0	704702.9	95.0	105.0	-	-	-	-	-	-	-	-	-
WS-36-81	Upper Alluvium	Upland	7624561.7	704714.7	70.0	80.0	-	-	-	-	-	-	-	-	-
WS-36-106	Lower Alluvium	Upland	7624564.7	704715.3	95.0	105.0	-	-	-	-	-	-	-	-	-

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WS-37-51	Upper Alluvium	Upland	7624606.5	704653.5	40.0	50.0	-	-	-	-	-	-	-	-	-
WS-38-61	Upper Alluvium	Upland	7624598.9	704670.1	50.0	60.0	-	-	-	-	-	-	-	-	-
WS-39-101	Lower Alluvium	Upland	7624485.1	704777.6	90.0	100.0	-	-	-	-	-	-	-	-	-
WS-40-36	Fill	Upland	7624571.0	704690.2	25.8	35.8	-	-	-	-	-	-	-	-	-
WS-41-36	Fill	Upland	7624534.6	704635.5	26.3	36.3	-	-	-	-	-	-	-	-	-
WS-41-91	Upper Alluvium	Upland	7624530.2	704638.5	75.3	90.3	-	-	-	-	-	-	-	-	-
WS-42-36	Fill	Upland	7624596.5	704583.4	25.8	35.8	-	-	-	-	-	-	-	-	-
WS-43-36	Fill	Upland	7624570.3	704567.9	25.8	35.8	-	-	-	-	-	-	-	-	-
WS-44-29	Fill	Nearshore	7624504.6	705143.3	24.0	29.0	-	-	-	-	-	-	-	-	-
WS-45-23	Fill	Upland	7624392.2	705054.5	18.0	23.0	-	-	-	-	-	-	-	-	-
WS-46-33	Fill	Upland	7624781.0	704876.3	28.5	33.5	-	-	-	-	-	-	-	-	-
WS-47-183	Deep Lower Alluvium	Nearshore	7624602.8	705154.3	172.0	182.0	T	Quarterly	-	-	-	-	-	-	1Q and 3Q
DNAPL Removal or Observation Wells															
DW-6U	Upper Alluvium	Nearshore	7623939.8	705466.0	36.3	48.3	-	Quarterly	-	-	-	-	-	-	-
DW-11U	Upper Alluvium	Nearshore	7624424.4	705169.8	21.7	33.7	-	Quarterly	-	-	-	-	-	-	-
DW-14U	Upper Alluvium	Nearshore	7623987.9	705421.1	31.8	46.8	-	Monthly	-	-	-	-	-	-	-
MW-6-32	Fill	Nearshore	7623289.8	705412.1	21.0	31.0	-	Auto-recovery	-	-	X	-	-	-	-
MW-13-30	Fill	Upland	7623447.2	705432.9	19.0	29.0	-	Auto-recovery	-	-	X	-	-	-	-
OW-1F	Fill	Nearshore	7624722.3	705044.2	30.0	35.0	T	-	-	X	-	-	-	-	1Q and 3Q
OW-2F	Fill	Nearshore	7624542.7	705172.5	25.6	30.6	T	Quarterly	-	X	-	-	-	-	1Q and 3Q
OW-5F	Fill	Nearshore	7624070.3	705366.7	28.5	33.5	T	Quarterly	-	X	-	-	Quarterly	-	-
OW-7-17	Fill	Nearshore	7623753.3	705593.8	12.5	17.5	T	-	-	X	-	-	Quarterly	-	-
OW-8-15	Fill	Nearshore	7623600.4	705685.4	10.1	15.1	T	-	-	X	-	-	Quarterly	-	-
OW-8-28	Fill	Nearshore	7623623.5	705691.3	23.1	28.1	M	-	-	X	-	-	-	-	-
OW-9-25	Fill	Nearshore	7623388.5	705812.5	20.0	25.0	T	-	-	X	-	-	Quarterly	-	-
OW-10F	Fill	Nearshore	7623183.5	705929.8	20.7	25.7	T	-	-	X	-	-	3Q	-	-
Groundwater Extraction Wells															
PW-1Lb	Lower Alluvium	Nearshore	7624730.3	705046.4	101.9	131.9	T	-	-	X	-	-	1Q and 3Q	-	-
PW-1U	Upper Alluvium	Nearshore	7624718.0	705053.1	55.1	70.1	T	-	-	-	-	-	-	-	-
PW-2L	Lower Alluvium	Nearshore	7624558.2	705165.7	120.1	140.1	T	Weekly	-	X	-	-	1Q and 3Q	-	-
PW-2U	Upper Alluvium	Nearshore	7624548.9	705171.6	57.8	72.8	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-3-118	Lower Alluvium	Nearshore	7624353.0	705238.0	108.0	118.0	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-3U	Upper Alluvium	Nearshore	7624358.3	705216.9	42.8	57.8	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-4L	Lower Alluvium	Nearshore	7624216.3	705309.2	105.4	125.4	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-4U	Upper Alluvium	Nearshore	7624207.1	705313.8	47.2	62.2	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-5L	Lower Alluvium	Nearshore	7624049.2	705380.6	105.7	125.7	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-5U	Upper Alluvium	Nearshore	7624057.4	705374.2	49.9	64.9	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-6L	Lower Alluvium	Nearshore	7623921.5	705497.0	103.7	123.7	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-6U	Upper Alluvium	Nearshore	7623927.6	705487.4	49.4	64.4	T	Weekly	-	X	-	-	1Q and 3Q	-	-
PW-7-93	Lower Alluvium	Nearshore	7623758.1	705591.0	73.5	93.5	T	-	-	X	-	-	1Q and 3Q	-	-
PW-8Ub	Upper Alluvium	Nearshore	7623620.3	705648.5	20.0	35.0	T	-	-	-	-	-	1Q and 3Q	-	-
PW-8-68	Lower Alluvium	Nearshore	7623605.5	705682.9	48.0	68.0	T	-	-	X	-	-	1Q and 3Q	-	-
PW-9-92	Lower Alluvium	Nearshore	7623393.5	705809.4	72.6	92.6	T	-	-	X	-	-	1Q and 3Q	-	-

Comprehensive Well Network Description – NW Natural and Siltronic Properties

Data Collection Program and Sampling Schedule

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Well Information							NW Natural MGP Data Collection Program					NW Natural Sampling Schedule			
Well ID	Water-Bearing Zone	Nearshore (200 feet)/ Upland/River	Easting[4]	Northing[4]	Screened Interval (feet bgs)		Quarterly GW Measurement: Manual (M)/ Transducer (T)	DNAPL Measurement:	HC&C Control Well	Source Control Monitoring	RI/HERA and Data Trends	TPH-Dx and TPH-Gx	Integrated Monitoring[1]	Integrated Monitoring[1] with TPH-Dx, TPH-Gx	Integrated Monitoring[1] with TPH-Dx, TPH-Gx, EPH, and VPH
PW-10Lb	Lower Alluvium	Nearshore	7623183.7	705887.8	76.0	96.0	T	-	-	X	-	-	1Q and 3Q	-	-
PW-10U	Upper Alluvium	Nearshore	7623222.1	705873.6	40.0	55.4	T	-	-	X	-	-	1Q and 3Q	-	-
PW-11U	Upper Alluvium	Nearshore	7624435.7	705191.3	49.8	64.8	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-12U	Upper Alluvium	Nearshore	7624297.6	705265.9	47.8	62.8	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PW-13U	Upper Alluvium	Nearshore	7624144.5	705333.4	57.6	72.6	T	Weekly	-	X	-	-	1Q and 3Q	-	-
PW-14U	Upper Alluvium	Nearshore	7623986.8	705437.0	57.8	67.8	T	Monthly	-	X	-	-	1Q and 3Q	-	-
PW-15U	Upper Alluvium	Nearshore	7623680.7	705639.0	35.1	55.1	T	-	-	X	-	-	1Q and 3Q	-	-
PW-16U	Upper Alluvium	Nearshore	7623554.8	705713.3	30.4	50.4	T	-	-	X	-	-	1Q and 3Q	-	-
Piezometers															
PZ1-5	Fill	River	7623598.3	705767.9	4.5	5.4	T	-	-	X	-	-	-	-	-
PZ1-20	Upper Alluvium	River	7623596.6	705766.9	19.3	20.2	T	-	-	X	-	-	-	-	-
PZ1-50	Lower Alluvium	River	7623592.6	705764.4	45.1	50.1	T	-	-	X	-	-	-	-	-
PZ2-5	Fill	River	7623677.3	705819.3	5.5	6.4	T	-	-	X	-	-	-	-	-
PZ2-20	Upper Alluvium	River	7623676.5	705817.6	20.6	21.5	T	-	-	X	-	-	-	-	-
PZ2-43	Lower Alluvium	River	7623665.1	705810.2	38.3	43.3	T	-	-	X	-	-	-	-	-
PZ2-77	Lower Alluvium	River	7623670.3	705813.4	71.9	76.9	T	-	-	X	-	-	-	-	-
PZ4-12	Upper Alluvium	River	7623820.4	705775.4	6.7	11.7	T	-	-	X	-	-	-	-	-
PZ4-41	Lower Alluvium	River	7623816.5	705777.8	36.1	41.1	T	-	-	X	-	-	-	-	-
PZ5-5	Fill	River	7623645.7	705738.0	3.8	4.8	T	-	-	X	-	-	1Q and 3Q	-	-
PZ5-20	Upper Alluvium	River	7623647.3	705735.8	15.0	20.0	T	-	-	X	-	-	1Q and 3Q	-	-
PZ5-55	Lower Alluvium	River	7623648.8	705733.4	50.0	55.0	T	-	-	X	-	-	1Q and 3Q	-	-
PZ5-85	Lower Alluvium	River	7623650.5	705731.0	79.9	84.9	T	-	-	X	-	-	1Q and 3Q	-	-
PZ6-5	Fill	River	7623986.5	705532.4	3.9	4.9	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ6-50	Upper Alluvium	River	7623989.1	705530.0	45.2	50.2	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ6-115	Lower Alluvium	River	7623989.2	705536.4	110.1	115.1	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ6-150	Deep Lower Alluvium	River	7623994.6	705532.7	145.4	150.4	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ7-5	Fill	River	7624284.1	705379.0	4.1	5.2	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ7-50	Upper Alluvium	River	7624288.8	705377.5	43.2	48.2	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ7-100	Lower Alluvium	River	7624285.4	705383.2	94.3	99.3	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ7-150	Deep Lower Alluvium	River	7624290.9	705381.7	145.3	150.3	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ8-5	Fill	River	7623244.6	706008.2	4.5	5.4	T	-	-	X	-	-	1Q and 3Q	-	-
PZ8-50	Upper Alluvium	River	7623249.0	706004.8	44.7	49.7	T	-	-	X	-	-	1Q and 3Q	-	-
PZ9-5	Fill	River	7624596.3	705254.1	4.5	5.5	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ9-50	Upper Alluvium	River	7624599.7	705256.9	45.4	50.4	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ9-75	Lower Alluvium	River	7624606.4	705252.4	67.5	72.5	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ9-110	Lower Alluvium	River	7624602.6	705255.0	105.6	110.6	T	Quarterly	-	X	-	-	1Q and 3Q	-	-
PZ9-150	Deep Lower Alluvium	River	7624603.7	705248.3	146.1	151.1	T	Quarterly	-	X	-	-	1Q and 3Q	-	-

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Well Information						
Well ID	**Water-Bearing Zone**	**Nearshore (200 feet)/ Upland/River**	**Easting[4]**	**Northing[4]**	**Screened Interval (feet bgs)**	
Monitoring Wells						
MW-1-22	Fill	Nearshore	7623089.8	705897.6	11	21
MW-1-55	Upper Alluvium	Nearshore	7623083.3	705869.1	45	55
MW-1-82	Lower Alluvium	Nearshore	7623095.0	705868.1	72	82
MW-2-32	Fill	Nearshore	7623338.8	705787.9	21.5	31.5
MW-2-61	Upper Alluvium	Nearshore	7623333.0	705792.2	50	60
MW-2-104	Lower Alluvium	Nearshore	7623343.6	705784.9	94	104
MW-3-26	Fill	Nearshore	7623842.6	705486.8	15	25
MW-3-56	Upper Alluvium	Nearshore	7623848.3	705485.4	45	55
MW-4-35	Fill	Nearshore	7624102.6	705378.2	24	34
MW-4-57	Upper Alluvium	Nearshore	7624107.4	705375.2	46	56
MW-4-101	Lower Alluvium	Nearshore	7624095.4	705380.3	89.5	99.5
MW-5-32	Upper Alluvium	Nearshore	7624346.9	705217.2	21	31
MW-5-100	Upper Alluvium	Nearshore	7624340.3	705213.1	88	98
MW-5-175	Deep Lower Alluvium	Nearshore	7624347.8	705207.6	163	173
MW-7-60	Upper Alluvium	Upland	7623510.3	705392.9	50.0	60.0
MW-8-29	Fill	Upland	7623959.0	705168.7	18.0	28.0
MW-8-56	Upper Alluvium	Upland	7623956.1	705170.8	45.0	55.0
MW-9-29	Fill/Alluvium	Upland	7623072.8	705017.3	18.0	28.0
MW-10-25	Fill	Upland	7623484.2	704943.6	14.0	24.0
MW-10-61	Upper Alluvium	Upland	7623481.4	704946.0	50.0	60.0
MW-11-32	Fill	Upland	7623854.1	704790.0	21.0	31.0
MW-12-36	Fill/Alluvium	Upland	7623621.3	704130.4	25.0	35.0
MW-14-110	Lower Alluvium	Upland	7623751.3	704881.7	98.0	108.0
MW-15-50	Upper Alluvium	Upland	7623699.5	704648.7	40.0	50.0
MW-15-66	Upper Alluvium	Upland	7623705.5	704639.7	60.5	65.5
MW-16-45	Upper Alluvium	Nearshore	7623944.8	705482.9	30	45
MW-16-65	Upper Alluvium	Nearshore	7623950.4	705478.8	55	65
MW-18-30	Fill	Nearshore	7623922.4	705446.9	19	29
MW-18-125	Lower Alluvium	Nearshore	7623935.8	705436.8	115	125
MW-18-180	Deep Lower Alluvium	Nearshore	7623930.4	705444.2	170	180
MW-19-22	Fill	Nearshore	7624251.0	705292.0	12	22
MW-19-125	Lower Alluvium	Nearshore	7624246.0	705295.0	115	125
MW-19-180	Deep Lower Alluvium	Nearshore	7624240.0	705298.0	170	180
MW-20-120	Lower Alluvium	Nearshore	7624360.0	705233.0	110	120
MW-21-12	Fill	Nearshore	7623633.5	705643.0	7	12
MW-21-75	Lower Alluvium	Nearshore	7623645.9	705635.6	65	75
MW-21-115	Lower Alluvium	Nearshore	7623653.4	705631.1	105.0	115.0
MW-21-165	Deep Lower Alluvium	Nearshore	7623661.9	705626.6	156.0	166.0
MW-21U	Upper Alluvium	Nearshore	7623643.7	705645.9	25	35
MW-22-80	Lower Alluvium	Nearshore	7623312.7	705869.2	69.9	79.9
MW-22U	Upper Alluvium	Nearshore	7623306.2	705875.4	45.0	55.0
MW-23-27	Fill	Nearshore	7623498.5	705734.9	17.7	27.7

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Well ID	Water-Bearing Zone	Nearshore (200 feet)/ Upland/River	Easting[4]	Northing[4]	Screened Interval (feet bgs)	
MW-23-75	Lower Alluvium	Nearshore	7623494.4	705738.2	64.7	74.7
MW-23-123	Lower Alluvium	Nearshore	7623490.4	705740.6	113.3	123.3
MW-23U	Upper Alluvium	Nearshore	7623490.3	705734.9	40.0	50.0
MW-24-70	Upper Alluvium	Nearshore	7623865.8	705515.5	60.1	70.1
MW-24-130	Lower Alluvium	Nearshore	7623868.1	705513.3	120.1	130.1
MW-25L	Lower Alluvium	Nearshore	7623074.4	705972.6	54.0	64.0
MW-26U	Upper Alluvium	Nearshore	7623954.2	705459.8	38.5	48.5
MW-27L	Lower Alluvium	Nearshore	7624002.7	705428.4	106.0	116.0
MW-27U	Upper Alluvium	Nearshore	7623998.7	705431.2	66.1	76.1
MW-28L	Lower Alluvium	Nearshore	7624153.1	705328.7	109.8	119.8
MW-28U	Upper Alluvium	Nearshore	7624150.1	705330.3	75.0	85.0
MW-29U	Upper Alluvium	Nearshore	7624175.9	705316.5	46.0	56.0
MW-30U	Upper Alluvium	Nearshore	7624247.3	705280.1	40.1	50.1
MW-31L	Lower Alluvium	Nearshore	7624307.8	705260.7	105.0	115.0
MW-31U	Upper Alluvium	Nearshore	7624310.6	705259.0	84.9	94.9
MW-32U	Upper Alluvium	Nearshore	7624331.6	705247.5	39.9	49.9
MW-33U	Upper Alluvium	Nearshore	7624399.1	705212.2	38.0	48.0
MW-34L	Lower Alluvium	Nearshore	7624426.8	705198.0	99.0	109.0
MW-34U	Upper Alluvium	Nearshore	7624423.0	705199.7	63.3	73.3
MW-35U	Upper Alluvium	Nearshore	7624487.2	705194.3	54.0	64.0
MW-36U	Upper Alluvium	Nearshore	7624629.6	705117.8	44.0	54.0
MW-37U	Upper Alluvium	Nearshore	7624028.0	705410.2	40.1	50.1
MW-38U	Upper Alluvium	Nearshore	7624100.8	705356.9	50.1	60.1
MW-39F	Fill	Nearshore	7623063.6	705973.0	11.8	16.8
MW-40F	Fill	Upland	7622894.1	705792.6	21.6	26.6
MW-41U	Upper Alluvium	Upland	7622721.4	705601.2	17.6	27.6
MW-42F	Fill	Nearshore	7624617.5	705151.9	26.0	31.0
MW-43F	Fill	Upland	7623148.6	705258.5	7.0	17.0
MW-44F	Fill	Upland	7623328.7	704799.5	6.0	16.0
MW-45F	Fill	Upland	7623563.4	704499.7	7.0	17.0
MW-46F	Fill	Upland	7623476.0	704733.0	6.1	16.1
MW-47F	Fill	Upland	7623719.2	705298.7	22.0	32.0
MW-48F	Fill	Upland	7623850.1	705158.8	15.6	25.6
MW-49F	Fill	Upland	7623476.8	705461.6	19.0	29.0
MW-50F	Fill	Upland	7623318.6	705313.8	14.1	23.8
MW-51F	Fill	Upland	7623427.4	705385.2	15.5	25.2
MW-52F	Fill	Upland	7623610.6	705430.3	5.8	10.5
MW-53F	Fill	Upland	7623770.1	705433.3	3.8	8.6
MW-PW-2L	Lower Alluvium	Nearshore	7624540.9	705179.9	119.8	139.8
NWN-1-20	Fill	Upland	7623946.7	704240.4	10.0	20.0
NWN-2-20	Fill	Upland	7623940.1	703958.0	10.0	20.0
NWN-3-17	Fill	Upland	7624165.6	703613.0	7.0	17.0
NWN-4-15	Fill	Upland	7624417.0	703176.5	5.0	15.0
NWN-5-20	Fill	Upland	7624797.3	702900.2	10.0	20.0
NWN-6-31	Fill	Upland	7625094.4	702865.2	21.0	31.0
NWN-7-30	Fill	Upland	7624543.0	703893.5	20.0	30.0

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NWN-8-30	Fill	Upland	7625491.7	703329.4	15.0	30.0
NWN-9-31	Fill	Nearshore	7625000.8	704896.3	16.0	31.0
NWN-10-26	Fill	Nearshore	7625813.7	704369.3	11.0	26.0
NWN-11-24	Fill	Upland	7625080.5	704323.5	14.0	24.0
NWN-12-20	Fill	Upland	7625552.3	704097.9	10.0	20.0
NWN-13-23	Fill	Upland	7624041.9	704353.4	13.0	23.0
NWN-13-73	Upper Alluvium	Upland	7624031.8	704361.5	63.0	73.0
NWN-13-106	Lower Alluvium	Upland	7624023.9	704368.0	96.0	106.0
PW-01-80	Upper Alluvium	Nearshore	7624095.8	705353.7	39.5	79.5
PW-3-85	Upper Alluvium	Nearshore	7624367.0	705229.0	75.0	85.0
WS-8-33	Fill	Nearshore	7624854.1	704987.9	22.5	32.5
WS-8-59	Upper Alluvium	Nearshore	7624858.3	704990.2	48.5	58.5
WS-9-34	Fill	Nearshore	7625261.8	704714.1	23.5	33.5
WS-10-27	Fill	Upland	7624393.1	704306.6	11.0	26.0
WS-12-125	Lower Alluvium	Nearshore	7624836.2	704998.7	109.0	124.0
WS-12-161	Deep Lower Alluvium	Nearshore	7624836.2	704998.7	145.0	160.0
WS-13-69	Upper Alluvium	Upland	7624575.1	704633.4	52.6	67.6
WS-13-105	Lower Alluvium	Upland	7624575.1	704633.4	89.0	104.0
WS-16-125	Lower Alluvium	Upland	7624326.8	704965.0	109.0	124.0
WS-16-161	Deep Lower Alluvium	Upland	7624326.8	704965.0	145.0	160.0
WS-17-52	Upper Alluvium	Upland	7624607.5	704484.3	41.0	51.0
WS-17-94	Lower Alluvium	Upland	7624607.5	704484.3	78.0	93.0
WS-19-71	Upper Alluvium	Upland	7624579.5	704675.8	60.0	70.0
WS-19-101	Lower Alluvium	Upland	7624575.9	704678.6	92.0	102.0
WS-21-112	Lower Alluvium	Nearshore	7624617.9	705091.1	94.5	109.5
WS-21-131	Lower Alluvium	Nearshore	7624622.6	705086.1	115.0	130.0
WS-23-116	Lower Alluvium	Upland	7624452.6	705097.3	100.0	115.0
WS-24-111	Lower Alluvium	Upland	7624532.1	705032.9	100.0	110.0
WS-24-155	Lower Alluvium	Upland	7624538.3	705037.4	99.0	109.6
WS-25-96	Upper Alluvium	Nearshore	7624670.2	705040.6	85.0	95.0
WS-25-111	Lower Alluvium	Nearshore	7624667.3	705042.8	100.0	110.0
WS-26-86	Upper Alluvium	Nearshore	7624747.8	704984.7	75.0	85.0
WS-26-116	Lower Alluvium	Nearshore	7624750.4	704982.4	105.0	115.0
WS-27-86	Upper Alluvium	Upland	7624754.5	704902.1	70.0	85.0
WS-30-96	Upper Alluvium	Upland	7624472.5	704758.7	85.0	95.0
WS-32-76	Upper Alluvium	Upland	7624524.7	704718.5	65.0	75.0
WS-34-71	Upper Alluvium	Upland	7624559.1	704675.8	60.0	70.0
WS-34-106	Lower Alluvium	Upland	7624563.5	704679.8	95.0	105.0
WS-35-76	Upper Alluvium	Upland	7624562.0	704701.3	65.0	75.0
WS-35-106	Lower Alluvium	Upland	7624561.0	704702.9	95.0	105.0
WS-36-81	Upper Alluvium	Upland	7624561.7	704714.7	70.0	80.0
WS-36-106	Lower Alluvium	Upland	7624564.7	704715.3	95.0	105.0

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Well Information						
Well ID	**Water-Bearing Zone**	**Nearshore (200 feet)/ Upland/River**	**Easting[4]**	**Northing[4]**	**Screened Interval (feet bgs)**	
WS-37-51	Upper Alluvium	Upland	7624606.5	704653.5	40.0	50.0
WS-38-61	Upper Alluvium	Upland	7624598.9	704670.1	50.0	60.0
WS-39-101	Lower Alluvium	Upland	7624485.1	704777.6	90.0	100.0
WS-40-36	Fill	Upland	7624571.0	704690.2	25.8	35.8
WS-41-36	Fill	Upland	7624534.6	704635.5	26.3	36.3
WS-41-91	Upper Alluvium	Upland	7624530.2	704638.5	75.3	90.3
WS-42-36	Fill	Upland	7624596.5	704583.4	25.8	35.8
WS-43-36	Fill	Upland	7624570.3	704567.9	25.8	35.8
WS-44-29	Fill	Nearshore	7624504.6	705143.3	24.0	29.0
WS-45-23	Fill	Upland	7624392.2	705054.5	18.0	23.0
WS-46-33	Fill	Upland	7624781.0	704876.3	28.5	33.5
WS-47-183	Deep Lower Alluvium	Nearshore	7624602.8	705154.3	172.0	182.0
DNAPL Removal or Observation Wells						
DW-6U	Upper Alluvium	Nearshore	7623939.8	705466.0	36.3	48.3
DW-11U	Upper Alluvium	Nearshore	7624424.4	705169.8	21.7	33.7
DW-14U	Upper Alluvium	Nearshore	7623987.9	705421.1	31.8	46.8
MW-6-32	Fill	Nearshore	7623289.8	705412.1	21.0	31.0
MW-13-30	Fill	Upland	7623447.2	705432.9	19.0	29.0
OW-1F	Fill	Nearshore	7624722.3	705044.2	30.0	35.0
OW-2F	Fill	Nearshore	7624542.7	705172.5	25.6	30.6
OW-5F	Fill	Nearshore	7624070.3	705366.7	28.5	33.5
OW-7-17	Fill	Nearshore	7623753.3	705593.8	12.5	17.5
OW-8-15	Fill	Nearshore	7623600.4	705685.4	10.1	15.1
OW-8-28	Fill	Nearshore	7623623.5	705691.3	23.1	28.1
OW-9-25	Fill	Nearshore	7623388.5	705812.5	20.0	25.0
OW-10F	Fill	Nearshore	7623183.5	705929.8	20.7	25.7
Groundwater Extraction Wells						
PW-1Lb	Lower Alluvium	Nearshore	7624730.3	705046.4	101.9	131.9
PW-1U	Upper Alluvium	Nearshore	7624718.0	705053.1	55.1	70.1
PW-2L	Lower Alluvium	Nearshore	7624558.2	705165.7	120.1	140.1
PW-2U	Upper Alluvium	Nearshore	7624548.9	705171.6	57.8	72.8
PW-3-118	Lower Alluvium	Nearshore	7624353.0	705238.0	108.0	118.0
PW-3U	Upper Alluvium	Nearshore	7624358.3	705216.9	42.8	57.8
PW-4L	Lower Alluvium	Nearshore	7624216.3	705309.2	105.4	125.4
PW-4U	Upper Alluvium	Nearshore	7624207.1	705313.8	47.2	62.2
PW-5L	Lower Alluvium	Nearshore	7624049.2	705380.6	105.7	125.7
PW-5U	Upper Alluvium	Nearshore	7624057.4	705374.2	49.9	64.9
PW-6L	Lower Alluvium	Nearshore	7623921.5	705497.0	103.7	123.7
PW-6U	Upper Alluvium	Nearshore	7623927.6	705487.4	49.4	64.4
PW-7-93	Lower Alluvium	Nearshore	7623758.1	705591.0	73.5	93.5
PW-8Ub	Upper Alluvium	Nearshore	7623620.3	705648.5	20.0	35.0
PW-8-68	Lower Alluvium	Nearshore	7623605.5	705682.9	48.0	68.0
PW-9-92	Lower Alluvium	Nearshore	7623393.5	705809.4	72.6	92.6

Comprehensive Well Network Description – NW Natural and Siltronic Properties

Data Collection Program and Sampling Schedule

Revision Date[7]: May 12, 2022

Well Information						
Well ID	**Water-Bearing Zone**	**Nearshore (200 feet)/ Upland/River**	**Easting[4]**	**Northing[4]**	**Screened Interval (feet bgs)**	
PW-10Lb	Lower Alluvium	Nearshore	7623183.7	705887.8	76.0	96.0
PW-10U	Upper Alluvium	Nearshore	7623222.1	705873.6	40.0	55.4
PW-11U	Upper Alluvium	Nearshore	7624435.7	705191.3	49.8	64.8
PW-12U	Upper Alluvium	Nearshore	7624297.6	705265.9	47.8	62.8
PW-13U	Upper Alluvium	Nearshore	7624144.5	705333.4	57.6	72.6
PW-14U	Upper Alluvium	Nearshore	7623986.8	705437.0	57.8	67.8
PW-15U	Upper Alluvium	Nearshore	7623680.7	705639.0	35.1	55.1
PW-16U	Upper Alluvium	Nearshore	7623554.8	705713.3	30.4	50.4
Piezometers						
PZ1-5	Fill	River	7623598.3	705767.9	4.5	5.4
PZ1-20	Upper Alluvium	River	7623596.6	705766.9	19.3	20.2
PZ1-50	Lower Alluvium	River	7623592.6	705764.4	45.1	50.1
PZ2-5	Fill	River	7623677.3	705819.3	5.5	6.4
PZ2-20	Upper Alluvium	River	7623676.5	705817.6	20.6	21.5
PZ2-43	Lower Alluvium	River	7623665.1	705810.2	38.3	43.3
PZ2-77	Lower Alluvium	River	7623670.3	705813.4	71.9	76.9
PZ4-12	Upper Alluvium	River	7623820.4	705775.4	6.7	11.7
PZ4-41	Lower Alluvium	River	7623816.5	705777.8	36.1	41.1
PZ5-5	Fill	River	7623645.7	705738.0	3.8	4.8
PZ5-20	Upper Alluvium	River	7623647.3	705735.8	15.0	20.0
PZ5-55	Lower Alluvium	River	7623648.8	705733.4	50.0	55.0
PZ5-85	Lower Alluvium	River	7623650.5	705731.0	79.9	84.9
PZ6-5	Fill	River	7623986.5	705532.4	3.9	4.9
PZ6-50	Upper Alluvium	River	7623989.1	705530.0	45.2	50.2
PZ6-115	Lower Alluvium	River	7623989.2	705536.4	110.1	115.1
PZ6-150	Deep Lower Alluvium	River	7623994.6	705532.7	145.4	150.4
PZ7-5	Fill	River	7624284.1	705379.0	4.1	5.2
PZ7-50	Upper Alluvium	River	7624288.8	705377.5	43.2	48.2
PZ7-100	Lower Alluvium	River	7624285.4	705383.2	94.3	99.3
PZ7-150	Deep Lower Alluvium	River	7624290.9	705381.7	145.3	150.3
PZ8-5	Fill	River	7623244.6	706008.2	4.5	5.4
PZ8-50	Upper Alluvium	River	7623249.0	706004.8	44.7	49.7
PZ9-5	Fill	River	7624596.3	705254.1	4.5	5.5
PZ9-50	Upper Alluvium	River	7624599.7	705256.9	45.4	50.4
PZ9-75	Lower Alluvium	River	7624606.4	705252.4	67.5	72.5
PZ9-110	Lower Alluvium	River	7624602.6	705255.0	105.6	110.6
PZ9-150	Deep Lower Alluvium	River	7624603.7	705248.3	146.1	151.1

Notes:
-: not applicable
ASTM: ASTM International
bgs: below ground surface
cVOC: chlorinated volatile organic compound
DNAPL: dense nonaqueous phase liquid
DO: dissolved oxygen
EIB: enhanced in situ bioremediation
EPA: U.S. Environmental Protection Agency
EPH: extractable petroleum hydrocarbons
GW: groundwater
HARN: High Accuracy Reference Network
HC&C: hydraulic control and containment
MGP: manufactured gas plant
NA: not applicable
NAD83: North American Datum of 1983
ORP: oxidation-reduction potential
PAH: polycyclic aromatic hydrocarbon
RI/HERA: Remedial Investigation/Human Health Ecological Risk Assessment
RI N&E: remedial investigation nature and extent
Siltronic: Siltronic Corporation
SIM: selected ion monitoring
SVOC: semivolatile organic compound
TPH: total petroleum hydrocarbons
TPH-Dx: total petroleum hydrocarbons, diesel range
TPH-Gx: total petroleum hydrocarbons, gasoline range
VOC: volatile organic compound
VPH: volatile petroleum hydrocarbon

NW Natural Notes:
1. Analyses at all locations include PAHs or SVOCs (EPA 8270-SIM), VOCs (EPA 8260B), Total Cyanide (EPA 335.4), Free Cyanide (ASTM D-4282-02),Available Cyanide (OIA-1677), and Total Metals (EPA 6000 Series).** In addition, field measurements will be collected including DO, pH, Conductivity, Turbidity, Temperature, and ORP.
2. Former Gasco MGP Operable Unit (Gasco OU) includes the NW Natural Gasco Site and northern portion of the Siltronic Site formerly used by NW Natural for MGP operations (i.e., the "Allen Tract").
3. DNAPL Monitoring conducted by Hahn and Associates, Inc.
7. Information regarding NW Natural monitoring has been updated.
**: aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc.

Appendix C2
2022 Data Summary Table

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-01-22	MW-01-55	MW-01-55	MW-01-82	MW-02-104	MW-02-32	MW-02-32	MW-02-32	MW-02-32
Sample ID	GS-092722-84	GS-032322-52	GS-092222-64	GS-092222-61	GS-100622-115	GS-031022-14	GS-061422-01	GS-061422-02	GS-091922-40
Sample Date	9/27/2022	3/23/2022	9/22/2022	9/22/2022	10/6/2022	3/10/2022	6/14/2022	6/14/2022	9/19/2022
Depth	11 - 21 ft	45 - 55 ft	45 - 55 ft	72 - 82 ft	94 - 104 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft
Sample Type	N	N	N	N	N	N	N	FD	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623089.85	7623083.3	7623083.3	7623095	7623343.559	7623338.778	7623338.778	7623338.778	7623338.778
Y	705897.648	705869.1	705869.1	705868.1	705784.859	705787.943	705787.943	705787.943	705787.943
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	20 U	--	**61.2**	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	--	20 U	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	--	20 U	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	20 U	--	**61.2**	--	--	--	--	--	--
Ammonia as nitrogen	**6.19**	--	**8.67**	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**3.29 J**	**0.277**	**0.271**	**0.0625**	**0.0849**	**0.21**	**0.492**	**0.49**	**0.189**
Cyanide, available	**0.00953**	0.002 U	0.002 UJ	0.002 UJ	0.002 U	**0.00523**	**0.0188**	**0.0212**	**0.00115 J**
Cyanide, free	**0.0126**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	--	0.25 U	--	--	--	--	--	--
Sulfate	**648**	--	**3080**	--	--	--	--	--	--
Sulfide	**14.7**	--	0.05 U	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	**0.256**	--	**0.182**	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**15200**	50 U	**573**	**148**	50 U	50 U	50 U	50 U	50 U
Antimony	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**3.77**	**1.31**	**1.81**	**1.77**	**5.53**	**0.552 J**	**0.521 J**	**0.509 J**	1 U
Barium	**31.7**	**20.7**	**26.4**	**83.2**	**286**	**6.53**	**20**	**21**	**5.31**
Beryllium	**0.469**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	**4.82**	2 U	**7.23**	2 U	**1.31 J**	2 U	2 U	2 U	2 U
Copper	2 U	2 U	**1.82 J**	2 U	2 U	2 U	2 U	2 U	2 U
Iron	**19600**	**410000**	**431000**	**33400**	**111000**	**623**	**304**	**319**	**198**
Lead	**0.112 J**	0.2 U	**0.269**	0.2 U	0.2 U	**0.269**	0.2 U	**0.372**	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**484**	**18300**	**19000**	**1890**	**7040**	**113**	**1500**	**1520**	**609**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**13.3**	2 U	**4.3**	**1.55 J**	**1.24 J**	**3**	**42.8**	**41.7**	**7.62**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**13.7**	2 U	**3.04**	2 U	2 U	**1.52 J**	**3.01**	**3.16**	**1.15 J**
Zinc	**3.96 J**	**5.47**	**2.83 J**	**3.79 J**	4 U	4 U	**4.66**	**5.26**	**6.26**

Appendix C2
2022 Data Summary Table

	Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
	Location ID	MW-01-22	MW-01-55	MW-01-55	MW-01-82	MW-02-104	MW-02-32	MW-02-32	MW-02-32	MW-02-32
	Sample ID	GS-092722-84	GS-032322-52	GS-092222-64	GS-092222-61	GS-100622-115	GS-031022-14	GS-061422-01	GS-061422-02	GS-091922-40
	Sample Date	9/27/2022	3/23/2022	9/22/2022	9/22/2022	10/6/2022	3/10/2022	6/14/2022	6/14/2022	9/19/2022
	Depth	11 - 21 ft	45 - 55 ft	45 - 55 ft	72 - 82 ft	94 - 104 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft
	Sample Type	N	N	N	N	N	N	N	FD	N
	Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
	X	7623089.85	7623083.3	7623083.3	7623095	7623343.559	7623338.778	7623338.778	7623338.778	7623338.778
	Y	705897.648	705869.1	705869.1	705868.1	705784.859	705787.943	705787.943	705787.943	705787.943
Metals, Dissolved (µg/L)										
Iron		**18000**	--	**405000**	--	--	--	--	--	--
Magnesium		--	--	--	--	--	--	--	--	--
Manganese		**495**	--	**18500**	--	--	--	--	--	--
Volatile Organics (µg/L)										
1,1,1,2-Tetrachloroethane		2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane		2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane		2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene		0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene		10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene		--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane		25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane		2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-		0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-		0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane		2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)		50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)		50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone		100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile		10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene		**3.8**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene		2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)		25 UJ	5 U	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U
Carbon disulfide		**1260**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)		5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene		2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-01-22	MW-01-55	MW-01-55	MW-01-82	MW-02-104	MW-02-32	MW-02-32	MW-02-32	MW-02-32
Sample ID	GS-092722-84	GS-032322-52	GS-092222-64	GS-092222-61	GS-100622-115	GS-031022-14	GS-061422-01	GS-061422-02	GS-091922-40
Sample Date	9/27/2022	3/23/2022	9/22/2022	9/22/2022	10/6/2022	3/10/2022	6/14/2022	6/14/2022	9/19/2022
Depth	11 - 21 ft	45 - 55 ft	45 - 55 ft	72 - 82 ft	94 - 104 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft
Sample Type	N	N	N	N	N	N	N	FD	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623089.85	7623083.3	7623083.3	7623095	7623343.559	7623338.778	7623338.778	7623338.778	7623338.778
Y	705897.648	705869.1	705869.1	705868.1	705784.859	705787.943	705787.943	705787.943	705787.943
Chloroethane	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	**5.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	**5.05**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	**1.7 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	10 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	**4.7 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**28.3**	0.0739 U	0.0758 U	0.0791 U	0.0756 U	0.0722 U	0.0697 U	0.0699 U	0.0716 U
2-Methylnaphthalene	**36.3**	0.0739 U	0.0758 U	0.0791 U	**0.0434 J**	0.0722 U	0.0697 U	0.0699 U	0.0716 U
Acenaphthene	**47.5**	0.037 U	0.0379 U	0.0396 U	**0.0274 J**	**0.561**	**0.0362**	**0.0415**	**0.116**
Acenaphthylene	3.59 U	0.037 U	0.0379 U	0.0396 U	0.0378 U	**0.25**	**0.161**	**0.182**	**0.291**
Anthracene	**1.89 J**	**0.0407**	**0.0403**	0.0396 U	0.0378 U	**0.169**	**0.11**	**0.122**	**0.178**
Benzo(a)anthracene	1.8 U	0.0185 U	0.019 U	0.0198 U	0.0189 U	0.0181 U	0.0174 U	0.0175 U	0.0179 U
Benzo(a)pyrene	1.8 U	0.0185 U	0.019 U	0.0198 U	0.0189 U	0.0181 U	0.0174 U	0.0175 U	0.0179 U
Benzo(b)fluoranthene	1.8 U	0.0185 U	0.019 U	0.0198 U	0.0189 U	0.0181 U	0.0174 U	0.0175 U	0.0179 U
Benzo(g,h,i)perylene	3.59 U	0.037 U	0.0379 U	0.0396 U	0.0378 U	0.0361 U	0.0348 U	0.035 U	0.0358 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-01-22	MW-01-55	MW-01-55	MW-01-82	MW-02-104	MW-02-32	MW-02-32	MW-02-32	MW-02-32
Sample ID	GS-092722-84	GS-032322-52	GS-092222-64	GS-092222-61	GS-100622-115	GS-031022-14	GS-061422-01	GS-061422-02	GS-091922-40
Sample Date	9/27/2022	3/23/2022	9/22/2022	9/22/2022	10/6/2022	3/10/2022	6/14/2022	6/14/2022	9/19/2022
Depth	11 - 21 ft	45 - 55 ft	45 - 55 ft	72 - 82 ft	94 - 104 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft
Sample Type	N	N	N	N	N	N	N	FD	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623089.85	7623083.3	7623083.3	7623095	7623343.559	7623338.778	7623338.778	7623338.778	7623338.778
Y	705897.648	705869.1	705869.1	705868.1	705784.859	705787.943	705787.943	705787.943	705787.943
Benzo(j,k)fluoranthene	1.8 U	0.0185 U	0.019 U	0.0198 U	0.0189 U	0.0181 U	0.0174 U	0.0175 U	0.0179 U
Carbazole	**70.5**	0.037 U	0.0379 U	0.0396 U	0.0378 U	0.0361 U	0.0348 U	0.035 U	0.0358 U
Chrysene	1.8 U	0.0185 U	0.019 U	0.0198 U	0.0189 U	0.0181 U	0.0174 U	0.0175 U	0.0179 U
Dibenzo(a,h)anthracene	1.8 U	0.0185 U	0.019 U	0.0198 U	0.0189 U	0.0181 U	0.0174 U	0.0175 U	0.0179 U
Dibenzofuran	**4.9**	0.037 U	0.0379 U	0.0396 U	0.0378 U	0.0361 U	0.0348 U	0.035 U	0.0358 U
Fluoranthene	3.59 U	0.037 U	0.0379 U	0.0396 U	0.0378 U	0.0361 U	0.0348 U	0.035 U	0.0358 U
Fluorene	**35.2**	0.037 U	0.0379 U	0.0396 U	0.0378 U	0.0598 U	0.0359 U	0.0415 U	0.0672 U
Indeno(1,2,3-c,d)pyrene	1.8 U	0.0185 U	0.019 U	0.0198 U	0.0189 U	0.0181 U	0.0174 U	0.0175 U	0.0179 U
Naphthalene	**280**	0.0739 U	0.0758 U	0.0791 U	0.0756 U	**0.0429 J**	0.0697 U	0.0699 U	0.0716 U
Phenanthrene	**20.5**	0.0739 U	0.0758 U	0.0791 U	0.0756 U	0.0722 U	0.0697 U	0.0699 U	0.0716 U
Pyrene	3.59 U	0.037 U	0.0379 U	0.0396 U	0.0378 U	0.0361 U	**0.129**	**0.13**	0.0358 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-01-22	MW-01-55	MW-01-55	MW-01-82	MW-02-104	MW-02-32	MW-02-32	MW-02-32	MW-02-32
Sample ID	GS-092722-84	GS-032322-52	GS-092222-64	GS-092222-61	GS-100622-115	GS-031022-14	GS-061422-01	GS-061422-02	GS-091922-40
Sample Date	9/27/2022	3/23/2022	9/22/2022	9/22/2022	10/6/2022	3/10/2022	6/14/2022	6/14/2022	9/19/2022
Depth	11 - 21 ft	45 - 55 ft	45 - 55 ft	72 - 82 ft	94 - 104 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft	21.5 - 31.5 ft
Sample Type	N	N	N	N	N	N	N	FD	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623089.85	7623083.3	7623083.3	7623095	7623343.559	7623338.778	7623338.778	7623338.778	7623338.778
Y	705897.648	705869.1	705869.1	705868.1	705784.859	705787.943	705787.943	705787.943	705787.943
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	0.04 UJ	--	--	--	--	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ
C10-C12 Aliphatics unadjusted	**0.09**	--	--	--	--	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ
C12-C16 Aliphatics unadjusted	0.04 U	--	--	--	--	0.04 U	0.04 U	0.04 U	0.04 UJ
C16-C21 Aliphatics unadjusted	0.04 U	--	--	--	--	0.04 U	0.04 U	0.04 U	0.04 U
C21-C34 Aliphatics unadjusted	**0.067**	--	--	--	--	**0.064**	**0.042**	**0.078**	**0.152**
C10-C12 Aromatics unadjusted	**0.114 J**	--	--	--	--	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
C8-C10 Aromatics unadjusted	0.04 U	--	--	--	--	0.04 U	0.04 U	0.04 U	0.04 U
C12-C16 Aromatics unadjusted	**0.146**	--	--	--	--	0.04 U	0.04 U	0.04 U	0.04 UJ
C16-C21 Aromatics unadjusted	**0.146**	--	--	--	--	0.04 U	0.04 U	0.04 U	0.04 U
C21-C34 Aromatics unadjusted	0.04 U	--	--	--	--	0.04 U	0.04 U	0.04 U	0.04 U
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	0.005 U	--	--	--	--	0.005 U	0.005 U	0.005 U	0.005 U
n-Dodecane (C12)	0.005 U	--	--	--	--	0.005 U	0.005 U	0.005 U	0.005 U
n-Hexane (C6)	0.005 U	--	--	--	--	0.005 U	0.005 U	0.005 U	0.005 U
n-Octane (C8)	0.005 U	--	--	--	--	0.005 U	0.005 UJ	0.005 UJ	0.005 U
n-Pentane (C5)	0.005 U	--	--	--	--	0.005 U	0.005 U	0.005 U	0.005 U
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	0.05 U	--	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U
C6-C8 Aliphatics unadjusted	0.05 U	--	--	--	--	0.05 U	0.05 UJ	0.05 UJ	0.05 U
C8-C10 Aliphatics unadjusted	0.05 U	--	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U
C10-C12 Aliphatics unadjusted	0.05 U	--	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U
C10-C12 Aromatics unadjusted	**0.406**	--	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U
C8-C10 Aromatics unadjusted	**0.418**	--	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U
C12-C13 Aromatics unadjusted	**0.14**	--	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	**1.3**	0.189 U	0.194 U	0.19 U	0.192 U	**0.204**	**0.246 J**	**0.29 J**	0.19 U
Gasoline range hydrocarbons	**1.58**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Oil range organics	**0.252 J**	**0.796**	0.388 U	0.381 U	0.385 U	0.381 U	0.374 U	0.374 U	**0.452**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-02-32	MW-02-61	MW-02-61	MW-03-26	MW-03-26	MW-03-26	MW-03-26	MW-03-56	MW-03-56
Sample ID	GS-121522-08	GS-031022-13	GS-100622-116	GS-031022-12	GS-061522-06	GS-100422-113	GS-121922-14	GS-100322-110	GS-100322-111
Sample Date	12/15/2022	3/10/2022	10/6/2022	3/10/2022	6/15/2022	10/4/2022	12/19/2022	10/3/2022	10/3/2022
Depth	21.5 - 31.5 ft	50 - 60 ft	50 - 60 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623338.778	7623332.974	7623332.974	7623842.599	7623842.599	7623842.599	7623842.599	7623848.347	7623848.347
Y	705787.943	705792.178	705792.178	705486.817	705486.817	705486.817	705486.817	705485.438	705485.438
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.273**	**0.184**	**0.232**	**0.363**	**0.461**	**0.456**	**0.463**	**0.0979**	**0.0982**
Cyanide, available	0.002 U	**0.00143 J**	**0.00134 J**	**0.00944**	**0.0141**	**0.0019 J**	**0.001 J**	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	**241**	**177**	50 U	50 U	**26.7 J**	50 U	**5040**	**3990**
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.18**	**0.884 J**
Arsenic	1 U	**2.21**	**2.37**	1 U	**0.811 J**	**1.24**	**1.39**	**4.4**	**4.02**
Barium	**5.88**	**55.6**	**54.5**	**49.8**	**64.6**	**54.3**	**82.6**	**74.2**	**67**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.221**	**0.173 J**
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**13.1**	**10.2**
Copper	2 U	2 U	2 U	2 U	**2.25**	2 U	2 U	**14.2**	**10.7**
Iron	**285**	**25500**	**24700**	**3890**	**5480**	**12200**	**15300**	**25100**	**23500**
Lead	0.2 U	**0.226**	**0.112 J**	0.2 U	**0.166 J**	0.2 U	0.2 U	**4.08**	**3.24**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**352**	**1000**	**988**	**1810**	**2120**	**4790**	**4860**	**475**	**462**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**4.83**	**1.15 J**	2 U	**180**	**488**	**188**	**122**	**19.9**	**16.3**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	**1.51 J**	**1.29 J**	**32.4**	**57.4**	**273**	**58.9**	**47.9**	**38.2**
Zinc	**5.63**	**6.35**	**4.11**	**6.7**	**6.03**	**8.13**	**3.79 J**	**23.2**	**18.9**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-02-32	MW-02-61	MW-02-61	MW-03-26	MW-03-26	MW-03-26	MW-03-26	MW-03-56	MW-03-56
Sample ID	GS-121522-08	GS-031022-13	GS-100622-116	GS-031022-12	GS-061522-06	GS-100422-113	GS-121922-14	GS-100322-110	GS-100322-111
Sample Date	12/15/2022	3/10/2022	10/6/2022	3/10/2022	6/15/2022	10/4/2022	12/19/2022	10/3/2022	10/3/2022
Depth	21.5 - 31.5 ft	50 - 60 ft	50 - 60 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623338.778	7623332.974	7623332.974	7623842.599	7623842.599	7623842.599	7623842.599	7623848.347	7623848.347
Y	705787.943	705792.178	705792.178	705486.817	705486.817	705486.817	705486.817	705485.438	705485.438
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	5 U	--	--	--	--	--	5 U	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	0.2 U	0.2 U	0.2 U	**0.82**	**1.51**	**0.3**	0.2 U	0.2 U	0.2 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-02-32	MW-02-61	MW-02-61	MW-03-26	MW-03-26	MW-03-26	MW-03-26	MW-03-56	MW-03-56
Sample ID	GS-121522-08	GS-031022-13	GS-100622-116	GS-031022-12	GS-061522-06	GS-100422-113	GS-121922-14	GS-100322-110	GS-100322-111
Sample Date	12/15/2022	3/10/2022	10/6/2022	3/10/2022	6/15/2022	10/4/2022	12/19/2022	10/3/2022	10/3/2022
Depth	21.5 - 31.5 ft	50 - 60 ft	50 - 60 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623338.778	7623332.974	7623332.974	7623842.599	7623842.599	7623842.599	7623842.599	7623848.347	7623848.347
Y	705787.943	705792.178	705792.178	705486.817	705486.817	705486.817	705486.817	705485.438	705485.438
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.69 J**	**0.57 J**
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0748 U	0.0877 U	0.0809 U	**0.0956**	**0.147**	**0.216**	0.316 U	**2.51**	**2.73**
2-Methylnaphthalene	0.0748 U	0.0877 U	**0.0511 J**	0.0659 U	**0.0617 J**	**0.118**	0.316 U	0.333 U	0.33 U
Acenaphthene	**0.0276 J**	0.0439 U	0.0405 U	**0.252**	**0.202**	**0.413**	**0.456**	**8.16**	**8.3**
Acenaphthylene	**0.276**	**0.0899**	**0.0516**	**1.51**	**1.52**	**2.22**	**1.84**	**0.934**	**1.06**
Anthracene	**0.157**	**0.126**	**0.087**	**2**	**2.07**	**2.36**	**2.12**	**1.51**	**1.41**
Benzo(a)anthracene	0.0187 U	0.0219 U	0.0202 U	**0.0515**	**0.0531**	**0.0507**	**0.0809**	**0.464**	**0.729**
Benzo(a)pyrene	0.0187 U	0.0219 U	0.0202 U	**0.0115 J**	**0.0223**	0.0195 U	**0.0415 J**	**0.256**	**0.63**
Benzo(b)fluoranthene	0.0187 U	0.0219 U	0.0202 U	**0.019 J**	**0.0291**	0.0244 U	**0.0513 J**	**0.256**	**0.57**
Benzo(g,h,i)perylene	0.0374 U	0.0439 U	0.0405 U	**0.0317 J**	**0.0866**	0.039 U	0.158 U	**0.21**	**0.526**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-02-32	MW-02-61	MW-02-61	MW-03-26	MW-03-26	MW-03-26	MW-03-26	MW-03-56	MW-03-56
Sample ID	GS-121522-08	GS-031022-13	GS-100622-116	GS-031022-12	GS-061522-06	GS-100422-113	GS-121922-14	GS-100322-110	GS-100322-111
Sample Date	12/15/2022	3/10/2022	10/6/2022	3/10/2022	6/15/2022	10/4/2022	12/19/2022	10/3/2022	10/3/2022
Depth	21.5 - 31.5 ft	50 - 60 ft	50 - 60 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623338.778	7623332.974	7623332.974	7623842.599	7623842.599	7623842.599	7623842.599	7623848.347	7623848.347
Y	705787.943	705792.178	705792.178	705486.817	705486.817	705486.817	705486.817	705485.438	705485.438
Benzo(j,k)fluoranthene	0.0187 U	0.0219 U	0.0202 U	**0.0346**	**0.0351**	0.0609 U	**0.0494 J**	**0.0832 J**	**0.206 J**
Carbazole	0.0374 U	0.0439 U	0.0405 U	**0.121**	**0.137**	0.146 U	**0.103 J**	0.166 U	0.165 U
Chrysene	0.0187 U	0.0219 U	0.0202 U	**0.0136 J**	**0.0133 J**	**0.0122 J**	0.079 U	**0.503**	**0.77**
Dibenzo(a,h)anthracene	0.0187 U	0.0219 U	0.0202 U	0.0165 U	0.0171 U	0.0195 U	0.079 U	0.0832 U	**0.0578 J**
Dibenzofuran	0.0374 U	0.0439 U	0.0405 U	**0.119**	**0.0566**	**0.103**	**0.132 J**	**0.112 J**	**0.101 J**
Fluoranthene	0.0374 U	0.0439 U	0.0405 U	**0.0915**	**0.0758**	**0.0906**	**0.136 J**	**4.72**	**5.29**
Fluorene	0.0374 U	0.0439 U	0.0405 U	**0.375**	**0.247**	**0.506**	**0.344**	**2.26**	**2.19**
Indeno(1,2,3-c,d)pyrene	0.0187 U	0.0219 U	0.0202 U	**0.0206**	**0.0514**	**0.0107 J**	**0.0474 J**	**0.177**	**0.442**
Naphthalene	0.0748 U	0.0877 U	0.0809 U	**0.0849**	**0.54**	**0.221**	0.316 U	0.333 U	0.33 U
Phenanthrene	0.0748 U	0.0877 U	0.0809 U	**0.433**	**0.395**	**0.25**	**0.43**	**1.94**	**1.91**
Pyrene	0.0374 U	0.0439 U	0.0405 U	**0.0787**	**0.0698**	**0.11**	**0.219**	**5.96**	**6.69**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-02-32	MW-02-61	MW-02-61	MW-03-26	MW-03-26	MW-03-26	MW-03-26	MW-03-56	MW-03-56
Sample ID	GS-121522-08	GS-031022-13	GS-100622-116	GS-031022-12	GS-061522-06	GS-100422-113	GS-121922-14	GS-100322-110	GS-100322-111
Sample Date	12/15/2022	3/10/2022	10/6/2022	3/10/2022	6/15/2022	10/4/2022	12/19/2022	10/3/2022	10/3/2022
Depth	21.5 - 31.5 ft	50 - 60 ft	50 - 60 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623338.778	7623332.974	7623332.974	7623842.599	7623842.599	7623842.599	7623842.599	7623848.347	7623848.347
Y	705787.943	705792.178	705792.178	705486.817	705486.817	705486.817	705486.817	705485.438	705485.438
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	0.04 UJ	--	--	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ
C10-C12 Aliphatics unadjusted	0.04 U	--	--	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
C12-C16 Aliphatics unadjusted	0.04 U	--	--	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
C16-C21 Aliphatics unadjusted	0.04 U	--	--	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
C21-C34 Aliphatics unadjusted	**0.068 J**	--	--	**0.053**	**0.051**	**0.135**	**0.05**	0.04 U	0.04 U
C10-C12 Aromatics unadjusted	0.04 UJ	--	--	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ
C8-C10 Aromatics unadjusted	0.04 U	--	--	0.04 U	0.04 U	0.04 U	--	0.04 U	0.04 U
C12-C16 Aromatics unadjusted	0.04 UJ	--	--	0.04 U	0.04 U	0.04 U	0.04 UJ	0.04 U	0.04 U
C16-C21 Aromatics unadjusted	0.04 U	--	--	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
C21-C34 Aromatics unadjusted	0.04 U	--	--	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	0.005 U	--	--	--	--	--	0.005 U	--	--
Ethylbenzene	0.005 U	--	--	--	--	--	0.005 U	--	--
m,p-Xylene	0.01 U	--	--	--	--	--	0.01 U	--	--
Methyl tert-butyl ether (MTBE)	0.005 U	--	--	--	--	--	0.005 U	--	--
n-Decane (C10)	0.005 U	--	--	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U
n-Dodecane (C12)	0.005 U	--	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
n-Hexane (C6)	0.005 U	--	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
n-Octane (C8)	0.005 U	--	--	0.005 U	0.005 UJ	0.005 U	0.005 UJ	0.005 U	0.005 U
n-Pentane (C5)	0.005 U	--	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
o-Xylene	0.005 U	--	--	--	--	--	0.005 U	--	--
Toluene	0.005 U	--	--	--	--	--	0.005 U	--	--
C5-C6 Aliphatics unadjusted	0.05 U	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
C6-C8 Aliphatics unadjusted	0.05 U	--	--	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
C8-C10 Aliphatics unadjusted	0.05 U	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
C10-C12 Aliphatics unadjusted	0.05 U	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
C10-C12 Aromatics unadjusted	0.05 U	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
C8-C10 Aromatics unadjusted	0.05 U	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
C12-C13 Aromatics unadjusted	0.05 U	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	**0.154 J**	**0.204**	**0.216**	**0.696 J**	**0.645**	**0.635**	**0.979 J**	**1.17**	**0.99**
Gasoline range hydrocarbons	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.0941 J**	**0.0916 J**
Oil range organics	0.392 U	**0.479**	0.385 U	0.377 U	0.374 U	0.381 U	0.385 U	0.381 U	0.381 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-04-101	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-57	MW-05-100	MW-05-175
Sample ID	GS-092222-67	GS-032122-39	GS-061422-04	GS-092222-62	GS-121522-12	GS-121522-13	GS-092222-65	GS-092122-53	GS-092122-57
Sample Date	9/22/2022	3/21/2022	6/14/2022	9/22/2022	12/15/2022	12/15/2022	9/22/2022	9/21/2022	9/21/2022
Depth	89.5 - 99.5 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	46 - 56 ft	88 - 98 ft	163 - 173 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624095.388	7624102.6	7624102.6	7624102.6	7624102.6	7624102.6	7624107.356	7624340.271	7624347.754
Y	705380.33	705378.2	705378.2	705378.2	705378.2	705378.2	705375.173	705213.088	705207.625
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0147**	**0.118**	**0.154**	**0.304**	**0.128**	**0.126**	**0.233**	**0.16**	**0.0359**
Cyanide, available	0.002 UJ	0.002 U	**0.00365**	0.002 UJ	0.002 U	0.002 U	**0.00112 J**	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**103**	50 U	50 U	50 U	50 U	50 U	**11100**	**98.5**	**8130**
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**9.34**
Arsenic	**5.07**	**1.53**	**2.23**	**3.48**	**3.06**	**3.05**	**7.37**	**8.33**	**6.52**
Barium	**55.2**	**108**	**89**	**134**	**122**	**123**	**96.4**	**48.7**	**76.8**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.361**	0.2 U	**0.246**
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.933**
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	**22.5**	2 U	2 U	**22.3**	**1.48 J**	**8.91**
Copper	2 U	2 U	2 U	2 U	2 U	2 U	**20.4**	2 U	**15.9**
Iron	**25700**	**20400**	**21400**	**37200**	**18100**	**17900**	**28100**	**30500**	**35700**
Lead	0.2 U	0.2 U	0.2 U	**0.125 J**	0.2 U	0.2 U	**3.63**	**0.189 J**	**11**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**2770**	**5490**	**5680**	**11900**	**6360**	**6320**	**3620**	**2090**	**2270**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	2 U	2 U	**11.8**	**1.09 J**	2 U	**20.9**	**1.12 J**	**11.5**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U	20 U	20 U	**40.7**	2 U	**23.3**
Zinc	**3.15 J**	**2.52 J**	4 U	4 U	**3.47 J**	**3.26 J**	**27.5**	**8.35**	**49**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-04-101	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-57	MW-05-100	MW-05-175
Sample ID	GS-092222-67	GS-032122-39	GS-061422-04	GS-092222-62	GS-121522-12	GS-121522-13	GS-092222-65	GS-092122-53	GS-092122-57
Sample Date	9/22/2022	3/21/2022	6/14/2022	9/22/2022	12/15/2022	12/15/2022	9/22/2022	9/21/2022	9/21/2022
Depth	89.5 - 99.5 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	46 - 56 ft	88 - 98 ft	163 - 173 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624095.388	7624102.6	7624102.6	7624102.6	7624102.6	7624102.6	7624107.356	7624340.271	7624347.754
Y	705380.33	705378.2	705378.2	705378.2	705378.2	705378.2	705375.173	705213.088	705207.625
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	5 U	5 U	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	**0.75 J**	1 U	1 U	**4**	20 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	**2.67**	20 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	400 U	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U	2 U
Benzene	0.2 U	**0.22**	0.2 U	**0.99**	**0.11 J**	**0.11 J**	**7.24**	**965**	0.2 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Bromomethane (Methyl bromide)	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	100 UJ	5 UJ
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Chlorobenzene	**0.34 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-04-101	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-57	MW-05-100	MW-05-175
Sample ID	GS-092222-67	GS-032122-39	GS-061422-04	GS-092222-62	GS-121522-12	GS-121522-13	GS-092222-65	GS-092122-53	GS-092122-57
Sample Date	9/22/2022	3/21/2022	6/14/2022	9/22/2022	12/15/2022	12/15/2022	9/22/2022	9/21/2022	9/21/2022
Depth	89.5 - 99.5 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	46 - 56 ft	88 - 98 ft	163 - 173 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624095.388	7624102.6	7624102.6	7624102.6	7624102.6	7624102.6	7624107.356	7624340.271	7624347.754
Y	705380.33	705378.2	705378.2	705378.2	705378.2	705378.2	705375.173	705213.088	705207.625
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	**0.5 J**	20 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.14**	10 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	**0.54 J**	1 U	1 U	**2.08**	20 U	1 U
m,p-Xylene	1 U	1 U	1 U	**1.64**	1 U	1 U	**4.18**	20 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.35 J**	10 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	**1.21**	0.5 U	0.5 U	**3.96**	10 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Styrene	2 U	1 U	1 U	2 U	1 U	1 U	2 U	40 U	2 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U	0.4 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	**0.72 J**	20 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U	2 U
1,2-Dichlorobenzene	**0.39 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0739 U	**1.71**	**7.37**	**9.91**	**0.828**	**0.778**	**152**	**76**	**0.0921**
2-Methylnaphthalene	0.0739 U	0.0803 U	**0.0783**	**0.154**	0.673 U	0.688 U	**22.8**	**79.2**	**0.118**
Acenaphthene	**0.11**	**31.7**	**62.7**	**58.5**	**37.2**	**39.5**	**243**	**16.6**	**0.0939**
Acenaphthylene	**0.0222 J**	**2.06**	**2.48**	**4.17**	**4.97**	**4.83**	**4.72**	**2.01 J**	**0.0465**
Anthracene	0.037 U	**1.39**	**2.23**	**3.57**	**1.45**	**1.53**	**4.2**	3.82 U	**0.0613**
Benzo(a)anthracene	0.0185 U	**0.0883**	**0.118**	**0.162**	**0.189**	**0.219**	**0.0647**	1.91 U	**0.0523**
Benzo(a)pyrene	0.0185 U	**0.0196 J**	**0.0209**	**0.0438**	0.168 U	0.172 U	**0.0674**	1.91 U	**0.0872**
Benzo(b)fluoranthene	0.0185 U	**0.0241**	**0.0272 J**	**0.0358**	0.168 U	0.172 U	**0.0551 J**	1.91 U	**0.0715**
Benzo(g,h,i)perylene	0.037 U	0.0402 U	0.0389 U	0.0398 U	0.336 U	0.344 U	**0.0454**	3.82 U	**0.0729**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-04-101	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-57	MW-05-100	MW-05-175
Sample ID	GS-092222-67	GS-032122-39	GS-061422-04	GS-092222-62	GS-121522-12	GS-121522-13	GS-092222-65	GS-092122-53	GS-092122-57
Sample Date	9/22/2022	3/21/2022	6/14/2022	9/22/2022	12/15/2022	12/15/2022	9/22/2022	9/21/2022	9/21/2022
Depth	89.5 - 99.5 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	46 - 56 ft	88 - 98 ft	163 - 173 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624095.388	7624102.6	7624102.6	7624102.6	7624102.6	7624102.6	7624107.356	7624340.271	7624347.754
Y	705380.33	705378.2	705378.2	705378.2	705378.2	705378.2	705375.173	705213.088	705207.625
Benzo(j,k)fluoranthene	0.0185 U	**0.0146 J**	**0.0126 J**	**0.0244 J**	0.168 U	0.172 U	**0.0436 J**	1.91 U	**0.0268 J**
Carbazole	0.037 U	0.1 U	0.0876 U	**0.266**	0.336 U	0.344 U	**92.3**	**11.6**	0.0358 U
Chrysene	0.0185 U	**0.0913**	**0.108**	**0.13**	**0.189**	**0.189**	**0.0684**	1.91 U	**0.0608**
Dibenzo(a,h)anthracene	0.0185 U	0.0201 U	0.0195 U	0.0199 U	0.168 U	0.172 U	0.0184 U	1.91 U	**0.00984 J**
Dibenzofuran	0.037 U	**0.114**	**0.141**	**0.725**	0.336 U	0.344 U	**6.1**	3.82 U	0.0358 U
Fluoranthene	0.037 U	**3.59**	**4.47**	**6.28**	**5.3**	**5.6**	**0.456**	3.82 U	**0.154**
Fluorene	**0.0328 J**	**7.72**	**18.3**	**18.3**	**10.5**	**11.2**	**39**	3.82 U	**0.0519**
Indeno(1,2,3-c,d)pyrene	0.0185 U	0.0201 U	0.0195 U	0.0199 U	0.168 U	0.172 U	**0.044**	1.91 U	**0.0617**
Naphthalene	0.0739 U	**0.316**	**0.383**	**1.58**	0.673 U	0.688 U	**5.32**	**161**	**0.39**
Phenanthrene	0.0739 U	**0.777**	**2.72**	**4.44**	**0.551 J**	**0.533 J**	**25.3**	7.64 U	**0.228**
Pyrene	0.037 U	**3.36**	**4.2**	**5.66**	**4.95**	**5.14**	**0.295**	3.82 U	**0.197**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-04-101	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-35	MW-04-57	MW-05-100	MW-05-175
Sample ID	GS-092222-67	GS-032122-39	GS-061422-04	GS-092222-62	GS-121522-12	GS-121522-13	GS-092222-65	GS-092122-53	GS-092122-57
Sample Date	9/22/2022	3/21/2022	6/14/2022	9/22/2022	12/15/2022	12/15/2022	9/22/2022	9/21/2022	9/21/2022
Depth	89.5 - 99.5 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	24 - 34 ft	46 - 56 ft	88 - 98 ft	163 - 173 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624095.388	7624102.6	7624102.6	7624102.6	7624102.6	7624102.6	7624107.356	7624340.271	7624347.754
Y	705380.33	705378.2	705378.2	705378.2	705378.2	705378.2	705375.173	705213.088	705207.625
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	--
C10-C12 Aliphatics unadjusted	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	**0.066 J**	**0.142 J**	--
C12-C16 Aliphatics unadjusted	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	--
C16-C21 Aliphatics unadjusted	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	--
C21-C34 Aliphatics unadjusted	0.04 U	**0.068 J**	0.04 U	0.04 U	**0.074 J**	**0.083 J**	0.04 U	**0.11**	--
C10-C12 Aromatics unadjusted	0.04 U	0.04 U	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	**0.067**	**0.339**	--
C8-C10 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	**0.083**	**0.192**	--
C12-C16 Aromatics unadjusted	0.04 UJ	0.04 UJ	**0.082**	**0.071 J**	**0.049 J**	**0.04 J**	**0.391 J**	**0.142 J**	--
C16-C21 Aromatics unadjusted	0.04 U	0.04 U	**0.058**	**0.071**	**0.058**	**0.064**	**0.125**	0.04 U	--
C21-C34 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	0.005 U	0.005 U	--	--	--
Ethylbenzene	--	--	--	--	0.005 U	0.005 U	--	--	--
m,p-Xylene	--	--	--	--	0.01 U	0.01 U	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	0.005 U	0.005 U	--	--	--
n-Decane (C10)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--
n-Dodecane (C12)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	**0.007**	**0.011**	--
n-Hexane (C6)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--
n-Octane (C8)	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--
n-Pentane (C5)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--
o-Xylene	--	--	--	--	0.005 U	0.005 U	--	--	--
Toluene	--	--	--	--	0.005 U	0.005 U	--	--	--
C5-C6 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--
C6-C8 Aliphatics unadjusted	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	**0.174**	--
C8-C10 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--
C10-C12 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.24**	**0.341**	--
C10-C12 Aromatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.323**	**1.12**	--
C8-C10 Aromatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.065**	--
C12-C13 Aromatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.321**	**1.02**	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	0.19 U	**0.468 J**	**0.823 J**	**1.16**	**0.525 J**	**0.61 J**	**2.27**	**2.48**	**0.102 J**
Gasoline range hydrocarbons	**0.116**	0.1 U	0.1 U	**0.131**	0.1 U	0.1 U	**1.42**	**5.28**	0.1 U
Oil range organics	0.381 U	**0.518**	0.381 U	0.381 U	**0.344 J**	**0.381 J**	0.385 U	**0.488**	0.385 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-05-32	MW-07-60	MW-08-29	MW-08-56	MW-09-29	MW-10-61	MW-12-36	MW-14-110	MW-14-110
Sample ID	GS-092122-59	GS-101322-132	GS-101322-131	GS-101322-133	GS-101722-136	GS-101722-134	GS-101722-135	GS-100622-117	GS-101222-129
Sample Date	9/21/2022	10/13/2022	10/13/2022	10/13/2022	10/17/2022	10/17/2022	10/17/2022	10/6/2022	10/12/2022
Depth	21 - 31 ft	50 - 60 ft	18 - 28 ft	45 - 55 ft	18 - 28 ft	50 - 60 ft	25 - 35 ft	98 - 108 ft	98 - 108 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624346.862	7623510.28	7623959	7623956.1	7623072.763	7623481.412	7623621.3	7623751.323	7623751.323
Y	705217.209	705392.85	705168.7	705170.8	705017.333	704945.978	704130.4	704881.681	704881.681
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	**194**	--	**453**	**101**	**210**	--	--	**307**
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	20 U	--	20 U	20 U	20 U	--	--	20 U
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	20 U	--	20 U	20 U	20 U	--	--	20 U
Alkalinity, total as calcium carbonate (CaCO3)	--	**194**	--	**453**	**101**	**210**	--	--	**307**
Ammonia as nitrogen	--	**5.66**	--	**2.07**	0.02 U	**0.113**	--	--	**0.035**
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.137**	**0.162**	**0.806**	**0.641**	**0.0444**	0.005 U	0.005 U	**0.0133**	--
Cyanide, available	0.002 U	0.002 U	**0.0035**	**0.00304**	0.002 U	0.002 U	0.002 U	0.002 U	--
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--
Nitrate as nitrogen	--	0.25 U	--	0.25 U	**0.41 J**	0.25 UJ	--	--	0.25 U
Sulfate	--	**0.505 J**	--	**0.58 J**	**10.4**	**181**	--	--	**363**
Sulfide	--	0.05 U	--	0.05 U	0.05 U	0.05 U	--	--	0.05 U
Conventional Parameters, Dissolved (mg/L)									
Methane	--	**0.866**	--	**17.2**	**0.00264**	**0.0289**	--	--	**0.0391**
Metals (µg/L)									
Aluminum	50 U	**118000**	**594**	**1740**	50 U	50 U	50 U	**41 J**	--
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
Arsenic	1 U	**23.7**	**0.958 J**	**5.4**	**2.89**	**3.1**	**2.65**	**13.1**	--
Barium	**19.4**	**562**	**575**	**83**	**11.9**	**46**	**32.4**	**43.8**	--
Beryllium	0.2 U	**3.64**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--
Cadmium	0.2 U	**0.896**	0.2 U	0.2 U	0.2 U	**0.111 J**	0.2 U	**0.101 J**	--
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	**153**	**1.73 J**	**3.45**	2 U	**2.48**	2 U	2 U	--
Copper	2 U	**178**	**1.02 J**	**2.66**	2 U	2 U	2 U	2 U	--
Iron	**580**	**170000**	**33400**	**28200**	**52.6**	**136**	**5000**	**2430**	--
Lead	0.2 U	**30**	**0.654**	**0.633**	0.2 U	0.2 U	0.2 U	0.2 U	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**3160**	**4610**	**3130**	**2550**	**48**	**3370**	**3610**	**12100**	--
Mercury	0.08 U	**0.0858**	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	--
Nickel	**2.61**	**124**	**3.18**	**3**	**1.29 J**	**3.25**	2 U	**1.71 J**	--
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	**2.71**	1 U	1 U	1 U	1 U	1 U	1 U	--
Silver	0.2 U	**0.338**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	**0.422**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--
Vanadium	**1.22 J**	**424**	**2.54**	**6.45**	**32.2**	**13.2**	2 U	2 U	--
Zinc	**3.16 J**	**291**	**5.62**	**4.48**	**4.75**	**3.97 J**	**7.12**	**4.65**	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-05-32	MW-07-60	MW-08-29	MW-08-56	MW-09-29	MW-10-61	MW-12-36	MW-14-110	MW-14-110
Sample ID	GS-092122-59	GS-101322-132	GS-101322-131	GS-101322-133	GS-101722-136	GS-101722-134	GS-101722-135	GS-100622-117	GS-101222-129
Sample Date	9/21/2022	10/13/2022	10/13/2022	10/13/2022	10/17/2022	10/17/2022	10/17/2022	10/6/2022	10/12/2022
Depth	21 - 31 ft	50 - 60 ft	18 - 28 ft	45 - 55 ft	18 - 28 ft	50 - 60 ft	25 - 35 ft	98 - 108 ft	98 - 108 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624346.862	7623510.28	7623959	7623956.1	7623072.763	7623481.412	7623621.3	7623751.323	7623751.323
Y	705217.209	705392.85	705168.7	705170.8	705017.333	704945.978	704130.4	704881.681	704881.681
Metals, Dissolved (µg/L)									
Iron	--	**12200**	**341**	**25700**	50 U	**125**	--	--	**2200**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	**2400**	**3270**	**2600**	**53.6**	**3460**	--	--	**12800**
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	2 U	0.4 U	--
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	2 U	0.4 U	--
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	2 U	0.4 U	--
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	0.5 U	0.4 U	--
1,1-Dichloropropene	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
1,2,3-Trichlorobenzene	2 U	2 U	2 U	200 U	2 U	2 U	10 U	2 U	--
1,2,3-Trichloropropane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	**6.26**	**329**	1 U	1 U	**48**	1 U	--
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	500 U	5 U	5 U	25 U	5 U	--
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	2 U	0.4 U	--
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	**0.293 J**	0.4 U	--
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	0.5 U	0.4 U	--
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	**1.9**	**116**	1 U	1 U	**6.25**	1 U	--
1,3-Dichloropropane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
1,3-Dichloropropene, cis-	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
1,3-Dichloropropene, trans-	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
2,2-Dichloropropane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
2-Chlorotoluene	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	1000 U	10 U	10 U	50 U	10 U	--
4-Chlorotoluene	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	1000 U	10 U	10 U	50 U	10 U	--
Acetone	20 U	20 U	20 U	2000 U	20 U	20 U	100 U	20 U	--
Acrylonitrile	2 U	2 U	2 U	200 U	2 U	2 U	10 U	2 U	--
Benzene	0.2 U	0.2 U	**49.6**	**34600**	0.2 U	0.2 U	**56.6**	0.2 U	--
Bromobenzene	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
Bromochloromethane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Bromodichloromethane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Bromoform (Tribromomethane)	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Bromomethane (Methyl bromide)	5 UJ	5 U	5 U	500 U	5 U	5 U	25 U	5 U	--
Carbon disulfide	10 U	10 U	10 U	1000 U	10 U	10 U	50 U	10 U	--
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Chlorobenzene	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-05-32	MW-07-60	MW-08-29	MW-08-56	MW-09-29	MW-10-61	MW-12-36	MW-14-110	MW-14-110
Sample ID	GS-092122-59	GS-101322-132	GS-101322-131	GS-101322-133	GS-101722-136	GS-101722-134	GS-101722-135	GS-100622-117	GS-101222-129
Sample Date	9/21/2022	10/13/2022	10/13/2022	10/13/2022	10/17/2022	10/17/2022	10/17/2022	10/6/2022	10/12/2022
Depth	21 - 31 ft	50 - 60 ft	18 - 28 ft	45 - 55 ft	18 - 28 ft	50 - 60 ft	25 - 35 ft	98 - 108 ft	98 - 108 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624346.862	7623510.28	7623959	7623956.1	7623072.763	7623481.412	7623621.3	7623751.323	7623751.323
Y	705217.209	705392.85	705168.7	705170.8	705017.333	704945.978	704130.4	704881.681	704881.681
Chloroethane	5 U	5 U	5 U	500 U	5 U	5 U	25 U	5 U	--
Chloroform	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Chloromethane	5 U	5 U	5 U	500 U	5 U	5 U	25 U	5 U	--
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Dibromochloromethane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Dibromomethane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Dichlorodifluoromethane	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	1000 U	10 U	10 U	50 U	10 U	--
Ethylbenzene	0.5 U	0.5 U	**16.2**	**1450**	0.5 U	0.5 U	**282**	0.5 U	--
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	500 U	5 U	5 U	25 U	5 U	--
Isopropylbenzene (Cumene)	1 U	1 U	**0.66 J**	100 U	1 U	1 U	**8.65**	1 U	--
m,p-Xylene	1 U	1 U	**10.8**	**1330**	1 U	1 U	**454**	1 U	--
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	1000 U	10 U	10 U	50 U	10 U	--
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
n-Butylbenzene	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
n-Propylbenzene	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	**5.35**	0.5 U	--
o-Xylene	0.5 U	0.5 U	**11.4**	**617**	0.5 U	0.5 U	**50.6**	0.5 U	--
sec-Butylbenzene	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Styrene	2 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
tert-Butylbenzene	1 U	1 U	1 U	100 U	1 U	1 U	5 U	1 U	--
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	2 U	0.4 U	--
Toluene	1 U	1 U	**7.6**	**2500**	1 U	1 U	**82.2**	1 U	--
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	0.5 U	0.4 U	--
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	200 U	2 U	2 U	10 U	2 U	--
Vinyl chloride	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U	0.5 U	0.4 U	--
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	200 U	2 U	2 U	10 U	2 U	--
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U	2.5 U	0.5 U	--
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0659 U	0.0897 U	**70.2**	**1110**	0.0654 U	0.0658 U	71.6 U	**0.0934**	--
2-Methylnaphthalene	0.0659 U	0.0897 U	**57.4**	**1950**	0.0654 U	0.0658 U	71.6 U	**0.0536 J**	--
Acenaphthene	**0.0317 J**	0.0448 U	**136**	**579**	0.0327 U	0.0329 U	**30.4 J**	0.0343 U	--
Acenaphthylene	**0.832**	0.0448 U	**25.1**	**210**	**0.0347**	**0.0288 J**	35.8 U	**0.309**	--
Anthracene	**0.97**	**0.0387 J**	**8.89**	**177**	**0.0752**	**0.0662**	35.8 U	**0.206**	--
Benzo(a)anthracene	**0.0292**	0.0224 U	2.01 U	**95.2**	0.0163 U	**0.014 J**	17.9 U	0.0171 U	--
Benzo(a)pyrene	0.0165 U	0.0224 U	2.01 U	**115**	0.0163 U	**0.0123 J**	17.9 U	0.0171 U	--
Benzo(b)fluoranthene	0.0165 U	0.0224 U	2.01 U	**99.9**	0.0163 U	**0.0111 J**	17.9 U	0.0171 U	--
Benzo(g,h,i)perylene	0.0329 U	0.0448 U	4.02 U	**96.2**	0.0327 U	0.0329 U	35.8 U	0.0343 U	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-05-32	MW-07-60	MW-08-29	MW-08-56	MW-09-29	MW-10-61	MW-12-36	MW-14-110	MW-14-110
Sample ID	GS-092122-59	GS-101322-132	GS-101322-131	GS-101322-133	GS-101722-136	GS-101722-134	GS-101722-135	GS-100622-117	GS-101222-129
Sample Date	9/21/2022	10/13/2022	10/13/2022	10/13/2022	10/17/2022	10/17/2022	10/17/2022	10/6/2022	10/12/2022
Depth	21 - 31 ft	50 - 60 ft	18 - 28 ft	45 - 55 ft	18 - 28 ft	50 - 60 ft	25 - 35 ft	98 - 108 ft	98 - 108 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624346.862	7623510.28	7623959	7623956.1	7623072.763	7623481.412	7623621.3	7623751.323	7623751.323
Y	705217.209	705392.85	705168.7	705170.8	705017.333	704945.978	704130.4	704881.681	704881.681
Benzo(j,k)fluoranthene	**0.0152 J**	0.0224 U	2.01 U	**41.6**	0.0163 U	0.0164 U	17.9 U	0.0171 U	--
Carbazole	**0.0432**	**0.0342 J**	**72.8**	**196**	0.0327 U	0.0329 U	**21 J**	**0.0356**	--
Chrysene	**0.0156 J**	0.0224 U	2.01 U	**130**	0.0163 U	**0.0189**	17.9 U	0.0171 U	--
Dibenzo(a,h)anthracene	0.0165 U	0.0224 U	2.01 U	**14 J**	0.0163 U	0.0164 U	17.9 U	0.0171 U	--
Dibenzofuran	0.0329 U	0.0448 U	**6.43**	**74.4**	0.0327 U	0.0329 U	35.8 U	0.0343 U	--
Fluoranthene	**0.0193 J**	**0.0247 J**	**4.02**	**391**	0.0327 U	0.0329 U	35.8 U	0.0343 U	--
Fluorene	0.154 U	0.0448 U	**36**	**315**	0.0327 U	0.0329 U	35.8 U	**0.0866**	--
Indeno(1,2,3-c,d)pyrene	0.0165 U	0.0224 U	2.01 U	**87.4**	0.0163 U	0.0164 U	17.9 U	0.0171 U	--
Naphthalene	0.0659 U	**0.336**	**984**	**19200**	0.0654 U	**0.0872**	**625**	**0.131**	--
Phenanthrene	**0.0449 J**	0.0897 U	**41.9**	**1080**	0.0654 U	0.0658 U	71.6 U	0.0686 U	--
Pyrene	**0.302**	**0.0263 J**	**3.87 J**	**433**	0.0327 U	**0.0526**	35.8 U	0.0343 U	--
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-05-32	MW-07-60	MW-08-29	MW-08-56	MW-09-29	MW-10-61	MW-12-36	MW-14-110	MW-14-110
Sample ID	GS-092122-59	GS-101322-132	GS-101322-131	GS-101322-133	GS-101722-136	GS-101722-134	GS-101722-135	GS-100622-117	GS-101222-129
Sample Date	9/21/2022	10/13/2022	10/13/2022	10/13/2022	10/17/2022	10/17/2022	10/17/2022	10/6/2022	10/12/2022
Depth	21 - 31 ft	50 - 60 ft	18 - 28 ft	45 - 55 ft	18 - 28 ft	50 - 60 ft	25 - 35 ft	98 - 108 ft	98 - 108 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624346.862	7623510.28	7623959	7623956.1	7623072.763	7623481.412	7623621.3	7623751.323	7623751.323
Y	705217.209	705392.85	705168.7	705170.8	705017.333	704945.978	704130.4	704881.681	704881.681
Dinoseb	--	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)										
C8-C10 Aliphatics unadjusted	0.04 UJ	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	0.04 UJ	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	0.04 U	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	0.04 U	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	**0.102**	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	0.04 U	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	0.04 U	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	0.04 UJ	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	0.04 U	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	0.04 U	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)										
Benzene	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--	--
n-Decane (C10)	0.005 U	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	0.005 U	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	0.005 U	--	--	--	--	--	--	--	--	--
n-Octane (C8)	0.005 U	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	0.005 U	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	0.05 U	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	0.05 U	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	0.05 U	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	0.05 U	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	0.05 U	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	0.05 U	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	0.05 U	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)										
Diesel range hydrocarbons	0.19 U	0.202 U	**10.8**	**73.7**	0.19 U	**0.143 J**	**1.63**	**0.355**	--
Gasoline range hydrocarbons	0.1 U	0.1 U	**2.98**	**160**	0.1 U	0.1 U	**5.96**	0.1 U	--
Oil range organics	**0.518**	**0.363 J**	0.385 U	**10.8**	**0.422**	**0.265 J**	**0.298 J**	**0.386**	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-15-50	MW-15-66	MW-16-65	MW-18-125	MW-18-180	MW-18-180	MW-19-125	MW-19-180	MW-19-22
Sample ID	GS-101222-128	GS-101222-127	GS-100322-112	GS-101122-125	GS-101122-123	GS-101122-124	GS-092222-66	GS-091922-38	GS-091922-37
Sample Date	10/12/2022	10/12/2022	10/3/2022	10/11/2022	10/11/2022	10/11/2022	9/22/2022	9/19/2022	9/19/2022
Depth	40 - 50 ft	60.5 - 65.5 ft	55 - 65 ft	115 - 125 ft	170 - 180 ft	170 - 180 ft	115 - 125 ft	170 - 180 ft	12 - 22 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623699.5	7623705.5	7623950.4	7623935.84	7623930.4	7623930.4	7624246	7624240	7624251
Y	704648.7	704639.7	705478.84	705436.81	705444.23	705444.23	705295	705298	705292
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**844**	--	--	--	--	--	**254**	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	--	--	--	--	--	20 U	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	--	--	--	--	--	20 U	--	--
Alkalinity, total as calcium carbonate (CaCO3)	**844**	--	--	--	--	--	**254**	--	--
Ammonia as nitrogen	**0.244**	--	--	--	--	--	**5.26**	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.141**	0.005 U	**0.122**	**0.0259**	**0.0222**	**0.0191**	**0.0877**	**0.0395**	**0.0912**
Cyanide, available	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 UJ	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	--	--	--	--	--	0.25 U	--	--
Sulfate	**234**	--	--	--	--	--	**25.4**	--	--
Sulfide	0.05 U	--	--	--	--	--	0.05 U	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	**1.88**	--	--	--	--	--	**0.0798**	--	--
Metals (µg/L)									
Aluminum	**98.9**	**168**	**6150**	**208**	**135**	**149**	**43.6 J**	**215**	50 U
Antimony	1 U	1 U	1 U	**2.43**	1 U	1 U	1 U	**0.571 J**	1 U
Arsenic	**21.4**	**5.17**	**5.52**	**8.83**	**0.638 J**	**0.624 J**	**3.49**	**1.05**	**1.92**
Barium	**153**	**11.6**	**72.2**	**77.6**	**23.2**	**23**	**52.3**	**33.7**	**35.4**
Beryllium	0.2 U	0.2 U	**0.279**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	**10.4**	**6.63**	2 U	2 U	2 U	2 U	2 U
Copper	2 U	2 U	**13.8**	**2.23**	2 U	2 U	2 U	2 U	2 U
Iron	**13500**	**280**	**30400**	**28300**	**3970**	**3940**	**25800**	**15300**	**20200**
Lead	**0.167 J**	**0.12 J**	**2.76**	**0.187 J**	**0.153 J**	**0.167 J**	0.2 U	**0.512**	**0.112 J**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**23800**	**310**	**2090**	**1940**	**128**	**123**	**2500**	**649**	**2610**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	**1.18 J**	**8.54**	**5.07**	2 U	2 U	2 U	2 U	**6.66**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	**0.592 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	**0.103 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**2.17**	**45.1**	**24.8**	2 U	2 U	2 U	2 U	2 U	2 U
Zinc	**2.65 J**	4 U	**17.7**	**31.7**	**4.26**	**4.01**	**2.61 J**	**4.53**	**2.65 J**

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2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-15-50	MW-15-66	MW-16-65	MW-18-125	MW-18-180	MW-18-180	MW-19-125	MW-19-180	MW-19-22
Sample ID	GS-101222-128	GS-101222-127	GS-100322-112	GS-101122-125	GS-101122-123	GS-101122-124	GS-092222-66	GS-091922-38	GS-091922-37
Sample Date	10/12/2022	10/12/2022	10/3/2022	10/11/2022	10/11/2022	10/11/2022	9/22/2022	9/19/2022	9/19/2022
Depth	40 - 50 ft	60.5 - 65.5 ft	55 - 65 ft	115 - 125 ft	170 - 180 ft	170 - 180 ft	115 - 125 ft	170 - 180 ft	12 - 22 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623699.5	7623705.5	7623950.4	7623935.84	7623930.4	7623930.4	7624246	7624240	7624251
Y	704648.7	704639.7	705478.84	705436.81	705444.23	705444.23	705295	705298	705292
Metals, Dissolved (µg/L)									
Iron	**12000**	--	--	--	--	--	**26300**	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**25600**	--	--	--	--	--	**2750**	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	100 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**93.5**	1 U	**35.9**	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	250 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	**34 J**	1 U	**4.54**	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	500 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	500 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	1000 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	100 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	**35200**	0.2 U	**313**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.49**
Bromobenzene	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	250 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U
Carbon disulfide	500 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.37 J**	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-15-50	MW-15-66	MW-16-65	MW-18-125	MW-18-180	MW-18-180	MW-19-125	MW-19-180	MW-19-22
Sample ID	GS-101222-128	GS-101222-127	GS-100322-112	GS-101122-125	GS-101122-123	GS-101122-124	GS-092222-66	GS-091922-38	GS-091922-37
Sample Date	10/12/2022	10/12/2022	10/3/2022	10/11/2022	10/11/2022	10/11/2022	9/22/2022	9/19/2022	9/19/2022
Depth	40 - 50 ft	60.5 - 65.5 ft	55 - 65 ft	115 - 125 ft	170 - 180 ft	170 - 180 ft	115 - 125 ft	170 - 180 ft	12 - 22 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623699.5	7623705.5	7623950.4	7623935.84	7623930.4	7623930.4	7624246	7624240	7624251
Y	704648.7	704639.7	705478.84	705436.81	705444.23	705444.23	705295	705298	705292
Chloroethane	250 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	250 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	50 U	1 U	**0.78 J**	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	500 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	**215**	0.5 U	**41.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	250 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	50 U	1 U	**6.87**	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	**460**	1 U	**27.6**	1 U	1 U	1 U	1 U	1 U	**0.68 J**
Methyl ethyl ketone (2-Butanone)	500 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	25 U	0.5 U	**1.84**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	**207**	0.5 U	**36.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.36**
sec-Butylbenzene	50 U	1 U	**0.58 J**	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	50 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U
tert-Butylbenzene	50 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	**103**	1 U	**2.35**	1 U	1 U	1 U	1 U	1 U	**1.1**
Trichloroethene (TCE)	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	100 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	100 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	25 U	0.5 U	0.5 U	0.5 U	**1.23**	**1.15**	**1.02**	0.5 U	0.5 U
1,3-Dichlorobenzene	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	25 U	0.5 U	0.5 U	0.5 U	**0.32 J**	**0.27 J**	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**563**	0.0686 U	**88.3**	**0.341**	0.0721 U	0.0696 U	0.0916 U	**1.61**	**27.9**
2-Methylnaphthalene	**310**	0.0686 U	**126**	**0.0583 J**	0.0721 U	0.0696 U	0.0916 U	**1.12**	**5.93**
Acenaphthene	**58.8**	0.0343 U	**37.4**	**1.43**	0.0676 U	0.0653 U	**0.0338 J**	**2.68**	**61.3**
Acenaphthylene	**27.6**	**0.0253 J**	3.89 U	**0.238**	**0.0288 J**	**0.03 J**	**0.0366 J**	0.344 U	**7.67**
Anthracene	**5.71**	0.0343 U	**9.53**	**0.575**	**0.0252 J**	**0.0257 J**	**0.028 J**	**0.613**	**14.5**
Benzo(a)anthracene	1.86 U	**0.0163 J**	**1.22 J**	**0.118**	**0.0108 J**	**0.00914 J**	0.0229 U	**0.149**	**1**
Benzo(a)pyrene	1.86 U	**0.0317**	1.94 U	**0.0471**	**0.0153 J**	**0.0122 J**	0.0229 U	**0.176**	**0.462**
Benzo(b)fluoranthene	1.86 U	**0.0338**	1.94 U	**0.0445**	**0.0153 J**	**0.0131 J**	0.0229 U	**0.159**	**0.499**
Benzo(g,h,i)perylene	3.72 U	**0.0257 J**	3.89 U	**0.0317 J**	0.0361 U	0.0348 U	0.0458 U	**0.135**	**0.328 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-15-50	MW-15-66	MW-16-65	MW-18-125	MW-18-180	MW-18-180	MW-19-125	MW-19-180	MW-19-22
Sample ID	GS-101222-128	GS-101222-127	GS-100322-112	GS-101122-125	GS-101122-123	GS-101122-124	GS-092222-66	GS-091922-38	GS-091922-37
Sample Date	10/12/2022	10/12/2022	10/3/2022	10/11/2022	10/11/2022	10/11/2022	9/22/2022	9/19/2022	9/19/2022
Depth	40 - 50 ft	60.5 - 65.5 ft	55 - 65 ft	115 - 125 ft	170 - 180 ft	170 - 180 ft	115 - 125 ft	170 - 180 ft	12 - 22 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623699.5	7623705.5	7623950.4	7623935.84	7623930.4	7623930.4	7624246	7624240	7624251
Y	704648.7	704639.7	705478.84	705436.81	705444.23	705444.23	705295	705298	705292
Benzo(j,k)fluoranthene	1.86 U	**0.009 J**	1.94 U	**0.0159 J**	0.018 U	0.0174 U	0.0229 U	**0.0518**	**0.148 J**
Carbazole	**45.5**	0.0343 U	**17.6**	**0.171**	**0.0216 J**	0.0348 U	**0.0349 J**	**0.333**	**16.2**
Chrysene	1.86 U	**0.0133 J**	**1.31 J**	**0.127**	**0.00946 J**	**0.0087 J**	0.0229 U	**0.189**	**1.09**
Dibenzo(a,h)anthracene	1.86 U	0.0171 U	1.94 U	0.0205 U	0.018 U	0.0174 U	0.0229 U	**0.016 J**	0.185 U
Dibenzofuran	**25.4**	0.0343 U	**3.55 J**	**0.128**	0.0361 U	0.0348 U	0.0458 U	**0.188**	**3.69**
Fluoranthene	**4.37**	**0.0189 J**	**8.99**	**1.37**	**0.0257 J**	**0.0213 J**	0.0458 U	**0.867**	**21.1**
Fluorene	**73.7**	0.0343 U	**16.9**	**0.777**	**0.0288 J**	**0.0296 J**	0.0458 U	**1.31**	**33.8**
Indeno(1,2,3-c,d)pyrene	1.86 U	**0.0223**	1.94 U	**0.0261**	**0.014 J**	**0.0113 J**	0.0229 U	**0.106**	**0.333**
Naphthalene	**5920**	**0.042 J**	**926**	**1.04**	0.0721 U	**0.0352 J**	0.0916 U	**2.28**	**30.3**
Phenanthrene	**71.2**	0.0686 U	**60.5**	**0.537**	0.0721 U	0.0696 U	0.0916 U	**3.14**	**50.1**
Pyrene	**3.53 J**	**0.0236 J**	**10.3**	**1.72**	**0.0374**	**0.0309 J**	0.0458 U	**1.03**	**23.1**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-15-50	MW-15-66	MW-16-65	MW-18-125	MW-18-180	MW-18-180	MW-19-125	MW-19-180	MW-19-22
Sample ID	GS-101222-128	GS-101222-127	GS-100322-112	GS-101122-125	GS-101122-123	GS-101122-124	GS-092222-66	GS-091922-38	GS-091922-37
Sample Date	10/12/2022	10/12/2022	10/3/2022	10/11/2022	10/11/2022	10/11/2022	9/22/2022	9/19/2022	9/19/2022
Depth	40 - 50 ft	60.5 - 65.5 ft	55 - 65 ft	115 - 125 ft	170 - 180 ft	170 - 180 ft	115 - 125 ft	170 - 180 ft	12 - 22 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623699.5	7623705.5	7623950.4	7623935.84	7623930.4	7623930.4	7624246	7624240	7624251
Y	704648.7	704639.7	705478.84	705436.81	705444.23	705444.23	705295	705298	705292
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	**0.05 J**	0.04 UJ	--	--	0.04 UJ	--	0.04 UJ
C10-C12 Aliphatics unadjusted	--	--	**0.435**	0.04 UJ	--	--	0.04 UJ	--	0.04 UJ
C12-C16 Aliphatics unadjusted	--	--	**0.073**	0.04 U	--	--	0.04 U	--	0.04 UJ
C16-C21 Aliphatics unadjusted	--	--	0.04 U	0.04 U	--	--	0.04 U	--	0.04 U
C21-C34 Aliphatics unadjusted	--	--	0.04 U	0.04 U	--	--	**0.063**	--	0.04 U
C10-C12 Aromatics unadjusted	--	--	**0.333 J**	0.04 UJ	--	--	0.04 U	--	0.04 UJ
C8-C10 Aromatics unadjusted	--	--	0.04 U	0.04 U	--	--	0.04 U	--	0.04 U
C12-C16 Aromatics unadjusted	--	--	**0.241**	0.04 UJ	--	--	0.04 UJ	--	**0.111 J**
C16-C21 Aromatics unadjusted	--	--	**0.179**	0.04 U	--	--	0.04 U	--	**0.22**
C21-C34 Aromatics unadjusted	--	--	0.04 U	0.04 U	--	--	0.04 U	--	**0.052**
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	0.005 U	0.005 U	--	--	0.005 U	--	0.005 U
n-Dodecane (C12)	--	--	0.005 U	0.005 U	--	--	0.005 U	--	0.005 U
n-Hexane (C6)	--	--	0.005 U	0.005 U	--	--	0.005 U	--	0.005 U
n-Octane (C8)	--	--	0.005 U	0.005 U	--	--	0.005 U	--	0.005 U
n-Pentane (C5)	--	--	0.005 U	0.005 U	--	--	0.005 U	--	0.005 U
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
C6-C8 Aliphatics unadjusted	--	--	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
C8-C10 Aliphatics unadjusted	--	--	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
C10-C12 Aliphatics unadjusted	--	--	0.05 U	0.05 U	--	--	0.05 U	--	0.05 U
C10-C12 Aromatics unadjusted	--	--	**2.16**	0.05 U	--	--	0.05 U	--	**0.051**
C8-C10 Aromatics unadjusted	--	--	**0.213**	0.05 U	--	--	0.05 U	--	0.05 U
C12-C13 Aromatics unadjusted	--	--	**0.983**	0.05 U	--	--	0.05 U	--	**0.064**
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	**15.5**	0.189 U	**2.15**	**0.104 J**	0.189 U	0.189 U	0.19 U	**0.153 J**	**4.91**
Gasoline range hydrocarbons	**90**	0.1 U	**5.52**	**0.0806 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.142**
Oil range organics	0.385 U	0.377 U	0.417 U	0.381 U	0.377 U	**0.33 J**	0.381 U	0.381 U	0.381 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-20-120	MW-21-115	MW-21-12	MW-21-12	MW-21-165	MW-21-75	MW-21U	MW-22U	MW-22U
Sample ID	GS-092122-52	GS-091922-39	GS-030922-11	GS-061522-05	GS-091922-41	GS-091922-36	GS-091922-42	GS-032122-37	GS-091922-43
Sample Date	9/21/2022	9/19/2022	3/9/2022	6/15/2022	9/19/2022	9/19/2022	9/19/2022	3/21/2022	9/19/2022
Depth	110 - 120 ft	105 - 115 ft	7 - 12 ft	7 - 12 ft	156 - 166 ft	65 - 75 ft	25 - 35 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624360	7623653.38	7623633.518	7623633.518	7623661.858	7623645.923	7623643.734	7623306.15	7623306.15
Y	705233	705631.13	705643.011	705643.011	705626.589	705635.644	705645.896	705875.446	705875.446
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.156**	**0.0319**	**0.0124**	**0.0112**	0.005 U	**0.111**	**0.0222**	**0.475**	**0.476**
Cyanide, available	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	**0.00104 J**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**159**	**36.3 J**	50 U	50 U	**111**	50 U	50 U	**4110**	**15000**
Antimony	1 U	1 U	1 U	1 U	**0.583 J**	1 U	1 U	**0.647 J**	1 U
Arsenic	**5.17**	**5.01**	**1.44**	**0.725 J**	**3.88**	**13.5**	**20.1**	**2.94**	**5.13**
Barium	**65.9**	**70.2**	**99**	**42.4**	**24.8**	**319**	**31.8**	**92.9**	**184**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.174 J**	**0.665**
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.14 J**
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**4.95**	**21.4**
Copper	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**7.68**	**38.1**
Iron	**29100**	**31600**	**15400**	**10700**	**11300**	**91100**	**15000**	**60300**	**117000**
Lead	**0.188 J**	0.2 U	0.2 U	**0.129 J**	**0.136 J**	0.2 U	0.2 U	**1.24**	**6.18**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**2280**	**5180**	**2120**	**956**	**1480**	**9750**	**6150**	**1660**	**2860**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	2 U	**18.6**	**1.19 J**	2 U	2 U	**2.52**	**4.66**	**18.6**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**1.27 J**	2 U	**2.82**	**2.33**	**1.34 J**	2 U	2 U	**15.8**	**68.5**
Zinc	**3.86 J**	**4.22**	**5.12**	4 U	**4.62**	**2.85 J**	4 U	**12.5**	**45.7**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-20-120	MW-21-115	MW-21-12	MW-21-12	MW-21-165	MW-21-75	MW-21U	MW-22U	MW-22U
Sample ID	GS-092122-52	GS-091922-39	GS-030922-11	GS-061522-05	GS-091922-41	GS-091922-36	GS-091922-42	GS-032122-37	GS-091922-43
Sample Date	9/21/2022	9/19/2022	3/9/2022	6/15/2022	9/19/2022	9/19/2022	9/19/2022	3/21/2022	9/19/2022
Depth	110 - 120 ft	105 - 115 ft	7 - 12 ft	7 - 12 ft	156 - 166 ft	65 - 75 ft	25 - 35 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624360	7623653.38	7623633.518	7623633.518	7623661.858	7623645.923	7623643.734	7623306.15	7623306.15
Y	705233	705631.13	705643.011	705643.011	705626.589	705635.644	705645.896	705875.446	705875.446
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	1 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	1 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	1 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	12.5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	1 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	50 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	0.2 U	0.2 U	**372**	**2.36**	0.2 U	0.2 U	**109**	0.2 U	0.2 U
Bromobenzene	0.5 U	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 UJ	5 U	12.5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	**1.85**	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-20-120	MW-21-115	MW-21-12	MW-21-12	MW-21-165	MW-21-75	MW-21U	MW-22U	MW-22U
Sample ID	GS-092122-52	GS-091922-39	GS-030922-11	GS-061522-05	GS-091922-41	GS-091922-36	GS-091922-42	GS-032122-37	GS-091922-43
Sample Date	9/21/2022	9/19/2022	3/9/2022	6/15/2022	9/19/2022	9/19/2022	9/19/2022	3/21/2022	9/19/2022
Depth	110 - 120 ft	105 - 115 ft	7 - 12 ft	7 - 12 ft	156 - 166 ft	65 - 75 ft	25 - 35 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624360	7623653.38	7623633.518	7623633.518	7623661.858	7623645.923	7623643.734	7623306.15	7623306.15
Y	705233	705631.13	705643.011	705643.011	705626.589	705635.644	705645.896	705875.446	705875.446
Chloroethane	5 U	5 U	12.5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	12.5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	2.5 UJ	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	0.5 U	0.5 U	1.25 U	**0.25 J**	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	12.5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	**1.9 J**	**0.65 J**	1 U	1 U	**1.02**	1 U	1 U
m,p-Xylene	1 U	1 U	2.5 U	1 U	1 U	1 U	**0.53 J**	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	**1.36**	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	1 U	1 U	**1.38 J**	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	**0.5**	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	**1.1 J**	**0.57**	0.5 U	0.5 U	**0.48 J**	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	2 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	1 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	**3.34**	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	**0.49 J**	0.5 U	1.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0792 U	0.0739 U	**1.25**	**1.45**	0.0707 U	0.0851 U	**10.2**	0.0822 U	**0.215**
2-Methylnaphthalene	0.0792 U	0.0739 U	1.04 U	0.716 U	**0.038 J**	0.0851 U	**5.21 J**	0.0822 U	**0.362**
Acenaphthene	**0.0242 J**	0.037 U	**10.6**	**12.7**	0.0354 U	0.0425 U	**30.7**	0.0411 U	**0.137**
Acenaphthylene	0.0396 U	**0.0485**	1.46 U	1.79 U	0.0354 U	0.0425 U	3.69 U	**0.0961**	**0.0747**
Anthracene	**0.0198 J**	**0.0213 J**	0.65 U	0.414 U	**0.0203 J**	0.0425 U	3.69 U	**0.174**	**0.133**
Benzo(a)anthracene	0.0198 U	0.0185 U	0.26 U	0.179 U	0.0177 U	0.0213 U	1.84 U	0.0206 U	0.0198 U
Benzo(a)pyrene	0.0198 U	0.0185 U	0.26 U	0.179 U	0.0177 U	0.0213 U	1.84 U	0.0206 U	0.0198 U
Benzo(b)fluoranthene	0.0198 U	0.0185 U	0.26 U	0.179 U	0.0177 U	0.0213 U	1.84 U	0.0206 U	0.0198 U
Benzo(g,h,i)perylene	0.0396 U	0.037 U	0.52 U	0.358 U	0.0354 U	0.0425 U	3.69 U	0.0411 U	0.0396 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-20-120	MW-21-115	MW-21-12	MW-21-12	MW-21-165	MW-21-75	MW-21U	MW-22U	MW-22U
Sample ID	GS-092122-52	GS-091922-39	GS-030922-11	GS-061522-05	GS-091922-41	GS-091922-36	GS-091922-42	GS-032122-37	GS-091922-43
Sample Date	9/21/2022	9/19/2022	3/9/2022	6/15/2022	9/19/2022	9/19/2022	9/19/2022	3/21/2022	9/19/2022
Depth	110 - 120 ft	105 - 115 ft	7 - 12 ft	7 - 12 ft	156 - 166 ft	65 - 75 ft	25 - 35 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624360	7623653.38	7623633.518	7623633.518	7623661.858	7623645.923	7623643.734	7623306.15	7623306.15
Y	705233	705631.13	705643.011	705643.011	705626.589	705635.644	705645.896	705875.446	705875.446
Benzo(j,k)fluoranthene	0.0198 U	0.0185 U	0.26 U	0.179 U	0.0177 U	0.0213 U	1.84 U	0.0206 U	0.0198 U
Carbazole	0.0396 U	0.037 U	0.52 U	0.358 U	0.0354 U	0.0425 U	3.69 U	0.0411 U	0.0396 U
Chrysene	0.0198 U	0.0185 U	0.26 U	0.179 U	0.0177 U	0.0213 U	1.84 U	0.0206 U	0.0198 U
Dibenzo(a,h)anthracene	0.0198 U	0.0185 U	0.26 U	0.179 U	0.0177 U	0.0213 U	1.84 U	0.0206 U	0.0198 U
Dibenzofuran	0.0396 U	0.037 U	**0.598**	0.727 U	0.0354 U	0.0425 U	**2.86 J**	0.0411 U	**0.0252 J**
Fluoranthene	0.0396 U	0.037 U	0.52 U	0.358 U	0.0354 U	0.0425 U	3.69 U	**0.0221 J**	**0.0356 J**
Fluorene	0.0396 U	0.037 U	**6.56**	**6.86**	0.0354 U	0.0425 U	**4.29**	0.0771 U	**0.134**
Indeno(1,2,3-c,d)pyrene	0.0198 U	0.0185 U	0.26 U	0.179 U	0.0177 U	0.0213 U	1.84 U	0.0206 U	0.0198 U
Naphthalene	0.0792 U	0.0739 U	**2.17**	0.906 U	0.0707 U	0.0851 U	7.37 U	0.0822 U	**0.651**
Phenanthrene	0.0792 U	0.0739 U	1.04 U	0.716 U	0.0707 U	0.0851 U	**6.45 J**	**0.0432 J**	**0.2**
Pyrene	0.0396 U	0.037 U	0.52 U	0.358 U	0.0354 U	0.0425 U	3.69 U	**0.0206 J**	**0.0405**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-20-120	MW-21-115	MW-21-12	MW-21-12	MW-21-165	MW-21-75	MW-21U	MW-22U	MW-22U
Sample ID	GS-092122-52	GS-091922-39	GS-030922-11	GS-061522-05	GS-091922-41	GS-091922-36	GS-091922-42	GS-032122-37	GS-091922-43
Sample Date	9/21/2022	9/19/2022	3/9/2022	6/15/2022	9/19/2022	9/19/2022	9/19/2022	3/21/2022	9/19/2022
Depth	110 - 120 ft	105 - 115 ft	7 - 12 ft	7 - 12 ft	156 - 166 ft	65 - 75 ft	25 - 35 ft	45 - 55 ft	45 - 55 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624360	7623653.38	7623633.518	7623633.518	7623661.858	7623645.923	7623643.734	7623306.15	7623306.15
Y	705233	705631.13	705643.011	705643.011	705626.589	705635.644	705645.896	705875.446	705875.446
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	--	--
C10-C12 Aliphatics unadjusted	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	--	--
C12-C16 Aliphatics unadjusted	0.04 U	0.04 UJ	**0.057**	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	--	--
C16-C21 Aliphatics unadjusted	0.04 U	0.04 U	**0.054**	0.04 U	0.04 U	0.04 U	0.04 U	--	--
C21-C34 Aliphatics unadjusted	0.04 U	0.04 U	0.04 U	0.04 U	**0.093**	0.04 U	0.04 U	--	--
C10-C12 Aromatics unadjusted	0.04 U	0.04 UJ	**0.044**	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	--	--
C8-C10 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	--	--
C12-C16 Aromatics unadjusted	0.04 UJ	0.04 UJ	**0.157**	**0.101**	0.04 UJ	0.04 UJ	**0.082 J**	--	--
C16-C21 Aromatics unadjusted	0.04 U	0.04 U	**0.108**	**0.075**	0.04 U	0.04 U	0.04 U	--	--
C21-C34 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--	--
n-Dodecane (C12)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--	--
n-Hexane (C6)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--	--
n-Octane (C8)	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	--	--
n-Pentane (C5)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--	--
C6-C8 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	--	--
C8-C10 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--	--
C10-C12 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--	--
C10-C12 Aromatics unadjusted	0.05 U	0.05 U	**0.086**	0.05 U	0.05 U	0.05 U	0.05 U	--	--
C8-C10 Aromatics unadjusted	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--	--
C12-C13 Aromatics unadjusted	0.05 U	0.05 U	**0.096**	**0.051**	0.05 U	0.05 U	0.05 U	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	0.192 U	0.198 U	**3.84**	**2.11**	0.194 U	0.196 U	**1.02**	**0.231 J**	**0.283**
Gasoline range hydrocarbons	0.1 U	0.1 U	**1.15 J**	**0.184**	0.1 U	0.1 U	**0.416**	0.1 U	0.1 U
Oil range organics	0.385 U	**0.236 J**	0.385 U	0.377 U	**0.284 J**	0.392 U	0.385 U	**0.515**	0.404 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-23-123	MW-23-27	MW-23-27	MW-23-27	MW-23-27	MW-23U	MW-28U	MW-31U	MW-34U
Sample ID	GS-101022-121	GS-031022-16	GS-061422-03	GS-101022-119	GS-121922-15	GS-101022-118	GS-101222-130	GS-090822-09	GS-092122-56
Sample Date	10/10/2022	3/10/2022	6/14/2022	10/10/2022	12/19/2022	10/10/2022	10/12/2022	9/8/2022	9/21/2022
Depth	113.3 - 123.3 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	40 - 50 ft	75 - 85 ft	84.9 - 94.9 ft	63.3 - 73.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623490.45	7623498.533	7623498.533	7623498.533	7623498.533	7623490.275	7624150.144	7624310.582	7624423.049
Y	705740.581	705734.949	705734.949	705734.949	705734.949	705734.917	705330.285	705258.989	705199.693
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0056**	**0.0874**	**0.151**	**0.143**	**0.169**	**0.183**	**0.0231**	**0.0608**	**0.0795**
Cyanide, available	0.002 U	**0.00237**	**0.00566**	0.002 U	**0.0013 J**	0.002 U	0.002 U	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**34.7 J**	50 U	50 U	50 U	50 U	**39100**	50 U	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**1.91**	1 U	1 U	1 U	1 U	**11.1**	**4.44**	**1.78**	**3.42**
Barium	**17.5**	**52.6**	**45.8**	**37**	**66.9**	**257**	**49.6**	**67.3**	**49.2**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.37**	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.27**	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	**66.3**	2 U	2 U	2 U
Copper	2 U	2 U	2 U	2 U	2 U	**74.1**	2 U	2 U	2 U
Iron	**2890**	**32400**	**27800**	**21100**	**38100**	**95300**	**24900**	**30500**	**35600**
Lead	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**11.8**	0.2 U	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**265**	**3930**	**3270**	**2590**	**4570**	**1710**	**2260**	**2690**	**1890**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**3.82**	2 U	2 U	2 U	2 U	**51.2**	2 U	2 U	2 U
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	**1.13**	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.118 J**	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.193 J**	0.2 U	0.2 U	0.2 U
Vanadium	**23.6**	2 U	2 U	2 U	2 U	**164**	2 U	2 U	2 U
Zinc	4 U	4 U	**2.66 J**	**3.95 J**	**4.42**	**100**	4 U	4 UJ	4 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-23-123	MW-23-27	MW-23-27	MW-23-27	MW-23-27	MW-23U	MW-28U	MW-31U	MW-34U
Sample ID	GS-101022-121	GS-031022-16	GS-061422-03	GS-101022-119	GS-121922-15	GS-101022-118	GS-101222-130	GS-090822-09	GS-092122-56
Sample Date	10/10/2022	3/10/2022	6/14/2022	10/10/2022	12/19/2022	10/10/2022	10/12/2022	9/8/2022	9/21/2022
Depth	113.3 - 123.3 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	40 - 50 ft	75 - 85 ft	84.9 - 94.9 ft	63.3 - 73.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623490.45	7623498.533	7623498.533	7623498.533	7623498.533	7623490.275	7624150.144	7624310.582	7624423.049
Y	705740.581	705734.949	705734.949	705734.949	705734.949	705734.917	705330.285	705258.989	705199.693
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	200 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
1,2,3-Trimethylbenzene	--	--	--	--	5 U	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	**0.88 J**	1 U	1 U	1 U	1 U	**91 J**
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	500 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1000 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1000 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	2000 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	200 U
Benzene	0.2 U	**0.38**	**0.31**	**0.41**	**0.49**	0.2 U	0.2 U	0.2 U	**3070**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	500 UJ
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1000 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.42 J**	50 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-23-123	MW-23-27	MW-23-27	MW-23-27	MW-23-27	MW-23U	MW-28U	MW-31U	MW-34U
Sample ID	GS-101022-121	GS-031022-16	GS-061422-03	GS-101022-119	GS-121922-15	GS-101022-118	GS-101222-130	GS-090822-09	GS-092122-56
Sample Date	10/10/2022	3/10/2022	6/14/2022	10/10/2022	12/19/2022	10/10/2022	10/12/2022	9/8/2022	9/21/2022
Depth	113.3 - 123.3 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	40 - 50 ft	75 - 85 ft	84.9 - 94.9 ft	63.3 - 73.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623490.45	7623498.533	7623498.533	7623498.533	7623498.533	7623490.275	7624150.144	7624310.582	7624423.049
Y	705740.581	705734.949	705734.949	705734.949	705734.949	705734.917	705330.285	705258.989	705199.693
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	500 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	500 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1000 U
Ethylbenzene	0.5 U	**0.61**	**0.58**	**0.74**	**0.88**	0.5 U	0.5 U	0.5 U	**626**
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	500 U
Isopropylbenzene (Cumene)	1 U	**16.5**	**18.1**	**19.2**	**25.8**	1 U	1 U	1 U	100 U
m,p-Xylene	1 U	**1.58**	**1.55**	**2.08**	**2.21**	1 U	1 U	1 U	**152**
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1000 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
n-Propylbenzene	0.5 U	**5.38**	**5.32**	**6.21**	**8.32**	0.5 U	0.5 U	0.5 U	50 U
o-Xylene	0.5 U	**0.8**	**0.81**	**1.07**	**1.31**	0.5 U	0.5 U	0.5 U	**181**
sec-Butylbenzene	1 U	**0.68 J**	**0.77 J**	**0.72 J**	**1.1**	1 U	1 U	1 U	100 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	200 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	100 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
Toluene	1 U	**0.54 J**	**0.55 J**	**1.05**	**0.74 J**	1 U	1 U	1 U	100 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	200 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	200 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0669 U	**37.1**	**34.5**	**70.1**	**54.4**	**0.168**	**0.21**	**0.2**	**320**
2-Methylnaphthalene	0.0669 U	0.975 U	**0.245**	6.51 U	8.52 U	**0.0592 J**	0.0739 U	0.0767 U	**469**
Acenaphthene	0.0335 U	**48.4**	**51.9**	**66.2**	**49.6**	**0.593**	**0.155**	**2.29**	**133**
Acenaphthylene	0.0335 U	**3.14**	**1.65**	**3.46**	**5.32**	**0.21**	**0.102**	**0.274**	35.9 U
Anthracene	**0.0238 J**	**1.33**	**1.16**	3.26 U	4.26 U	**0.268**	**0.0194 J**	**0.0901**	35.9 U
Benzo(a)anthracene	0.0167 U	**0.14 J**	**0.0643**	1.63 U	2.13 U	**0.0487**	0.0185 U	**0.115**	18 U
Benzo(a)pyrene	**0.00962 J**	0.244 U	**0.0107 J**	1.63 U	2.13 U	**0.0215**	0.0185 U	**0.0196**	18 U
Benzo(b)fluoranthene	**0.00962 J**	0.244 U	**0.0141 J**	1.63 U	2.13 U	**0.0236**	0.0185 U	**0.0201**	18 U
Benzo(g,h,i)perylene	0.0335 U	0.488 U	0.039 U	3.26 U	4.26 U	0.0419 U	0.0369 U	0.0383 U	35.9 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-23-123	MW-23-27	MW-23-27	MW-23-27	MW-23-27	MW-23U	MW-28U	MW-31U	MW-34U
Sample ID	GS-101022-121	GS-031022-16	GS-061422-03	GS-101022-119	GS-121922-15	GS-101022-118	GS-101222-130	GS-090822-09	GS-092122-56
Sample Date	10/10/2022	3/10/2022	6/14/2022	10/10/2022	12/19/2022	10/10/2022	10/12/2022	9/8/2022	9/21/2022
Depth	113.3 - 123.3 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	40 - 50 ft	75 - 85 ft	84.9 - 94.9 ft	63.3 - 73.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623490.45	7623498.533	7623498.533	7623498.533	7623498.533	7623490.275	7624150.144	7624310.582	7624423.049
Y	705740.581	705734.949	705734.949	705734.949	705734.949	705734.917	705330.285	705258.989	705199.693
Benzo(j,k)fluoranthene	0.0167 U	0.244 U	0.0195 U	1.63 U	2.13 U	0.021 U	0.0185 U	**0.0115 J**	18 U
Carbazole	**0.0176 J**	0.488 U	0.0584 U	3.26 U	4.26 U	**0.106**	**0.0319 J**	**0.516**	**176**
Chrysene	0.0167 U	0.244 U	**0.0721**	1.63 U	2.13 U	**0.0493**	0.0185 U	**0.116**	18 U
Dibenzo(a,h)anthracene	0.0167 U	0.244 U	0.0195 U	1.63 U	2.13 U	0.021 U	0.0185 U	0.0192 U	18 U
Dibenzofuran	0.0335 U	**0.384 J**	**0.229**	3.26 U	4.26 U	**0.0472**	0.0369 U	**0.157**	35.9 U
Fluoranthene	0.0335 U	**1.25**	**1.2**	3.26 U	4.26 U	**0.327**	0.0369 U	**2.45**	35.9 U
Fluorene	0.0335 U	**7.34**	**7.14**	**9.07**	**8.36**	**0.381**	**0.0383 J**	**1.15**	**32.4 J**
Indeno(1,2,3-c,d)pyrene	0.0167 U	0.244 U	0.0195 U	1.63 U	2.13 U	**0.0183 J**	0.0185 U	**0.0115 J**	18 U
Naphthalene	**0.121**	**1.65**	**0.901**	6.51 U	8.52 U	**0.431**	**0.594**	**1.79**	**9620**
Phenanthrene	0.0669 U	0.975 U	**0.475**	6.51 U	8.52 U	**0.661**	0.0739 U	**0.133**	71.9 U
Pyrene	**0.0268 J**	**1.46**	**1.44**	**1.83 J**	4.26 U	**0.371**	0.0369 U	**2.76**	35.9 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-23-123	MW-23-27	MW-23-27	MW-23-27	MW-23-27	MW-23U	MW-28U	MW-31U	MW-34U
Sample ID	GS-101022-121	GS-031022-16	GS-061422-03	GS-101022-119	GS-121922-15	GS-101022-118	GS-101222-130	GS-090822-09	GS-092122-56
Sample Date	10/10/2022	3/10/2022	6/14/2022	10/10/2022	12/19/2022	10/10/2022	10/12/2022	9/8/2022	9/21/2022
Depth	113.3 - 123.3 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	17.7 - 27.73 ft	40 - 50 ft	75 - 85 ft	84.9 - 94.9 ft	63.3 - 73.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623490.45	7623498.533	7623498.533	7623498.533	7623498.533	7623490.275	7624150.144	7624310.582	7624423.049
Y	705740.581	705734.949	705734.949	705734.949	705734.949	705734.917	705330.285	705258.989	705199.693
Dinoseb	--	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)										
C8-C10 Aliphatics unadjusted	--	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ	--	0.04 UJ	--	--
C10-C12 Aliphatics unadjusted	--	**0.206 J**	**0.282 J**	**0.215 J**	**0.519**	--	0.04 UJ	--	--
C12-C16 Aliphatics unadjusted	--	0.04 U	0.04 U	0.04 U	0.04 U	--	0.04 U	--	--
C16-C21 Aliphatics unadjusted	--	0.04 U	0.04 U	0.04 U	0.04 U	--	0.04 U	--	--
C21-C34 Aliphatics unadjusted	--	**0.045**	**0.053**	**0.045**	**0.058**	--	0.04 U	--	--
C10-C12 Aromatics unadjusted	--	**0.065**	**0.043 J**	**0.057 J**	**0.049 J**	--	0.04 UJ	--	--
C8-C10 Aromatics unadjusted	--	**0.188**	**0.08**	**0.153**	**0.083**	--	0.04 U	--	--
C12-C16 Aromatics unadjusted	--	**0.156**	**0.125**	**0.145 J**	**0.179 J**	--	0.04 UJ	--	--
C16-C21 Aromatics unadjusted	--	**0.076**	**0.065**	**0.054**	**0.091**	--	0.04 U	--	--
C21-C34 Aromatics unadjusted	--	0.04 U	0.04 U	0.04 U	0.04 U	--	0.04 U	--	--
Volatile Petroleum Hydrocarbons (mg/L)										
Benzene	--	--	--	--	0.005 U	--	--	--	--
Ethylbenzene	--	--	--	--	0.005 U	--	--	--	--
m,p-Xylene	--	--	--	--	0.01 U	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	0.005 U	--	--	--	--
n-Decane (C10)	--	0.005 U	0.005 U	0.005 U	0.005 UJ	--	0.005 U	--	--
n-Dodecane (C12)	--	**0.008**	**0.009**	**0.008**	**0.012**	--	0.005 U	--	--
n-Hexane (C6)	--	0.005 U	0.005 U	0.005 U	0.005 U	--	0.005 U	--	--
n-Octane (C8)	--	0.005 U	0.005 UJ	0.005 U	0.005 UJ	--	0.005 U	--	--
n-Pentane (C5)	--	0.005 U	0.005 U	0.005 U	0.005 U	--	0.005 U	--	--
o-Xylene	--	--	--	--	0.005 U	--	--	--	--
Toluene	--	--	--	--	0.005 U	--	--	--	--
C5-C6 Aliphatics unadjusted	--	0.05 U	0.05 U	0.05 U	0.05 U	--	0.05 U	--	--
C6-C8 Aliphatics unadjusted	--	0.05 U	0.05 UJ	0.05 U	0.05 U	--	0.05 U	--	--
C8-C10 Aliphatics unadjusted	--	0.05 U	0.05 U	0.05 U	0.05 U	--	0.05 U	--	--
C10-C12 Aliphatics unadjusted	--	**0.437**	**0.363**	**0.598**	**0.69**	--	**0.08**	--	--
C10-C12 Aromatics unadjusted	--	**1.02**	**0.9**	**1.1**	**1.24**	--	**0.079**	--	--
C8-C10 Aromatics unadjusted	--	0.05 U	0.05 U	0.05 U	**0.059**	--	0.05 U	--	--
C12-C13 Aromatics unadjusted	--	**0.183**	**0.139**	**0.206**	**0.219**	--	0.05 U	--	--
Total Petroleum Hydrocarbons (mg/L)										
Diesel range hydrocarbons	0.189 U	**2.19**	**1.9**	**1.39**	**1.4 J**	**0.269**	**0.1 J**	--	--
Gasoline range hydrocarbons	0.1 U	**3.37**	**3.45**	**3.04**	**2.48 J**	0.1 U	**0.282**	--	--
Oil range organics	0.377 U	**0.291 J**	**0.206 J**	0.381 U	**0.303 J**	0.412 U	0.385 U	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-40F	MW-40F	MW-41U	MW-42F	MW-42F	MW-44F	MW-44F	MW-46F	MW-46F
Sample ID	GS-030922-09	GS-092222-60	GS-092222-63	GS-031422-19	GS-091222-13	GS-101922-143	GS-101922-144	GS-030922-08	GS-062022-18
Sample Date	3/9/2022	9/22/2022	9/22/2022	3/14/2022	9/12/2022	10/19/2022	10/19/2022	3/9/2022	6/20/2022
Depth	21.6 - 26.6 ft	21.6 - 26.6 ft	17.6 - 27.6 ft	26 - 31 ft	26 - 31 ft	6 - 16 ft	6 - 16 ft	6.1 - 16.1 ft	6.1 - 16.1 ft
Sample Type	N	N	N	N	N	N	FD	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7622894.055	7622894.055	7622721.386	7624617.491	7624617.491	7623328.68	7623328.68	7623476.04	7623476.04
Y	705792.624	705792.624	705601.167	705151.924	705151.924	704799.46	704799.46	704733.02	704733.02
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	**28.5**	**69.6**	--	--	**162**	**161**	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	20 U	20 U	--	--	20 U	20 U	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	20 U	20 U	--	--	20 U	20 U	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	**28.5**	**69.6**	--	--	**162**	**161**	--	--
Ammonia as nitrogen	--	**1.18**	0.02 U	--	--	**0.579**	**0.58**	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0139**	**0.3**	**0.0069**	**0.156**	**0.181**	--	--	**0.0138**	**0.008**
Cyanide, available	0.002 U	0.002 UJ	0.002 UJ	**0.00101 J**	0.002 U	--	--	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--	--	0.005 U	0.005 U
Nitrate as nitrogen	--	0.25 U	**0.7**	--	--	0.25 U	0.25 U	--	--
Sulfate	--	**46.9**	**8.3**	--	--	1 U	1 U	--	--
Sulfide	--	**0.079**	0.05 U	--	--	0.05 U	0.05 U	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	**0.292**	0.00065 U	--	--	**3.36**	**3.42**	--	--
Metals (µg/L)									
Aluminum	**28.4 J**	50 U	**30.9 J**	50 U	50 U	--	--	**291**	**46.6 J**
Antimony	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U
Arsenic	1 U	1 U	**0.739 J**	**25.1**	**23.4**	--	--	**0.843 J**	**0.729 J**
Barium	**16**	**48.5**	**15.2**	**95.6**	**69.3**	--	--	**9.21**	**10**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	**0.1 J**	0.2 U	--	--	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	**1.96 J**	**1.11 J**	2 U	--	--	2 U	2 U
Copper	2 U	2 U	2 U	2 UJ	2 U	--	--	**1.99 J**	**1.39 J**
Iron	**332**	**3510**	**48.6 J**	**91900**	**71500**	--	--	**5090**	**2800**
Lead	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	**0.379**	**0.14 J**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**23**	**106**	**1.08**	**3520**	**2910**	--	--	**295**	**207**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	--	--	0.08 U	0.08 U
Nickel	2 U	2 U	2 U	**2.37**	**2.27**	--	--	**5.47**	**5.86**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U
Vanadium	2 U	**1.68 J**	**10.7**	**1.07 J**	2 U	--	--	**2.85**	**1.49 J**
Zinc	4 U	**2.85 J**	**4.15**	**5.68**	4 U	--	--	**2.28 J**	**7.13**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-40F	MW-40F	MW-41U	MW-42F	MW-42F	MW-44F	MW-44F	MW-46F	MW-46F
Sample ID	GS-030922-09	GS-092222-60	GS-092222-63	GS-031422-19	GS-091222-13	GS-101922-143	GS-101922-144	GS-030922-08	GS-062022-18
Sample Date	3/9/2022	9/22/2022	9/22/2022	3/14/2022	9/12/2022	10/19/2022	10/19/2022	3/9/2022	6/20/2022
Depth	21.6 - 26.6 ft	21.6 - 26.6 ft	17.6 - 27.6 ft	26 - 31 ft	26 - 31 ft	6 - 16 ft	6 - 16 ft	6.1 - 16.1 ft	6.1 - 16.1 ft
Sample Type	N	N	N	N	N	N	FD	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7622894.055	7622894.055	7622721.386	7624617.491	7624617.491	7623328.68	7623328.68	7623476.04	7623476.04
Y	705792.624	705792.624	705601.167	705151.924	705151.924	704799.46	704799.46	704733.02	704733.02
Metals, Dissolved (µg/L)									
Iron	--	**4000**	50 U	--	--	**22900**	**23000**	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	**110**	**0.543 J**	--	--	**1570**	**1580**	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	20 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	20 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	20 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	--	--	200 U	100 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	--	--	500 U	250 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	20 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	--	--	1000 U	500 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	--	--	1000 U	500 U
Acetone	20 U	20 U	20 U	20 UJ	20 U	--	--	2000 U	1000 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	--	--	200 U	100 U
Benzene	0.2 U	**0.23**	0.2 U	0.2 U	0.2 U	--	--	**10700**	**3570**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Bromomethane (Methyl bromide)	5 U	5 UJ	5 UJ	5 U	5 U	--	--	500 U	250 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	--	--	1000 U	500 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-40F	MW-40F	MW-41U	MW-42F	MW-42F	MW-44F	MW-44F	MW-46F	MW-46F
Sample ID	GS-030922-09	GS-092222-60	GS-092222-63	GS-031422-19	GS-091222-13	GS-101922-143	GS-101922-144	GS-030922-08	GS-062022-18
Sample Date	3/9/2022	9/22/2022	9/22/2022	3/14/2022	9/12/2022	10/19/2022	10/19/2022	3/9/2022	6/20/2022
Depth	21.6 - 26.6 ft	21.6 - 26.6 ft	17.6 - 27.6 ft	26 - 31 ft	26 - 31 ft	6 - 16 ft	6 - 16 ft	6.1 - 16.1 ft	6.1 - 16.1 ft
Sample Type	N	N	N	N	N	N	FD	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7622894.055	7622894.055	7622721.386	7624617.491	7624617.491	7623328.68	7623328.68	7623476.04	7623476.04
Y	705792.624	705792.624	705601.167	705151.924	705151.924	704799.46	704799.46	704733.02	704733.02
Chloroethane	5 U	5 U	5 U	5 U	5 U	--	--	500 U	250 U
Chloroform	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	--	--	500 U	250 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Dichlorodifluoromethane	1 UJ	1 U	1 U	1 U	1 UJ	--	--	100 U	50 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	--	--	1000 U	500 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	**31 J**	**20 J**
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	--	--	500 U	250 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	--	--	**59 J**	**40 J**
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	--	--	1000 U	500 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
o-Xylene	0.5 U	0.5 U	0.5 U	**0.49 J**	0.5 U	--	--	**33 J**	**20 J**
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Styrene	1 U	2 U	2 U	1 U	1 U	--	--	100 U	50 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	--	--	100 U	50 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	**2.81**	0.4 U	0.4 U	--	--	40 U	20 U
Toluene	1 U	1 U	1 U	1 U	1 U	--	--	**467**	**248**
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	--	--	200 U	100 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	40 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	--	--	200 U	100 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	**0.29 J**	--	--	50 U	25 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	50 U	25 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0706 U	0.0705 U	0.0685 U	**0.933 J**	**2.19**	--	--	**7.43**	**7.47**
2-Methylnaphthalene	0.0706 U	0.0705 U	0.0685 U	1 U	0.793 U	--	--	**2.74**	7.11 U
Acenaphthene	**0.299**	**0.11**	0.0342 U	**129**	**251**	--	--	5.43 U	12.9 U
Acenaphthylene	0.0353 U	**0.022 J**	**0.0201 J**	**7.23**	**20.3**	--	--	**1.87**	**2.09 J**
Anthracene	**0.102**	**0.0824**	0.0342 U	**0.908**	**0.689**	--	--	**2.48**	3.56 U
Benzo(a)anthracene	0.0176 U	0.0176 U	0.0171 U	**0.157 J**	**0.169 J**	--	--	**0.175 J**	1.78 U
Benzo(a)pyrene	0.0176 U	0.0176 U	0.0171 U	0.251 U	0.198 U	--	--	**0.161 J**	1.78 U
Benzo(b)fluoranthene	0.0176 U	0.0176 U	0.0171 U	0.251 U	0.198 U	--	--	**0.184 J**	1.78 U
Benzo(g,h,i)perylene	0.0353 U	0.0353 U	0.0342 U	0.501 U	0.397 U	--	--	**0.812**	3.56 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-40F	MW-40F	MW-41U	MW-42F	MW-42F	MW-44F	MW-44F	MW-46F	MW-46F
Sample ID	GS-030922-09	GS-092222-60	GS-092222-63	GS-031422-19	GS-091222-13	GS-101922-143	GS-101922-144	GS-030922-08	GS-062022-18
Sample Date	3/9/2022	9/22/2022	9/22/2022	3/14/2022	9/12/2022	10/19/2022	10/19/2022	3/9/2022	6/20/2022
Depth	21.6 - 26.6 ft	21.6 - 26.6 ft	17.6 - 27.6 ft	26 - 31 ft	26 - 31 ft	6 - 16 ft	6 - 16 ft	6.1 - 16.1 ft	6.1 - 16.1 ft
Sample Type	N	N	N	N	N	N	FD	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7622894.055	7622894.055	7622721.386	7624617.491	7624617.491	7623328.68	7623328.68	7623476.04	7623476.04
Y	705792.624	705792.624	705601.167	705151.924	705151.924	704799.46	704799.46	704733.02	704733.02
Benzo(j,k)fluoranthene	0.0176 U	0.0176 U	0.0171 U	0.251 U	0.198 U	--	--	0.189 U	1.78 U
Carbazole	**0.0335 J**	0.0353 U	0.0342 U	0.501 U	**0.828**	--	--	**9.98**	**9.12**
Chrysene	0.0176 U	0.0176 U	0.0171 U	**0.163 J**	**0.174 J**	--	--	**0.132 J**	1.78 U
Dibenzo(a,h)anthracene	0.0176 U	0.0176 U	0.0171 U	0.251 U	0.198 U	--	--	0.189 U	1.78 U
Dibenzofuran	**0.0243 J**	0.0353 U	0.0342 U	0.501 U	0.397 U	--	--	**1.17**	3.56 U
Fluoranthene	**0.121**	**0.0555**	0.0342 U	**3.04**	**4.07**	--	--	**1.24**	3.56 U
Fluorene	**0.385**	**0.0357**	0.0342 U	2.66 U	**9.8**	--	--	**2.55**	**2.22 J**
Indeno(1,2,3-c,d)pyrene	0.0176 U	0.0176 U	0.0171 U	0.251 U	0.198 U	--	--	**0.567**	1.78 U
Naphthalene	**0.0556 J**	0.0705 U	0.0685 U	1 U	**0.521 J**	--	--	**154**	**240**
Phenanthrene	0.0706 U	0.0705 U	0.0685 U	1 U	0.793 U	--	--	**3.4**	7.11 U
Pyrene	**0.0441**	**0.0317 J**	0.0342 U	**6.11**	**8.04**	--	--	**1.11**	3.56 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-40F	MW-40F	MW-41U	MW-42F	MW-42F	MW-44F	MW-44F	MW-46F	MW-46F
Sample ID	GS-030922-09	GS-092222-60	GS-092222-63	GS-031422-19	GS-091222-13	GS-101922-143	GS-101922-144	GS-030922-08	GS-062022-18
Sample Date	3/9/2022	9/22/2022	9/22/2022	3/14/2022	9/12/2022	10/19/2022	10/19/2022	3/9/2022	6/20/2022
Depth	21.6 - 26.6 ft	21.6 - 26.6 ft	17.6 - 27.6 ft	26 - 31 ft	26 - 31 ft	6 - 16 ft	6 - 16 ft	6.1 - 16.1 ft	6.1 - 16.1 ft
Sample Type	N	N	N	N	N	N	FD	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7622894.055	7622894.055	7622721.386	7624617.491	7624617.491	7623328.68	7623328.68	7623476.04	7623476.04
Y	705792.624	705792.624	705601.167	705151.924	705151.924	704799.46	704799.46	704733.02	704733.02
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	0.04 UJ	0.04 UJ	--	0.04 UJ	0.04 UJ	--	--	--	--
C10-C12 Aliphatics unadjusted	0.04 UJ	0.04 UJ	--	0.04 UJ	0.04 UJ	--	--	--	--
C12-C16 Aliphatics unadjusted	0.04 U	0.04 U	--	0.04 UJ	0.04 U	--	--	--	--
C16-C21 Aliphatics unadjusted	0.04 U	0.04 U	--	0.04 UJ	0.04 U	--	--	--	--
C21-C34 Aliphatics unadjusted	**0.101**	**0.071**	--	**0.107 J**	0.04 U	--	--	--	--
C10-C12 Aromatics unadjusted	0.04 U	0.04 U	--	0.04 U	0.04 U	--	--	--	--
C8-C10 Aromatics unadjusted	0.04 U	0.04 U	--	0.04 U	0.04 U	--	--	--	--
C12-C16 Aromatics unadjusted	0.04 U	0.04 UJ	--	**0.119 J**	**0.239**	--	--	--	--
C16-C21 Aromatics unadjusted	0.04 U	0.04 U	--	**0.048**	**0.076**	--	--	--	--
C21-C34 Aromatics unadjusted	0.04 U	0.04 U	--	0.04 U	0.04 U	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	0.005 U	0.005 U	--	0.005 U	0.005 U	--	--	--	--
n-Dodecane (C12)	0.005 U	0.005 U	--	0.005 U	0.005 U	--	--	--	--
n-Hexane (C6)	0.005 U	0.005 U	--	0.005 U	0.005 U	--	--	--	--
n-Octane (C8)	0.005 U	0.005 U	--	0.005 U	0.005 U	--	--	--	--
n-Pentane (C5)	0.005 U	0.005 U	--	0.005 U	0.005 U	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	0.05 U	0.05 U	--	0.05 U	0.05 U	--	--	--	--
C6-C8 Aliphatics unadjusted	0.05 U	0.05 U	--	0.05 U	0.05 U	--	--	--	--
C8-C10 Aliphatics unadjusted	0.05 U	0.05 U	--	0.05 U	0.05 U	--	--	--	--
C10-C12 Aliphatics unadjusted	0.05 U	0.05 U	--	0.05 U	0.05 U	--	--	--	--
C10-C12 Aromatics unadjusted	0.05 U	0.05 U	--	0.05 U	0.05 U	--	--	--	--
C8-C10 Aromatics unadjusted	0.05 U	0.05 U	--	0.05 U	0.05 U	--	--	--	--
C12-C13 Aromatics unadjusted	0.05 U	0.05 U	--	0.05 U	0.05 U	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	0.19 U	0.19 U	0.19 U	**0.662 J**	**0.793**	**9.86**	**10.3**	--	--
Gasoline range hydrocarbons	0.1 U	0.1 U	0.1 U	**0.0933 J**	**0.07 J**	**56.8**	**48.6**	--	--
Oil range organics	0.381 U	**0.207 J**	**0.209 J**	**0.895**	0.381 U	0.377 U	0.377 U	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-46F	MW-46F	MW-47F	MW-47F	MW-47F	MW-47F	MW-48F	MW-48F	MW-48F
Sample ID	GS-090722-02	GS-121422-02	GS-030822-04	GS-061622-13	GS-090722-07	GS-121422-07	GS-030822-05	GS-061622-12	GS-090722-05
Sample Date	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022
Depth	6.1 - 16.1 ft	6.1 - 16.1 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	15.6 - 25.6 ft	15.6 - 25.6 ft	15.6 - 25.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623476.04	7623476.04	7623719.23	7623719.23	7623719.23	7623719.23	7623850.06	7623850.06	7623850.06
Y	704733.02	704733.02	705298.71	705298.71	705298.71	705298.71	705158.82	705158.82	705158.82
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0098**	**0.0286**	**0.327 J**	**0.212**	**0.203**	**0.246**	**0.831 J**	**0.493**	**0.651**
Cyanide, available	0.002 U	0.002 U	**0.00321**	**0.00312**	0.002 U	0.002 U	**0.00982**	**0.00878**	**0.00189 J**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**87.2**	**163**	**1870**	50 U	50 U	50 U	50 U	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**1.63**	**0.704 J**	**1.4**	**0.8 J**	**0.681 J**	**0.768 J**	**6.58**	**5.2**	**5.88**
Barium	**10.8**	**12.1**	**46.3**	**29.7**	**28.3**	**35.4**	**135**	**83.9**	**149**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	**4.97**	2 U	2 U	2 U	2 U	2 U	2 U
Copper	**1.63 J**	**1.65 J**	**4.9**	2 U	**1.32 J**	2 U	2 U	2 U	2 UJ
Iron	**3550**	**3870**	**36600**	**31500**	**29200**	**37200**	**39100**	**25500**	**38400**
Lead	0.2 U	**0.262**	**8.54**	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 UJ
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**170**	**289**	**3760**	**3190**	**3170**	**3810**	**5490**	**3290**	**5520**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**6.18**	**7.67**	**12.2**	2 U	2 U	2 U	**1.75 J**	2 U	2 U
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**1.88 J**	2 U	**10.7**	2 U	2 U	20 U	**1.55 J**	**1.78 J**	**1.09 J**
Zinc	4 UJ	**2.25 J**	**29.9**	**2.24 J**	4 UJ	**2.23 J**	**7.31**	**2.01 J**	4 UJ

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-46F	MW-46F	MW-47F	MW-47F	MW-47F	MW-47F	MW-48F	MW-48F	MW-48F
Sample ID	GS-090722-02	GS-121422-02	GS-030822-04	GS-061622-13	GS-090722-07	GS-121422-07	GS-030822-05	GS-061622-12	GS-090722-05
Sample Date	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022
Depth	6.1 - 16.1 ft	6.1 - 16.1 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	15.6 - 25.6 ft	15.6 - 25.6 ft	15.6 - 25.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623476.04	7623476.04	7623719.23	7623719.23	7623719.23	7623719.23	7623850.06	7623850.06	7623850.06
Y	704733.02	704733.02	705298.71	705298.71	705298.71	705298.71	705158.82	705158.82	705158.82
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	20 U	20 U	40 U	20 U	20 U	20 U	40 U	20 U	4 U
1,1,1-Trichloroethane	20 U	20 U	40 U	20 U	20 U	20 U	40 U	20 U	4 U
1,1,2,2-Tetrachloroethane	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
1,1,2-Trichloroethane	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
1,1-Dichloroethane	20 U	20 U	40 U	20 U	20 U	20 U	40 U	20 U	4 U
1,1-Dichloroethene	0.5 U	0.5 U	40 U	20 U	20 U	0.5 U	0.4 U	20 U	0.2 U
1,1-Dichloropropene	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
1,2,3-Trichlorobenzene	100 U	100 U	200 U	100 U	100 U	100 U	200 U	100 U	20 U
1,2,3-Trichloropropane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	50 U	50 U	**114**	**140**	**123**	**86.5**	100 U	**59**	**10.3**
1,2-Dibromo-3-chloropropane	250 U	250 U	500 U	250 U	250 U	250 U	500 U	250 U	50 U
1,2-Dichloroethane	20 U	20 U	40 U	20 U	20 U	20 U	40 U	20 U	4 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	40 U	20 U	20 U	0.5 U	0.4 U	20 U	0.2 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	40 U	20 U	20 U	0.5 U	0.4 U	20 U	0.2 U
1,2-Dichloropropane	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
1,3,5-Trimethylbenzene (Mesitylene)	50 U	50 U	**60 J**	**57.5**	**48.5 J**	**45.5 J**	100 U	50 U	10 U
1,3-Dichloropropane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
1,3-Dichloropropene, cis-	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
1,3-Dichloropropene, trans-	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
2,2-Dichloropropane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
2-Chlorotoluene	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
2-Hexanone (Methyl butyl ketone)	500 U	500 U	1000 U	500 U	500 U	500 U	1000 U	500 U	100 U
4-Chlorotoluene	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	500 U	500 U	1000 U	500 U	500 U	500 U	1000 U	500 U	100 U
Acetone	1000 U	1000 U	2000 U	1000 U	1000 U	1000 U	2000 U	1000 U	200 U
Acrylonitrile	100 U	100 U	200 U	100 U	100 U	100 U	200 U	100 U	20 U
Benzene	**3340**	**5740**	**15700**	**13500**	**10200**	**7280**	**5960 J**	**24200**	**1230**
Bromobenzene	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
Bromochloromethane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Bromodichloromethane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Bromoform (Tribromomethane)	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Bromomethane (Methyl bromide)	250 UJ	250 U	500 UJ	250 U	250 UJ	250 U	500 UJ	250 U	50 UJ
Carbon disulfide	500 U	500 U	1000 U	500 U	500 U	500 U	1000 U	500 U	100 U
Carbon tetrachloride (Tetrachloromethane)	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Chlorobenzene	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-46F	MW-46F	MW-47F	MW-47F	MW-47F	MW-47F	MW-48F	MW-48F	MW-48F
Sample ID	GS-090722-02	GS-121422-02	GS-030822-04	GS-061622-13	GS-090722-07	GS-121422-07	GS-030822-05	GS-061622-12	GS-090722-05
Sample Date	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022
Depth	6.1 - 16.1 ft	6.1 - 16.1 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	15.6 - 25.6 ft	15.6 - 25.6 ft	15.6 - 25.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623476.04	7623476.04	7623719.23	7623719.23	7623719.23	7623719.23	7623850.06	7623850.06	7623850.06
Y	704733.02	704733.02	705298.71	705298.71	705298.71	705298.71	705158.82	705158.82	705158.82
Chloroethane	250 U	250 U	500 U	250 U	250 U	250 U	500 U	250 U	50 U
Chloroform	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Chloromethane	250 U	250 U	500 U	250 U	250 U	250 U	500 U	250 U	50 U
Cymene, p- (4-Isopropyltoluene)	50 U	50 U	100 U	50 U	50 U	**29.5 J**	100 U	50 U	10 U
Dibromochloromethane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Dibromomethane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Dichlorodifluoromethane	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Dichloromethane (Methylene chloride)	500 U	500 U	1000 U	500 U	500 U	500 U	1000 U	500 U	100 U
Ethylbenzene	25 U	**17.5 J**	**563**	**564**	**550**	**550**	**166**	**376**	**25.3**
Ethylene dibromide (1,2-Dibromoethane)	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	250 U	250 U	500 U	250 U	250 U	250 U	500 U	250 U	50 U
Isopropylbenzene (Cumene)	50 U	50 U	**67 J**	**33 J**	**29 J**	**34 J**	**53 J**	50 U	10 U
m,p-Xylene	50 U	**39.5 J**	**236**	**318**	**267**	**204**	**138**	**346**	**16.9**
Methyl ethyl ketone (2-Butanone)	500 U	500 U	1000 U	500 U	500 U	500 U	1000 U	500 U	100 U
Methyl tert-butyl ether (MTBE)	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
n-Butylbenzene	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
n-Propylbenzene	25 U	25 U	50 U	**25.5**	**24.5 J**	**21.5 J**	50 U	25 U	5 U
o-Xylene	25 U	**21.5 J**	**158**	**202**	**170**	**134**	**72**	**146**	**15.4**
sec-Butylbenzene	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Styrene	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
tert-Butylbenzene	50 U	50 U	100 U	50 U	50 U	50 U	100 U	50 U	10 U
Tetrachloroethene (PCE)	20 U	20 U	**20 J**	20 U	20 U	20 U	40 U	20 U	4 U
Toluene	**118**	**462**	**69 J**	**110**	**62.5**	**48 J**	**331**	**1340**	**13**
Trichloroethene (TCE)	0.5 U	0.5 U	40 U	20 U	20 U	0.5 U	0.4 U	20 U	0.2 U
Trichlorofluoromethane (Fluorotrichloromethane)	100 U	100 U	200 U	100 U	100 U	100 U	200 U	100 U	20 U
Vinyl chloride	0.5 U	0.5 U	40 U	20 U	20 U	0.5 U	0.4 U	20 U	0.2 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	100 U	100 U	200 U	100 U	100 U	100 U	200 U	100 U	20 U
1,2-Dichlorobenzene	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
1,3-Dichlorobenzene	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
1,4-Dichlorobenzene	25 U	25 U	50 U	25 U	25 U	25 U	50 U	25 U	5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**4.26**	**5.76 J**	**671**	**823**	**648**	**661**	**132**	**323**	**58.4**
2-Methylnaphthalene	**2.05**	6.54 U	**940**	**1110**	**872**	**855**	**174**	**491**	**51.5**
Acenaphthene	**3.62 J**	**4.37 J**	**225**	**275**	**242**	**223**	**107**	**231**	**70.3**
Acenaphthylene	**1.71**	3.27 U	14.2 U	**24.3**	29.5 U	40 U	**11.1**	**25.1**	**13.8**
Anthracene	**2.66**	**2.94 J**	**8.83**	**9**	**6.99 J**	40 U	**5.01**	**12.1**	**3.09 J**
Benzo(a)anthracene	**0.206**	1.63 U	**1.14 J**	2.02 U	3.94 U	20 U	1.97 U	1.84 U	1.87 U
Benzo(a)pyrene	**0.234**	1.63 U	**0.95 J**	2.02 U	3.94 U	20 U	1.97 U	1.84 U	1.87 U
Benzo(b)fluoranthene	**0.24**	1.63 U	**0.95 J**	2.02 U	3.94 U	20 U	1.97 U	1.84 U	1.87 U
Benzo(g,h,i)perylene	**0.836**	3.27 U	3.8 U	4.04 U	7.88 U	40 U	3.93 U	3.68 U	3.74 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-46F	MW-46F	MW-47F	MW-47F	MW-47F	MW-47F	MW-48F	MW-48F	MW-48F
Sample ID	GS-090722-02	GS-121422-02	GS-030822-04	GS-061622-13	GS-090722-07	GS-121422-07	GS-030822-05	GS-061622-12	GS-090722-05
Sample Date	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022
Depth	6.1 - 16.1 ft	6.1 - 16.1 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	15.6 - 25.6 ft	15.6 - 25.6 ft	15.6 - 25.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623476.04	7623476.04	7623719.23	7623719.23	7623719.23	7623719.23	7623850.06	7623850.06	7623850.06
Y	704733.02	704733.02	705298.71	705298.71	705298.71	705298.71	705158.82	705158.82	705158.82
Benzo(j,k)fluoranthene	**0.0855 J**	1.63 U	1.9 U	2.02 U	3.94 U	20 U	1.97 U	1.84 U	1.87 U
Carbazole	**6.21**	**9.15**	**114**	**133**	**97**	**108**	**43.9**	**82.4**	**20.4**
Chrysene	**0.206**	1.63 U	**1.28 J**	2.02 U	3.94 U	20 U	1.97 U	1.84 U	1.87 U
Dibenzo(a,h)anthracene	**0.0438 J**	1.63 U	1.9 U	2.02 U	3.94 U	20 U	**8.01 J**	1.84 U	1.87 U
Dibenzofuran	**1.22**	3.27 U	**18**	**21.2**	**18.6**	**24 J**	**7.96**	**14**	**7.4**
Fluoranthene	**1.23**	3.27 U	**16.2**	**14.8**	**13.2**	40 U	**2.36 J**	**6.34**	3.74 U
Fluorene	**2.14**	**2.45 J**	**62.4**	**73.2**	**54.1**	**60**	**23.6**	**54.6**	**13**
Indeno(1,2,3-c,d)pyrene	**0.54**	**0.858 J**	1.9 U	2.02 U	3.94 U	20 U	1.97 U	1.84 U	1.87 U
Naphthalene	**98.9**	**199**	**1520**	**2080**	**1490**	**1120**	**2340**	**5790**	**664**
Phenanthrene	**3.17**	**4.09 J**	**85.3**	**99.5**	**88.9**	**98**	**21.5**	**69.8**	**12.7**
Pyrene	**1.15**	3.27 U	**16.9**	**14.8**	**13.5**	40 U	**2.26 J**	**6.76**	3.74 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-46F	MW-46F	MW-47F	MW-47F	MW-47F	MW-47F	MW-48F	MW-48F	MW-48F
Sample ID	GS-090722-02	GS-121422-02	GS-030822-04	GS-061622-13	GS-090722-07	GS-121422-07	GS-030822-05	GS-061622-12	GS-090722-05
Sample Date	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022	12/14/2022	3/8/2022	6/16/2022	9/7/2022
Depth	6.1 - 16.1 ft	6.1 - 16.1 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	22 - 33 ft	15.6 - 25.6 ft	15.6 - 25.6 ft	15.6 - 25.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623476.04	7623476.04	7623719.23	7623719.23	7623719.23	7623719.23	7623850.06	7623850.06	7623850.06
Y	704733.02	704733.02	705298.71	705298.71	705298.71	705298.71	705158.82	705158.82	705158.82
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-48F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-51F
Sample ID	GS-121422-04	GS-030822-02	GS-030822-03	GS-062022-15	GS-090722-03	GS-090722-04	GS-101722-137	GS-121422-01	GS-030822-01
Sample Date	12/14/2022	3/8/2022	3/8/2022	6/20/2022	9/7/2022	9/7/2022	10/17/2022	12/14/2022	3/8/2022
Depth	15.6 - 25.6 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	15.5 - 25.2 ft
Sample Type	N	N	FD	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623850.06	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623427.421
Y	705158.82	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705385.198
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	**332**	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	20 U	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	20 U	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	**332**	--	--
Ammonia as nitrogen	--	--	--	--	--	--	**1.68**	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.453**	**0.0326**	**0.0329**	**0.057**	**0.114**	**0.114**	--	**0.0864**	**0.0293**
Cyanide, available	0.002 U	**0.00126 J**	0.002 U	0.002 U	0.002 U	0.002 U	--	0.002 U	**0.00107 J**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	--	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	0.25 UJ	--	--
Sulfate	--	--	--	--	--	--	1 U	--	--
Sulfide	--	--	--	--	--	--	0.05 U	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	**8.02**	--	--
Metals (µg/L)									
Aluminum	50 U	**129**	**128**	**43.8 J**	50 U	50 U	--	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
Arsenic	**6.59**	**0.808 J**	**0.872 J**	**3.54**	**6.75**	**6.78**	--	**6.97**	**5.57**
Barium	**101**	**112**	**120**	**257**	**46**	**45.6**	--	**112**	**37.5**
Beryllium	0.2 U	**0.788**	**0.867**	**0.151 J**	0.2 U	0.2 U	--	0.2 U	0.2 U
Cadmium	0.2 U	**0.259**	**0.253**	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	**7.6**	**4.15**	**10.7**	**4.45**	**3.87**	--	**1.03 J**	2 U
Copper	2 U	**1.48 J**	**1.4 J**	**1.03 J**	2 UJ	**1.61 J**	--	2 U	2 U
Iron	**32800**	**11400**	**12900**	**98400**	**28300**	**28000**	--	**56200**	**45000**
Lead	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 UJ	--	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**3380**	**7950**	**8620**	**6560**	**1210**	**1200**	--	**2620**	**2360**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	--	0.08 U	0.08 U
Nickel	**1.06 J**	**185**	**194**	**37.1**	**7.39**	**6.37**	--	**3.91**	2 U
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U	**2.27**	**2.4**	--	2 U	2 U
Zinc	**2.29 J**	**43.2**	**45.8**	**9.1**	4 U	4 U	--	**2.06 J**	**3.86 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-48F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-51F
Sample ID	GS-121422-04	GS-030822-02	GS-030822-03	GS-062022-15	GS-090722-03	GS-090722-04	GS-101722-137	GS-121422-01	GS-030822-01
Sample Date	12/14/2022	3/8/2022	3/8/2022	6/20/2022	9/7/2022	9/7/2022	10/17/2022	12/14/2022	3/8/2022
Depth	15.6 - 25.6 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	15.5 - 25.2 ft
Sample Type	N	N	FD	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623850.06	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623427.421
Y	705158.82	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705385.198
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	**24000**	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	**1070**	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	80 U	0.4 U	0.4 U	4 U	2 U	2 U	--	2 U	4 U
1,1,1-Trichloroethane	80 U	0.4 U	0.4 U	4 U	2 U	2 U	--	2 U	4 U
1,1,2,2-Tetrachloroethane	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
1,1,2-Trichloroethane	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
1,1-Dichloroethane	80 U	0.4 U	0.4 U	4 U	2 U	2 U	--	2 U	4 U
1,1-Dichloroethene	80 U	0.4 U	0.4 U	0.2 U	0.1 U	0.1 U	--	0.5 U	0.4 U
1,1-Dichloropropene	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
1,2,3-Trichlorobenzene	400 U	2 U	2 U	20 U	10 U	10 U	--	10 U	20 U
1,2,3-Trichloropropane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**100 J**	**7.23**	**8.88**	**14.1**	**12.8**	**12.8**	--	**13**	**141**
1,2-Dibromo-3-chloropropane	1000 U	5 U	5 U	50 U	25 U	25 U	--	25 U	50 U
1,2-Dichloroethane	80 U	0.4 U	0.4 U	4 U	2 U	2 U	--	2 U	4 U
1,2-Dichloroethene, cis-	80 U	0.4 U	0.4 U	0.2 U	0.1 U	0.1 U	--	0.675 U	0.4 U
1,2-Dichloroethene, trans-	80 U	0.4 U	0.4 U	0.2 U	0.1 U	0.1 U	--	0.5 U	0.4 U
1,2-Dichloropropane	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
1,3,5-Trimethylbenzene (Mesitylene)	200 U	**1.36**	**1.72**	10 U	**3.3 J**	**3.2 J**	--	**2.7 J**	**41.1**
1,3-Dichloropropane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
1,3-Dichloropropene, cis-	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
1,3-Dichloropropene, trans-	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
2,2-Dichloropropane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
2-Chlorotoluene	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
2-Hexanone (Methyl butyl ketone)	2000 U	10 U	10 U	100 U	50 U	50 U	--	50 U	100 U
4-Chlorotoluene	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	2000 U	10 U	10 U	100 U	50 U	50 U	--	50 U	100 U
Acetone	4000 U	20 U	20 U	200 U	100 U	100 U	--	100 U	200 U
Acrylonitrile	400 U	2 U	2 U	20 U	10 U	10 U	--	10 U	20 U
Benzene	**30000**	**200**	**188**	**231**	**110**	**103**	--	**36.6**	**1620**
Bromobenzene	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
Bromochloromethane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Bromodichloromethane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Bromoform (Tribromomethane)	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Bromomethane (Methyl bromide)	1000 U	5 UJ	5 U	50 U	25 UJ	25 UJ	--	25 U	50 U
Carbon disulfide	2000 U	10 U	10 U	100 U	50 U	50 U	--	50 U	100 U
Carbon tetrachloride (Tetrachloromethane)	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Chlorobenzene	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-48F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-51F
Sample ID	GS-121422-04	GS-030822-02	GS-030822-03	GS-062022-15	GS-090722-03	GS-090722-04	GS-101722-137	GS-121422-01	GS-030822-01
Sample Date	12/14/2022	3/8/2022	3/8/2022	6/20/2022	9/7/2022	9/7/2022	10/17/2022	12/14/2022	3/8/2022
Depth	15.6 - 25.6 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	15.5 - 25.2 ft
Sample Type	N	N	FD	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623850.06	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623427.421
Y	705158.82	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705385.198
Chloroethane	1000 U	5 U	5 U	50 U	25 U	25 U	--	25 U	50 U
Chloroform	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Chloromethane	1000 U	5 U	5 U	50 U	25 U	25 U	--	25 U	50 U
Cymene, p- (4-Isopropyltoluene)	200 U	**0.68 J**	1 U	10 U	5 U	5 U	--	5 U	**11.2 J**
Dibromochloromethane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Dibromomethane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Dichlorodifluoromethane	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Dichloromethane (Methylene chloride)	2000 U	10 U	10 U	100 U	50 U	50 U	--	50 U	100 U
Ethylbenzene	**530**	**44.8**	**42.9**	**66.2**	**54.6**	**55**	--	**132**	**584**
Ethylene dibromide (1,2-Dibromoethane)	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	1000 U	5 U	5 U	50 U	25 U	25 U	--	25 U	50 U
Isopropylbenzene (Cumene)	200 U	**13.9**	**17.5**	**14.4**	**14.9**	**15.2**	--	**10**	**76.8**
m,p-Xylene	**422**	**6.99**	**7.25**	**14.5**	**10.4**	**10.4**	--	**13**	**101**
Methyl ethyl ketone (2-Butanone)	2000 U	10 U	10 U	100 U	50 U	50 U	--	50 U	100 U
Methyl tert-butyl ether (MTBE)	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
n-Butylbenzene	200 U	**0.87 J**	1 U	10 U	5 U	5 U	--	5 U	10 U
n-Propylbenzene	100 U	**4.45**	**5.32**	**5.6**	**5.8**	**5.95**	--	**4.05**	**39.2**
o-Xylene	**174**	**11.1**	**11.5**	**22.2**	**17.4**	**17.7**	--	**45.5**	**149**
sec-Butylbenzene	200 U	**0.9 J**	**0.89 J**	10 U	5 U	5 U	--	5 U	**5.4 J**
Styrene	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
tert-Butylbenzene	200 U	1 U	1 U	10 U	5 U	5 U	--	5 U	10 U
Tetrachloroethene (PCE)	80 U	0.4 U	0.4 U	4 U	2 U	2 U	--	2 U	4 U
Toluene	**4080**	**1.21**	**1.19**	10 U	5 U	5 U	--	5 U	**15.4**
Trichloroethene (TCE)	80 U	0.4 U	0.4 U	0.2 U	0.1 U	0.1 U	--	0.75 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	400 U	2 U	2 U	20 U	10 U	10 U	--	10 U	20 U
Vinyl chloride	80 U	0.4 U	0.4 U	0.2 U	0.1 U	0.1 U	--	0.5 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	400 U	2 U	2 U	20 U	10 U	10 U	--	10 U	20 U
1,2-Dichlorobenzene	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
1,3-Dichlorobenzene	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
1,4-Dichlorobenzene	100 U	0.5 U	0.5 U	5 U	2.5 U	2.5 U	--	2.5 U	5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**292**	**109**	**127**	**196**	**215**	**225**	--	**172**	**513**
2-Methylnaphthalene	**432**	8.28 U	**1.56**	**18.7**	**14.6**	**14.5**	--	10.3 U	**478**
Acenaphthene	**198**	**77.3**	**88**	**167**	**173**	**176**	--	**143**	**164**
Acenaphthylene	51.6 U	**5.54**	3.69 U	**24.1**	**23.7**	**25.6**	--	**19.7**	8.56 U
Anthracene	36.7 U	**2.69 J**	**3.86**	**4.61 J**	**5.76**	**5.89**	--	**7.56**	**7**
Benzo(a)anthracene	18.3 U	2.07 U	**0.0194**	2.39 U	2.04 U	1.93 U	--	2.58 U	2.11 U
Benzo(a)pyrene	18.3 U	2.07 U	0.0184 U	2.39 U	2.04 U	1.93 U	--	2.58 U	2.11 U
Benzo(b)fluoranthene	18.3 U	2.07 U	0.0184 U	2.39 U	2.04 U	1.93 U	--	2.58 U	2.11 U
Benzo(g,h,i)perylene	36.7 U	4.14 U	0.0369 U	4.79 U	4.08 U	3.86 U	--	5.17 U	4.21 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-48F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-51F
Sample ID	GS-121422-04	GS-030822-02	GS-030822-03	GS-062022-15	GS-090722-03	GS-090722-04	GS-101722-137	GS-121422-01	GS-030822-01
Sample Date	12/14/2022	3/8/2022	3/8/2022	6/20/2022	9/7/2022	9/7/2022	10/17/2022	12/14/2022	3/8/2022
Depth	15.6 - 25.6 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	15.5 - 25.2 ft
Sample Type	N	N	FD	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623850.06	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623427.421
Y	705158.82	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705385.198
Benzo(j,k)fluoranthene	18.3 U	2.07 U	0.0184 U	2.39 U	2.04 U	1.93 U	--	2.58 U	2.11 U
Carbazole	**106**	**28.5**	**40.1**	**44.4**	**45.8**	**47.4**	--	**47.3**	**145**
Chrysene	18.3 U	2.07 U	**0.0166 J**	2.39 U	2.04 U	1.93 U	--	2.58 U	2.11 U
Dibenzo(a,h)anthracene	18.3 U	2.07 U	0.0184 U	2.39 U	2.04 U	1.93 U	--	2.58 U	2.11 U
Dibenzofuran	36.7 U	**2.9 J**	**3.74**	**6.52**	**6.99**	**7.09**	--	**7.56**	**14.5**
Fluoranthene	36.7 U	4.14 U	**1.42**	**2.45 J**	**2.81 J**	**2.89 J**	--	**3.17 J**	4.21 U
Fluorene	**50.9**	**14.2**	**17.7**	**29**	**25.8**	**26.9**	--	**36.3**	**58.2**
Indeno(1,2,3-c,d)pyrene	18.3 U	2.07 U	0.0184 U	2.39 U	2.04 U	1.93 U	--	2.58 U	2.11 U
Naphthalene	**7620**	**167**	**195**	**834**	**443**	**446**	--	**1130**	**666**
Phenanthrene	**84.3**	**13**	**13.6**	**22.4**	**31**	**31.5**	--	**41.6**	**54**
Pyrene	36.7 U	4.14 U	**1.53**	4.79 U	4.08 U	**2.22 J**	--	5.17 U	4.21 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-48F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-49F	MW-51F
Sample ID	GS-121422-04	GS-030822-02	GS-030822-03	GS-062022-15	GS-090722-03	GS-090722-04	GS-101722-137	GS-121422-01	GS-030822-01
Sample Date	12/14/2022	3/8/2022	3/8/2022	6/20/2022	9/7/2022	9/7/2022	10/17/2022	12/14/2022	3/8/2022
Depth	15.6 - 25.6 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	15.5 - 25.2 ft
Sample Type	N	N	FD	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623850.06	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623476.81	7623427.421
Y	705158.82	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705461.64	705385.198
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	**7.19**	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	**15.6**	--	--
Oil range organics	--	--	--	--	--	--	0.377 U	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-51F	MW-51F	MW-51F	MW-52F	MW-52F	MW-52F	MW-52F	MW-53F	MW-53F
Sample ID	GS-062022-14	GS-090722-01	GS-121422-03	GS-030922-10	GS-062022-17	GS-090822-10	GS-121422-05	GS-030822-06	GS-062022-16
Sample Date	6/20/2022	9/7/2022	12/14/2022	3/9/2022	6/20/2022	9/8/2022	12/14/2022	3/8/2022	6/20/2022
Depth	15.5 - 25.2 ft	15.5 - 25.2 ft	15.5 - 25.2 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	3.8 - 8.6 ft	3.8 - 8.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623427.421	7623427.421	7623427.421	7623610.623	7623610.623	7623610.623	7623610.623	7623770.055	7623770.055
Y	705385.198	705385.198	705385.198	705430.281	705430.281	705430.281	705430.281	705433.306	705433.306
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0307**	**0.0368**	**0.0393**	**0.113**	**0.114**	**0.105**	**0.0677**	**0.582 J**	**0.558**
Cyanide, available	0.002 U	0.002 U	0.002 U	**0.00196 J**	0.002 U	0.002 U	0.002 U	**0.00451**	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	50 U	50 U	**30.5 J**	50 U	**393**	**510**	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	**0.58 J**	1 U	1 U
Arsenic	**5.07**	**5.31**	**6.06**	**1.41**	**1.51**	**1.2**	**0.982 J**	**1.18**	**1.8**
Barium	**36.5**	**31.6**	**39.8**	**43.5**	**40.2**	**64.7**	**80.9**	**55.3**	**65.4**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	**1.54 J**	**2.25**	2 U	2 U
Copper	2 U	**2.63 J**	2 U	2 U	2 U	**1.26 J**	2 U	2 U	2 U
Iron	**41900**	**38100**	**48000**	**28900**	**29800**	**10600**	**12500**	**33800**	**32800**
Lead	**0.399**	0.2 U	0.2 U	0.2 U	0.2 U	**0.454**	**0.424**	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**2300**	**1700**	**2080**	**1500**	**1460**	**1630**	**2200**	**1780**	**1350**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	2 U	2 U	**1.14 J**	2 U	**3.2**	**3.12**	**1.32 J**	2 U
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	**1.09 J**	2 U	**1.52 J**	**2.16**	**1.14 J**	**1.06 J**
Zinc	**4.71**	4 U	**2.05 J**	**3.18 J**	**3.63 J**	**6.08 J**	**4.3**	**2.72 J**	**3.98 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-51F	MW-51F	MW-51F	MW-52F	MW-52F	MW-52F	MW-52F	MW-53F	MW-53F
Sample ID	GS-062022-14	GS-090722-01	GS-121422-03	GS-030922-10	GS-062022-17	GS-090822-10	GS-121422-05	GS-030822-06	GS-062022-16
Sample Date	6/20/2022	9/7/2022	12/14/2022	3/9/2022	6/20/2022	9/8/2022	12/14/2022	3/8/2022	6/20/2022
Depth	15.5 - 25.2 ft	15.5 - 25.2 ft	15.5 - 25.2 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	3.8 - 8.6 ft	3.8 - 8.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623427.421	7623427.421	7623427.421	7623610.623	7623610.623	7623610.623	7623610.623	7623770.055	7623770.055
Y	705385.198	705385.198	705385.198	705430.281	705430.281	705430.281	705430.281	705433.306	705433.306
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	4 U	2 U	2 U	40 U	20 U	20 U	80 U	4 U	4 U
1,1,1-Trichloroethane	4 U	2 U	2 U	40 U	20 U	20 U	80 U	4 U	4 U
1,1,2,2-Tetrachloroethane	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
1,1,2-Trichloroethane	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
1,1-Dichloroethane	4 U	2 U	2 U	40 U	20 U	20 U	80 U	4 U	4 U
1,1-Dichloroethene	0.2 U	0.5 U	0.5 U	0.4 U	0.4 U	20 U	80 U	0.4 U	0.2 U
1,1-Dichloropropene	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
1,2,3-Trichlorobenzene	20 U	10 U	10 U	200 U	100 U	100 U	400 U	20 U	20 U
1,2,3-Trichloropropane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**103**	**56.1**	**64.8**	**56 J**	**72**	**75.5**	200 U	**6.9 J**	10 U
1,2-Dibromo-3-chloropropane	50 U	25 U	25 U	500 U	250 U	250 U	1000 U	50 U	50 U
1,2-Dichloroethane	4 U	2 U	2 U	40 U	20 U	20 U	80 U	4 U	4 U
1,2-Dichloroethene, cis-	**0.185 J**	0.5 U	0.55 U	**0.215 J**	0.4 U	20 U	80 U	0.4 U	0.2 U
1,2-Dichloroethene, trans-	0.2 U	0.5 U	0.5 U	0.4 U	0.4 U	20 U	80 U	0.4 U	0.2 U
1,2-Dichloropropane	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
1,3,5-Trimethylbenzene (Mesitylene)	**32.5**	**22.8**	**16.8**	100 U	50 U	50 U	200 U	10 U	10 U
1,3-Dichloropropane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
1,3-Dichloropropene, cis-	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
1,3-Dichloropropene, trans-	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
2,2-Dichloropropane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
2-Chlorotoluene	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
2-Hexanone (Methyl butyl ketone)	100 U	50 U	50 U	1000 U	500 U	500 U	2000 U	100 U	100 U
4-Chlorotoluene	10 U	5 U	10 U	100 U	50 U	50 U	200 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	100 U	50 U	50 U	1000 U	500 U	500 U	2000 U	100 U	100 U
Acetone	200 U	100 U	100 U	2000 U	1000 U	1000 U	4000 U	200 U	200 U
Acrylonitrile	20 U	10 U	10 U	200 U	100 U	100 U	400 U	20 U	20 U
Benzene	**732**	**141**	**120**	**2150**	**3780**	**15000**	**21700**	**1060**	**1050**
Bromobenzene	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
Bromochloromethane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Bromodichloromethane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Bromoform (Tribromomethane)	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Bromomethane (Methyl bromide)	50 U	25 UJ	25 U	500 U	250 U	250 UJ	1000 U	50 U	50 U
Carbon disulfide	100 U	50 U	50 U	1000 U	500 U	500 U	2000 U	100 U	100 U
Carbon tetrachloride (Tetrachloromethane)	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Chlorobenzene	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-51F	MW-51F	MW-51F	MW-52F	MW-52F	MW-52F	MW-52F	MW-53F	MW-53F
Sample ID	GS-062022-14	GS-090722-01	GS-121422-03	GS-030922-10	GS-062022-17	GS-090822-10	GS-121422-05	GS-030822-06	GS-062022-16
Sample Date	6/20/2022	9/7/2022	12/14/2022	3/9/2022	6/20/2022	9/8/2022	12/14/2022	3/8/2022	6/20/2022
Depth	15.5 - 25.2 ft	15.5 - 25.2 ft	15.5 - 25.2 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	3.8 - 8.6 ft	3.8 - 8.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623427.421	7623427.421	7623427.421	7623610.623	7623610.623	7623610.623	7623610.623	7623770.055	7623770.055
Y	705385.198	705385.198	705385.198	705430.281	705430.281	705430.281	705430.281	705433.306	705433.306
Chloroethane	50 U	25 U	25 U	500 U	250 U	250 U	1000 U	50 U	50 U
Chloroform	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Chloromethane	50 U	25 U	25 U	500 U	250 U	250 U	1000 U	50 U	50 U
Cymene, p- (4-Isopropyltoluene)	**11.3 J**	**13.5 J**	**13**	100 U	50 U	50 U	200 U	10 U	10 U
Dibromochloromethane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Dibromomethane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Dichlorodifluoromethane	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
Dichloromethane (Methylene chloride)	100 U	50 U	50 U	1000 U	500 U	500 U	2000 U	100 U	100 U
Ethylbenzene	**491**	**309**	**370**	**197**	**360**	**558**	**408**	**5.1**	**5.7**
Ethylene dibromide (1,2-Dibromoethane)	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	50 U	25 U	25 U	500 U	250 U	250 U	1000 U	50 U	50 U
Isopropylbenzene (Cumene)	**69.3**	**75.8**	**77.8**	100 U	50 U	50 U	200 U	**8.5 J**	**6.2 J**
m,p-Xylene	**80.3**	**31.4**	**38.2**	**100**	**200**	**451**	**228**	**5.7 J**	10 U
Methyl ethyl ketone (2-Butanone)	100 U	50 U	50 U	1000 U	500 U	500 U	2000 U	100 U	100 U
Methyl tert-butyl ether (MTBE)	10 U	5 U	5 U	100 U	50 U	50 U	200 U	10 U	10 U
n-Butylbenzene	10 U	**3.9 J**	**3.95 J**	100 U	50 U	50 U	200 U	10 U	10 U
n-Propylbenzene	**31.5**	**35.4**	**34.4**	50 U	25 U	25 U	100 U	**4.4 J**	**4.2 J**
o-Xylene	**89.3**	**90.8**	**107**	**83**	**120**	**218**	**132**	**8.6**	**4 J**
sec-Butylbenzene	**5 J**	**7.9**	**7**	100 U	50 U	50 U	200 U	10 U	10 U
Styrene	10 U	5 U	**2.95 J**	100 U	50 U	50 U	200 U	10 U	10 U
tert-Butylbenzene	10 U	6 U	10 U	100 U	50 U	50 U	200 U	10 U	10 U
Tetrachloroethene (PCE)	4 U	2 U	2 U	40 U	20 U	20 U	80 U	4 U	4 U
Toluene	**10.4**	**3.05 J**	**2.65 J**	100 U	50 U	**86.5**	200 U	10 U	10 U
Trichloroethene (TCE)	0.2 U	0.5 U	0.5 U	0.4 U	0.4 U	20 U	80 U	0.4 U	0.2 U
Trichlorofluoromethane (Fluorotrichloromethane)	20 U	10 U	10 U	200 U	100 U	100 U	400 U	20 U	20 U
Vinyl chloride	0.2 U	0.5 U	0.5 U	0.4 U	0.4 U	20 U	80 U	0.4 U	0.2 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	20 U	10 U	10 U	200 U	100 U	100 U	400 U	20 U	20 U
1,2-Dichlorobenzene	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
1,3-Dichlorobenzene	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
1,4-Dichlorobenzene	5 U	2.5 U	2.5 U	50 U	25 U	25 U	100 U	5 U	5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**688**	**679**	**535**	**134**	**194**	**179**	**206**	**60.7**	**69**
2-Methylnaphthalene	**662**	**766**	**582**	**50.1**	**77.9**	**101**	**126**	**5.09**	**4.66 J**
Acenaphthene	**206**	**255 J**	**173**	**71.3**	**103**	**101**	**97.8**	**162**	**285**
Acenaphthylene	23.9 U	30.3 U	45.4 U	5.2 U	37.1 U	32.9 U	45.5 U	7.78 U	**54.3**
Anthracene	**8.76**	**8.59**	45.4 U	**2.88**	37.1 U	32.9 U	45.5 U	**5.46**	**5.6**
Benzo(a)anthracene	1.91 U	1.1 U	22.7 U	0.238 U	18.5 U	16.4 U	22.8 U	**0.36**	1.88 U
Benzo(a)pyrene	1.91 U	1.1 U	22.7 U	0.238 U	18.5 U	16.4 U	22.8 U	**0.0908**	1.88 U
Benzo(b)fluoranthene	1.91 U	1.1 U	22.7 U	0.238 U	18.5 U	16.4 U	22.8 U	**0.102 J**	1.88 U
Benzo(g,h,i)perylene	3.83 U	2.2 U	45.4 U	0.476 U	37.1 U	32.9 U	45.5 U	0.0415 U	3.77 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-51F	MW-51F	MW-51F	MW-52F	MW-52F	MW-52F	MW-52F	MW-53F	MW-53F
Sample ID	GS-062022-14	GS-090722-01	GS-121422-03	GS-030922-10	GS-062022-17	GS-090822-10	GS-121422-05	GS-030822-06	GS-062022-16
Sample Date	6/20/2022	9/7/2022	12/14/2022	3/9/2022	6/20/2022	9/8/2022	12/14/2022	3/8/2022	6/20/2022
Depth	15.5 - 25.2 ft	15.5 - 25.2 ft	15.5 - 25.2 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	3.8 - 8.6 ft	3.8 - 8.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623427.421	7623427.421	7623427.421	7623610.623	7623610.623	7623610.623	7623610.623	7623770.055	7623770.055
Y	705385.198	705385.198	705385.198	705430.281	705430.281	705430.281	705430.281	705433.306	705433.306
Benzo(j,k)fluoranthene	1.91 U	1.1 U	22.7 U	0.238 U	18.5 U	16.4 U	22.8 U	**0.084 J**	1.88 U
Carbazole	**189**	**192**	**183**	**26.7**	**30.1 J**	**34.9**	**34.7 J**	**12.7**	**15**
Chrysene	1.91 U	1.1 U	22.7 U	0.238 U	18.5 U	16.4 U	22.8 U	**0.287**	1.88 U
Dibenzo(a,h)anthracene	1.91 U	1.1 U	22.7 U	0.238 U	18.5 U	16.4 U	22.8 U	0.0207 U	1.88 U
Dibenzofuran	**16.4**	**19.9**	45.4 U	**2.98**	37.1 U	32.9 U	45.5 U	**5.81**	**7.63**
Fluoranthene	**2.35 J**	**2.64**	45.4 U	**11.1**	37.1 U	32.9 U	45.5 U	**6.39**	**4.05**
Fluorene	**59.7**	**68.9**	**64.1**	**16.9**	**19.9 J**	**21 J**	45.5 U	**24.7**	**36.3**
Indeno(1,2,3-c,d)pyrene	1.91 U	1.1 U	22.7 U	0.238 U	18.5 U	16.4 U	22.8 U	0.0207 U	1.88 U
Naphthalene	**927**	**377**	**408**	**2270**	**3700**	**3250**	**3790**	**16.2**	**17.3**
Phenanthrene	**67.9**	**74**	**68.7 J**	**9.83**	74.2 U	**39.4 J**	91 U	**15.6**	**17.4**
Pyrene	**2.15 J**	**2.2**	45.4 U	**11.8**	37.1 U	32.9 U	45.5 U	**6.9**	**4.52**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-51F	MW-51F	MW-51F	MW-52F	MW-52F	MW-52F	MW-52F	MW-53F	MW-53F
Sample ID	GS-062022-14	GS-090722-01	GS-121422-03	GS-030922-10	GS-062022-17	GS-090822-10	GS-121422-05	GS-030822-06	GS-062022-16
Sample Date	6/20/2022	9/7/2022	12/14/2022	3/9/2022	6/20/2022	9/8/2022	12/14/2022	3/8/2022	6/20/2022
Depth	15.5 - 25.2 ft	15.5 - 25.2 ft	15.5 - 25.2 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	5.8 - 10.5 ft	3.8 - 8.6 ft	3.8 - 8.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623427.421	7623427.421	7623427.421	7623610.623	7623610.623	7623610.623	7623610.623	7623770.055	7623770.055
Y	705385.198	705385.198	705385.198	705430.281	705430.281	705430.281	705430.281	705433.306	705433.306
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-53F	MW-53F	NWN-01-20	NWN-01-20	NWN-02-20	NWN-02-20	NWN-03-17	NWN-03-17	NWN-07-30
Sample ID	GS-090822-08	GS-121422-06	GS-091522-30	GS-091522-31	GS-032822-67	GS-091522-34	GS-032822-64	GS-091522-29	GS-031722-33
Sample Date	9/8/2022	12/14/2022	9/15/2022	9/15/2022	3/28/2022	9/15/2022	3/28/2022	9/15/2022	3/17/2022
Depth	3.8 - 8.6 ft	3.8 - 8.6 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	7 - 17 ft	7 - 17 ft	20 - 30 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623770.055	7623770.055	7623946.7	7623946.7	7623940.1	7623940.1	7624165.6	7624165.6	7624543
Y	705433.306	705433.306	704240.4	704240.4	703958	703958	703613	703613	703893.5
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.59**	**0.83**	**37.9 J**	**20.2 J**	**2.97**	**8.48**	**1.09**	**0.653 J**	**11.6**
Cyanide, available	**0.00147 J**	0.002 U	**0.086**	**0.087**	**0.0206**	**0.0123 J**	**0.00485**	0.002 U	**0.00107 J**
Cyanide, free	0.005 U	0.005 U	**0.013**	**0.01**	**0.00316 J**	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**403**	**25.2 J**	**106**	**218**	**97.7**	**112**	50 U	50 U	**52.9**
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**1.07**	**1.04**	**3.18**	**3.24**	**2.5**	**0.575 J**	**9.22**	**13.6**	**12.6**
Barium	**89**	**93.6**	**195**	**199**	**29**	**67.6**	**52.1**	**49.2**	**127**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	**1.76 J**	2 U	**4.76**	**5.48**	2 U	2 U	2 U	2 U	**1.52 J**
Copper	**1.66 J**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Iron	**23100**	**31800**	**16400**	**16600**	**15200**	**23300**	**33200**	**40000**	**103000**
Lead	**0.362**	0.2 U	**0.324**	**0.618**	**0.853**	**0.89**	0.2 U	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**1700**	**2220**	**774**	**773**	**3250**	**4410**	**6870**	**7070**	**3800**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**2.36**	**2.12**	**4.65**	**9.53**	**1.21 J**	2 U	**3.9**	**6.58**	2 U
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**2.74**	**1.37 J**	**140**	**136**	**1.97 J**	**6.73**	2 U	2 U	**2.93**
Zinc	**4.79 J**	**2.92 J**	**2.29 J**	**3.71 J**	**8.06**	**12.1**	**3.83 J**	**8.45**	**12.8**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-53F	MW-53F	NWN-01-20	NWN-01-20	NWN-02-20	NWN-02-20	NWN-03-17	NWN-03-17	NWN-07-30
Sample ID	GS-090822-08	GS-121422-06	GS-091522-30	GS-091522-31	GS-032822-67	GS-091522-34	GS-032822-64	GS-091522-29	GS-031722-33
Sample Date	9/8/2022	12/14/2022	9/15/2022	9/15/2022	3/28/2022	9/15/2022	3/28/2022	9/15/2022	3/17/2022
Depth	3.8 - 8.6 ft	3.8 - 8.6 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	7 - 17 ft	7 - 17 ft	20 - 30 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623770.055	7623770.055	7623946.7	7623946.7	7623940.1	7623940.1	7624165.6	7624165.6	7624543
Y	705433.306	705433.306	704240.4	704240.4	703958	703958	703613	703613	703893.5
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	2 U	2 U	4 U	4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	2 U	2 U	4 U	4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	2 U	2 U	4 U	4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.1 U	0.5 U	0.2 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	10 U	10 U	20 U	20 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**6**	**5.95**	**192**	**178**	1 U	1 U	1 U	1 U	**0.53 J**
1,2-Dibromo-3-chloropropane	25 U	25 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	2 U	**1.3 J**	4 U	4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.1 U	0.5 U	0.2 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.1 U	0.5 U	0.2 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	**2.9 J**	**3 J**	**52.6**	**49.7**	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	50 U	50 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	50 U	50 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U
Acetone	100 U	100 U	200 U	200 U	20 U	20 U	20 U	20 U	20 UJ
Acrylonitrile	10 U	10 U	20 U	20 U	2 U	2 U	2 U	2 U	2 U
Benzene	**968**	**726**	**503**	**438**	**5.93**	**0.51**	0.2 U	0.2 U	**0.41**
Bromobenzene	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	25 UJ	25 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	50 U	50 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.41**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-53F	MW-53F	NWN-01-20	NWN-01-20	NWN-02-20	NWN-02-20	NWN-03-17	NWN-03-17	NWN-07-30
Sample ID	GS-090822-08	GS-121422-06	GS-091522-30	GS-091522-31	GS-032822-67	GS-091522-34	GS-032822-64	GS-091522-29	GS-031722-33
Sample Date	9/8/2022	12/14/2022	9/15/2022	9/15/2022	3/28/2022	9/15/2022	3/28/2022	9/15/2022	3/17/2022
Depth	3.8 - 8.6 ft	3.8 - 8.6 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	7 - 17 ft	7 - 17 ft	20 - 30 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623770.055	7623770.055	7623946.7	7623946.7	7623940.1	7623940.1	7624165.6	7624165.6	7624543
Y	705433.306	705433.306	704240.4	704240.4	703958	703958	703613	703613	703893.5
Chloroethane	25 U	25 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U
Chloroform	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	25 U	25 U	110 U	130 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	5 U	5 U	10 UJ	10 UJ	1 U	1 UJ	1 U	1 UJ	1 U
Dichloromethane (Methylene chloride)	50 U	50 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	**3**	**4.6**	**113**	**97.5**	0.5 U	**0.27 J**	0.5 U	0.5 U	**0.41 J**
Ethylene dibromide (1,2-Dibromoethane)	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	25 U	25 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	**6.85**	**7.3**	**10.1**	**9.6 J**	**0.6 J**	1 U	1 U	1 U	**4.04**
m,p-Xylene	**2.65 J**	**3.4 J**	**130**	**121**	1 U	1 U	1 U	1 U	**0.88 J**
Methyl ethyl ketone (2-Butanone)	50 U	50 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	**4.05**	**3.35**	**15.5**	**14.8**	**0.52**	0.5 U	0.5 U	0.5 U	**0.95**
o-Xylene	**4.65**	**6.05**	**119**	**114**	**0.3 J**	**0.47 J**	0.5 U	0.5 U	**1.76**
sec-Butylbenzene	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	**0.77 J**
Styrene	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	5 U	5 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	2 U	2 U	4 U	4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	5 U	5 U	**30.1**	**26.4**	1 U	1 U	1 U	1 U	**0.6 J**
Trichloroethene (TCE)	0.1 U	0.5 U	0.2 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	10 U	10 U	20 U	20 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.1 U	0.5 U	0.2 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	10 U	10 U	20 U	20 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	2.5 U	2.5 U	5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**78.7**	**89.2 J**	**239**	**223**	**4.28**	**2.51**	0.1 U	0.0797 U	**2.8 J**
2-Methylnaphthalene	**6.99**	96.5 U	**325**	**298**	**0.173**	**0.844**	0.1 U	0.0797 U	**0.26 J**
Acenaphthene	**196**	**225**	**68.5**	**66.2**	**17.3**	**25.3**	**2.41**	**1.3**	**48.5 J**
Acenaphthylene	**10.7**	**38 J**	14.5 U	15.6 U	**1.1**	**2.13**	**0.272**	**0.193**	**4.62 J**
Anthracene	**7.54**	48.2 U	**18.2**	**17.6**	**3.97**	**8.52**	**0.42**	**0.319**	**1.78 J**
Benzo(a)anthracene	**0.678**	24.1 U	**2.12**	**2.56**	**0.267**	**0.462**	**0.0219 J**	**0.0149 J**	**0.122 J**
Benzo(a)pyrene	**0.376**	24.1 U	**1.54 J**	**2.4**	**0.0538**	**0.101**	0.025 U	0.0199 U	0.0888 UJ
Benzo(b)fluoranthene	**0.359**	24.1 U	**1.25 J**	**2.19**	**0.0707**	**0.099**	0.025 U	0.0199 U	0.0888 UJ
Benzo(g,h,i)perylene	**0.243**	48.2 U	3.86 U	4.17 U	0.0398 U	**0.0263 J**	0.0501 U	0.0398 U	0.178 UJ

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-53F	MW-53F	NWN-01-20	NWN-01-20	NWN-02-20	NWN-02-20	NWN-03-17	NWN-03-17	NWN-07-30
Sample ID	GS-090822-08	GS-121422-06	GS-091522-30	GS-091522-31	GS-032822-67	GS-091522-34	GS-032822-64	GS-091522-29	GS-031722-33
Sample Date	9/8/2022	12/14/2022	9/15/2022	9/15/2022	3/28/2022	9/15/2022	3/28/2022	9/15/2022	3/17/2022
Depth	3.8 - 8.6 ft	3.8 - 8.6 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	7 - 17 ft	7 - 17 ft	20 - 30 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623770.055	7623770.055	7623946.7	7623946.7	7623940.1	7623940.1	7624165.6	7624165.6	7624543
Y	705433.306	705433.306	704240.4	704240.4	703958	703958	703613	703613	703893.5
Benzo(j,k)fluoranthene	**0.17 J**	24.1 U	1.93 U	**1.15 J**	**0.0229 J**	**0.0465**	0.025 U	0.0199 U	0.0888 UJ
Carbazole	**24.2**	48.2 U	**162**	**155**	**0.373**	**7.3**	0.0501 U	0.0398 U	0.178 UJ
Chrysene	**0.558**	24.1 U	**1.93**	**2.97**	**0.33**	**0.513**	0.025 U	0.0199 U	0.0888 UJ
Dibenzo(a,h)anthracene	0.0946 U	24.1 U	1.93 U	2.09 U	0.0199 U	0.0202 U	0.025 U	0.0199 U	0.0888 UJ
Dibenzofuran	**6.16**	48.2 U	**12.8**	**12.3**	**0.898**	**1.31**	0.0501 U	0.0398 U	**0.635 J**
Fluoranthene	**10.8**	48.2 U	**15.6**	**15.8**	**4.59**	**8.76**	**0.0344 J**	0.0398 U	**1.09 J**
Fluorene	**28**	**31.4 J**	**66.8**	**62.1**	**11.4**	**14.4**	**0.0513**	0.0398 U	**4.33 J**
Indeno(1,2,3-c,d)pyrene	**0.196**	24.1 U	**1.45 J**	**1.46 J**	**0.0174 J**	**0.0253**	0.025 U	0.0199 U	0.0888 UJ
Naphthalene	**18**	96.5 U	**3920**	**3440**	**0.874**	**2.38**	**0.0645 J**	0.0807 U	**0.828 J**
Phenanthrene	**32.4**	96.5 U	**112**	**112**	**2.08**	**10.7**	**0.087 J**	**0.19**	**0.899 J**
Pyrene	**11.9**	48.2 U	**16.6**	**17.5**	**6.69**	**10.4**	**0.0983**	**0.101**	**1.1 J**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	MW-53F	MW-53F	NWN-01-20	NWN-01-20	NWN-02-20	NWN-02-20	NWN-03-17	NWN-03-17	NWN-07-30
Sample ID	GS-090822-08	GS-121422-06	GS-091522-30	GS-091522-31	GS-032822-67	GS-091522-34	GS-032822-64	GS-091522-29	GS-031722-33
Sample Date	9/8/2022	12/14/2022	9/15/2022	9/15/2022	3/28/2022	9/15/2022	3/28/2022	9/15/2022	3/17/2022
Depth	3.8 - 8.6 ft	3.8 - 8.6 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	7 - 17 ft	7 - 17 ft	20 - 30 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623770.055	7623770.055	7623946.7	7623946.7	7623940.1	7623940.1	7624165.6	7624165.6	7624543
Y	705433.306	705433.306	704240.4	704240.4	703958	703958	703613	703613	703893.5
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	0.04 U	0.04 UJ	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	0.04 U	0.04 UJ	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	0.04 U	0.04 UJ	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	0.04 U	0.04 U	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	**0.062**	**0.055**	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	0.04 U	0.04 UJ	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	0.04 U	0.04 U	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	**0.073**	**0.076 J**	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	**0.069**	**0.206**	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	0.04 U	**0.058**	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	0.005 U	0.005 U	--	--	--
n-Dodecane (C12)	--	--	--	--	0.005 U	0.005 U	--	--	--
n-Hexane (C6)	--	--	--	--	0.005 U	0.005 U	--	--	--
n-Octane (C8)	--	--	--	--	0.005 U	0.005 U	--	--	--
n-Pentane (C5)	--	--	--	--	0.005 U	0.005 U	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	0.05 U	0.05 U	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	0.05 U	0.05 U	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	0.05 U	0.05 U	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	0.05 U	0.05 U	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	0.05 U	0.05 U	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	0.05 U	0.05 U	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	0.05 U	0.05 U	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	**13.6**	**12.3**	**0.472**	**2.54**	**0.295 J**	0.19 U	**1.45**
Gasoline range hydrocarbons	--	--	**15.9**	**14.1**	**0.192 J**	**0.163**	0.1 U	0.1 U	**3.36 J**
Oil range organics	--	--	0.377 U	**2.1**	0.381 U	0.381 U	**0.294 J**	**0.594**	0.374 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-07-30	NWN-07-30	NWN-09-31	NWN-09-31	NWN-11-24	NWN-11-24	NWN-11-24	NWN-13-106	NWN-13-106
Sample ID	GS-091522-32	GS-101822-140	GS-031622-30	GS-091422-25	GS-031722-34	GS-031722-35	GS-091522-33	GS-031522-25	GS-091422-27
Sample Date	9/15/2022	10/18/2022	3/16/2022	9/14/2022	3/17/2022	3/17/2022	9/15/2022	3/15/2022	9/14/2022
Depth	20 - 30 ft	20 - 30 ft	16 - 31 ft	16 - 31 ft	14 - 24 ft	14 - 24 ft	14 - 24 ft	96 - 106 ft	96 - 106 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624543	7624543	7625000.8	7625000.8	7625080.53	7625080.53	7625080.53	7624023.89	7624023.89
Y	703893.5	703893.5	704896.3	704896.3	704323.49	704323.49	704323.49	704367.99	704367.99
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	**556**	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	20 U	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	20 U	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	**556**	--	--	--	--	--	--	--
Ammonia as nitrogen	--	**7.15**	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**3.64**	--	**0.0301**	**0.0937**	**6.24**	**6.1**	**3.81**	0.005 U	**0.014**
Cyanide, available	0.002 UJ	--	0.002 U	0.002 U	**0.00386**	**0.00369**	**0.0021 J**	0.002 U	0.002 U
Cyanide, free	0.005 U	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U
Nitrate as nitrogen	--	0.25 U	--	--	--	--	--	--	--
Sulfate	--	**0.514 J**	--	--	--	--	--	--	--
Sulfide	--	0.05 U	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	**13.1**	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	--	50 U	50 U	50 U	50 U	50 U	**110**	**243**
Antimony	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**13.5**	--	**27**	**28.3**	**4.72**	**5.09**	**3.53**	**1.96**	**1.63**
Barium	**126**	--	**107**	**151**	**179**	**182**	**139**	**38.8**	**40.9**
Beryllium	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	--	2 U	2 U	2 U	2 U	2 U	2 U	**1.56 J**
Copper	2 U	--	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U
Iron	**92900**	--	**73700**	**102000**	**58200**	**60100**	**64600**	**7430**	**8050**
Lead	0.2 U	--	0.2 U	**1.66**	0.2 U	0.2 U	0.2 U	**0.978**	**0.158 J**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**2660**	--	**3610**	**5350**	**7330**	**6590**	**3900**	**4410**	**4410**
Mercury	0.08 U	--	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	--	**1.85 J**	**9.86**	2 U	2 U	2 U	2 U	**1.29 J**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**1.86 J**	--	**1.82 J**	**1.47 J**	**1.66 J**	**1.59 J**	2 U	**1.11 J**	**2.46**
Zinc	**3.53 J**	--	**3.56 J**	**5.75**	**3.44 J**	**2.79 J**	4 U	**4.07**	**2.62 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-07-30	NWN-07-30	NWN-09-31	NWN-09-31	NWN-11-24	NWN-11-24	NWN-11-24	NWN-13-106	NWN-13-106
Sample ID	GS-091522-32	GS-101822-140	GS-031622-30	GS-091422-25	GS-031722-34	GS-031722-35	GS-091522-33	GS-031522-25	GS-091422-27
Sample Date	9/15/2022	10/18/2022	3/16/2022	9/14/2022	3/17/2022	3/17/2022	9/15/2022	3/15/2022	9/14/2022
Depth	20 - 30 ft	20 - 30 ft	16 - 31 ft	16 - 31 ft	14 - 24 ft	14 - 24 ft	14 - 24 ft	96 - 106 ft	96 - 106 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624543	7624543	7625000.8	7625000.8	7625080.53	7625080.53	7625080.53	7624023.89	7624023.89
Y	703893.5	703893.5	704896.3	704896.3	704323.49	704323.49	704323.49	704367.99	704367.99
Metals, Dissolved (µg/L)									
Iron	--	**102000**	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	**2420**	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	--	0.4 U	0.4 U	4 U	4 U	0.4 U	40 U	40 U
1,1,1-Trichloroethane	0.4 U	--	0.4 U	0.4 U	4 U	4 U	0.4 U	40 U	40 U
1,1,2,2-Tetrachloroethane	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
1,1,2-Trichloroethane	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
1,1-Dichloroethane	0.4 U	--	0.4 U	0.4 U	4 U	4 U	0.4 U	40 U	40 U
1,1-Dichloroethene	0.4 U	--	0.4 U	0.4 U	0.2 U	0.2 U	0.4 U	40 U	40 U
1,1-Dichloropropene	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
1,2,3-Trichlorobenzene	2 U	--	2 U	2 U	20 U	20 U	2 U	200 U	200 U
1,2,3-Trichloropropane	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	--	**3.12**	**2.31**	**14.2**	**14.7**	**10.7**	100 U	100 U
1,2-Dibromo-3-chloropropane	5 U	--	5 U	5 U	50 U	50 U	5 U	500 U	500 U
1,2-Dichloroethane	0.4 U	--	0.4 U	0.4 U	4 U	4 U	0.4 U	40 U	40 U
1,2-Dichloroethene, cis-	0.4 U	--	0.4 U	0.4 U	0.2 U	0.2 U	0.4 U	40 U	40 U
1,2-Dichloroethene, trans-	0.4 U	--	0.4 U	0.4 U	0.2 U	0.2 U	0.4 U	40 U	40 U
1,2-Dichloropropane	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	--	**1.09**	**0.7 J**	10 U	10 U	**2.77**	100 U	100 U
1,3-Dichloropropane	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
1,3-Dichloropropene, cis-	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
1,3-Dichloropropene, trans-	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
2,2-Dichloropropane	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
2-Chlorotoluene	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
2-Hexanone (Methyl butyl ketone)	10 U	--	10 U	10 U	100 U	100 U	10 U	1000 U	1000 U
4-Chlorotoluene	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	--	10 U	10 U	100 U	100 U	10 U	1000 U	1000 U
Acetone	20 U	--	20 U	20 U	200 UJ	200 UJ	20 U	2000 U	2000 U
Acrylonitrile	2 U	--	2 U	2 U	20 U	20 U	2 U	200 U	200 U
Benzene	**0.4**	--	**2.64**	**0.69**	**39**	**46**	**106**	**20800**	**10800**
Bromobenzene	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
Bromochloromethane	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Bromodichloromethane	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Bromoform (Tribromomethane)	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Bromomethane (Methyl bromide)	5 U	--	5 U	5 U	50 U	50 U	5 U	500 U	500 U
Carbon disulfide	10 U	--	10 U	10 U	100 U	100 U	10 U	1000 U	1000 U
Carbon tetrachloride (Tetrachloromethane)	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Chlorobenzene	**1.08**	--	0.5 U	0.5 U	5 U	5 U	**0.27 J**	50 U	50 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-07-30	NWN-07-30	NWN-09-31	NWN-09-31	NWN-11-24	NWN-11-24	NWN-11-24	NWN-13-106	NWN-13-106
Sample ID	GS-091522-32	GS-101822-140	GS-031622-30	GS-091422-25	GS-031722-34	GS-031722-35	GS-091522-33	GS-031522-25	GS-091422-27
Sample Date	9/15/2022	10/18/2022	3/16/2022	9/14/2022	3/17/2022	3/17/2022	9/15/2022	3/15/2022	9/14/2022
Depth	20 - 30 ft	20 - 30 ft	16 - 31 ft	16 - 31 ft	14 - 24 ft	14 - 24 ft	14 - 24 ft	96 - 106 ft	96 - 106 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624543	7624543	7625000.8	7625000.8	7625080.53	7625080.53	7625080.53	7624023.89	7624023.89
Y	703893.5	703893.5	704896.3	704896.3	704323.49	704323.49	704323.49	704367.99	704367.99
Chloroethane	5 U	--	5 U	5 U	50 U	50 U	5 U	500 U	500 U
Chloroform	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Chloromethane	5 U	--	5 U	5 U	50 U	50 U	5 U	500 U	500 U
Cymene, p- (4-Isopropyltoluene)	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Dibromochloromethane	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Dibromomethane	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Dichlorodifluoromethane	1 UJ	--	1 U	1 U	10 U	10 U	1 UJ	100 U	100 U
Dichloromethane (Methylene chloride)	10 U	--	10 U	10 U	100 U	100 U	10 U	1000 U	1000 U
Ethylbenzene	**0.85**	--	**3.33**	**2.02**	**38.9**	**44.2**	**26.1**	**236**	**136**
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	--	5 U	5 U	50 U	50 U	5 U	500 U	500 U
Isopropylbenzene (Cumene)	**5.95**	--	**0.76 J**	1 U	10 U	10 U	**2.54**	100 U	100 U
m,p-Xylene	**0.71 J**	--	**1.9**	**1.47**	**10.9**	**12.8**	**10.1**	**230**	**135**
Methyl ethyl ketone (2-Butanone)	10 U	--	10 U	10 U	100 U	100 U	10 U	1000 U	1000 U
Methyl tert-butyl ether (MTBE)	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
n-Butylbenzene	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
n-Propylbenzene	**0.59**	--	0.5 U	0.5 U	**2.6 J**	**2.5 J**	**1.25**	50 U	50 U
o-Xylene	**1.59**	--	**2.93**	**2.16**	**16.3**	**19.2**	**16.4**	**113**	**77**
sec-Butylbenzene	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Styrene	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
tert-Butylbenzene	1 U	--	1 U	1 U	10 U	10 U	1 U	100 U	100 U
Tetrachloroethene (PCE)	0.4 U	--	0.4 U	0.4 U	4 U	4 U	0.5 U	40 U	40 U
Toluene	**0.57 J**	--	1 U	1 U	10 U	10 U	**1.2**	**77 J**	100 U
Trichloroethene (TCE)	0.4 U	--	0.4 U	0.4 U	0.2 U	0.2 U	0.8 U	40 U	40 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	--	2 U	2 U	20 U	20 U	2 U	200 U	200 U
Vinyl chloride	0.4 U	--	0.4 U	0.4 U	0.2 U	0.2 U	0.4 U	40 U	40 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	--	2 U	2 U	20 U	20 U	2 U	200 U	200 U
1,2-Dichlorobenzene	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
1,3-Dichlorobenzene	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
1,4-Dichlorobenzene	0.5 U	--	0.5 U	0.5 U	5 U	5 U	0.5 U	50 U	50 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**3.82**	--	**8.32**	**7.03**	**82.3**	**84.2**	**108**	**35.9**	**21.5 J**
2-Methylnaphthalene	0.753 U	--	**6.46**	**7.17**	**44.5**	**45.4**	**57.2**	**12.3**	36.5 U
Acenaphthene	**127**	--	**49.7**	**10.9**	**67.3**	**69.3**	**91.6**	**94.8**	**64.6**
Acenaphthylene	**7.54**	--	**1.58**	**2.41**	**9.61**	**9.87**	5.33 U	**6.44**	18.3 U
Anthracene	**1.93**	--	**1.51**	**1.13**	**8.46**	**8.19**	**12.8**	**1.91 J**	18.3 U
Benzo(a)anthracene	**0.108 J**	--	**0.0963**	**0.0939 J**	2.18 U	2.17 U	**0.442**	1.02 U	9.13 U
Benzo(a)pyrene	0.188 U	--	**0.0227**	0.188 U	2.18 U	2.17 U	**0.202 J**	1.02 U	9.13 U
Benzo(b)fluoranthene	0.188 U	--	**0.0227**	0.188 U	2.18 U	2.17 U	**0.229**	1.02 U	9.13 U
Benzo(g,h,i)perylene	0.376 U	--	0.0453 U	0.375 U	4.37 U	4.34 U	0.426 U	2.04 U	18.3 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-07-30	NWN-07-30	NWN-09-31	NWN-09-31	NWN-11-24	NWN-11-24	NWN-11-24	NWN-13-106	NWN-13-106
Sample ID	GS-091522-32	GS-101822-140	GS-031622-30	GS-091422-25	GS-031722-34	GS-031722-35	GS-091522-33	GS-031522-25	GS-091422-27
Sample Date	9/15/2022	10/18/2022	3/16/2022	9/14/2022	3/17/2022	3/17/2022	9/15/2022	3/15/2022	9/14/2022
Depth	20 - 30 ft	20 - 30 ft	16 - 31 ft	16 - 31 ft	14 - 24 ft	14 - 24 ft	14 - 24 ft	96 - 106 ft	96 - 106 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624543	7624543	7625000.8	7625000.8	7625080.53	7625080.53	7625080.53	7624023.89	7624023.89
Y	703893.5	703893.5	704896.3	704896.3	704323.49	704323.49	704323.49	704367.99	704367.99
Benzo(j,k)fluoranthene	0.188 U	--	**0.0181 J**	0.188 U	2.18 U	2.17 U	**0.107 J**	1.02 U	9.13 U
Carbazole	0.376 U	--	**0.494**	0.375 U	**47.3**	**47.3**	**51.9**	**29.3**	**16.2 J**
Chrysene	0.188 U	--	**0.103**	**0.103 J**	2.18 U	2.17 U	**0.399**	1.02 U	9.13 U
Dibenzo(a,h)anthracene	0.188 U	--	0.0227 U	0.188 U	2.18 U	2.17 U	0.213 U	1.02 U	9.13 U
Dibenzofuran	**0.635**	--	**0.298**	**0.291 J**	**4.86**	**4.99**	**6.48**	**10**	18.3 U
Fluoranthene	**1.27**	--	**2.42**	**1.58**	**4.7**	**4.28 J**	**6.95**	2.04 U	18.3 U
Fluorene	**6.59**	--	**11.4**	**3.69**	**24.7**	**26.3**	**37.7**	**18.3**	**11.9 J**
Indeno(1,2,3-c,d)pyrene	0.188 U	--	0.0227 U	0.188 U	2.18 U	2.17 U	**0.154 J**	1.02 U	9.13 U
Naphthalene	1.53 U	--	**14.1**	**22.5**	**756**	**806**	**585**	**555**	**363**
Phenanthrene	**1.74**	--	**3.7**	**4.58**	**29.3**	**31.9**	**40.1**	**13**	36.5 U
Pyrene	**1.28**	--	**2.56**	**1.91**	**4.59**	**4.5**	**7.05**	2.04 U	18.3 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-07-30	NWN-07-30	NWN-09-31	NWN-09-31	NWN-11-24	NWN-11-24	NWN-11-24	NWN-13-106	NWN-13-106
Sample ID	GS-091522-32	GS-101822-140	GS-031622-30	GS-091422-25	GS-031722-34	GS-031722-35	GS-091522-33	GS-031522-25	GS-091422-27
Sample Date	9/15/2022	10/18/2022	3/16/2022	9/14/2022	3/17/2022	3/17/2022	9/15/2022	3/15/2022	9/14/2022
Depth	20 - 30 ft	20 - 30 ft	16 - 31 ft	16 - 31 ft	14 - 24 ft	14 - 24 ft	14 - 24 ft	96 - 106 ft	96 - 106 ft
Sample Type	N	N	N	N	N	FD	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624543	7624543	7625000.8	7625000.8	7625080.53	7625080.53	7625080.53	7624023.89	7624023.89
Y	703893.5	703893.5	704896.3	704896.3	704323.49	704323.49	704323.49	704367.99	704367.99
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	0.04 UJ	0.04 UJ	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	**0.041 J**	**0.051 J**	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	0.04 U	0.04 UJ	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	0.04 U	0.04 U	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	**0.161 J**	**0.115**	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	0.04 U	0.04 UJ	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	0.04 U	0.04 U	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	**0.095 J**	**0.047 J**	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	**0.067**	0.04 U	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	0.04 U	0.04 U	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	0.005 U	0.005 U	--	--	--	--	--
n-Dodecane (C12)	--	--	0.005 U	0.005 U	--	--	--	--	--
n-Hexane (C6)	--	--	0.005 U	0.005 U	--	--	--	--	--
n-Octane (C8)	--	--	0.005 U	0.005 U	--	--	--	--	--
n-Pentane (C5)	--	--	0.005 U	0.005 U	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	0.05 U	0.05 U	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	0.05 U	0.05 U	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	0.05 U	0.05 U	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	0.05 U	**0.052**	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	**0.098**	**0.111**	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	0.05 U	0.05 U	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	**0.066**	0.05 U	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	**2.89**	--	**0.528 J**	**0.41**	**3.46**	**3.32**	**2.84**	**1.22 J**	**1.11**
Gasoline range hydrocarbons	**3.7**	--	**0.395**	**0.486**	**4.03**	**4.28**	**3.08**	**60.9**	**32.5**
Oil range organics	**0.355 J**	--	**0.425 J**	**0.408**	**0.787**	**0.813**	**0.252 J**	0.385 U	0.381 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-13-106	NWN-13-23	NWN-13-23	NWN-13-73	NWN-13-73	NWN-13-73	OW-10F	OW-1F	OW-1F
Sample ID	GS-101822-141	GS-031522-22	GS-091422-24	GS-031522-26	GS-091422-26	GS-101822-139	GS-092722-83	GS-031622-29	GS-091322-17
Sample Date	10/18/2022	3/15/2022	9/14/2022	3/15/2022	9/14/2022	10/18/2022	9/27/2022	3/16/2022	9/13/2022
Depth	96 - 106 ft	13 - 23 ft	13 - 23 ft	63 - 73 ft	63 - 73 ft	63 - 73 ft	20.7 - 25.7 ft	30 - 35 ft	30 - 35 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624023.89	7624041.9	7624041.9	7624031.76	7624031.76	7624031.76	7623183.541	7624722.31	7624722.31
Y	704367.99	704353.4	704353.4	704361.46	704361.46	704361.46	705929.763	705044.17	705044.17
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**202**	--	--	--	--	**417**	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	--	--	--	--	20 U	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	--	--	--	--	20 U	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	**202**	--	--	--	--	**417**	--	--	--
Ammonia as nitrogen	**0.02**	--	--	--	--	**0.071**	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	--	**89.4**	**69.4**	**0.23**	**0.158**	--	**3.87 J**	**0.167**	**0.451**
Cyanide, available	--	**0.078**	**0.175**	**0.00718**	**0.0161**	--	**0.00695**	0.002 U	0.002 U
Cyanide, free	--	**0.0435 J**	**0.0369**	0.005 UJ	0.005 U	--	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	--	--	--	--	0.25 U	--	--	--
Sulfate	1 U	--	--	--	--	**632**	--	--	--
Sulfide	0.05 U	--	--	--	--	0.05 U	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	**3.68**	--	--	--	--	**0.00403**	--	--	--
Metals (µg/L)									
Aluminum	--	**113**	**69.9**	**368**	**69.8**	--	**931**	50 U	**227**
Antimony	--	1 U	1 U	1 U	1 U	--	1 U	**0.851 J**	**1.04**
Arsenic	--	**0.899 J**	**0.841 J**	**4.98**	**3.43**	--	**2.61**	**11.3**	**6.67**
Barium	--	**163**	**179**	**174**	**149**	--	**13.1**	**77.9**	**68.4**
Beryllium	--	0.2 U	2 U	0.2 U	0.2 U	--	**0.518**	0.2 U	0.2 U
Cadmium	--	0.2 U	2 U	**0.463**	**0.975**	--	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	--	**8.01**	**5.17**	**1.24 J**	**1.02 J**	--	**10.6**	2 U	2 U
Copper	--	2 UJ	2 U	**1.38 J**	**2.69**	--	2 U	2 U	2 U
Iron	--	**27600**	**25200**	**1080**	**300**	--	**30000**	**67600**	**39300**
Lead	--	**0.547**	**2.64**	**0.637**	**0.133 J**	--	0.2 U	0.2 U	**0.429**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	**1980**	**2410**	**21800**	**14000**	--	**650**	**3820**	**5690**
Mercury	--	0.08 U	0.08 U	0.08 U	0.08 U	--	0.08 U	0.08 U	0.08 U
Nickel	--	2 U	2 U	**6.47**	**4.82**	--	**4.35**	**2.74**	**4.98**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	--	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U
Silver	--	0.2 U	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	--	0.2 U	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.2 U
Vanadium	--	**1.69 J**	2 U	**16.7**	**20.4**	--	**18.4**	**1.03 J**	2 U
Zinc	--	4 U	4 U	**6.71**	**4.54**	--	**42.3**	**4.33**	4 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-13-106	NWN-13-23	NWN-13-23	NWN-13-73	NWN-13-73	NWN-13-73	OW-10F	OW-1F	OW-1F
Sample ID	GS-101822-141	GS-031522-22	GS-091422-24	GS-031522-26	GS-091422-26	GS-101822-139	GS-092722-83	GS-031622-29	GS-091322-17
Sample Date	10/18/2022	3/15/2022	9/14/2022	3/15/2022	9/14/2022	10/18/2022	9/27/2022	3/16/2022	9/13/2022
Depth	96 - 106 ft	13 - 23 ft	13 - 23 ft	63 - 73 ft	63 - 73 ft	63 - 73 ft	20.7 - 25.7 ft	30 - 35 ft	30 - 35 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624023.89	7624041.9	7624041.9	7624031.76	7624031.76	7624031.76	7623183.541	7624722.31	7624722.31
Y	704367.99	704353.4	704353.4	704361.46	704361.46	704361.46	705929.763	705044.17	705044.17
Metals, Dissolved (µg/L)									
Iron	**5890**	--	--	--	--	**166 J**	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**4720**	--	--	--	--	**18700**	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	--	4 U	2 U	0.4 U	0.4 U	--	0.8 U	0.4 U	0.4 U
1,1,1-Trichloroethane	--	4 U	2 U	0.4 U	0.4 U	--	0.8 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
1,1,2-Trichloroethane	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
1,1-Dichloroethane	--	4 U	2 U	0.4 U	0.4 U	--	0.8 U	0.4 U	0.4 U
1,1-Dichloroethene	--	0.2 U	0.5 U	0.4 U	0.4 U	--	0.5 U	0.4 U	0.4 U
1,1-Dichloropropene	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
1,2,3-Trichlorobenzene	--	20 U	10 U	2 U	2 U	--	4 U	2 U	2 U
1,2,3-Trichloropropane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	**11**	**3.45 J**	1 U	1 U	--	2 U	1 U	1 U
1,2-Dibromo-3-chloropropane	--	50 U	25 U	5 U	5 U	--	10 U	5 U	5 U
1,2-Dichloroethane	--	4 U	2 U	0.4 U	0.4 U	--	0.8 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	--	0.2 U	0.5 U	0.4 U	0.4 U	--	0.5 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	--	0.2 U	0.5 U	0.4 U	0.4 U	--	0.5 U	0.4 U	0.4 U
1,2-Dichloropropane	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
1,3-Dichloropropane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
1,3-Dichloropropene, cis-	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
1,3-Dichloropropene, trans-	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
2,2-Dichloropropane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
2-Chlorotoluene	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	--	100 U	50 U	10 U	10 U	--	20 U	10 U	10 U
4-Chlorotoluene	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	--	100 U	50 U	10 U	10 U	--	20 U	10 U	10 U
Acetone	--	200 UJ	100 U	20 U	20 U	--	40 U	20 U	20 U
Acrylonitrile	--	20 U	10 U	2 U	2 U	--	4 U	2 U	2 U
Benzene	--	**405**	**136**	**0.56**	0.2 U	--	**2.26**	**0.1 J**	**0.62**
Bromobenzene	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
Bromochloromethane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Bromodichloromethane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Bromoform (Tribromomethane)	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Bromomethane (Methyl bromide)	--	50 UJ	25 U	5 U	5 U	--	10 UJ	5 U	5 U
Carbon disulfide	--	**1800**	**1120**	10 U	10 U	--	**40.4**	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Chlorobenzene	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-13-106	NWN-13-23	NWN-13-23	NWN-13-73	NWN-13-73	NWN-13-73	OW-10F	OW-1F	OW-1F
Sample ID	GS-101822-141	GS-031522-22	GS-091422-24	GS-031522-26	GS-091422-26	GS-101822-139	GS-092722-83	GS-031622-29	GS-091322-17
Sample Date	10/18/2022	3/15/2022	9/14/2022	3/15/2022	9/14/2022	10/18/2022	9/27/2022	3/16/2022	9/13/2022
Depth	96 - 106 ft	13 - 23 ft	13 - 23 ft	63 - 73 ft	63 - 73 ft	63 - 73 ft	20.7 - 25.7 ft	30 - 35 ft	30 - 35 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624023.89	7624041.9	7624041.9	7624031.76	7624031.76	7624031.76	7623183.541	7624722.31	7624722.31
Y	704367.99	704353.4	704353.4	704361.46	704361.46	704361.46	705929.763	705044.17	705044.17
Chloroethane	--	50 U	25 U	5 U	5 U	--	10 U	5 U	5 U
Chloroform	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Chloromethane	--	50 U	65 U	5 U	5 U	--	10 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	--	10 U	5 U	1 U	1 U	--	**1.08 J**	1 U	1 U
Dibromochloromethane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Dibromomethane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Dichlorodifluoromethane	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Dichloromethane (Methylene chloride)	--	100 U	50 U	10 U	10 U	--	20 U	10 U	10 U
Ethylbenzene	--	**107**	**74.7**	0.5 U	0.5 U	--	**3.76**	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	--	50 U	25 U	5 U	5 U	--	10 U	5 U	5 U
Isopropylbenzene (Cumene)	--	10 U	5 U	1 U	1 U	--	2 U	**0.8 J**	1 U
m,p-Xylene	--	**58.8**	**15**	1 U	1 U	--	**1.06 J**	1 U	1 U
Methyl ethyl ketone (2-Butanone)	--	100 U	50 U	10 U	10 U	--	20 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
n-Butylbenzene	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
n-Propylbenzene	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	**0.38 J**	0.5 U
o-Xylene	--	**35.1 J**	**12**	0.5 U	0.5 U	--	1 U	**0.51**	**0.29 J**
sec-Butylbenzene	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Styrene	--	10 U	5 U	1 U	1 U	--	4 U	1 U	1 U
tert-Butylbenzene	--	10 U	5 U	1 U	1 U	--	2 U	1 U	1 U
Tetrachloroethene (PCE)	--	4 U	2 U	0.4 U	0.4 U	--	0.8 U	0.4 U	0.4 U
Toluene	--	**11.4**	**6.4**	1 U	1 U	--	2 U	1 U	1 U
Trichloroethene (TCE)	--	0.2 U	0.5 U	0.4 U	0.4 U	--	0.5 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	--	20 U	10 U	2 U	2 U	--	4 U	2 U	2 U
Vinyl chloride	--	0.2 U	0.5 U	0.4 U	0.4 U	--	0.5 U	**0.21 J**	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	--	20 U	10 U	2 U	2 U	--	4 U	2 U	2 U
1,2-Dichlorobenzene	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
1,3-Dichlorobenzene	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
1,4-Dichlorobenzene	--	5 U	2.5 U	0.5 U	0.5 U	--	1 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	--	**33.4**	**15.3**	**0.1 J**	0.0674 U	--	**5.45 J**	**2.22**	**1.08**
2-Methylnaphthalene	--	**35.4**	**8.81**	**0.0833 J**	0.0674 U	--	**7.36**	**0.0642 J**	**0.197**
Acenaphthene	--	**8.59 J**	**6.88**	**0.0469 J**	0.0337 U	--	**3.62**	**105**	**36.4**
Acenaphthylene	--	3.93 U	0.939 U	0.0351 UJ	0.0337 U	--	3.25 U	**2.3**	**1.43**
Anthracene	--	3.93 U	**1.89**	0.0351 UJ	0.0337 U	--	3.25 U	**1.67**	**1.42**
Benzo(a)anthracene	--	1.96 U	**0.418**	**0.0167 J**	0.0168 U	--	1.63 U	**0.151**	**0.32**
Benzo(a)pyrene	--	1.96 U	**0.221**	**0.0232 J**	0.0168 U	--	1.63 U	**0.0239 J**	**0.091**
Benzo(b)fluoranthene	--	1.96 U	**0.319**	**0.0211 J**	**0.00842 J**	--	1.63 U	**0.0296 J**	**0.0793**
Benzo(g,h,i)perylene	--	3.93 UJ	**0.225 J**	0.0351 UJ	0.0337 U	--	3.25 U	0.0503 U	**0.0325 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-13-106	NWN-13-23	NWN-13-23	NWN-13-73	NWN-13-73	NWN-13-73	OW-10F	OW-1F	OW-1F
Sample ID	GS-101822-141	GS-031522-22	GS-091422-24	GS-031522-26	GS-091422-26	GS-101822-139	GS-092722-83	GS-031622-29	GS-091322-17
Sample Date	10/18/2022	3/15/2022	9/14/2022	3/15/2022	9/14/2022	10/18/2022	9/27/2022	3/16/2022	9/13/2022
Depth	96 - 106 ft	13 - 23 ft	13 - 23 ft	63 - 73 ft	63 - 73 ft	63 - 73 ft	20.7 - 25.7 ft	30 - 35 ft	30 - 35 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624023.89	7624041.9	7624041.9	7624031.76	7624031.76	7624031.76	7623183.541	7624722.31	7624722.31
Y	704367.99	704353.4	704353.4	704361.46	704361.46	704361.46	705929.763	705044.17	705044.17
Benzo(j,k)fluoranthene	--	1.96 U	**0.117 J**	**0.00877 J**	0.0168 U	--	1.63 U	**0.0201 J**	**0.0389 J**
Carbazole	--	**3.24 J**	**1.07**	**0.0241 J**	0.0337 U	--	3.25 U	0.11 U	**0.182**
Chrysene	--	1.96 U	**0.549**	**0.0145 J**	0.0168 U	--	1.63 U	**0.156**	**0.324**
Dibenzo(a,h)anthracene	--	1.96 U	0.188 U	0.0175 UJ	0.0168 U	--	1.63 U	0.0252 U	**0.0117 J**
Dibenzofuran	--	3.93 U	**1.31**	0.0351 UJ	0.0337 U	--	3.25 U	0.11 U	0.12 U
Fluoranthene	--	**3.63 J**	**5.15**	**0.0285 J**	0.0337 U	--	3.25 U	**3.07**	**4.4**
Fluorene	--	**7.66 J**	**6.41**	0.0351 UJ	0.0337 U	--	**2.11 J**	**20.3**	**8.36**
Indeno(1,2,3-c,d)pyrene	--	1.96 U	**0.258**	**0.0136 J**	**0.00926 J**	--	1.63 U	0.0252 U	**0.0319**
Naphthalene	--	**995**	**297**	**0.943 J**	0.0674 U	--	**155**	0.692 U	**4.37**
Phenanthrene	--	**19.1**	**19.8**	0.0702 UJ	0.0674 U	--	6.5 U	**0.444**	**0.266**
Pyrene	--	3.93 U	**4.66**	**0.0351 J**	0.0337 U	--	3.25 U	**3.25**	**4.73**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	NWN-13-106	NWN-13-23	NWN-13-23	NWN-13-73	NWN-13-73	NWN-13-73	OW-10F	OW-1F	OW-1F
Sample ID	GS-101822-141	GS-031522-22	GS-091422-24	GS-031522-26	GS-091422-26	GS-101822-139	GS-092722-83	GS-031622-29	GS-091322-17
Sample Date	10/18/2022	3/15/2022	9/14/2022	3/15/2022	9/14/2022	10/18/2022	9/27/2022	3/16/2022	9/13/2022
Depth	96 - 106 ft	13 - 23 ft	13 - 23 ft	63 - 73 ft	63 - 73 ft	63 - 73 ft	20.7 - 25.7 ft	30 - 35 ft	30 - 35 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624023.89	7624041.9	7624041.9	7624031.76	7624031.76	7624031.76	7623183.541	7624722.31	7624722.31
Y	704367.99	704353.4	704353.4	704361.46	704361.46	704361.46	705929.763	705044.17	705044.17
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	0.04 UJ	0.04 UJ
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	0.04 UJ	0.04 UJ
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	0.04 U	0.04 U
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	0.04 U	0.04 U
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	**0.146 J**	0.04 U
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	0.04 U	0.04 U
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	0.04 U	0.04 U
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	**0.14 J**	**0.113**
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	**0.066**	**0.064**
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	0.04 U	0.04 U
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	0.005 U	0.005 U
n-Dodecane (C12)	--	--	--	--	--	--	--	0.005 U	0.005 U
n-Hexane (C6)	--	--	--	--	--	--	--	0.005 U	0.005 U
n-Octane (C8)	--	--	--	--	--	--	--	0.005 U	0.005 U
n-Pentane (C5)	--	--	--	--	--	--	--	0.005 U	0.005 U
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	0.05 U	0.05 U
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	0.05 U	0.05 U
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	0.05 U	0.05 U
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	0.05 U	0.05 U
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	**0.052**	0.05 U
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	0.05 U	0.05 U
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	**0.066**	0.05 U
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	**1.3 J**	**0.987**	0.192 U	0.189 U	--	--	**0.711 J**	**0.812**
Gasoline range hydrocarbons	--	**4.39**	**1.56**	0.1 U	0.1 U	--	--	**0.296**	**0.0682 J**
Oil range organics	--	0.385 U	**0.668**	**0.425**	**0.289 J**	--	--	**0.374 J**	0.381 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-2F	OW-2F	OW-5F	OW-5F	OW-5F	OW-5F	OW-7-17	OW-7-17	OW-7-17
Sample ID	GS-031622-27	GS-091322-15	GS-031022-17	GS-061522-07	GS-101022-120	GS-121522-09	GS-032122-38	GS-061622-09	GS-101122-122
Sample Date	3/16/2022	9/13/2022	3/10/2022	6/15/2022	10/10/2022	12/15/2022	3/21/2022	6/16/2022	10/11/2022
Depth	25.6 - 30.6 ft	25.6 - 30.6 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624542.71	7624542.71	7624070.282	7624070.282	7624070.282	7624070.282	7623753.29	7623753.29	7623753.29
Y	705172.45	705172.45	705366.661	705366.661	705366.661	705366.661	705593.81	705593.81	705593.81
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.079**	**0.107**	**0.172**	**0.196**	**0.589**	**0.284**	**0.0145**	**0.111**	**0.0281**
Cyanide, available	0.002 U	0.002 U	**0.00273**	**0.00469**	**0.00336**	0.002 U	0.002 U	**0.00228**	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	50 U	**68.3**	50 U	50 U	50 U	**197**	**141**	**190**
Antimony	**1.03**	1 U	1 U	1 U	1 U	1 U	1 U	**0.593 J**	1 U
Arsenic	**2.93**	**3.05**	**5.63**	**5.15**	**6.18**	**5.49**	1 U	1 U	**1.97**
Barium	**179**	**176**	**88.5**	**83.9**	**94.6**	**101**	**17.9**	**24.3**	**112**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	**1.26 J**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Copper	**2.56 J**	2 U	2 U	2 U	2 U	2 U	2 U	**1.03 J**	2 U
Iron	**41400**	**41700**	**22700**	**22100**	**25900**	**24700**	**2570**	**613**	**37500**
Lead	**7.34**	**0.194 J**	**0.182 J**	**0.126 J**	0.2 U	0.2 U	**0.283**	**0.208**	**0.255**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**2850**	**3120**	**1330**	**1390**	**1770**	**1500**	**324**	**169**	**4020**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	**0.0601 J**	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**3.42**	**3.57**	**1.91 J**	2 U	**2.28**	**2**	**16.7**	**14.5**	**6.44**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U	2 U	2 U	**23.5**	**83.2**	**15.4**
Zinc	**87.9**	**87.4**	4 U	**3.32 J**	**4.33**	**3.09 J**	**5.67**	**5.02**	**7.26**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-2F	OW-2F	OW-5F	OW-5F	OW-5F	OW-5F	OW-7-17	OW-7-17	OW-7-17
Sample ID	GS-031622-27	GS-091322-15	GS-031022-17	GS-061522-07	GS-101022-120	GS-121522-09	GS-032122-38	GS-061622-09	GS-101122-122
Sample Date	3/16/2022	9/13/2022	3/10/2022	6/15/2022	10/10/2022	12/15/2022	3/21/2022	6/16/2022	10/11/2022
Depth	25.6 - 30.6 ft	25.6 - 30.6 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624542.71	7624542.71	7624070.282	7624070.282	7624070.282	7624070.282	7623753.29	7623753.29	7623753.29
Y	705172.45	705172.45	705366.661	705366.661	705366.661	705366.661	705593.81	705593.81	705593.81
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	1.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**2.37**	**5.87**	**2.23**	**7.07**	**4.51**	**2.56**	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	**0.79 J**	**1.54**	**0.91 J**	**2.45**	**1.75**	**1.12**	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 UJ	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	**26.4**	**127**	**0.91**	**2.53**	**1.2**	**0.86**	0.2 U	0.2 U	**0.43**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-2F	OW-2F	OW-5F	OW-5F	OW-5F	OW-5F	OW-7-17	OW-7-17	OW-7-17
Sample ID	GS-031622-27	GS-091322-15	GS-031022-17	GS-061522-07	GS-101022-120	GS-121522-09	GS-032122-38	GS-061622-09	GS-101122-122
Sample Date	3/16/2022	9/13/2022	3/10/2022	6/15/2022	10/10/2022	12/15/2022	3/21/2022	6/16/2022	10/11/2022
Depth	25.6 - 30.6 ft	25.6 - 30.6 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624542.71	7624542.71	7624070.282	7624070.282	7624070.282	7624070.282	7623753.29	7623753.29	7623753.29
Y	705172.45	705172.45	705366.661	705366.661	705366.661	705366.661	705593.81	705593.81	705593.81
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	**7.38**	**23.3**	**0.6**	**1.28**	**0.99**	**0.79**	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	**0.85 J**	1 U	**1.19**	**0.6 J**	1 U	1 U	1 U	**1.56**
m,p-Xylene	**4.52**	**9.14**	**0.97 J**	**2.04**	**1.58**	**1.13**	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	1 U	1 U	1 U	**0.52 J**	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	**0.28 J**	0.5 U	**0.97**	**0.36 J**	**0.25 J**	0.5 U	0.5 U	0.5 U
o-Xylene	**3.5**	**9.48**	**1.01**	**2.09**	**1.48**	**0.96**	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	**1.4**	**0.56 J**	**0.74 J**	**1**	**0.75 J**	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**14.5**	7.69 U	**42.6**	**73.9**	**54**	**48.7**	**0.335**	**0.186**	**1.24 J**
2-Methylnaphthalene	**9.94**	7.69 U	**16.6**	**41.7**	**26.7**	**20.8**	0.088 U	0.0699 U	1.66 U
Acenaphthene	**25.9**	**6.25**	**114**	**162**	**139**	**114**	**4.97**	**1.97**	**41.4**
Acenaphthylene	**2.67**	3.85 U	**8.65**	**20.6**	**9.26**	**15.4**	**0.321**	**0.233**	**2.59**
Anthracene	**2.07**	3.85 U	**10.1**	**8.78**	**9.35**	**11.3**	**0.171**	**0.178**	**0.942**
Benzo(a)anthracene	0.929 U	1.92 U	**0.661**	1.98 U	**0.639**	**1.04 J**	**0.0115 J**	0.0175 U	0.414 U
Benzo(a)pyrene	0.929 U	1.92 U	0.218 U	1.98 U	0.448 U	1.81 U	0.022 U	**0.0127 J**	0.414 U
Benzo(b)fluoranthene	0.929 U	1.92 U	**0.126 J**	1.98 U	0.448 U	1.81 U	0.022 U	**0.0131 J**	0.414 U
Benzo(g,h,i)perylene	1.86 U	3.85 U	0.437 U	3.97 U	0.897 U	3.61 U	0.044 U	**0.0367**	0.828 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-2F	OW-2F	OW-5F	OW-5F	OW-5F	OW-5F	OW-7-17	OW-7-17	OW-7-17
Sample ID	GS-031622-27	GS-091322-15	GS-031022-17	GS-061522-07	GS-101022-120	GS-121522-09	GS-032122-38	GS-061622-09	GS-101122-122
Sample Date	3/16/2022	9/13/2022	3/10/2022	6/15/2022	10/10/2022	12/15/2022	3/21/2022	6/16/2022	10/11/2022
Depth	25.6 - 30.6 ft	25.6 - 30.6 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624542.71	7624542.71	7624070.282	7624070.282	7624070.282	7624070.282	7623753.29	7623753.29	7623753.29
Y	705172.45	705172.45	705366.661	705366.661	705366.661	705366.661	705593.81	705593.81	705593.81
Benzo(j,k)fluoranthene	0.929 U	1.92 U	0.218 U	1.98 U	0.448 U	1.81 U	0.022 U	0.0175 U	0.414 U
Carbazole	**2.95**	3.85 U	**10.2**	**7.29**	**12.2**	**9.35**	**0.0764**	**0.0319 J**	0.828 U
Chrysene	0.929 U	1.92 U	**0.47**	1.98 U	**0.448**	1.81 U	0.022 U	0.0175 U	0.414 U
Dibenzo(a,h)anthracene	0.929 U	1.92 U	0.218 U	1.98 U	0.448 U	1.81 U	0.022 U	0.0175 U	0.414 U
Dibenzofuran	1.86 U	3.85 U	**4.53**	**5.71**	**5.12**	**4.65**	**0.0346 J**	0.0349 U	0.828 U
Fluoranthene	**3.81**	3.85 U	**21.4**	**16.9**	**16.6**	**19.5**	**0.407**	**0.165**	**2.78**
Fluorene	**7.22**	3.85 U	**38.4**	**37**	**36.8**	**34**	**0.239**	**0.104**	**1.9**
Indeno(1,2,3-c,d)pyrene	0.929 U	1.92 U	0.218 U	1.98 U	0.448 U	1.81 U	0.022 U	**0.0249**	0.414 U
Naphthalene	**171**	**62.7**	**17.5**	**48.2**	**18.4**	**15.7**	**0.376**	**0.192**	**1.45 J**
Phenanthrene	**11**	7.69 U	**55.4**	**73.4**	**57.8**	**59.7**	0.088 U	**0.041 J**	1.66 U
Pyrene	**4.18**	3.85 U	**21.9**	**17.7**	**17.1**	**21.1**	**0.185**	**0.124**	**2**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-2F	OW-2F	OW-5F	OW-5F	OW-5F	OW-5F	OW-7-17	OW-7-17	OW-7-17
Sample ID	GS-031622-27	GS-091322-15	GS-031022-17	GS-061522-07	GS-101022-120	GS-121522-09	GS-032122-38	GS-061622-09	GS-101122-122
Sample Date	3/16/2022	9/13/2022	3/10/2022	6/15/2022	10/10/2022	12/15/2022	3/21/2022	6/16/2022	10/11/2022
Depth	25.6 - 30.6 ft	25.6 - 30.6 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	28.5 - 33.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft	12.5 - 17.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624542.71	7624542.71	7624070.282	7624070.282	7624070.282	7624070.282	7623753.29	7623753.29	7623753.29
Y	705172.45	705172.45	705366.661	705366.661	705366.661	705366.661	705593.81	705593.81	705593.81
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	0.04 UJ	0.04 UJ	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	0.04 UJ	0.04 UJ	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	0.04 U	0.04 U	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	0.04 U	0.04 U	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	0.04 UJ	0.04 U	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	**0.154 J**	**0.397**	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	0.04 UJ	0.04 U	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	**0.066 J**	**0.142**	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	**0.064 J**	**0.107**	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	0.04 UJ	0.04 U	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	0.005 U	0.005 U	--	--	--	--	--	--	--
n-Dodecane (C12)	0.005 U	0.005 U	--	--	--	--	--	--	--
n-Hexane (C6)	0.005 U	0.005 U	--	--	--	--	--	--	--
n-Octane (C8)	0.005 U	0.005 U	--	--	--	--	--	--	--
n-Pentane (C5)	0.005 U	0.005 U	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	0.05 U	0.05 U	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	0.05 U	0.05 U	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	0.05 U	0.05 U	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	0.05 U	0.05 U	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	**0.268**	**1.04**	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	0.05 U	**0.066**	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	**0.072**	**0.26**	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	**0.629 J**	**1.86**	--	--	--	--	--	--	--
Gasoline range hydrocarbons	**0.896**	**3.02**	--	--	--	--	--	--	--
Oil range organics	0.374 U	0.381 U	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-7-17	OW-8-15	OW-8-15	OW-9-25	OW-9-25	OW-9-25	PW-01Lb	PW-01Lb	PW-01U
Sample ID	GS-121522-11	GS-032222-40	GS-061622-10	GS-031022-15	GS-061622-11	GS-121522-10	GS-032822-63	GS-092022-44	GS-032822-66
Sample Date	12/15/2022	3/22/2022	6/16/2022	3/10/2022	6/16/2022	12/15/2022	3/28/2022	9/20/2022	3/28/2022
Depth	12.5 - 17.5 ft	10.1 - 15.1 ft	10.1 - 15.1 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	101.9 - 131.9 ft	101.9 - 131.9 ft	55.1 - 70.1 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623753.29	7623600.35	7623600.35	7623388.523	7623388.523	7623388.523	7624756.27	7624756.27	7624717.968
Y	705593.81	705685.36	705685.36	705812.544	705812.544	705812.544	705024.78	705024.78	705053.095
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	**284**	**291**	**406**
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	20 U	20 U	20 U
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	20 U	20 U	20 U
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	**284**	**291**	**406**
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	**35.7**	**36.8**	**9.97**
Cyanide	**0.0175**	**0.0493**	**0.115**	**0.301**	**0.449**	**0.392**	**0.258**	**0.268**	**0.203**
Cyanide, available	0.002 U	0.002 U	**0.00251**	**0.0046**	**0.00856**	0.002 U	**0.00178 J**	0.002 U	**0.00125 J**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	0.25 U	0.25 U	0.25 U
Sulfate	--	--	--	--	--	--	**2.74**	**2.53**	1 U
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**327**	**156**	**427**	50 U	**45.3 J**	**205**	50 U	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	**1.7**	1 U	1 U	1 U	1 U
Arsenic	**0.716 J**	1 U	1 U	**0.835 J**	**0.559 J**	1 U	**4.57**	**4.7**	**2.01**
Barium	**125**	**40.4**	**13.7**	**25.7**	**24.9**	**30.7**	**49.2**	**51.5**	**66.5**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.102 J**	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	**43200**	**55500**	**54700**
Chromium	2 U	**1.57 J**	2 U	2 U	2 U	**2.18**	2 U	2 U	2 U
Copper	**1.45 J**	**1.74 J**	**1.55 J**	2 U	**1.54 J**	2 U	2 U	**4.1**	**2.59**
Iron	**29700**	**1260**	**699**	**127**	**227**	**377**	**31200**	**37500**	**41800**
Lead	**0.763**	**0.259**	**0.38**	0.2 U	**0.331**	0.2 U	0.2 U	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	**31300**	**34600**	**40400**
Manganese	**3910**	**84.9**	**4.58**	**7.51**	**6.42**	**920**	**1100**	**1110**	**1200**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**48.5**	**15.8**	**16.7**	**101**	**1160**	**92.4**	**2.96**	**2.35**	**7.88**
Potassium	--	--	--	--	--	--	**2370**	**2370**	**2640**
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	**0.517**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	**19400**	**21300**	**32300**
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**32**	**7.77**	**139**	**243**	**3630**	**165**	2 U	2 U	2 U
Zinc	**10.8**	**4**	**4.63**	**9.95**	**38.1**	**18.6**	4 U	4 U	**17.3**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-7-17	OW-8-15	OW-8-15	OW-9-25	OW-9-25	OW-9-25	PW-01Lb	PW-01Lb	PW-01U
Sample ID	GS-121522-11	GS-032222-40	GS-061622-10	GS-031022-15	GS-061622-11	GS-121522-10	GS-032822-63	GS-092022-44	GS-032822-66
Sample Date	12/15/2022	3/22/2022	6/16/2022	3/10/2022	6/16/2022	12/15/2022	3/28/2022	9/20/2022	3/28/2022
Depth	12.5 - 17.5 ft	10.1 - 15.1 ft	10.1 - 15.1 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	101.9 - 131.9 ft	101.9 - 131.9 ft	55.1 - 70.1 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623753.29	7623600.35	7623600.35	7623388.523	7623388.523	7623388.523	7624756.27	7624756.27	7624717.968
Y	705593.81	705685.36	705685.36	705812.544	705812.544	705812.544	705024.78	705024.78	705053.095
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	**31200**	**31900**	**39400**
Magnesium	--	--	--	--	--	--	**31300**	**33800**	**39700**
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	**4.9**	**4.37**	**0.4**
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**30**
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	**0.11 J**	**0.21**	0.2 U	0.2 U	0.2 U	0.2 U	**13.6**	**21.7**	**1.36**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.62**	**0.53**	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-7-17	OW-8-15	OW-8-15	OW-9-25	OW-9-25	OW-9-25	PW-01Lb	PW-01Lb	PW-01U
Sample ID	GS-121522-11	GS-032222-40	GS-061622-10	GS-031022-15	GS-061622-11	GS-121522-10	GS-032822-63	GS-092022-44	GS-032822-66
Sample Date	12/15/2022	3/22/2022	6/16/2022	3/10/2022	6/16/2022	12/15/2022	3/28/2022	9/20/2022	3/28/2022
Depth	12.5 - 17.5 ft	10.1 - 15.1 ft	10.1 - 15.1 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	101.9 - 131.9 ft	101.9 - 131.9 ft	55.1 - 70.1 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623753.29	7623600.35	7623600.35	7623388.523	7623388.523	7623388.523	7624756.27	7624756.27	7624717.968
Y	705593.81	705685.36	705685.36	705812.544	705812.544	705812.544	705024.78	705024.78	705053.095
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 UJ
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	**0.55 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**43.7**
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	**4.59**	**3.7**	1 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.28 J**	**0.36 J**	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.56**	**0.59**	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	**15.2**	**14.5**	**1.09**
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.99**	**0.78**	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	9.22 U	0.0935 U	0.0716 U	0.0656 U	0.0719 U	0.0721 U	**0.0989**	**0.057 J**	**0.519**
2-Methylnaphthalene	9.22 U	0.0935 U	0.0716 U	0.0656 U	0.0719 U	0.0721 U	**0.0519 J**	**0.047 J**	**0.158**
Acenaphthene	**34.9**	0.0877 U	0.0358 U	**0.0184 J**	0.036 U	**0.0185 J**	**0.102**	**0.0956**	**4.12**
Acenaphthylene	**5.02**	**0.252**	**0.209**	**0.175**	**0.177**	**0.124**	**0.143**	**0.252**	**0.203**
Anthracene	4.61 U	**0.359**	**0.173**	**0.107**	**0.266**	**0.096**	**0.157**	**0.2**	**0.636**
Benzo(a)anthracene	2.31 U	0.0234 U	**0.0179 J**	0.0164 U	**0.0144 J**	0.018 U	0.0198 U	0.0211 U	**0.0306**
Benzo(a)pyrene	2.31 U	0.0234 U	**0.102**	0.0164 U	**0.0144 J**	0.018 U	0.0198 U	0.0211 U	0.0245 U
Benzo(b)fluoranthene	2.31 U	0.0234 U	**0.0998 J**	0.0164 U	**0.0184**	0.018 U	0.0198 U	0.0211 U	0.0245 U
Benzo(g,h,i)perylene	4.61 U	0.0468 U	**0.372**	0.0328 U	**0.0405**	0.0361 U	0.0395 U	0.0422 U	0.0489 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-7-17	OW-8-15	OW-8-15	OW-9-25	OW-9-25	OW-9-25	PW-01Lb	PW-01Lb	PW-01U
Sample ID	GS-121522-11	GS-032222-40	GS-061622-10	GS-031022-15	GS-061622-11	GS-121522-10	GS-032822-63	GS-092022-44	GS-032822-66
Sample Date	12/15/2022	3/22/2022	6/16/2022	3/10/2022	6/16/2022	12/15/2022	3/28/2022	9/20/2022	3/28/2022
Depth	12.5 - 17.5 ft	10.1 - 15.1 ft	10.1 - 15.1 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	101.9 - 131.9 ft	101.9 - 131.9 ft	55.1 - 70.1 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623753.29	7623600.35	7623600.35	7623388.523	7623388.523	7623388.523	7624756.27	7624756.27	7624717.968
Y	705593.81	705685.36	705685.36	705812.544	705812.544	705812.544	705024.78	705024.78	705053.095
Benzo(j,k)fluoranthene	2.31 U	0.0234 U	**0.0291 J**	0.0164 U	0.018 U	0.018 U	0.0198 U	0.0211 U	0.0245 U
Carbazole	4.61 U	**0.0485**	0.0358 U	0.0328 U	0.036 U	**0.0198 J**	**0.0321 J**	0.0422 U	**0.111**
Chrysene	2.31 U	0.0234 U	**0.0345 J**	0.0164 U	0.018 U	0.018 U	0.0198 U	0.0211 U	**0.0269 J**
Dibenzo(a,h)anthracene	2.31 U	0.0234 U	**0.0224**	0.0164 U	0.018 U	0.018 U	0.0198 U	0.0211 U	0.0245 U
Dibenzofuran	4.61 U	0.0468 U	0.0358 U	0.0328 U	0.036 U	0.0361 U	0.0395 U	0.0422 U	**0.206**
Fluoranthene	**2.54 J**	**0.0538**	**0.0242 J**	0.0328 U	**0.0328 J**	0.0361 U	0.0395 U	0.0422 U	**0.438**
Fluorene	4.61 U	0.0731 U	0.0358 U	0.0328 U	0.573 U	0.0361 U	0.0395 U	**0.0222 J**	**1.63**
Indeno(1,2,3-c,d)pyrene	2.31 U	0.0234 U	**0.218**	0.0164 U	**0.0247**	0.018 U	0.0198 U	0.0211 U	0.0245 U
Naphthalene	9.22 U	0.0935 U	**0.0372 J**	**0.0385 J**	**0.0409 J**	**0.0406 J**	**0.964**	**1.78**	**0.7**
Phenanthrene	9.22 U	0.0935 U	0.0716 U	0.0656 U	0.0719 U	0.0721 U	0.0791 U	**0.0554 J**	**0.502**
Pyrene	4.61 U	**0.0438 J**	**0.0363**	0.0328 U	**0.0189 J**	0.0361 U	0.0395 U	0.0422 U	**0.5**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	0.01 U	0.01 U	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	0.01 U	0.01 U	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	0.01 U	0.01 U	--
Aldrin	--	--	--	--	--	--	0.01 U	0.01 U	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	0.01 U	0.01 U	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	0.01 U	0.01 U	--
Dieldrin	--	--	--	--	--	--	0.01 U	0.01 U	--
Endosulfan sulfate	--	--	--	--	--	--	0.01 U	0.01 U	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	0.01 U	0.01 U	--
Endosulfan, beta (II)	--	--	--	--	--	--	0.01 U	0.083 U	--
Endrin	--	--	--	--	--	--	0.01 U	0.01 U	--
Endrin aldehyde	--	--	--	--	--	--	0.01 U	0.01 U	--
Endrin ketone	--	--	--	--	--	--	0.01 U	0.01 U	--
Heptachlor	--	--	--	--	--	--	0.01 U	0.01 U	--
Heptachlor epoxide	--	--	--	--	--	--	0.01 U	0.01 U	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	0.01 U	0.01 U	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	0.01 U	0.01 U	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	0.01 U	0.01 U	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	0.01 U	0.01 U	--
Methoxychlor	--	--	--	--	--	--	0.01 U	0.01 U	--
Toxaphene	--	--	--	--	--	--	0.6 U	0.6 U	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	0.69 U	0.38 U	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	0.19 U	0.19 U	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	0.19 U	**0.047 J**	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	0.38 U	**0.059 J**	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	0.38 U	**0.21 J**	--
Dicamba	--	--	--	--	--	--	0.19 U	0.19 U	--
Dichloroprop	--	--	--	--	--	--	**0.036 J**	**0.098 J**	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	OW-7-17	OW-8-15	OW-8-15	OW-9-25	OW-9-25	OW-9-25	PW-01Lb	PW-01Lb	PW-01U
Sample ID	GS-121522-11	GS-032222-40	GS-061622-10	GS-031022-15	GS-061622-11	GS-121522-10	GS-032822-63	GS-092022-44	GS-032822-66
Sample Date	12/15/2022	3/22/2022	6/16/2022	3/10/2022	6/16/2022	12/15/2022	3/28/2022	9/20/2022	3/28/2022
Depth	12.5 - 17.5 ft	10.1 - 15.1 ft	10.1 - 15.1 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	101.9 - 131.9 ft	101.9 - 131.9 ft	55.1 - 70.1 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623753.29	7623600.35	7623600.35	7623388.523	7623388.523	7623388.523	7624756.27	7624756.27	7624717.968
Y	705593.81	705685.36	705685.36	705812.544	705812.544	705812.544	705024.78	705024.78	705053.095
Dinoseb	--	--	--	--	--	--	0.19 U	0.19 U	--
Mecoprop (MCPP)	--	--	--	--	--	--	96 U	94 U	--
Mephanac (MCPA)	--	--	--	--	--	--	96 U	94 U	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-01U	PW-02L	PW-02L	PW-02U	PW-02U	PW-03-118	PW-03-118	PW-03U	PW-03U
Sample ID	GS-092022-46	GS-032822-69	GS-092022-48	GS-032822-68	GS-092022-47	GS-032822-72	GS-092122-55	GS-032822-70	GS-092122-51
Sample Date	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/21/2022	3/28/2022	9/21/2022
Depth	55.1 - 70.1 ft	120.1 - 140.1 ft	120.1 - 140.1 ft	57.8 - 72.8 ft	57.8 - 72.8 ft	108 - 118 ft	108 - 118 ft	42.8 - 57.8 ft	42.8 - 57.8 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624717.968	7624558.245	7624558.245	7624548.91	7624548.91	7624353	7624353	7624358.26	7624358.26
Y	705053.095	705165.657	705165.657	705171.55	705171.55	705238	705238	705216.9	705216.9
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**434**	**213**	**221**	**277**	**269**	**212**	**216**	**279**	**278**
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, total as calcium carbonate (CaCO3)	**434**	**213**	**221**	**277**	**269**	**212**	**216**	**279**	**278**
Ammonia as nitrogen	--	--	**9.04**	--	--	--	--	--	--
Chloride	**10.2**	**279**	**272 J**	**17.1**	**18.5**	**139**	**112 J**	**23.9**	**20.3 J**
Cyanide	**0.224**	**0.0356**	**0.032**	**0.237**	**0.241**	**0.0756**	**0.0917**	**0.246**	**0.249**
Cyanide, available	0.002 U	0.002 U	0.002 U	**0.00212**	0.002 U	**0.00149 J**	0.002 U	**0.0025**	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Sulfate	1 U	**3.53**	**2.19**	1 U	1 U	**38.4**	**32.6**	1 U	1 U
Sulfide	--	--	0.05 U	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	**4.27**	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Antimony	1 U	1 U	1 U	**0.974 J**	1 U	1 U	1 U	1 U	1 U
Arsenic	**1.84**	**6.22**	**6.61**	**1.88**	**2.05**	**5.25**	**5.56**	**2.63**	**2.85**
Barium	**65.2**	**97.3**	**103**	**44.3**	**44.7**	**87.4**	**87.1**	**43.6**	**45.5**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	**68500**	**107000**	**89800**	**36200**	**43200**	**78700**	**75800**	**43000**	**48700**
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Copper	2 U	2 U	2 U	**6.26**	**11.7**	**2.82**	2 U	**5.7**	**5.6**
Iron	**35300**	**36400**	**37200**	**22200**	**24900**	**36300**	**34900**	**30900**	**31300**
Lead	0.2 U	0.2 U	0.2 U	**0.132 J**	**0.918**	0.2 U	0.2 U	**0.133 J**	**3.26**
Magnesium	**44900**	**38300**	**39500**	**30900**	**33100**	**31400**	**30500**	**31000**	**32200**
Manganese	**1080**	**3550**	**3200**	**671**	**723**	**3370**	**3400**	**2000**	**2010**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**8.63**	2 U	2 U	**2.06**	**1.62 J**	2 U	2 U	2 U	2 U
Potassium	**2480**	**5280**	**5190**	**2080**	**2200**	**4330**	**4530**	**2220**	**2290**
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	**36400**	**69200**	**68600**	**20500**	**21800**	**23800**	**24300**	**17200**	**17800**
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Zinc	**19.5**	**2.2 J**	**2.56 J**	**22.4**	**17.6**	**2.65 J**	4 U	**39**	**26.8**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-01U	PW-02L	PW-02L	PW-02U	PW-02U	PW-03-118	PW-03-118	PW-03U	PW-03U
Sample ID	GS-092022-46	GS-032822-69	GS-092022-48	GS-032822-68	GS-092022-47	GS-032822-72	GS-092122-55	GS-032822-70	GS-092122-51
Sample Date	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/21/2022	3/28/2022	9/21/2022
Depth	55.1 - 70.1 ft	120.1 - 140.1 ft	120.1 - 140.1 ft	57.8 - 72.8 ft	57.8 - 72.8 ft	108 - 118 ft	108 - 118 ft	42.8 - 57.8 ft	42.8 - 57.8 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624717.968	7624558.245	7624558.245	7624548.91	7624548.91	7624353	7624353	7624358.26	7624358.26
Y	705053.095	705165.657	705165.657	705171.55	705171.55	705238	705238	705216.9	705216.9
Metals, Dissolved (µg/L)									
Iron	**34800**	**39200**	**35400**	**21800**	**21400**	**36400**	**36500**	**30000**	**30800**
Magnesium	**46500**	**37400**	**39000**	**30100**	**32100**	**31500**	**34300**	**30000**	**33200**
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	20 U	0.4 U	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	20 U	0.4 U	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	20 U	0.4 U	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	100 U	2 U	2 U	2 U	100 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	**102**	**147**	**0.98 J**	**1.21**	50 U	**42.7 J**	**19.6**	**17.8**
1,2-Dibromo-3-chloropropane	5 U	250 U	5 U	5 U	5 U	250 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	20 U	0.4 U	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	**0.54**	**11.4**	**8.12**	**9.66**	**5.77**	**1.81**	**0.81**	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	**1.12**	**0.82**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	**33 J**	**48**	1 U	1 U	50 U	**6.84**	**2.85**	**2.07**
1,3-Dichloropropane	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	500 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	500 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U
Acetone	20 U	1000 U	20 U	20 U	20 U	1000 UJ	20 U	20 U	20 U
Acrylonitrile	2 U	100 U	2 U	2 U	2 U	100 U	2 U	2 U	2 U
Benzene	**0.84**	**336**	**272**	**45.2**	**49.4**	**106**	**84.4**	**619**	**406**
Bromobenzene	0.5 U	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Bromodichloromethane	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 UJ	250 U	5 UJ	5 U	5 UJ	250 U	5 UJ	5 U	5 UJ
Carbon disulfide	10 U	500 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	**15.5 J**	**17.9**	0.5 U	0.5 U	25 U	**1.46**	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-01U	PW-02L	PW-02L	PW-02U	PW-02U	PW-03-118	PW-03-118	PW-03U	PW-03U
Sample ID	GS-092022-46	GS-032822-69	GS-092022-48	GS-032822-68	GS-092022-47	GS-032822-72	GS-092122-55	GS-032822-70	GS-092122-51
Sample Date	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/21/2022	3/28/2022	9/21/2022
Depth	55.1 - 70.1 ft	120.1 - 140.1 ft	120.1 - 140.1 ft	57.8 - 72.8 ft	57.8 - 72.8 ft	108 - 118 ft	108 - 118 ft	42.8 - 57.8 ft	42.8 - 57.8 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624717.968	7624558.245	7624558.245	7624548.91	7624548.91	7624353	7624353	7624358.26	7624358.26
Y	705053.095	705165.657	705165.657	705171.55	705171.55	705238	705238	705216.9	705216.9
Chloroethane	5 U	250 U	5 U	5 U	5 U	250 U	5 U	5 U	5 U
Chloroform	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Chloromethane	5 U	250 U	5 U	5 U	5 U	250 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	50 U	**5.28 J**	1 U	1 U	50 U	**1.51 J**	1 U	**0.69 J**
Dibromochloromethane	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Dibromomethane	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	50 UJ	1 U	1 UJ	1 U	50 UJ	1 U	1 UJ	1 U
Dichloromethane (Methylene chloride)	10 U	500 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U
Ethylbenzene	0.5 U	**374**	**414**	**3.21**	**3.49**	**94.5**	**151**	**77**	**65.7**
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	250 U	5 U	5 U	5 U	250 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	50 U	**25.2**	1 U	**0.5 J**	50 U	**8.02**	**5.53**	**4.52**
m,p-Xylene	1 U	**268**	**317**	**1.19**	**1.36**	50 U	**32.2**	**4.22**	**9.7**
Methyl ethyl ketone (2-Butanone)	10 U	500 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	50 U	**3.08**	1 U	1 U	50 U	**0.99 J**	**0.71 J**	1 U
n-Butylbenzene	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	25 U	**7.57**	0.5 U	0.5 U	25 U	**4.67**	**1.23**	**1.08**
o-Xylene	0.5 U	**133**	**184**	**1.81**	**2.04**	**20.5 J**	**40.1 J**	**15.2**	**15.3**
sec-Butylbenzene	1 U	50 U	1 U	1 U	1 U	50 U	1 U	1 U	1 U
Styrene	2 U	50 U	2 U	1 U	2 U	50 U	2 U	1 U	2 U
tert-Butylbenzene	1 U	50 U	2.5 U	1 U	1 U	50 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	20 U	0.4 U	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	50 U	**16.4**	**0.99 J**	**1.05**	50 U	**0.9 J**	**1.28**	**2.14**
Trichloroethene (TCE)	0.4 U	**0.392 J**	**0.26 J**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	100 U	2 U	2 U	2 U	100 U	2 U	2 U	2 U
Vinyl chloride	**1.83**	**3.95**	**2.56**	**34.6**	**23.4**	**1.61 J**	**0.69**	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	100 U	2 U	2 U	2 U	100 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	25 U	**5.73**	0.5 U	0.5 U	25 U	**1.75**	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	25 U	**2.13**	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**0.305**	**506**	**666**	**3.27**	**3.51**	**141**	**192**	**70.3**	**48.8**
2-Methylnaphthalene	**0.0623 J**	**696**	**999**	**2.78**	**3.55**	**92.4**	**142**	**82.5**	**52.1**
Acenaphthene	**3.72**	**342**	**296**	**2.67**	**2.93**	**85.5**	**74.5**	**28.5**	**21.1**
Acenaphthylene	**0.25**	54.4 U	12.4 U	**0.421**	**0.507**	9.8 U	3.71 U	**3.24 J**	**2.3 J**
Anthracene	**0.617**	**23.9 J**	**22**	**0.172 J**	**0.157**	9.8 U	**3.83**	4.71 U	4.18 U
Benzo(a)anthracene	**0.0357**	21.7 U	2.2 U	0.115 U	0.0217 U	4.9 U	0.371 U	2.35 U	2.09 U
Benzo(a)pyrene	0.0201 U	21.7 U	2.2 U	0.115 U	0.0217 U	4.9 U	0.371 U	2.35 U	2.09 U
Benzo(b)fluoranthene	**0.0131 J**	21.7 U	2.2 U	0.115 U	0.0217 U	4.9 U	0.371 U	2.35 U	2.09 U
Benzo(g,h,i)perylene	0.0402 U	43.5 U	4.4 U	0.229 U	0.0434 U	9.8 U	0.742 U	4.71 U	4.18 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-01U	PW-02L	PW-02L	PW-02U	PW-02U	PW-03-118	PW-03-118	PW-03U	PW-03U
Sample ID	GS-092022-46	GS-032822-69	GS-092022-48	GS-032822-68	GS-092022-47	GS-032822-72	GS-092122-55	GS-032822-70	GS-092122-51
Sample Date	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/21/2022	3/28/2022	9/21/2022
Depth	55.1 - 70.1 ft	120.1 - 140.1 ft	120.1 - 140.1 ft	57.8 - 72.8 ft	57.8 - 72.8 ft	108 - 118 ft	108 - 118 ft	42.8 - 57.8 ft	42.8 - 57.8 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624717.968	7624558.245	7624558.245	7624548.91	7624548.91	7624353	7624353	7624358.26	7624358.26
Y	705053.095	705165.657	705165.657	705171.55	705171.55	705238	705238	705216.9	705216.9
Benzo(j,k)fluoranthene	0.0201 U	21.7 U	2.2 U	0.115 U	0.0217 U	4.9 U	0.371 U	2.35 U	2.09 U
Carbazole	**0.0482**	**214**	**227**	**0.676**	**0.853**	**45.1**	**40.9**	**15.8**	**12**
Chrysene	**0.0357**	21.7 U	2.2 U	0.115 U	0.0217 U	4.9 U	0.371 U	2.35 U	2.09 U
Dibenzo(a,h)anthracene	0.0201 U	21.7 U	2.2 U	0.115 U	0.0217 U	4.9 U	0.371 U	2.35 U	2.09 U
Dibenzofuran	**0.199**	**21.7 J**	**21.3**	0.229 U	**0.0629**	9.8 U	**4.47**	4.71 U	4.18 U
Fluoranthene	**0.495**	43.5 U	**10.8**	0.229 U	**0.0352 J**	9.8 U	**1.18**	4.71 U	4.18 U
Fluorene	**1.36**	**81**	**90.9**	**0.381**	**0.321**	**20**	**19.6**	**3.83 J**	**2.41 J**
Indeno(1,2,3-c,d)pyrene	0.0201 U	21.7 U	2.2 U	0.115 U	0.0217 U	4.9 U	0.371 U	2.35 U	2.09 U
Naphthalene	**0.173**	**10500**	**10000**	**31.9**	**41.1**	**1850**	**1660**	**1320**	**1010**
Phenanthrene	**0.42**	**127**	**118**	**0.409 J**	**0.197**	**23**	**19.5**	9.42 U	8.37 U
Pyrene	**0.617**	43.5 U	**10.6**	0.229 U	**0.038 J**	9.8 U	**1.02**	4.71 U	4.18 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-01U	PW-02L	PW-02L	PW-02U	PW-02U	PW-03-118	PW-03-118	PW-03U	PW-03U
Sample ID	GS-092022-46	GS-032822-69	GS-092022-48	GS-032822-68	GS-092022-47	GS-032822-72	GS-092122-55	GS-032822-70	GS-092122-51
Sample Date	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/20/2022	3/28/2022	9/21/2022	3/28/2022	9/21/2022
Depth	55.1 - 70.1 ft	120.1 - 140.1 ft	120.1 - 140.1 ft	57.8 - 72.8 ft	57.8 - 72.8 ft	108 - 118 ft	108 - 118 ft	42.8 - 57.8 ft	42.8 - 57.8 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624717.968	7624558.245	7624558.245	7624548.91	7624548.91	7624353	7624353	7624358.26	7624358.26
Y	705053.095	705165.657	705165.657	705171.55	705171.55	705238	705238	705216.9	705216.9
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	**20.5**	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	**46.6**	--	--	--	--	--	--
Oil range organics	--	--	**0.519**	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-04L	PW-04L	PW-04U	PW-04U	PW-04U	PW-05L	PW-05L	PW-05U	PW-05U
Sample ID	GS-032422-57	GS-092822-95	GS-032422-55	GS-032422-56	GS-092822-96	GS-032422-54	GS-092822-94	GS-032422-53	GS-092822-91
Sample Date	3/24/2022	9/28/2022	3/24/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022
Depth	105.4 - 125.4 ft	105.4 - 125.4 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	105.7 - 125.7 ft	105.7 - 125.7 ft	49.9 - 64.9 ft	49.9 - 64.9 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624216.273	7624216.273	7624207.066	7624207.066	7624207.066	7624049.247	7624049.247	7624057.4	7624057.4
Y	705309.196	705309.196	705313.835	705313.835	705313.835	705380.561	705380.561	705374.24	705374.24
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**197**	**194**	**289**	**287**	**282**	**144**	**162**	**314**	**320**
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, total as calcium carbonate (CaCO3)	**197**	**194**	**289**	**287**	**282**	**144**	**162**	**314**	**320**
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	**109**	**103**	**26.1**	**26.6**	**26.9**	**67.6**	**62.9**	**45.4**	**46**
Cyanide	**0.0582**	**0.0555**	**0.429**	**0.43**	**0.397**	**0.0239**	**0.0231**	**0.446**	**0.446**
Cyanide, available	**0.00121 J**	**0.00136 J**	**0.00162 J**	**0.00134 J**	**0.00264**	0.002 U	0.002 U	**0.00116 J**	**0.00291**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Sulfate	**65**	**59.5**	**1.36**	**1.11**	**0.746 J**	**124**	**102**	**23.6**	**23.9**
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**5.19**	**5.13**	**5.81**	**6.01**	**5.88**	**7.15**	**8.37**	**4.36**	**3.7**
Barium	**84.5**	**80.7**	**52.3**	**54.1**	**51.1**	**70.1**	**75.3**	**60.5**	**56.3**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	**72500**	--	--	**60400**	--	**71200**	--	**60600**
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Copper	2 U	2 U	**2.25**	**64.8**	**1.03 J**	**1.88 J**	**1.18 J**	2 U	2 U
Iron	**36500**	**34400**	**33800**	**34400**	**32800**	**29600**	**31700**	**35300**	**32900**
Lead	0.2 U	0.2 U	0.2 U	**4.88**	**0.155 J**	0.2 U	0.2 U	0.2 U	0.2 U
Magnesium	--	**28600**	--	--	**28000**	--	**25800**	--	**39200**
Manganese	**3290**	**3270**	**2440**	**2490**	**2410**	**2250**	**2260**	**2200**	**2100**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	2 U	2 U	2 U	**1.35 J**	2 U	2 U	2 U	2 U
Potassium	--	**4630**	--	--	**2670**	--	**4700**	--	**2730**
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	**28000**	--	--	**16300**	--	**16200**	--	**28800**
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Zinc	4 U	4 U	**17**	**32.9**	**20.3**	**7.27**	**3.31 J**	**9.29**	4 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-04L	PW-04L	PW-04U	PW-04U	PW-04U	PW-05L	PW-05L	PW-05U	PW-05U
Sample ID	GS-032422-57	GS-092822-95	GS-032422-55	GS-032422-56	GS-092822-96	GS-032422-54	GS-092822-94	GS-032422-53	GS-092822-91
Sample Date	3/24/2022	9/28/2022	3/24/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022
Depth	105.4 - 125.4 ft	105.4 - 125.4 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	105.7 - 125.7 ft	105.7 - 125.7 ft	49.9 - 64.9 ft	49.9 - 64.9 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624216.273	7624216.273	7624207.066	7624207.066	7624207.066	7624049.247	7624049.247	7624057.4	7624057.4
Y	705309.196	705309.196	705313.835	705313.835	705313.835	705380.561	705380.561	705374.24	705374.24
Metals, Dissolved (µg/L)									
Iron	**35900**	**35300**	**33900**	**33400**	**32900**	**27900**	**30400**	**33800**	**33700**
Magnesium	**31300**	**29800**	**31300**	**30200**	**29200**	**27000**	**26300**	**43600**	**40400**
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	0.5 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	**2.53**	**2.58**	**1.58**	1 U	1 U	50 U	100 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,2-Dichloroethene, cis-	**1**	**1.35**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	0.5 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	1000 U	2000 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
Benzene	**1.48**	**1.69**	**288**	**265**	**287**	0.2 U	0.2 U	**5520**	**5580**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	250 U	500 UJ
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Chlorobenzene	**0.26 J**	**0.27 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-04L	PW-04L	PW-04U	PW-04U	PW-04U	PW-05L	PW-05L	PW-05U	PW-05U
Sample ID	GS-032422-57	GS-092822-95	GS-032422-55	GS-032422-56	GS-092822-96	GS-032422-54	GS-092822-94	GS-032422-53	GS-092822-91
Sample Date	3/24/2022	9/28/2022	3/24/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022
Depth	105.4 - 125.4 ft	105.4 - 125.4 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	105.7 - 125.7 ft	105.7 - 125.7 ft	49.9 - 64.9 ft	49.9 - 64.9 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624216.273	7624216.273	7624207.066	7624207.066	7624207.066	7624049.247	7624049.247	7624057.4	7624057.4
Y	705309.196	705309.196	705313.835	705313.835	705313.835	705380.561	705380.561	705374.24	705374.24
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	**0.5 J**	1 U	1 U	50 U	100 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Ethylbenzene	0.5 U	0.5 U	**17.4**	**18**	**16.5**	0.5 U	0.5 U	**213**	**218**
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
Isopropylbenzene (Cumene)	1 U	1 U	**1.56**	**1.59**	**1.29**	1 U	1 U	50 U	100 U
m,p-Xylene	1 U	1 U	**0.83 J**	**0.84 J**	**0.83 J**	1 U	1 U	50 U	100 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
n-Propylbenzene	0.5 U	0.5 U	**0.28 J**	**0.29 J**	**0.29 J**	0.5 U	0.5 U	25 U	50 U
o-Xylene	0.5 U	0.5 U	**2.96**	**3.04**	**2.58**	0.5 U	0.5 U	**32.5**	**35 J**
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Styrene	1 U	1 U	1 U	1 U	2 U	1 U	2 U	50 U	200 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	0.5 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
Vinyl chloride	**0.69**	**1.51**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	0.5 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
1,2-Dichlorobenzene	**0.99**	**0.93**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,4-Dichlorobenzene	**0.25 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0896 UJ	0.0652 U	**5.33 J**	**5.76 J**	**8.65**	0.081 UJ	0.0839 U	**64.7 J**	**72.7**
2-Methylnaphthalene	0.0896 UJ	0.0652 U	**3.12 J**	**3.12 J**	**4.71**	0.081 UJ	0.0839 U	**62.8 J**	**65.8**
Acenaphthene	0.0448 UJ	0.0326 U	**2.79 J**	**3.14 J**	**3.78**	0.0405 UJ	0.0419 U	**33.7 J**	**33.7**
Acenaphthylene	0.0448 UJ	**0.0322 J**	**1.25 J**	**1.56 J**	**1.39**	**0.0238 J**	**0.043**	12.3 UJ	**5.97**
Anthracene	0.0448 UJ	**0.0167 J**	**0.251 J**	**0.324 J**	**0.426**	0.0405 UJ	0.0419 U	12.3 UJ	**2.21 J**
Benzo(a)anthracene	0.0224 UJ	0.0163 U	0.228 UJ	0.223 UJ	0.0198 U	0.0203 UJ	0.021 U	6.16 UJ	2.06 U
Benzo(a)pyrene	0.0224 UJ	0.0163 U	0.228 UJ	0.223 UJ	0.0198 U	0.0203 UJ	0.021 U	6.16 UJ	2.06 U
Benzo(b)fluoranthene	0.0224 UJ	0.0163 U	0.228 UJ	0.223 UJ	0.0198 U	0.0203 UJ	0.021 U	6.16 UJ	2.06 U
Benzo(g,h,i)perylene	0.0448 UJ	0.0326 U	0.457 UJ	0.446 UJ	0.0397 U	0.0405 UJ	0.0419 U	12.3 UJ	4.12 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-04L	PW-04L	PW-04U	PW-04U	PW-04U	PW-05L	PW-05L	PW-05U	PW-05U
Sample ID	GS-032422-57	GS-092822-95	GS-032422-55	GS-032422-56	GS-092822-96	GS-032422-54	GS-092822-94	GS-032422-53	GS-092822-91
Sample Date	3/24/2022	9/28/2022	3/24/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022
Depth	105.4 - 125.4 ft	105.4 - 125.4 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	105.7 - 125.7 ft	105.7 - 125.7 ft	49.9 - 64.9 ft	49.9 - 64.9 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624216.273	7624216.273	7624207.066	7624207.066	7624207.066	7624049.247	7624049.247	7624057.4	7624057.4
Y	705309.196	705309.196	705313.835	705313.835	705313.835	705380.561	705380.561	705374.24	705374.24
Benzo(j,k)fluoranthene	0.0224 UJ	0.0163 U	0.228 UJ	0.223 UJ	0.0198 U	0.0203 UJ	0.021 U	6.16 UJ	2.06 U
Carbazole	0.0448 UJ	0.0326 U	**0.594 J**	**0.625 J**	**0.923**	0.0405 UJ	0.0419 U	**9.86 J**	**9.16**
Chrysene	0.0224 UJ	0.0163 U	0.228 UJ	0.223 UJ	0.0198 U	0.0203 UJ	0.021 U	6.16 UJ	2.06 U
Dibenzo(a,h)anthracene	0.0224 UJ	0.0163 U	0.228 UJ	0.223 UJ	0.0198 U	0.0203 UJ	0.021 U	6.16 UJ	2.06 U
Dibenzofuran	0.0448 UJ	0.0326 U	0.457 UJ	0.446 UJ	**0.0575**	0.0405 UJ	0.0419 U	12.3 UJ	4.12 U
Fluoranthene	0.0448 UJ	0.0326 U	0.457 UJ	0.446 UJ	**0.055**	0.0405 UJ	0.0419 U	12.3 UJ	4.12 U
Fluorene	0.0448 UJ	0.0326 U	**0.371 J**	**0.363 J**	**0.367**	0.0405 UJ	0.0419 U	**6.62 J**	**7.15**
Indeno(1,2,3-c,d)pyrene	0.0224 UJ	0.0163 U	0.228 UJ	0.223 UJ	0.0198 U	0.0203 UJ	0.021 U	6.16 UJ	2.06 U
Naphthalene	0.0896 UJ	**0.0811**	**58.2 J**	**60.1 J**	**49.9**	0.081 UJ	**0.177**	**2140 J**	**2170**
Phenanthrene	0.0896 UJ	0.0652 U	0.913 UJ	**0.469 J**	**0.638**	0.081 UJ	0.0839 U	24.6 UJ	**12.5**
Pyrene	0.0448 UJ	0.0326 U	0.457 UJ	0.446 UJ	**0.0575**	0.0405 UJ	0.0419 U	12.3 UJ	**2.06 J**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-04L	PW-04L	PW-04U	PW-04U	PW-04U	PW-05L	PW-05L	PW-05U	PW-05U
Sample ID	GS-032422-57	GS-092822-95	GS-032422-55	GS-032422-56	GS-092822-96	GS-032422-54	GS-092822-94	GS-032422-53	GS-092822-91
Sample Date	3/24/2022	9/28/2022	3/24/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022	3/24/2022	9/28/2022
Depth	105.4 - 125.4 ft	105.4 - 125.4 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	47.2 - 62.2 ft	105.7 - 125.7 ft	105.7 - 125.7 ft	49.9 - 64.9 ft	49.9 - 64.9 ft
Sample Type	N	N	N	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624216.273	7624216.273	7624207.066	7624207.066	7624207.066	7624049.247	7624049.247	7624057.4	7624057.4
Y	705309.196	705309.196	705313.835	705313.835	705313.835	705380.561	705380.561	705374.24	705374.24
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-06L	PW-06L	PW-06U	PW-06U	PW-07-93	PW-07-93	PW-08-68	PW-08-68	PW-09-92
Sample ID	GS-032922-75	GS-092922-103	GS-032922-77	GS-092922-106	GS-032422-60	GS-092922-108	GS-032422-58	GS-092922-102	GS-032922-76
Sample Date	3/29/2022	9/29/2022	3/29/2022	9/29/2022	3/24/2022	9/29/2022	3/24/2022	9/29/2022	3/29/2022
Depth	103.7 - 123.7 ft	103.7 - 123.7 ft	49.4 - 64.4 ft	49.4 - 64.4 ft	73.5 - 93.5 ft	73.5 - 93.5 ft	48 - 68 ft	48 - 68 ft	72.6 - 92.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623921.52	7623921.52	7623927.56	7623927.56	7623758.1	7623758.1	7623605.53	7623605.53	7623393.471
Y	705497.031	705497.031	705487.41	705487.41	705590.96	705590.96	705682.87	705682.87	705809.388
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**124**	**131**	**273**	**266**	**113**	**136**	**109**	**139**	**138**
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, total as calcium carbonate (CaCO3)	**124**	**131**	**273**	**266**	**113**	**136**	**109**	**139**	**138**
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	**307**	**282**	**7.53**	**8.16**	**444**	**393**	**416**	**412**	**448**
Cyanide	**0.0352**	**0.0344**	**0.102**	**0.0618**	**0.0536**	**0.0571**	**0.047**	**0.0516**	**0.0634**
Cyanide, available	0.002 U	0.002 UJ	**0.00108 J**	**0.00119 J**	**0.00152 J**	**0.00101 J**	**0.0011 J**	**0.00103 J**	**0.00115 J**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Sulfate	**150**	**131 J**	**4.92**	**5.75 J**	**207**	**178 J**	**173**	**169 J**	**209**
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**7.18**	**7.37**	**3.24**	**3.39**	**12**	**12**	**9.95**	**10.2**	**7.41**
Barium	**142**	**143**	**36.6**	**36.6**	**220**	**222**	**203**	**224**	**199**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	**146000**	**130000**	**40100**	**39700**	--	**135000**	--	**124000**	**126000**
Chromium	2 U	2 U	2 U	**1.19 J**	2 U	2 U	2 U	2 U	2 U
Copper	2 U	**2.48**	2 U	2 U	**48.3**	**9.15**	**1.12 J**	2 U	**2.34**
Iron	**60500**	**56400**	**20500**	**20400**	**64500**	**61600**	**67000**	**68000**	**56000**
Lead	0.2 U	0.2 U	0.2 U	0.2 U	**1.75**	**0.192 J**	0.2 U	0.2 U	0.2 U
Magnesium	**51900**	**48200**	**35000**	**34500**	--	**49200**	--	**49200**	**54500**
Manganese	**5120**	**4950**	**1090**	**1100**	**6150**	**5900**	**6830**	**6820**	**4980**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**1.28 J**	2 U	2 U	2 U	2 U	2 U	**4.75**	**1.18 J**	2 U
Potassium	**7720**	**6990**	**2300**	**2250**	--	**9850**	--	**8510**	**8450**
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	**25900**	**27300**	**17300**	**16800**	--	**114000**	--	**122000**	**154000**
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	**1.11 J**	2 U	2 U	2 U	2 U	2 U	2 U
Zinc	**2.34 J**	**3.11 J**	4 U	4 U	**60.4**	**42.1**	**17.1**	**9.72**	**20.7**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-06L	PW-06L	PW-06U	PW-06U	PW-07-93	PW-07-93	PW-08-68	PW-08-68	PW-09-92
Sample ID	GS-032922-75	GS-092922-103	GS-032922-77	GS-092922-106	GS-032422-60	GS-092922-108	GS-032422-58	GS-092922-102	GS-032922-76
Sample Date	3/29/2022	9/29/2022	3/29/2022	9/29/2022	3/24/2022	9/29/2022	3/24/2022	9/29/2022	3/29/2022
Depth	103.7 - 123.7 ft	103.7 - 123.7 ft	49.4 - 64.4 ft	49.4 - 64.4 ft	73.5 - 93.5 ft	73.5 - 93.5 ft	48 - 68 ft	48 - 68 ft	72.6 - 92.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623921.52	7623921.52	7623927.56	7623927.56	7623758.1	7623758.1	7623605.53	7623605.53	7623393.471
Y	705497.031	705497.031	705487.41	705487.41	705590.96	705590.96	705682.87	705682.87	705809.388
Metals, Dissolved (µg/L)									
Iron	**53000**	**54400**	**19700**	**19600**	**67300**	**66000**	**59700**	**69300**	**53100**
Magnesium	**46200**	**45700**	**33200**	**34200**	**50900**	**46000**	**43200**	**46300**	**47700**
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	**42 J**	**40.9**	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	50 U	**9.73**	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 UJ	10 U	500 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ
4-Chlorotoluene	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	1000 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	2 U	2 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	**0.21**	**0.19 J**	**332**	**171**	0.2 U	0.2 U	**6.04**	**8.96**	0.2 U
Bromobenzene	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 U	5 U	250 U	5 U	5 U	5 U	5 U	5 UJ	5 U
Carbon disulfide	10 U	10 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-06L	PW-06L	PW-06U	PW-06U	PW-07-93	PW-07-93	PW-08-68	PW-08-68	PW-09-92
Sample ID	GS-032922-75	GS-092922-103	GS-032922-77	GS-092922-106	GS-032422-60	GS-092922-108	GS-032422-58	GS-092922-102	GS-032922-76
Sample Date	3/29/2022	9/29/2022	3/29/2022	9/29/2022	3/24/2022	9/29/2022	3/24/2022	9/29/2022	3/29/2022
Depth	103.7 - 123.7 ft	103.7 - 123.7 ft	49.4 - 64.4 ft	49.4 - 64.4 ft	73.5 - 93.5 ft	73.5 - 93.5 ft	48 - 68 ft	48 - 68 ft	72.6 - 92.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623921.52	7623921.52	7623927.56	7623927.56	7623758.1	7623758.1	7623605.53	7623605.53	7623393.471
Y	705497.031	705497.031	705487.41	705487.41	705590.96	705590.96	705682.87	705682.87	705809.388
Chloroethane	5 U	5 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	50 U	**1.36 J**	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	**0.25 J**	**0.39 J**	**95.5**	**71.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	50 U	**7.1**	1 U	1 U	**0.73 J**	1 U	1 U
m,p-Xylene	1 U	1 U	**83.5**	**63.2**	1 U	1 U	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	0.5 U	25 U	**2.11**	0.5 U	0.5 U	**0.27 J**	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	**42**	**39.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	50 U	**0.85 J**	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	50 U	1 U	1 U	1 U	1 U	2 U	1 U
tert-Butylbenzene	1 U	1 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	20 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	1 U	50 U	**5.36**	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**1.64**	**2.17**	**254**	**153**	0.0803 UJ	0.0799 U	**0.828 J**	**0.243**	**1.11**
2-Methylnaphthalene	**0.104**	**0.254**	**401**	**240**	0.0803 UJ	0.0799 U	**0.153 J**	0.0839 U	**0.0681 J**
Acenaphthene	**0.936**	**1.19**	**91.5**	**70.5**	**0.0607 J**	**0.0599**	**2.31 J**	**1.45**	**1.02**
Acenaphthylene	**0.112**	0.193 U	16 U	5.79 U	**0.0552 J**	**0.0769**	**0.233 J**	0.131 U	**0.111**
Anthracene	**0.0845**	**0.0859**	**11.2 J**	**9.91**	**0.0241 J**	**0.0205 J**	**0.0832 J**	**0.054**	0.0524 U
Benzo(a)anthracene	**0.021**	**0.0245**	7.99 U	1.85 U	0.0201 UJ	0.02 U	**0.0162 J**	**0.0136 J**	0.0262 U
Benzo(a)pyrene	0.021 U	0.0182 U	7.99 U	1.85 U	0.0201 UJ	0.02 U	0.0209 UJ	0.021 U	0.0262 U
Benzo(b)fluoranthene	0.021 U	**0.0109 J**	7.99 U	1.85 U	0.0201 UJ	0.02 U	0.0209 UJ	0.021 U	0.0262 U
Benzo(g,h,i)perylene	0.042 U	0.0364 U	16 U	3.71 U	0.0401 UJ	0.0399 U	0.0419 UJ	0.0419 U	0.0524 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-06L	PW-06L	PW-06U	PW-06U	PW-07-93	PW-07-93	PW-08-68	PW-08-68	PW-09-92
Sample ID	GS-032922-75	GS-092922-103	GS-032922-77	GS-092922-106	GS-032422-60	GS-092922-108	GS-032422-58	GS-092922-102	GS-032922-76
Sample Date	3/29/2022	9/29/2022	3/29/2022	9/29/2022	3/24/2022	9/29/2022	3/24/2022	9/29/2022	3/29/2022
Depth	103.7 - 123.7 ft	103.7 - 123.7 ft	49.4 - 64.4 ft	49.4 - 64.4 ft	73.5 - 93.5 ft	73.5 - 93.5 ft	48 - 68 ft	48 - 68 ft	72.6 - 92.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623921.52	7623921.52	7623927.56	7623927.56	7623758.1	7623758.1	7623605.53	7623605.53	7623393.471
Y	705497.031	705497.031	705487.41	705487.41	705590.96	705590.96	705682.87	705682.87	705809.388
Benzo(j,k)fluoranthene	0.021 U	0.0182 U	7.99 U	1.85 U	0.0201 UJ	0.02 U	0.0209 UJ	0.021 U	0.0262 U
Carbazole	**0.379**	**0.478**	**35.1**	**29.9**	0.0401 UJ	0.0399 U	**0.228 J**	**0.142**	0.0524 U
Chrysene	**0.0215**	**0.0282**	7.99 U	1.85 U	0.0201 UJ	0.02 U	0.0209 UJ	0.021 U	0.0262 U
Dibenzo(a,h)anthracene	0.021 U	0.0182 U	7.99 U	1.85 U	0.0201 UJ	0.02 U	0.0209 UJ	0.021 U	0.0262 U
Dibenzofuran	**0.0824**	**0.0991**	**9.59 J**	**8.52**	**0.0306 J**	**0.0225 J**	**0.394 J**	**0.0744**	0.0524 U
Fluoranthene	**0.109**	**0.116**	16 U	**6.53**	**0.0301 J**	**0.0235 J**	**0.156 J**	**0.0944**	0.0524 U
Fluorene	**0.448**	**0.464**	**38.3**	**27.9**	**0.0396 J**	**0.0364 J**	**0.67 J**	**0.233**	0.0524 U
Indeno(1,2,3-c,d)pyrene	0.021 U	0.0182 U	7.99 U	1.85 U	0.0201 UJ	0.02 U	0.0209 UJ	0.021 U	0.0262 U
Naphthalene	**1.02**	**2.58**	**2290**	**1550**	0.0803 UJ	**0.0624 J**	**0.901 J**	**0.118**	**1.49**
Phenanthrene	**0.112**	**0.187**	**71.9**	**68.2**	**0.0592 J**	**0.0419 J**	**0.283 J**	**0.143**	0.105 U
Pyrene	**0.131**	**0.14**	16 U	**7.74**	**0.0286 J**	**0.0205 J**	**0.105 J**	**0.0687**	0.0524 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-06L	PW-06L	PW-06U	PW-06U	PW-07-93	PW-07-93	PW-08-68	PW-08-68	PW-09-92
Sample ID	GS-032922-75	GS-092922-103	GS-032922-77	GS-092922-106	GS-032422-60	GS-092922-108	GS-032422-58	GS-092922-102	GS-032922-76
Sample Date	3/29/2022	9/29/2022	3/29/2022	9/29/2022	3/24/2022	9/29/2022	3/24/2022	9/29/2022	3/29/2022
Depth	103.7 - 123.7 ft	103.7 - 123.7 ft	49.4 - 64.4 ft	49.4 - 64.4 ft	73.5 - 93.5 ft	73.5 - 93.5 ft	48 - 68 ft	48 - 68 ft	72.6 - 92.6 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623921.52	7623921.52	7623927.56	7623927.56	7623758.1	7623758.1	7623605.53	7623605.53	7623393.471
Y	705497.031	705497.031	705487.41	705487.41	705590.96	705590.96	705682.87	705682.87	705809.388
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-09-92	PW-10Lb	PW-10Lb	PW-10Lb	PW-10Lb	PW-10U	PW-10U	PW-11U	PW-11U
Sample ID	GS-092922-107	GS-032922-80	GS-032922-81	GS-092922-100	GS-092922-99	GS-032922-78	GS-092922-104	GS-032822-73	GS-092122-54
Sample Date	9/29/2022	3/29/2022	3/29/2022	9/29/2022	9/29/2022	3/29/2022	9/29/2022	3/28/2022	9/21/2022
Depth	72.6 - 92.6 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	40 - 55.4 ft	40 - 55.4 ft	49.8 - 64.8 ft	49.8 - 64.8 ft
Sample Type	N	N	FD	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623393.471	7623183.683	7623183.683	7623183.683	7623183.683	7623222.22	7623222.22	7624435.734	7624435.734
Y	705809.388	705887.8351	705887.8351	705887.8351	705887.8351	705871.593	705871.593	705191.274	705191.274
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**128**	**144**	**140**	**148**	**157**	**47.4**	**69.4**	**251**	**217**
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, total as calcium carbonate (CaCO3)	**128**	**144**	**140**	**148**	**157**	**47.4**	**69.4**	**251**	**217**
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	**416**	**230**	**228**	**190**	**203**	**5.22**	**4.96**	**41.7**	**64.1 J**
Cyanide	**0.097**	**0.225**	**0.225**	**0.144**	**0.158**	**1.23**	**1.14**	**0.204**	**0.09**
Cyanide, available	**0.0015 J**	**0.00114 J**	0.002 U	**0.0157 J**	0.002 UJ	**0.00178 J**	**0.00162 J**	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	**0.00559**	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Sulfate	**186 J**	**276**	**282**	**227 J**	**247 J**	**1840**	**1720 J**	**1.26**	1 U
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	50 U	50 U	**31.6 J**	**181**	**43.7 J**	**30 J**	50 U	**43.2 J**
Antimony	**1.71**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**9.38**	**2.54**	**2.56**	**2.28**	**2.38**	**1.8**	**2.06**	**2.69**	**2.66**
Barium	**214**	**82.9**	**83**	**104**	**111**	**28.9**	**35.3**	**44.7**	**55.8**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.23**	**0.163 J**	0.2 U	0.2 U
Cadmium	**0.189 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	**122000**	**102000**	**97600**	**92900**	**96300**	**292000**	**279000**	**45800**	**55400**
Chromium	2 U	2 U	2 U	2 U	**1.5 J**	**3.32**	**1.98 J**	2 U	2 U
Copper	**1350**	2 U	**2.14**	**907**	**64.5**	**3.34**	2 U	**2.05**	**4.03**
Iron	**61200**	**101000**	**97800**	**90000**	**96100**	**382000**	**378000**	**28000**	**49700**
Lead	**92**	0.2 U	0.2 U	**0.409**	**0.34**	**0.131 J**	0.2 U	0.2 U	**0.205**
Magnesium	**50300**	**48300**	**48800**	**46900**	**47400**	**92100**	**93200**	**27900**	**27900**
Manganese	**4910**	**4190**	**4090**	**4160**	**4270**	**7620**	**7970**	**2140**	**2680**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**8.66**	2 U	2 U	2 U	**1.5 J**	**3.4**	**2.85**	2 U	**1.36 J**
Potassium	**7680**	**5760**	**5800**	**5400**	**5500**	**6340**	**6140**	**2340**	**2600**
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	**0.207**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	**147000**	**79600**	**76300**	**67000**	**71500**	**71000**	**76200**	**16900**	**15600**
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U	**1.07 J**	**2.45**	**2.36**	2 U	2 U
Zinc	**1190**	4 U	**2.35 J**	**42.2**	**35.1**	**6.67**	**3.1 J**	**18**	**26.4**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-09-92	PW-10Lb	PW-10Lb	PW-10Lb	PW-10Lb	PW-10U	PW-10U	PW-11U	PW-11U
Sample ID	GS-092922-107	GS-032922-80	GS-032922-81	GS-092922-100	GS-092922-99	GS-032922-78	GS-092922-104	GS-032822-73	GS-092122-54
Sample Date	9/29/2022	3/29/2022	3/29/2022	9/29/2022	9/29/2022	3/29/2022	9/29/2022	3/28/2022	9/21/2022
Depth	72.6 - 92.6 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	40 - 55.4 ft	40 - 55.4 ft	49.8 - 64.8 ft	49.8 - 64.8 ft
Sample Type	N	N	FD	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623393.471	7623183.683	7623183.683	7623183.683	7623183.683	7623222.22	7623222.22	7624435.734	7624435.734
Y	705809.388	705887.8351	705887.8351	705887.8351	705887.8351	705871.593	705871.593	705191.274	705191.274
Metals, Dissolved (µg/L)									
Iron	**51500**	**96600**	**91900**	**94800**	**99200**	**339000**	**363000**	**27200**	**44500**
Magnesium	**46700**	**46000**	**48300**	**44000**	**44400**	**81500**	**87300**	**27600**	**27500**
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	**53 J**
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.483**	40 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.292 J**	40 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
2-Hexanone (Methyl butyl ketone)	10 U	10 UJ	10 UJ	10 U	10 U	10 U	10 U	500 U	1000 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	1000 U	2000 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.18 J**	**0.11 J**	**376**	**162**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	250 U	500 UJ
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-09-92	PW-10Lb	PW-10Lb	PW-10Lb	PW-10Lb	PW-10U	PW-10U	PW-11U	PW-11U
Sample ID	GS-092922-107	GS-032922-80	GS-032922-81	GS-092922-100	GS-092922-99	GS-032922-78	GS-092922-104	GS-032822-73	GS-092122-54
Sample Date	9/29/2022	3/29/2022	3/29/2022	9/29/2022	9/29/2022	3/29/2022	9/29/2022	3/28/2022	9/21/2022
Depth	72.6 - 92.6 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	40 - 55.4 ft	40 - 55.4 ft	49.8 - 64.8 ft	49.8 - 64.8 ft
Sample Type	N	N	FD	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623393.471	7623183.683	7623183.683	7623183.683	7623183.683	7623222.22	7623222.22	7624435.734	7624435.734
Y	705809.388	705887.8351	705887.8351	705887.8351	705887.8351	705871.593	705871.593	705191.274	705191.274
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 UJ	100 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**40**	**153**
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	250 U	500 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	**60 J**
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	500 U	1000 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	**48 J**
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Styrene	1 U	1 U	1 U	2 U	2 U	1 U	1 U	50 U	200 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	40 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	50 U	100 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	**0.553**	40 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	100 U	200 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	50 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**0.994**	**0.611**	**0.523**	**0.402**	**0.407**	**0.685**	**0.444**	**79**	**449**
2-Methylnaphthalene	**0.0885**	**0.0565 J**	**0.0412 J**	0.073 U	0.0767 U	0.537 U	**0.131**	**89.2**	**664**
Acenaphthene	**1.12**	**2.48**	**2.51**	**2.77**	**2.76**	**0.265 J**	**0.224**	**46.5**	**351**
Acenaphthylene	**0.119**	**0.211**	**0.209**	**0.226**	**0.236**	0.269 U	0.0724 U	**5.41 J**	44.4 U
Anthracene	**0.0395 J**	**0.024 J**	**0.0278 J**	**0.031 J**	**0.0264 J**	**0.138 J**	**0.161**	9.02 U	**29.9 J**
Benzo(a)anthracene	0.0211 U	0.0224 U	0.0206 U	0.0183 U	0.0192 U	0.134 U	0.0196 U	4.51 U	22.2 U
Benzo(a)pyrene	0.0211 U	0.0224 U	0.0206 U	0.0183 U	0.0192 U	0.134 U	0.0196 U	4.51 U	22.2 U
Benzo(b)fluoranthene	0.0211 U	0.0224 U	0.0206 U	0.0183 U	0.0192 U	0.134 U	0.0196 U	4.51 U	22.2 U
Benzo(g,h,i)perylene	0.0421 U	0.0447 U	0.0412 U	0.0365 U	0.0383 U	0.269 U	0.0392 U	9.02 U	44.4 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-09-92	PW-10Lb	PW-10Lb	PW-10Lb	PW-10Lb	PW-10U	PW-10U	PW-11U	PW-11U
Sample ID	GS-092922-107	GS-032922-80	GS-032922-81	GS-092922-100	GS-092922-99	GS-032922-78	GS-092922-104	GS-032822-73	GS-092122-54
Sample Date	9/29/2022	3/29/2022	3/29/2022	9/29/2022	9/29/2022	3/29/2022	9/29/2022	3/28/2022	9/21/2022
Depth	72.6 - 92.6 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	40 - 55.4 ft	40 - 55.4 ft	49.8 - 64.8 ft	49.8 - 64.8 ft
Sample Type	N	N	FD	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623393.471	7623183.683	7623183.683	7623183.683	7623183.683	7623222.22	7623222.22	7624435.734	7624435.734
Y	705809.388	705887.8351	705887.8351	705887.8351	705887.8351	705871.593	705871.593	705191.274	705191.274
Benzo(j,k)fluoranthene	0.0211 U	0.0224 U	0.0206 U	0.0183 U	0.0192 U	0.134 U	0.0196 U	4.51 U	22.2 U
Carbazole	0.0421 U	0.0447 U	0.0412 U	0.0365 U	0.0383 U	0.269 U	**0.0358 J**	**17.4**	**123**
Chrysene	0.0211 U	0.0224 U	0.0206 U	0.0183 U	0.0192 U	0.134 U	0.0196 U	4.51 U	22.2 U
Dibenzo(a,h)anthracene	0.0211 U	0.0224 U	0.0206 U	0.0183 U	0.0192 U	0.134 U	0.0196 U	4.51 U	22.2 U
Dibenzofuran	0.0421 U	0.0447 U	0.0412 U	0.0365 U	0.0383 U	0.269 U	0.0392 U	9.02 U	44.4 U
Fluoranthene	0.0421 U	0.0447 U	0.0412 U	0.0365 U	0.0383 U	0.269 U	0.0392 U	9.02 U	**25.5 J**
Fluorene	0.0421 U	0.0447 U	**0.0211 J**	**0.0201 J**	0.0383 U	**0.185 J**	**0.151**	**7.1 J**	**84.8**
Indeno(1,2,3-c,d)pyrene	0.0211 U	0.0224 U	0.0206 U	0.0183 U	0.0192 U	0.134 U	0.0196 U	4.51 U	22.2 U
Naphthalene	**0.965**	**0.466**	**0.438**	**0.416**	**0.401**	**1.12**	**0.534**	**983**	**7400**
Phenanthrene	0.0843 U	0.0895 U	0.0824 U	0.073 U	0.0767 U	0.537 U	0.0785 U	**10.3 J**	**170**
Pyrene	0.0421 U	0.0447 U	0.0412 U	0.0365 U	0.0383 U	0.269 U	**0.0221 J**	9.02 U	**25 J**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-09-92	PW-10Lb	PW-10Lb	PW-10Lb	PW-10Lb	PW-10U	PW-10U	PW-11U	PW-11U
Sample ID	GS-092922-107	GS-032922-80	GS-032922-81	GS-092922-100	GS-092922-99	GS-032922-78	GS-092922-104	GS-032822-73	GS-092122-54
Sample Date	9/29/2022	3/29/2022	3/29/2022	9/29/2022	9/29/2022	3/29/2022	9/29/2022	3/28/2022	9/21/2022
Depth	72.6 - 92.6 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	76 - 96 ft	40 - 55.4 ft	40 - 55.4 ft	49.8 - 64.8 ft	49.8 - 64.8 ft
Sample Type	N	N	FD	FD	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623393.471	7623183.683	7623183.683	7623183.683	7623183.683	7623222.22	7623222.22	7624435.734	7624435.734
Y	705809.388	705887.8351	705887.8351	705887.8351	705887.8351	705871.593	705871.593	705191.274	705191.274
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-12U	PW-12U	PW-13U	PW-13U	PW-14U	PW-14U	PW-15U	PW-15U	PW-16U
Sample ID	GS-032922-83	GS-092822-85	GS-032922-82	GS-092822-88	GS-032922-79	GS-092822-89	GS-032422-61	GS-092922-105	GS-032422-59
Sample Date	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/24/2022	9/29/2022	3/24/2022
Depth	47.8 - 62.8 ft	47.8 - 62.8 ft	57.6 - 72.6 ft	57.6 - 72.6 ft	57.8 - 67.8 ft	57.8 - 67.8 ft	35.1 - 55.1 ft	35.1 - 55.1 ft	30.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624297.598	7624297.598	7624144.462	7624144.462	7623986.846	7623986.846	7623680.686	7623680.686	7623554.777
Y	705265.903	705265.903	705333.359	705333.359	705437.044	705437.044	705639.013	705639.013	705713.301
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**284**	**278**	**206**	**208**	**291**	**286**	**278**	**272**	**264**
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Alkalinity, total as calcium carbonate (CaCO3)	**284**	**278**	**206**	**208**	**291**	**286**	**278**	**272**	**264**
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	**23.1**	**22.2**	**66.4**	**66.7**	**23**	**22.1**	**24**	**39.5**	**83.1**
Cyanide	**0.342**	**0.313**	**0.236**	**0.224**	**0.232**	**0.226**	**0.0585**	**0.0835**	**0.119**
Cyanide, available	**0.00243**	**0.0026**	**0.00338**	**0.00318**	0.002 U	**0.00202**	**0.00149 J**	0.002 UJ	**0.00103 J**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Sulfate	1 U	1 U	**26.2**	**22.6**	**5.08**	**4.58**	**11.6**	**17.7 J**	**30.4**
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**4.59**	**4.35**	**5.25**	**3.34**	**4.33**	**4.19**	**4.24**	**4.03**	**2.76**
Barium	**53.7**	**45.3**	**54**	**49.7**	**44.3**	**42.3**	**43.3**	**45.6**	**66.7**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	**53800**	**51800**	**57000**	**54400**	**47700**	**46700**	--	**51200**	--
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Copper	**5.09**	**5.18**	2 U	2 U	2 U	2 U	2 U	2 U	**1.08 J**
Iron	**32600**	**27500**	**32200**	**29100**	**23900**	**20300**	**18400**	**20400**	**41000**
Lead	0.2 U	**0.191 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Magnesium	**34700**	**32000**	**30400**	**30300**	**33500**	**31000**	--	**39500**	--
Manganese	**1940**	**1800**	**2430**	**2230**	**1600**	**1500**	**940**	**1090**	**2830**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Potassium	**2450**	**2290**	**3080**	**2840**	**2920**	**2790**	--	**2720**	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	**17900**	**16400**	**18400**	**18600**	**28000**	**24800**	--	**21100**	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Zinc	**22.6**	**32.3**	**5.16**	**2 J**	**6.29**	**5.15**	**4.9**	4 U	**3.44 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-12U	PW-12U	PW-13U	PW-13U	PW-14U	PW-14U	PW-15U	PW-15U	PW-16U
Sample ID	GS-032922-83	GS-092822-85	GS-032922-82	GS-092822-88	GS-032922-79	GS-092822-89	GS-032422-61	GS-092922-105	GS-032422-59
Sample Date	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/24/2022	9/29/2022	3/24/2022
Depth	47.8 - 62.8 ft	47.8 - 62.8 ft	57.6 - 72.6 ft	57.6 - 72.6 ft	57.8 - 67.8 ft	57.8 - 67.8 ft	35.1 - 55.1 ft	35.1 - 55.1 ft	30.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624297.598	7624297.598	7624144.462	7624144.462	7623986.846	7623986.846	7623680.686	7623680.686	7623554.777
Y	705265.903	705265.903	705333.359	705333.359	705437.044	705437.044	705639.013	705639.013	705713.301
Metals, Dissolved (µg/L)									
Iron	**26600**	**26700**	**30700**	**29600**	**24200**	**20700**	**17400**	**17200**	**37500**
Magnesium	**34100**	**32000**	**30300**	**30600**	**33200**	**31900**	**37200**	**36800**	**40200**
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	20 U	4 U	20 U	80 U	20 U	40 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	20 U	4 U	20 U	80 U	20 U	40 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	20 U	4 U	20 U	80 U	20 U	40 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	20 U	0.5 U	20 U	0.5 U	20 U	0.5 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	100 U	20 U	100 U	400 U	100 U	200 U	2 U	2 U	2 U
1,2,3-Trichloropropane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	50 U	**13.2**	**75**	200 U	50 U	100 U	**1.42**	**3.24**	1 U
1,2-Dibromo-3-chloropropane	250 U	50 U	250 U	1000 U	250 U	500 U	5 U	5 U	5 U
1,2-Dichloroethane	20 U	4 U	20 U	80 U	20 U	40 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	20 U	0.5 U	20 U	0.5 U	20 U	0.5 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	20 U	0.5 U	20 U	**0.251 J**	20 U	0.5 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	50 U	10 U	**25.5 J**	200 U	50 U	100 U	1 U	**0.9 J**	1 U
1,3-Dichloropropane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
2,2-Dichloropropane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
2-Chlorotoluene	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	500 UJ	100 U	500 UJ	2000 U	500 UJ	1000 U	10 U	10 U	10 U
4-Chlorotoluene	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	500 U	100 U	500 U	2000 U	500 U	1000 U	10 U	10 U	10 U
Acetone	1000 U	200 U	1000 U	4000 U	1000 U	2000 U	20 U	20 U	20 U
Acrylonitrile	100 U	20 U	100 U	400 U	100 U	200 U	2 U	2 U	2 U
Benzene	**1490**	**1370**	**4360**	**2800**	**4760**	**4440**	**61.9**	**182**	**7.35**
Bromobenzene	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Bromodichloromethane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	250 U	50 U	250 U	1000 UJ	250 U	500 UJ	5 U	5 U	5 U
Carbon disulfide	500 U	100 U	500 U	2000 U	500 U	1000 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Chlorobenzene	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-12U	PW-12U	PW-13U	PW-13U	PW-14U	PW-14U	PW-15U	PW-15U	PW-16U
Sample ID	GS-032922-83	GS-092822-85	GS-032922-82	GS-092822-88	GS-032922-79	GS-092822-89	GS-032422-61	GS-092922-105	GS-032422-59
Sample Date	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/24/2022	9/29/2022	3/24/2022
Depth	47.8 - 62.8 ft	47.8 - 62.8 ft	57.6 - 72.6 ft	57.6 - 72.6 ft	57.8 - 67.8 ft	57.8 - 67.8 ft	35.1 - 55.1 ft	35.1 - 55.1 ft	30.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624297.598	7624297.598	7624144.462	7624144.462	7623986.846	7623986.846	7623680.686	7623680.686	7623554.777
Y	705265.903	705265.903	705333.359	705333.359	705437.044	705437.044	705639.013	705639.013	705713.301
Chloroethane	250 U	50 U	250 U	1000 U	250 U	500 U	5 U	5 U	5 U
Chloroform	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Chloromethane	250 U	50 U	250 U	1000 U	250 U	500 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Dibromochloromethane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Dibromomethane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Dichlorodifluoromethane	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	500 U	100 U	500 U	2000 U	500 U	1000 U	10 U	10 U	10 U
Ethylbenzene	**62**	**76.3**	**615**	**498**	**132**	**157**	**0.64**	**1.43**	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	250 U	50 U	250 U	1000 U	250 U	500 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	50 U	10 U	50 U	200 U	50 U	100 U	**1.26**	**1.94**	**1.62**
m,p-Xylene	50 U	**5 J**	**240**	**178 J**	**32.5 J**	**54 J**	**0.84 J**	**1.61**	1 U
Methyl ethyl ketone (2-Butanone)	500 U	100 U	500 U	2000 U	500 U	1000 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
n-Butylbenzene	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
n-Propylbenzene	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	**0.41 J**	**0.37 J**
o-Xylene	25 U	**11.9**	**123**	**102**	**26**	**39 J**	**0.57**	**1.02**	0.5 U
sec-Butylbenzene	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Styrene	50 U	10 U	50 U	400 U	50 U	200 U	1 U	1 U	1 U
tert-Butylbenzene	50 U	10 U	50 U	200 U	50 U	100 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	20 U	4 U	20 U	80 U	20 U	40 U	0.4 U	0.4 U	0.4 U
Toluene	50 U	10 U	**82.5**	200 U	50 U	100 U	1 U	1 U	1 U
Trichloroethene (TCE)	20 U	0.5 U	20 U	0.5 U	20 U	0.5 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	100 U	20 U	100 U	400 U	100 U	200 U	2 U	2 U	2 U
Vinyl chloride	20 U	0.5 U	20 U	**0.556**	20 U	0.5 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	100 U	20 U	100 U	400 U	100 U	200 U	2 U	2 U	2 U
1,2-Dichlorobenzene	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	25 U	5 U	25 U	100 U	25 U	50 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**29.1**	**36.4**	**439**	**309**	**93.3**	**159**	**75.1 J**	**53**	**1.32 J**
2-Methylnaphthalene	**32.3**	**51.6**	**708**	**480**	**87.6**	**237**	**117 J**	**76.8**	**0.125 J**
Acenaphthene	**12.7**	**9.54**	**310**	**156**	**50.6**	**70.4**	**92.1 J**	**68.4**	**13.9 J**
Acenaphthylene	9.6 U	**2.09**	**47.7**	15.6 U	7.38 U	8.08 U	**5.92 J**	5.62 U	**0.999 J**
Anthracene	9.6 U	**0.323 J**	**19.6 J**	**9.63**	**5.35 J**	**9.7**	**5.75 J**	**3.88**	**0.492 J**
Benzo(a)anthracene	4.8 U	0.205 U	18.7 U	2.08 U	3.69 U	1.85 U	**0.612 J**	0.817 U	**0.0498 J**
Benzo(a)pyrene	4.8 U	0.205 U	18.7 U	2.08 U	3.69 U	1.85 U	0.389 UJ	0.817 U	0.0199 UJ
Benzo(b)fluoranthene	4.8 U	0.205 U	18.7 U	2.08 U	3.69 U	1.85 U	0.389 UJ	0.817 U	**0.0154 J**
Benzo(g,h,i)perylene	9.6 U	0.41 U	37.4 U	4.16 U	7.38 U	3.7 U	0.777 UJ	1.63 U	0.0398 UJ

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-12U	PW-12U	PW-13U	PW-13U	PW-14U	PW-14U	PW-15U	PW-15U	PW-16U
Sample ID	GS-032922-83	GS-092822-85	GS-032922-82	GS-092822-88	GS-032922-79	GS-092822-89	GS-032422-61	GS-092922-105	GS-032422-59
Sample Date	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/24/2022	9/29/2022	3/24/2022
Depth	47.8 - 62.8 ft	47.8 - 62.8 ft	57.6 - 72.6 ft	57.6 - 72.6 ft	57.8 - 67.8 ft	57.8 - 67.8 ft	35.1 - 55.1 ft	35.1 - 55.1 ft	30.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624297.598	7624297.598	7624144.462	7624144.462	7623986.846	7623986.846	7623680.686	7623680.686	7623554.777
Y	705265.903	705265.903	705333.359	705333.359	705437.044	705437.044	705639.013	705639.013	705713.301
Benzo(j,k)fluoranthene	4.8 U	0.205 U	18.7 U	2.08 U	3.69 U	1.85 U	0.389 UJ	0.817 U	0.0199 UJ
Carbazole	**6.96 J**	**8.55**	**54.2**	**51.7**	**11.8**	**19.9**	**18.7 J**	**12**	**0.0488 J**
Chrysene	4.8 U	0.205 U	18.7 U	2.08 U	3.69 U	1.85 U	**0.243 J**	0.817 U	**0.0518 J**
Dibenzo(a,h)anthracene	4.8 U	0.205 U	18.7 U	2.08 U	3.69 U	1.85 U	0.389 UJ	0.817 U	0.0199 UJ
Dibenzofuran	9.6 U	**0.497**	37.4 U	**8.53**	**3.87 J**	**7.25**	**37.5 J**	**26.9**	0.0747 UJ
Fluoranthene	9.6 U	0.41 U	37.4 U	**9**	**3.97 J**	**6.28**	**10.1 J**	**6.78**	**0.621 J**
Fluorene	9.6 U	**2.23**	**74.8**	**41.9**	**16.4**	**30.2**	**45 J**	**27.8**	**1.6 J**
Indeno(1,2,3-c,d)pyrene	4.8 U	0.205 U	18.7 U	2.08 U	3.69 U	1.85 U	0.389 UJ	0.817 U	0.0199 UJ
Naphthalene	**590**	**892**	**5020**	**4780**	**225**	**850**	**170 J**	**127**	**0.388 J**
Phenanthrene	19.2 U	**1.39**	**132**	**59.8**	**29.4**	**56.6**	**40.5 J**	**36.5**	**0.119 J**
Pyrene	9.6 U	0.41 U	**19.6 J**	**10.1**	**4.52 J**	**7.48**	**6.33 J**	**4.27**	**0.688 J**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-12U	PW-12U	PW-13U	PW-13U	PW-14U	PW-14U	PW-15U	PW-15U	PW-16U
Sample ID	GS-032922-83	GS-092822-85	GS-032922-82	GS-092822-88	GS-032922-79	GS-092822-89	GS-032422-61	GS-092922-105	GS-032422-59
Sample Date	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/29/2022	9/28/2022	3/24/2022	9/29/2022	3/24/2022
Depth	47.8 - 62.8 ft	47.8 - 62.8 ft	57.6 - 72.6 ft	57.6 - 72.6 ft	57.8 - 67.8 ft	57.8 - 67.8 ft	35.1 - 55.1 ft	35.1 - 55.1 ft	30.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624297.598	7624297.598	7624144.462	7624144.462	7623986.846	7623986.846	7623680.686	7623680.686	7623554.777
Y	705265.903	705265.903	705333.359	705333.359	705437.044	705437.044	705639.013	705639.013	705713.301
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-16U	PZ5-20	PZ5-20	PZ5-5	PZ5-55	PZ5-55	PZ5-85	PZ5-85	PZ5-85
Sample ID	GS-092922-101	GS-032322-46	GS-092722-75	GS-032322-45	GS-032222-41	GS-092622-70	GS-032222-42	GS-092622-68	GS-092622-69
Sample Date	9/29/2022	3/23/2022	9/27/2022	3/23/2022	3/22/2022	9/26/2022	3/22/2022	9/26/2022	9/26/2022
Depth	30.4 - 50.4 ft	15 - 20 ft	15 - 20 ft	3.8 - 4.8 ft	50 - 55 ft	50 - 55 ft	79.9 - 84.9 ft	79.9 - 84.9 ft	79.9 - 84.9 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623554.777	7623647.33	7623647.33	7623645.73	7623648.81	7623648.81	7623650.52	7623650.52	7623650.52
Y	705713.301	705735.82	705735.82	705737.97	705733.4	705733.4	705730.99	705730.99	705730.99
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	**278**	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	20 U	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	20 U	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	**278**	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	**67.7**	--	--	--	--	--	--	--	--
Cyanide	**0.162**	**0.0166**	**0.0123 J**	**0.0546**	**0.0299**	**0.0242**	**0.0771**	**0.103**	**0.103**
Cyanide, available	**0.00106 J**	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	**0.00102 J**	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	0.25 U	--	--	--	--	--	--	--	--
Sulfate	**25.1 J**	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	**279**	**110**	**39.1 J**	**77.4**	**245**	**74.1**	**248**	**259**
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**2.41**	**1.58**	**3.47**	1 U	**3.93**	**1.42**	**3.86**	**1.13**	**1.15**
Barium	**64.4**	**53.8**	**79.1**	**33.7**	**72.8**	**90.3**	**175**	**207**	**214**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	**66400**	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Copper	2 U	2 U	2 U	**2.49**	2 U	2 U	2 U	2 U	2 U
Iron	**40600**	**14100**	**35900**	**1680**	**36800**	**5280**	**53700**	**21800**	**22400**
Lead	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.152 J**	0.2 U	**0.193 J**	**0.178 J**
Magnesium	**41500**	--	--	--	--	--	--	--	--
Manganese	**2830**	**1610**	**2030**	**82.1**	**2490**	**1950**	**6610**	**7960**	**8320**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	**1.79 J**	**1.17 J**	**1.81 J**	2 U	**3.74**	2 U	**8.66**	**8.91**
Potassium	**2480**	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	**27700**	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**1.1 J**	**1.37 J**	2 U	2 U	2 U	**1.09 J**	2 U	**1.07 J**	**1.19 J**
Zinc	4 U	**9.33**	**8.13**	**6.32**	**3.12 J**	**31.1**	**4.81**	**46**	**45.7**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-16U	PZ5-20	PZ5-20	PZ5-5	PZ5-55	PZ5-55	PZ5-85	PZ5-85	PZ5-85
Sample ID	GS-092922-101	GS-032322-46	GS-092722-75	GS-032322-45	GS-032222-41	GS-092622-70	GS-032222-42	GS-092622-68	GS-092622-69
Sample Date	9/29/2022	3/23/2022	9/27/2022	3/23/2022	3/22/2022	9/26/2022	3/22/2022	9/26/2022	9/26/2022
Depth	30.4 - 50.4 ft	15 - 20 ft	15 - 20 ft	3.8 - 4.8 ft	50 - 55 ft	50 - 55 ft	79.9 - 84.9 ft	79.9 - 84.9 ft	79.9 - 84.9 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623554.777	7623647.33	7623647.33	7623645.73	7623648.81	7623648.81	7623650.52	7623650.52	7623650.52
Y	705713.301	705735.82	705735.82	705737.97	705733.4	705733.4	705730.99	705730.99	705730.99
Metals, Dissolved (µg/L)									
Iron	**38700**	--	--	--	--	--	--	--	--
Magnesium	**40000**	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	**24.9**	**46**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 UJ	5 U	5 UJ	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-16U	PZ5-20	PZ5-20	PZ5-5	PZ5-55	PZ5-55	PZ5-85	PZ5-85	PZ5-85
Sample ID	GS-092922-101	GS-032322-46	GS-092722-75	GS-032322-45	GS-032222-41	GS-092622-70	GS-032222-42	GS-092622-68	GS-092622-69
Sample Date	9/29/2022	3/23/2022	9/27/2022	3/23/2022	3/22/2022	9/26/2022	3/22/2022	9/26/2022	9/26/2022
Depth	30.4 - 50.4 ft	15 - 20 ft	15 - 20 ft	3.8 - 4.8 ft	50 - 55 ft	50 - 55 ft	79.9 - 84.9 ft	79.9 - 84.9 ft	79.9 - 84.9 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623554.777	7623647.33	7623647.33	7623645.73	7623648.81	7623648.81	7623650.52	7623650.52	7623650.52
Y	705713.301	705735.82	705735.82	705737.97	705733.4	705733.4	705730.99	705730.99	705730.99
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	**1.17**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	**0.37 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	2 U	1 U	2 U	1 U	1 U	2 U	1 U	2 U	2 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**1.19**	**0.0411 J**	0.346 U	0.0717 U	0.0939 U	0.0699 U	0.0936 U	0.0667 U	0.0665 U
2-Methylnaphthalene	0.774 U	0.073 U	0.346 U	0.0717 U	0.0939 U	0.0699 U	0.0936 U	0.0667 U	0.0665 U
Acenaphthene	**13.1**	**1.49 J**	**0.162 J**	**1.5**	**0.112**	**0.0546**	0.0468 U	0.0333 U	0.0333 U
Acenaphthylene	**1.22**	**0.353**	**0.19**	**0.227**	**0.0405 J**	**0.0227 J**	0.0468 U	0.0333 U	0.0333 U
Anthracene	**0.425**	**0.326**	**0.175**	**0.238**	**0.0276 J**	0.0349 U	0.0468 U	0.0333 U	0.0333 U
Benzo(a)anthracene	0.193 U	0.0182 U	0.0865 U	**0.00941 J**	0.0235 U	0.0175 U	0.0234 U	0.0167 U	0.0166 U
Benzo(a)pyrene	0.193 U	0.0182 U	0.0865 U	0.0179 U	0.0235 U	0.0175 U	0.0234 U	0.0167 U	0.0166 U
Benzo(b)fluoranthene	0.193 U	0.0182 U	0.0865 U	0.0179 U	0.0235 U	0.0175 U	0.0234 U	0.0167 U	0.0166 U
Benzo(g,h,i)perylene	0.387 U	0.0365 U	0.173 U	0.0358 U	0.0469 U	0.0349 U	0.0468 U	0.0333 U	0.0333 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-16U	PZ5-20	PZ5-20	PZ5-5	PZ5-55	PZ5-55	PZ5-85	PZ5-85	PZ5-85
Sample ID	GS-092922-101	GS-032322-46	GS-092722-75	GS-032322-45	GS-032222-41	GS-092622-70	GS-032222-42	GS-092622-68	GS-092622-69
Sample Date	9/29/2022	3/23/2022	9/27/2022	3/23/2022	3/22/2022	9/26/2022	3/22/2022	9/26/2022	9/26/2022
Depth	30.4 - 50.4 ft	15 - 20 ft	15 - 20 ft	3.8 - 4.8 ft	50 - 55 ft	50 - 55 ft	79.9 - 84.9 ft	79.9 - 84.9 ft	79.9 - 84.9 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623554.777	7623647.33	7623647.33	7623645.73	7623648.81	7623648.81	7623650.52	7623650.52	7623650.52
Y	705713.301	705735.82	705735.82	705737.97	705733.4	705733.4	705730.99	705730.99	705730.99
Benzo(j,k)fluoranthene	0.193 U	0.0182 U	0.0865 U	0.0179 U	0.0235 U	0.0175 U	0.0234 U	0.0167 U	0.0166 U
Carbazole	0.387 U	0.0365 U	0.173 U	0.0358 U	0.0469 U	0.0349 U	0.0468 U	0.0333 U	0.0333 U
Chrysene	**0.121 J**	0.0182 U	0.0865 U	0.0179 U	0.0235 U	0.0175 U	0.0234 U	0.0167 U	0.0166 U
Dibenzo(a,h)anthracene	0.193 U	0.0182 U	0.0865 U	0.0179 U	0.0235 U	0.0175 U	0.0234 U	0.0167 U	0.0166 U
Dibenzofuran	0.387 U	0.0365 U	0.173 U	0.0358 U	0.0469 U	0.0349 U	0.0468 U	0.0333 U	0.0333 U
Fluoranthene	**1.09**	0.0365 U	0.173 U	0.0358 U	0.0469 U	0.0349 U	0.0468 U	0.0333 U	0.0333 U
Fluorene	**1.18**	0.0912 U	0.173 U	0.0672 U	**0.0329 J**	**0.0284 J**	0.0468 U	0.0333 U	0.0333 U
Indeno(1,2,3-c,d)pyrene	0.193 U	0.0182 U	0.0865 U	0.0179 U	0.0235 U	0.0175 U	0.0234 U	0.0167 U	0.0166 U
Naphthalene	**0.517 J**	0.073 U	**0.229 J**	**0.0363 J**	0.0939 U	**0.0406 J**	0.0936 U	**0.0412 J**	**0.0374 J**
Phenanthrene	**0.952**	0.073 U	0.346 U	0.0717 U	0.0939 U	0.0699 U	0.0936 U	0.0667 U	0.0665 U
Pyrene	**1.25**	0.0365 U	0.173 U	0.0358 U	0.0469 U	0.0349 U	0.0468 U	0.0333 U	0.0333 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PW-16U	PZ5-20	PZ5-20	PZ5-5	PZ5-55	PZ5-55	PZ5-85	PZ5-85	PZ5-85
Sample ID	GS-092922-101	GS-032322-46	GS-092722-75	GS-032322-45	GS-032222-41	GS-092622-70	GS-032222-42	GS-092622-68	GS-092622-69
Sample Date	9/29/2022	3/23/2022	9/27/2022	3/23/2022	3/22/2022	9/26/2022	3/22/2022	9/26/2022	9/26/2022
Depth	30.4 - 50.4 ft	15 - 20 ft	15 - 20 ft	3.8 - 4.8 ft	50 - 55 ft	50 - 55 ft	79.9 - 84.9 ft	79.9 - 84.9 ft	79.9 - 84.9 ft
Sample Type	N	N	N	N	N	N	N	N	FD
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623554.777	7623647.33	7623647.33	7623645.73	7623648.81	7623648.81	7623650.52	7623650.52	7623650.52
Y	705713.301	705735.82	705735.82	705737.97	705733.4	705733.4	705730.99	705730.99	705730.99
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ6-115	PZ6-115	PZ6-150	PZ6-150	PZ6-5	PZ6-5	PZ6-50	PZ6-50	PZ7-100
Sample ID	GS-033022-87	GS-092622-74	GS-033022-88	GS-092622-73	GS-033022-85	GS-092622-71	GS-033022-86	GS-092622-72	GS-032322-50
Sample Date	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/23/2022
Depth	110.1 - 115.1 ft	110.1 - 115.1 ft	145.4 - 150.4 ft	145.4 - 150.4 ft	3.9 - 4.9 ft	3.9 - 4.9 ft	45.2 - 50.2 ft	45.2 - 50.2 ft	94.3 - 99.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623989.201	7623989.201	7623994.577	7623994.577	7623986.53	7623986.53	7623989.149	7623989.149	7624285.369
Y	705536.406	705536.406	705532.725	705532.725	705532.354	705532.354	705529.954	705529.954	705383.238
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0232**	**0.0151**	**0.0257**	**0.0236**	**0.081**	**0.0411**	**0.0769**	**0.0419**	**0.0335**
Cyanide, available	0.002 U	0.002 U	0.002 U	0.002 U	**0.00182 J**	0.002 U	**0.00172 J**	0.002 U	0.002 U
Cyanide, free	0.005 UJ	0.005 U	0.005 UJ	0.005 U	0.005 UJ	0.005 U	0.005 UJ	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**103**	**165**	**130**	**81.1**	50 U	50 U	**79.1**	**91.9**	**90.4**
Antimony	1 U	1 U	1 U	1 U	**0.569 J**	1 U	1 U	1 U	**0.686 J**
Arsenic	1 U	1 U	**1.09**	1 U	**1.64**	**6.14**	**8.39**	**1.51**	**2.09**
Barium	**129**	**103**	**17.9**	**26.3**	**77.8**	**74.9**	**40.1**	**43.3**	**111**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Copper	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Iron	**5490**	**1290**	**11400**	**1030**	**6880**	**10300**	**24600**	**2760**	**45700**
Lead	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**3220**	**2500**	**633**	**418**	**1330**	**1130**	**2650**	**1730**	**5000**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**5.6**	**8.13**	2 U	**3.02**	**33.1**	**10.6**	2 U	**1.82 J**	**1.01 J**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	**1.86 J**	2 U	**2.18**	**2.47**	**1.09 J**	2 U	2 U
Zinc	**9.27**	**10.5**	**3.53 J**	**4.26**	**4.56**	**3.49 J**	**28.3**	**11**	**3.55 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ6-115	PZ6-115	PZ6-150	PZ6-150	PZ6-5	PZ6-5	PZ6-50	PZ6-50	PZ7-100
Sample ID	GS-033022-87	GS-092622-74	GS-033022-88	GS-092622-73	GS-033022-85	GS-092622-71	GS-033022-86	GS-092622-72	GS-032322-50
Sample Date	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/23/2022
Depth	110.1 - 115.1 ft	110.1 - 115.1 ft	145.4 - 150.4 ft	145.4 - 150.4 ft	3.9 - 4.9 ft	3.9 - 4.9 ft	45.2 - 50.2 ft	45.2 - 50.2 ft	94.3 - 99.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623989.201	7623989.201	7623994.577	7623994.577	7623986.53	7623986.53	7623989.149	7623989.149	7624285.369
Y	705536.406	705536.406	705532.725	705532.725	705532.354	705532.354	705529.954	705529.954	705383.238
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	**0.19 J**	**1.36**	0.2 U	0.2 U	0.2 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ6-115	PZ6-115	PZ6-150	PZ6-150	PZ6-5	PZ6-5	PZ6-50	PZ6-50	PZ7-100
Sample ID	GS-033022-87	GS-092622-74	GS-033022-88	GS-092622-73	GS-033022-85	GS-092622-71	GS-033022-86	GS-092622-72	GS-032322-50
Sample Date	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/23/2022
Depth	110.1 - 115.1 ft	110.1 - 115.1 ft	145.4 - 150.4 ft	145.4 - 150.4 ft	3.9 - 4.9 ft	3.9 - 4.9 ft	45.2 - 50.2 ft	45.2 - 50.2 ft	94.3 - 99.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623989.201	7623989.201	7623994.577	7623994.577	7623986.53	7623986.53	7623989.149	7623989.149	7624285.369
Y	705536.406	705536.406	705532.725	705532.725	705532.354	705532.354	705529.954	705529.954	705383.238
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U	1 U	**0.62 J**	1 U	1 U	1 U
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	**0.7 J**	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.87 J**
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.58**	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1 U	2 U	1 U	2 U	1 U	2 U	1 U	2 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0717 U	0.0713 U	0.0852 U	0.0675 U	**1.51**	**5.85 J**	**0.0889**	**0.0483 J**	**0.0818 J**
2-Methylnaphthalene	0.0717 U	0.0713 U	0.0852 U	0.0675 U	**0.175**	7.03 U	**0.04 J**	0.0661 U	**0.0646 J**
Acenaphthene	0.0359 U	0.0357 U	0.0426 U	0.0338 U	**12.5**	**24.4**	**0.0874**	**0.0264 J**	**0.0799 J**
Acenaphthylene	0.0359 U	0.0357 U	**0.0442**	**0.0481**	**0.641**	**2.2 J**	**0.28**	**0.154**	0.0383 UJ
Anthracene	0.0359 U	0.0357 U	**0.0367 J**	**0.0241 J**	**0.653**	3.52 U	**0.084**	**0.043**	0.0383 UJ
Benzo(a)anthracene	**0.0121 J**	**0.012 J**	0.0213 U	0.0169 U	**0.0442**	1.76 U	0.0198 U	**0.0095 J**	0.0191 UJ
Benzo(a)pyrene	**0.0193**	**0.012 J**	0.0213 U	0.0169 U	0.0182 U	1.76 U	0.0198 U	0.0165 U	0.0191 UJ
Benzo(b)fluoranthene	**0.0143 J**	**0.0125 J**	0.0213 U	0.0169 U	**0.00911 J**	1.76 U	0.0198 U	0.0165 U	0.0191 UJ
Benzo(g,h,i)perylene	**0.0179 J**	0.0357 U	0.0426 U	0.0338 U	0.0364 U	3.52 U	0.0395 U	0.033 U	0.0383 UJ

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ6-115	PZ6-115	PZ6-150	PZ6-150	PZ6-5	PZ6-5	PZ6-50	PZ6-50	PZ7-100
Sample ID	GS-033022-87	GS-092622-74	GS-033022-88	GS-092622-73	GS-033022-85	GS-092622-71	GS-033022-86	GS-092622-72	GS-032322-50
Sample Date	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/23/2022
Depth	110.1 - 115.1 ft	110.1 - 115.1 ft	145.4 - 150.4 ft	145.4 - 150.4 ft	3.9 - 4.9 ft	3.9 - 4.9 ft	45.2 - 50.2 ft	45.2 - 50.2 ft	94.3 - 99.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623989.201	7623989.201	7623994.577	7623994.577	7623986.53	7623986.53	7623989.149	7623989.149	7624285.369
Y	705536.406	705536.406	705532.725	705532.725	705532.354	705532.354	705529.954	705529.954	705383.238
Benzo(j,k)fluoranthene	0.0179 U	0.0178 U	0.0213 U	0.0169 U	0.0182 U	1.76 U	0.0198 U	0.0165 U	0.0191 UJ
Carbazole	0.0359 U	0.0357 U	0.0426 U	0.0338 U	**0.958**	3.52 U	0.0395 U	0.033 U	0.0383 UJ
Chrysene	**0.0108 J**	0.0178 U	0.0213 U	0.0169 U	**0.0319 J**	1.76 U	0.0198 U	0.0165 U	0.0191 UJ
Dibenzo(a,h)anthracene	0.0179 U	0.0178 U	0.0213 U	0.0169 U	0.0182 U	1.76 U	0.0198 U	0.0165 U	0.0191 UJ
Dibenzofuran	0.0359 U	0.0357 U	0.0426 U	0.0338 U	**0.251**	3.52 U	0.0395 U	0.033 U	0.0383 UJ
Fluoranthene	0.0359 U	**0.0276 J**	0.0426 U	0.0338 U	**2.11**	**3.87**	0.0395 U	**0.0227 J**	0.0383 UJ
Fluorene	0.0359 U	0.0357 U	0.0426 U	0.0338 U	**3.27**	**5.67**	**0.044**	**0.0227 J**	**0.0201 J**
Indeno(1,2,3-c,d)pyrene	**0.0157 J**	0.0178 U	0.0213 U	0.0169 U	0.0182 U	1.76 U	0.0198 U	0.0165 U	0.0191 UJ
Naphthalene	0.0717 U	**0.126**	0.0852 U	**0.0654 J**	**8.5**	**66.4**	0.079 U	**0.0991**	**0.0675 J**
Phenanthrene	0.0717 U	0.0713 U	0.0852 U	0.0675 U	**1.94**	**5.5 J**	**0.0499 J**	**0.0698**	0.0766 UJ
Pyrene	**0.061**	**0.0548**	0.0426 U	**0.0219 J**	**2.09**	**4.35**	**0.0217 J**	**0.031 J**	0.0383 UJ
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ6-115	PZ6-115	PZ6-150	PZ6-150	PZ6-5	PZ6-5	PZ6-50	PZ6-50	PZ7-100
Sample ID	GS-033022-87	GS-092622-74	GS-033022-88	GS-092622-73	GS-033022-85	GS-092622-71	GS-033022-86	GS-092622-72	GS-032322-50
Sample Date	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/30/2022	9/26/2022	3/23/2022
Depth	110.1 - 115.1 ft	110.1 - 115.1 ft	145.4 - 150.4 ft	145.4 - 150.4 ft	3.9 - 4.9 ft	3.9 - 4.9 ft	45.2 - 50.2 ft	45.2 - 50.2 ft	94.3 - 99.3 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623989.201	7623989.201	7623994.577	7623994.577	7623986.53	7623986.53	7623989.149	7623989.149	7624285.369
Y	705536.406	705536.406	705532.725	705532.725	705532.354	705532.354	705529.954	705529.954	705383.238
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ7-100	PZ7-150	PZ7-150	PZ7-5	PZ7-5	PZ7-50	PZ7-50	PZ8-5	PZ8-5
Sample ID	GS-092722-78	GS-032322-48	GS-092722-80	GS-032322-49	GS-092722-76	GS-032322-47	GS-092722-77	GS-032222-43	GS-092722-79
Sample Date	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/22/2022	9/27/2022
Depth	94.3 - 99.3 ft	145.3 - 150.3 ft	145.3 - 150.3 ft	4.1 - 5.2 ft	4.1 - 5.2 ft	43.2 - 48.2 ft	43.2 - 48.2 ft	4.5 - 5.4 ft	4.5 - 5.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624285.369	7624290.945	7624290.945	7624284.059	7624284.059	7624288.837	7624288.837	7623244.605	7623244.605
Y	705383.238	705381.665	705381.665	705378.986	705378.986	705377.543	705377.543	706008.241	706008.241
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0315 J**	**0.102**	**0.101 J**	**0.0101**	**0.0121 J**	**0.0692**	**0.0669 J**	**1.42**	**1.28 J**
Cyanide, available	0.002 U	0.002 U	**0.0048**	0.002 U	0.002 U	0.002 U	0.002 U	**0.0062**	**0.0151**
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	**0.00356 J**	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**57.4**	**301**	**126**	**134**	50 U	**67.4**	**126**	**598**	**307**
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	1 U	1 U	1 U	1 U	**0.524 J**	**8.51**	**6.78**	1 U	1 U
Barium	**116**	**18**	**36.7**	**46.7**	**82.2**	**37.6**	**38.8**	**18.6**	**45**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.402**	**0.315**
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**5.92**	**5.98**
Copper	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Iron	**11200**	**1290**	**595**	**3220**	**6000**	**31500**	**24900**	**17700**	**14400**
Lead	0.2 U	**0.167 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.86**	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**4570**	**351**	**262**	**1570**	**2940**	**2710**	**3000**	**540**	**412**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**7.62**	2 U	**1.03 J**	2 U	**1.05 J**	2 U	**1.71 J**	2 U	**1.23 J**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	**1.69 J**	2 U	**1.21 J**	2 U	**1.28 J**	**2.42**	**28.9**	**28.3**
Zinc	**27.2**	**2.54 J**	4 U	**3.09 J**	4 U	**3.6 J**	**8.78**	**3.9 J**	4 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ7-100	PZ7-150	PZ7-150	PZ7-5	PZ7-5	PZ7-50	PZ7-50	PZ8-5	PZ8-5
Sample ID	GS-092722-78	GS-032322-48	GS-092722-80	GS-032322-49	GS-092722-76	GS-032322-47	GS-092722-77	GS-032222-43	GS-092722-79
Sample Date	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/22/2022	9/27/2022
Depth	94.3 - 99.3 ft	145.3 - 150.3 ft	145.3 - 150.3 ft	4.1 - 5.2 ft	4.1 - 5.2 ft	43.2 - 48.2 ft	43.2 - 48.2 ft	4.5 - 5.4 ft	4.5 - 5.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624285.369	7624290.945	7624290.945	7624284.059	7624284.059	7624288.837	7624288.837	7623244.605	7623244.605
Y	705383.238	705381.665	705381.665	705378.986	705378.986	705377.543	705377.543	706008.241	706008.241
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**3.01**	20 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.02**	20 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	400 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**19.2**	**14.8**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Bromomethane (Methyl bromide)	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U	100 UJ
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**79.4**	**106 J**
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ7-100	PZ7-150	PZ7-150	PZ7-5	PZ7-5	PZ7-50	PZ7-50	PZ8-5	PZ8-5
Sample ID	GS-092722-78	GS-032322-48	GS-092722-80	GS-032322-49	GS-092722-76	GS-032322-47	GS-092722-77	GS-032222-43	GS-092722-79
Sample Date	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/22/2022	9/27/2022
Depth	94.3 - 99.3 ft	145.3 - 150.3 ft	145.3 - 150.3 ft	4.1 - 5.2 ft	4.1 - 5.2 ft	43.2 - 48.2 ft	43.2 - 48.2 ft	4.5 - 5.4 ft	4.5 - 5.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624285.369	7624290.945	7624290.945	7624284.059	7624284.059	7624288.837	7624288.837	7623244.605	7623244.605
Y	705383.238	705381.665	705381.665	705378.986	705378.986	705377.543	705377.543	706008.241	706008.241
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	18 U	100 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.56**	10 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**3.02**	20 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	200 U
Methyl tert-butyl ether (MTBE)	**0.66 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.45 J**	**0.37 J**	**1.97**	10 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Styrene	2 U	1 U	2 U	1 U	2 U	1 U	2 U	1 U	40 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	20 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	8 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.45**	20 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	40 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0667 U	**0.0435 J**	0.0666 U	0.0644 U	0.0664 U	**0.0612 J**	0.0794 U	**87.9**	**69.4**
2-Methylnaphthalene	0.0667 U	**0.0368 J**	0.0666 U	0.0644 U	0.0664 U	0.069 U	0.0794 U	**57.6**	**34.6**
Acenaphthene	0.0333 U	**0.0473 J**	0.0333 U	**0.212**	**0.0573**	**0.682**	**0.24**	**29.7**	**26.4**
Acenaphthylene	0.0333 U	0.0335 UJ	0.0333 U	**0.117**	**0.136**	**0.401**	**0.416**	2.24 U	3.57 U
Anthracene	0.0333 U	**0.0238 J**	**0.0333**	**0.239**	**0.269**	**0.131**	**0.112**	**3.32**	**3.75**
Benzo(a)anthracene	0.0167 U	**0.01 J**	0.0167 U	**0.0201 J**	**0.0249 J**	0.0172 U	0.0198 U	0.171 U	1.78 U
Benzo(a)pyrene	0.0167 U	0.0167 UJ	0.0167 U	0.0161 U	0.0166 U	0.0172 U	0.0198 U	0.171 U	1.78 U
Benzo(b)fluoranthene	0.0167 U	0.0167 UJ	0.0167 U	0.0161 U	0.0166 U	0.0172 U	0.0198 U	0.171 U	1.78 U
Benzo(g,h,i)perylene	0.0333 U	0.0335 UJ	0.0333 U	0.0322 U	0.0332 U	0.0345 U	0.0397 U	0.342 U	3.57 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ7-100	PZ7-150	PZ7-150	PZ7-5	PZ7-5	PZ7-50	PZ7-50	PZ8-5	PZ8-5
Sample ID	GS-092722-78	GS-032322-48	GS-092722-80	GS-032322-49	GS-092722-76	GS-032322-47	GS-092722-77	GS-032222-43	GS-092722-79
Sample Date	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/22/2022	9/27/2022
Depth	94.3 - 99.3 ft	145.3 - 150.3 ft	145.3 - 150.3 ft	4.1 - 5.2 ft	4.1 - 5.2 ft	43.2 - 48.2 ft	43.2 - 48.2 ft	4.5 - 5.4 ft	4.5 - 5.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624285.369	7624290.945	7624290.945	7624284.059	7624284.059	7624288.837	7624288.837	7623244.605	7623244.605
Y	705383.238	705381.665	705381.665	705378.986	705378.986	705377.543	705377.543	706008.241	706008.241
Benzo(j,k)fluoranthene	0.0167 U	0.0167 UJ	0.0167 U	0.0161 U	0.0166 U	0.0172 U	0.0198 U	0.171 U	1.78 U
Carbazole	0.0333 U	0.0335 UJ	0.0333 U	**0.0583**	0.0332 U	0.0345 U	0.0397 U	**21.5**	**18.8**
Chrysene	0.0167 U	0.0167 UJ	0.0167 U	**0.0137 J**	**0.0145 J**	0.0172 U	0.0198 U	0.171 U	1.78 U
Dibenzo(a,h)anthracene	0.0167 U	0.0167 UJ	0.0167 U	0.0161 U	0.0166 U	0.0172 U	0.0198 U	0.171 U	1.78 U
Dibenzofuran	0.0333 U	0.0335 UJ	0.0333 U	0.0322 U	0.0332 U	**0.0198 J**	0.0397 U	**3.65**	**3.61**
Fluoranthene	0.0333 U	**0.0356 J**	0.0333 U	**0.658**	**0.363**	**0.0591**	**0.0452**	**2.6**	**2.59 J**
Fluorene	0.0333 U	**0.0226 J**	0.0333 U	**0.14**	**0.0573**	**0.209**	**0.0898**	**25.5**	**25.1**
Indeno(1,2,3-c,d)pyrene	0.0167 U	0.0167 UJ	0.0167 U	0.0161 U	0.0166 U	0.0172 U	0.0198 U	0.171 U	1.78 U
Naphthalene	**0.0488 J**	**0.108 J**	**0.0974**	**0.0342 J**	**0.044 J**	**0.0487 J**	**0.07 J**	**1740**	**1720**
Phenanthrene	0.0667 U	0.0669 UJ	0.0666 U	0.0644 U	0.0664 U	**0.144**	**0.107**	**24.9**	**28.7**
Pyrene	0.0333 U	**0.0431 J**	0.0333 U	**1.28**	**1.59**	**0.0668**	**0.0556**	**2.55**	**2.72 J**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ7-100	PZ7-150	PZ7-150	PZ7-5	PZ7-5	PZ7-50	PZ7-50	PZ8-5	PZ8-5
Sample ID	GS-092722-78	GS-032322-48	GS-092722-80	GS-032322-49	GS-092722-76	GS-032322-47	GS-092722-77	GS-032222-43	GS-092722-79
Sample Date	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/23/2022	9/27/2022	3/22/2022	9/27/2022
Depth	94.3 - 99.3 ft	145.3 - 150.3 ft	145.3 - 150.3 ft	4.1 - 5.2 ft	4.1 - 5.2 ft	43.2 - 48.2 ft	43.2 - 48.2 ft	4.5 - 5.4 ft	4.5 - 5.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624285.369	7624290.945	7624290.945	7624284.059	7624284.059	7624288.837	7624288.837	7623244.605	7623244.605
Y	705383.238	705381.665	705381.665	705378.986	705378.986	705377.543	705377.543	706008.241	706008.241
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ8-50	PZ8-50	PZ9-110	PZ9-110	PZ9-150	PZ9-150	PZ9-5	PZ9-5	PZ9-50
Sample ID	GS-032222-44	GS-092722-81	GS-033122-92	GS-092822-93	GS-033122-91	GS-092822-86	GS-033122-94	GS-092822-87	GS-033122-93
Sample Date	3/22/2022	9/27/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022
Depth	44.7 - 49.7 ft	44.7 - 49.7 ft	105.6 - 110.6 ft	105.6 - 110.6 ft	146.1 - 151.1 ft	146.1 - 151.1 ft	4.5 - 5.5 ft	4.5 - 5.5 ft	45.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623248.987	7623248.987	7624602.558	7624602.558	7624603.692	7624603.692	7624596.338	7624596.338	7624599.739
Y	706004.846	706004.846	705255.014	705255.014	705248.282	705248.282	705254.123	705254.123	705256.867
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**1.11**	**0.689 J**	**0.0137**	**0.0121**	**0.031**	**0.0436**	**0.0514**	**0.0902**	**0.0146**
Cyanide, available	0.002 U	**0.00189 J**	0.002 U	0.002 U	0.002 U	**0.00136 J**	**0.00108 J**	0.002 U	0.002 U
Cyanide, free	**0.00612**	0.005 U	0.005 UJ	0.005 U	0.005 UJ	0.005 U	**0.00439 J**	0.005 U	0.005 UJ
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**166**	**106**	**16100**	**4860**	**947**	**11800**	**46.5 J**	**47.3 J**	**209**
Antimony	10 U	1 U	**1.26**	1 U	1 U	**0.81 J**	1 U	1 U	1 U
Arsenic	**0.555 J**	1 U	**4.26**	**1.57**	1 U	**3.33**	**2.39**	**1.97**	**0.892 J**
Barium	**49.5**	**77.5**	**312**	**169**	**64.3**	**161**	**51.3**	**50.4**	**21.7**
Beryllium	0.2 U	0.2 U	**0.554**	**0.153 J**	0.2 U	**0.5**	0.2 U	0.2 U	0.2 U
Cadmium	2 U	0.2 U	**0.228**	**0.113 J**	0.2 U	**0.16 J**	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	**19.7**	**5.62**	**1.01 J**	**16.6**	2 U	2 U	2 U
Copper	2 U	2 U	**28.8**	**8.26**	**1.92 J**	**27.1**	2 U	2 U	**1.73 J**
Iron	**639000**	**292000**	**24100**	**8650**	**3710**	**22300**	**63500**	**66000**	**1090**
Lead	**0.298**	0.2 U	**7.99**	**2.47**	**0.395**	**8.15**	0.2 U	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**8490**	**7500**	**4050**	**3290**	**2350**	**1900**	**2890**	**2570**	**274**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**2.2**	**10.6**	**25.4**	**12.4**	**6.89**	**15**	2 U	2 U	**1.81 J**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	2 U	0.2 U	**0.113 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	**0.13 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**1.07 J**	2 U	**56.6**	**16.5**	**3.06**	**49.4**	**1.19 J**	2 U	**2.24**
Zinc	**5.23**	**11.2**	**171**	**65.9**	**7.37**	**75**	**2.28 J**	**2.07 J**	**17.1**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ8-50	PZ8-50	PZ9-110	PZ9-110	PZ9-150	PZ9-150	PZ9-5	PZ9-5	PZ9-50
Sample ID	GS-032222-44	GS-092722-81	GS-033122-92	GS-092822-93	GS-033122-91	GS-092822-86	GS-033122-94	GS-092822-87	GS-033122-93
Sample Date	3/22/2022	9/27/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022
Depth	44.7 - 49.7 ft	44.7 - 49.7 ft	105.6 - 110.6 ft	105.6 - 110.6 ft	146.1 - 151.1 ft	146.1 - 151.1 ft	4.5 - 5.5 ft	4.5 - 5.5 ft	45.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623248.987	7623248.987	7624602.558	7624602.558	7624603.692	7624603.692	7624596.338	7624596.338	7624599.739
Y	706004.846	706004.846	705255.014	705255.014	705248.282	705248.282	705254.123	705254.123	705256.867
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	100 U	20 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	**12.8**	**0.63 J**
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	250 U	50 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	**0.43**	0.4 U	**0.55**	**0.35 J**	0.4 U	0.5 U	**0.58**
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	50 U	**5.9 J**	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 UJ	10 U	10 UJ	10 U	500 UJ	100 U	10 UJ
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	500 U	100 U	10 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	1000 U	200 U	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	100 U	20 U	2 U
Benzene	0.2 U	0.2 U	0.2 U	**0.26**	0.2 U	0.2 U	**296**	**52.2**	**129**
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Bromomethane (Methyl bromide)	5 U	5 UJ	5 U	5 UJ	5 U	5 U	250 U	50 U	5 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	500 U	100 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	**0.55**	0.5 U	25 U	5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ8-50	PZ8-50	PZ9-110	PZ9-110	PZ9-150	PZ9-150	PZ9-5	PZ9-5	PZ9-50
Sample ID	GS-032222-44	GS-092722-81	GS-033122-92	GS-092822-93	GS-033122-91	GS-092822-86	GS-033122-94	GS-092822-87	GS-033122-93
Sample Date	3/22/2022	9/27/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022
Depth	44.7 - 49.7 ft	44.7 - 49.7 ft	105.6 - 110.6 ft	105.6 - 110.6 ft	146.1 - 151.1 ft	146.1 - 151.1 ft	4.5 - 5.5 ft	4.5 - 5.5 ft	45.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623248.987	7623248.987	7624602.558	7624602.558	7624603.692	7624603.692	7624596.338	7624596.338	7624599.739
Y	706004.846	706004.846	705255.014	705255.014	705248.282	705248.282	705254.123	705254.123	705256.867
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	250 U	50 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	8.6 U	250 U	50 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	500 U	100 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**59**	**21.6**	**2.71**
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	250 U	50 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	**0.94 J**
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	**6.7 J**	**0.96 J**
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	500 U	100 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	**3.87**	**3.94**	**5.04**	**2.78**	50 U	10 U	1 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**16.5 J**	**9.2**	**4.39**
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Styrene	1 U	2 U	1 U	2 U	1 U	1 U	50 U	10 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	20 U	4 U	0.4 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	50 U	10 U	**4.74**
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	100 U	20 U	2 U
Vinyl chloride	0.4 U	0.4 U	**2.38**	**5.18**	0.4 U	0.4 U	0.4 U	0.5 U	**1.01**
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	100 U	20 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	**1.95**	**0.45 J**	25 U	5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25 U	5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	**2.21**	**1.23**	25 U	5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.0856 U	0.0824 U	0.0967 U	0.0742 U	0.0722 U	0.0655 U	**127**	**142**	0.641 U
2-Methylnaphthalene	0.0856 U	0.0824 U	0.0967 U	0.0742 U	0.0722 U	0.0655 U	**124**	**125**	0.641 U
Acenaphthene	0.0428 U	0.0412 U	**0.0411 J**	**0.0659**	0.0361 U	**0.036**	**228**	**277**	0.32 U
Acenaphthylene	**0.124**	**0.114**	0.0483 U	**0.0223 J**	0.0361 U	**0.0303 J**	**26**	8.73 U	**0.18 J**
Anthracene	**0.169**	**0.0819**	0.0483 U	0.0371 U	**0.0185 J**	**0.0582**	**6.65 J**	**13.3**	0.32 U
Benzo(a)anthracene	0.0214 U	0.0206 U	0.0242 U	0.0186 U	0.0181 U	**0.0213**	4.59 U	0.184 U	0.16 U
Benzo(a)pyrene	0.0214 U	0.0206 U	0.0242 U	0.0186 U	0.0181 U	**0.0229**	4.59 U	0.184 U	0.16 U
Benzo(b)fluoranthene	0.0214 U	0.0206 U	0.0242 U	0.0186 U	0.0181 U	**0.0246**	4.59 U	0.184 U	0.16 U
Benzo(g,h,i)perylene	0.0428 U	0.0412 U	0.0483 U	0.0371 U	0.0361 U	**0.0266 J**	9.18 U	0.368 U	0.32 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ8-50	PZ8-50	PZ9-110	PZ9-110	PZ9-150	PZ9-150	PZ9-5	PZ9-5	PZ9-50
Sample ID	GS-032222-44	GS-092722-81	GS-033122-92	GS-092822-93	GS-033122-91	GS-092822-86	GS-033122-94	GS-092822-87	GS-033122-93
Sample Date	3/22/2022	9/27/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022
Depth	44.7 - 49.7 ft	44.7 - 49.7 ft	105.6 - 110.6 ft	105.6 - 110.6 ft	146.1 - 151.1 ft	146.1 - 151.1 ft	4.5 - 5.5 ft	4.5 - 5.5 ft	45.4 - 50.4 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623248.987	7623248.987	7624602.558	7624602.558	7624603.692	7624603.692	7624596.338	7624596.338	7624599.739
Y	706004.846	706004.846	705255.014	705255.014	705248.282	705248.282	705254.123	705254.123	705256.867
Benzo(j,k)fluoranthene	0.0214 U	0.0206 U	0.0242 U	0.0186 U	0.0181 U	**0.0102 J**	4.59 U	0.184 U	0.16 U
Carbazole	0.0428 U	0.0412 U	0.0483 U	**0.0301 J**	0.0361 U	0.0328 U	**41.1**	**78.9**	0.32 U
Chrysene	0.0214 U	0.0206 U	0.0242 U	0.0186 U	0.0181 U	**0.0279**	4.59 U	0.184 U	0.16 U
Dibenzo(a,h)anthracene	0.0214 U	0.0206 U	0.0242 U	0.0186 U	0.0181 U	0.0164 U	4.59 U	0.184 U	0.16 U
Dibenzofuran	0.0428 U	0.0412 U	0.0483 U	0.0371 U	0.0361 U	0.0328 U	**8.38 J**	**17.6**	0.32 U
Fluoranthene	0.0428 U	0.0412 U	0.0483 U	0.0371 U	**0.0429**	**0.102**	9.18 U	**5.43**	0.32 U
Fluorene	0.0669 U	0.0412 U	0.0483 U	0.0371 U	0.0361 U	**0.0365**	**43.3**	**88.3**	0.32 U
Indeno(1,2,3-c,d)pyrene	0.0214 U	0.0206 U	0.0242 U	0.0186 U	0.0181 U	**0.018**	4.59 U	0.184 U	0.16 U
Naphthalene	**0.0696 J**	**0.0711 J**	**0.0483 J**	**0.0696 J**	**0.0442 J**	**0.123**	**958**	**797**	**17.3**
Phenanthrene	0.0856 U	0.0824 U	0.0967 U	0.0742 U	0.0722 U	**0.12**	**55**	**94.7**	0.641 U
Pyrene	0.0428 U	0.0412 U	0.0483 U	0.0371 U	**0.0614**	**0.131**	9.18 U	**4.81**	0.32 U
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ8-50	PZ8-50	PZ9-110	PZ9-110	PZ9-150	PZ9-150	PZ9-5	PZ9-5	PZ9-50
Sample ID	GS-032222-44	GS-092722-81	GS-033122-92	GS-092822-93	GS-033122-91	GS-092822-86	GS-033122-94	GS-092822-87	GS-033122-93
Sample Date	3/22/2022	9/27/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022	9/28/2022	3/30/2022
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Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7623248.987	7623248.987	7624602.558	7624602.558	7624603.692	7624603.692	7624596.338	7624596.338	7624599.739
Y	706004.846	706004.846	705255.014	705255.014	705248.282	705248.282	705254.123	705254.123	705256.867
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--	--
n-Hexane (C6)	--	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	--	--	--	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	--	--	--	--	--	--
Gasoline range hydrocarbons	--	--	--	--	--	--	--	--	--
Oil range organics	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ9-50	PZ9-75	PZ9-75	WS-08-33	WS-08-33	WS-08-59	WS-08-59	WS-09-34	WS-09-34
Sample ID	GS-092822-90	GS-033122-90	GS-092822-92	GS-031622-28	GS-091422-28	GS-031622-31	GS-091322-19	GS-031722-32	GS-091422-22
Sample Date	9/28/2022	3/30/2022	9/28/2022	3/16/2022	9/14/2022	3/16/2022	9/13/2022	3/17/2022	9/14/2022
Depth	45.4 - 50.4 ft	67.5 - 72.5 ft	67.5 - 72.5 ft	22.5 - 32.5 ft	22.5 - 32.5 ft	48.5 - 58.5 ft	48.5 - 58.5 ft	23.5 - 33.5 ft	23.5 - 33.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624599.739	7624606.427	7624606.427	7624854.144	7624854.144	7624858.335	7624858.335	7625261.758	7625261.758
Y	705256.867	705252.394	705252.394	704987.857	704987.857	704990.171	704990.171	704714.064	704714.064
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.0142**	**0.123**	**0.134**	**0.592**	**0.598**	**0.794**	**0.89**	**0.0342**	**0.0565**
Cyanide, available	0.002 U	0.002 U	**0.00193 J**	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	**293**	**254**	**1230**	**794**	50 U	**2750**	**12700**	**32.8 J**	**31.2 J**
Antimony	1 U	1 U	**0.88 J**	**0.938 J**	1 U	**0.631 J**	**0.684 J**	1 U	1 U
Arsenic	**0.588 J**	**4.75**	**3.43**	**8.92**	**8.43**	**6.53**	**7.49**	**8.16**	**8.7**
Barium	**22.5**	**64.2**	**70.1**	**102**	**91.8**	**90.3**	**138**	**62.2**	**70.9**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.485**	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	**0.203**	0.2 U	0.2 U	**0.117 J**	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	**1.62 J**	**2.13**	2 U	**3.27**	**15.2**	2 U	2 U
Copper	2 U	2 U	**2.75**	**4.32 J**	2 U	**2.24**	**25.7**	2 U	2 U
Iron	**1440**	**29500**	**25800**	**61700**	**79400**	**70700**	**75000**	**53700**	**51700**
Lead	**0.131 J**	**0.133 J**	**0.748**	**3.55**	0.2 U	**0.876**	**4.53**	0.2 U	0.2 U
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**372**	**2230**	**2400**	**2940**	**3320**	**4030**	**3890**	**1650**	**1660**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**2.22**	**2.42**	**3.59**	**6.46**	**1.74 J**	**2.3**	**13.8**	2 U	**1.34 J**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**1.35 J**	**1.19 J**	**4.85**	**6.56**	**1.12 J**	**7.87**	**49.6**	2 U	2 U
Zinc	**16.6**	**9.77**	**9.57**	**22.8**	**3.43 J**	**10**	**33.9**	**2.08 J**	**3.64 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ9-50	PZ9-75	PZ9-75	WS-08-33	WS-08-33	WS-08-59	WS-08-59	WS-09-34	WS-09-34
Sample ID	GS-092822-90	GS-033122-90	GS-092822-92	GS-031622-28	GS-091422-28	GS-031622-31	GS-091322-19	GS-031722-32	GS-091422-22
Sample Date	9/28/2022	3/30/2022	9/28/2022	3/16/2022	9/14/2022	3/16/2022	9/13/2022	3/17/2022	9/14/2022
Depth	45.4 - 50.4 ft	67.5 - 72.5 ft	67.5 - 72.5 ft	22.5 - 32.5 ft	22.5 - 32.5 ft	48.5 - 58.5 ft	48.5 - 58.5 ft	23.5 - 33.5 ft	23.5 - 33.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624599.739	7624606.427	7624606.427	7624854.144	7624854.144	7624858.335	7624858.335	7625261.758	7625261.758
Y	705256.867	705252.394	705252.394	704987.857	704987.857	704990.171	704990.171	704714.064	704714.064
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**10.7**	1 U	1 U	**3.64**	**2.11**	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	**0.56**	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	**1.96**	1 U	1 U	**1.63**	**0.83 J**	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	20 U	20 UJ	20 U	20 U	20 U	20 UJ	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	**190**	**52**	**46.3**	**9.73**	**7.47**	**4.96**	**6.77**	0.2 U	0.2 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 UJ	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ9-50	PZ9-75	PZ9-75	WS-08-33	WS-08-33	WS-08-59	WS-08-59	WS-09-34	WS-09-34
Sample ID	GS-092822-90	GS-033122-90	GS-092822-92	GS-031622-28	GS-091422-28	GS-031622-31	GS-091322-19	GS-031722-32	GS-091422-22
Sample Date	9/28/2022	3/30/2022	9/28/2022	3/16/2022	9/14/2022	3/16/2022	9/13/2022	3/17/2022	9/14/2022
Depth	45.4 - 50.4 ft	67.5 - 72.5 ft	67.5 - 72.5 ft	22.5 - 32.5 ft	22.5 - 32.5 ft	48.5 - 58.5 ft	48.5 - 58.5 ft	23.5 - 33.5 ft	23.5 - 33.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624599.739	7624606.427	7624606.427	7624854.144	7624854.144	7624858.335	7624858.335	7625261.758	7625261.758
Y	705256.867	705252.394	705252.394	704987.857	704987.857	704990.171	704990.171	704714.064	704714.064
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	**22.1**	0.5 U	0.5 U	**0.97**	**0.76**	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	**3.96**	1 U	1 U	**2.08**	**0.99 J**	1 U	1 U	1 U	1 U
m,p-Xylene	**13.3**	1 U	1 U	**3.05**	**2.07**	1 U	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	**0.6 J**	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	**0.25 J**	0.5 U	0.5 U	**0.95**	**0.51**	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	**13.6**	0.5 U	0.5 U	**3.32**	**2.19**	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	**7.43**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	**3.21**	0.4 U	0.4 U	**0.38 J**	**0.26 J**	**0.21 J**	**0.22 J**	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	**1.06**	0.0707 U	0.0719 U	**34.5**	**26.5**	**0.267**	0.0762 U	**0.179 J**	**0.16 J**
2-Methylnaphthalene	**0.459**	0.0707 U	0.0719 U	**4.59**	7.75 U	**0.0709 J**	0.0762 U	0.353 UJ	0.313 U
Acenaphthene	**0.0783**	0.0353 U	0.036 U	**105**	**127**	**0.467**	**0.0533**	**29.1 J**	**29.4**
Acenaphthylene	**0.205**	**0.198**	**0.236**	3.76 U	**15.6**	**0.137**	**0.198**	**2 J**	**1.18**
Anthracene	**0.0377**	**0.0309 J**	**0.04**	**6.46**	**5.72**	**0.125**	**0.135**	**0.477 J**	**0.34**
Benzo(a)anthracene	0.0166 U	0.0177 U	0.018 U	**0.388**	1.94 U	**0.0127 J**	**0.0171 J**	0.0883 UJ	**0.0391 J**
Benzo(a)pyrene	0.0166 U	0.0177 U	0.018 U	**0.29**	1.94 U	**0.0112 J**	0.019 U	0.0883 UJ	0.0782 U
Benzo(b)fluoranthene	0.0166 U	0.0177 U	0.018 U	**0.271**	1.94 U	0.0196 U	**0.0114 J**	0.0883 UJ	0.0782 U
Benzo(g,h,i)perylene	0.0331 U	0.0353 U	0.036 U	**0.173**	3.88 U	0.0391 U	0.0381 U	0.177 UJ	0.156 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ9-50	PZ9-75	PZ9-75	WS-08-33	WS-08-33	WS-08-59	WS-08-59	WS-09-34	WS-09-34
Sample ID	GS-092822-90	GS-033122-90	GS-092822-92	GS-031622-28	GS-091422-28	GS-031622-31	GS-091322-19	GS-031722-32	GS-091422-22
Sample Date	9/28/2022	3/30/2022	9/28/2022	3/16/2022	9/14/2022	3/16/2022	9/13/2022	3/17/2022	9/14/2022
Depth	45.4 - 50.4 ft	67.5 - 72.5 ft	67.5 - 72.5 ft	22.5 - 32.5 ft	22.5 - 32.5 ft	48.5 - 58.5 ft	48.5 - 58.5 ft	23.5 - 33.5 ft	23.5 - 33.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624599.739	7624606.427	7624606.427	7624854.144	7624854.144	7624858.335	7624858.335	7625261.758	7625261.758
Y	705256.867	705252.394	705252.394	704987.857	704987.857	704990.171	704990.171	704714.064	704714.064
Benzo(j,k)fluoranthene	0.0166 U	0.0177 U	0.018 U	**0.0855 J**	1.94 U	0.0196 U	**0.0114 J**	0.0883 UJ	0.0782 U
Carbazole	0.0331 U	0.0353 U	0.036 U	**0.626**	3.88 U	**0.0196 J**	0.0381 U	0.177 UJ	0.156 U
Chrysene	0.0166 U	0.0177 U	0.018 U	**0.397**	1.94 U	**0.0103 J**	**0.0109 J**	0.0883 UJ	0.0782 U
Dibenzo(a,h)anthracene	0.0166 U	0.0177 U	0.018 U	**0.028**	1.94 U	0.0196 U	0.019 U	0.0883 UJ	0.0782 U
Dibenzofuran	0.0331 U	0.0353 U	0.036 U	**2.33**	**2.13 J**	**0.022 J**	0.0381 U	0.177 UJ	0.156 U
Fluoranthene	0.0331 U	0.0353 U	0.036 U	**5.57**	**5.43**	**0.044**	**0.0571**	**1.49 J**	**1.15**
Fluorene	**0.0178 J**	0.0353 U	0.036 U	**31.2**	**31**	**0.134**	**0.0195 J**	**6.8 J**	**6.47**
Indeno(1,2,3-c,d)pyrene	0.0166 U	0.0177 U	0.018 U	**0.159**	1.94 U	0.0196 U	0.019 U	0.0883 UJ	0.0782 U
Naphthalene	**265**	**0.0552 J**	**0.0782**	**1.97**	7.75 U	**0.0821**	0.101 U	0.353 UJ	0.313 U
Phenanthrene	**0.0331 J**	0.0707 U	0.0719 U	**38.5**	**36.6**	**0.153**	**0.108**	**6.6 J**	**8.1**
Pyrene	0.0331 U	0.0353 U	0.036 U	**5.81**	**5.72**	**0.0645**	**0.0976**	**1.4 J**	**1.04**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	PZ9-50	PZ9-75	PZ9-75	WS-08-33	WS-08-33	WS-08-59	WS-08-59	WS-09-34	WS-09-34
Sample ID	GS-092822-90	GS-033122-90	GS-092822-92	GS-031622-28	GS-091422-28	GS-031622-31	GS-091322-19	GS-031722-32	GS-091422-22
Sample Date	9/28/2022	3/30/2022	9/28/2022	3/16/2022	9/14/2022	3/16/2022	9/13/2022	3/17/2022	9/14/2022
Depth	45.4 - 50.4 ft	67.5 - 72.5 ft	67.5 - 72.5 ft	22.5 - 32.5 ft	22.5 - 32.5 ft	48.5 - 58.5 ft	48.5 - 58.5 ft	23.5 - 33.5 ft	23.5 - 33.5 ft
Sample Type	N	N	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624599.739	7624606.427	7624606.427	7624854.144	7624854.144	7624858.335	7624858.335	7625261.758	7625261.758
Y	705256.867	705252.394	705252.394	704987.857	704987.857	704990.171	704990.171	704714.064	704714.064
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	--	--	--	0.04 UJ	0.04 UJ	--	--	0.04 UJ	0.04 UJ
C10-C12 Aliphatics unadjusted	--	--	--	**0.044 J**	0.04 UJ	--	--	0.04 UJ	0.04 UJ
C12-C16 Aliphatics unadjusted	--	--	--	0.04 U	0.04 UJ	--	--	0.04 U	0.04 UJ
C16-C21 Aliphatics unadjusted	--	--	--	0.04 U	0.04 U	--	--	0.04 U	0.04 U
C21-C34 Aliphatics unadjusted	--	--	--	**1.52 J**	**0.166**	--	--	0.04 UJ	**0.042**
C10-C12 Aromatics unadjusted	--	--	--	0.04 U	0.04 UJ	--	--	0.04 U	0.04 UJ
C8-C10 Aromatics unadjusted	--	--	--	0.04 U	0.04 U	--	--	0.04 U	0.04 U
C12-C16 Aromatics unadjusted	--	--	--	**0.163 J**	**0.229 J**	--	--	**0.052 J**	**0.045 J**
C16-C21 Aromatics unadjusted	--	--	--	**0.162**	**0.181**	--	--	**0.044**	**0.046**
C21-C34 Aromatics unadjusted	--	--	--	**0.078**	**0.047**	--	--	0.04 U	0.04 U
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	0.005 U	0.005 U	--	--	0.005 U	0.005 U
n-Dodecane (C12)	--	--	--	0.005 U	0.005 U	--	--	0.005 U	0.005 U
n-Hexane (C6)	--	--	--	0.005 U	0.005 U	--	--	0.005 U	0.005 U
n-Octane (C8)	--	--	--	0.005 U	0.005 U	--	--	0.005 U	0.005 U
n-Pentane (C5)	--	--	--	0.005 U	**0.031**	--	--	0.005 U	0.005 U
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	--	0.05 U	0.05 U	--	--	0.05 U	0.05 U
C6-C8 Aliphatics unadjusted	--	--	--	0.05 U	0.05 U	--	--	0.05 U	0.05 U
C8-C10 Aliphatics unadjusted	--	--	--	0.05 U	0.05 U	--	--	0.05 U	0.05 U
C10-C12 Aliphatics unadjusted	--	--	--	**0.057**	0.05 U	--	--	0.05 U	0.05 U
C10-C12 Aromatics unadjusted	--	--	--	**0.114**	**0.065**	--	--	0.05 U	0.05 U
C8-C10 Aromatics unadjusted	--	--	--	0.05 U	0.05 U	--	--	0.05 U	0.05 U
C12-C13 Aromatics unadjusted	--	--	--	**0.12**	**0.071**	--	--	0.05 U	0.05 U
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	--	--	--	**8.96 J**	**2.89**	0.196 U	0.19 U	**0.294**	**0.205**
Gasoline range hydrocarbons	--	--	--	**0.574**	**0.323**	0.1 U	0.1 U	0.1 U	**0.0503 J**
Oil range organics	--	--	--	0.374 U	0.381 U	**0.407**	0.381 U	0.377 U	**0.214 J**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-12-125	WS-12-125	WS-12-125	WS-12-161	WS-12-161	WS-13-105	WS-13-69	WS-16-161	WS-16-161
Sample ID	GS-031422-20	GS-031422-21	GS-091222-11	GS-031522-23	GS-091422-23	GS-091322-16	GS-091322-14	GS-031522-24	GS-091422-21
Sample Date	3/14/2022	3/14/2022	9/12/2022	3/15/2022	9/14/2022	9/13/2022	9/13/2022	3/15/2022	9/14/2022
Depth	109 - 124 ft	109 - 124 ft	109 - 124 ft	145 - 160 ft	145 - 160 ft	89 - 104 ft	52.6 - 67.6 ft	145 - 160 ft	145 - 160 ft
Sample Type	N	FD	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624836.249	7624836.249	7624836.249	7624836.249	7624836.249	7624575.103	7624575.103	7624326.815	7624326.815
Y	704998.746	704998.746	704998.746	704998.746	704998.746	704633.42	704633.42	704965.043	704965.043
Conventional Parameters (mg/L)									
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--	--	--	--	--	--
Ammonia as nitrogen	--	--	--	--	--	--	--	--	--
Chloride	--	--	--	--	--	--	--	--	--
Cyanide	**0.126**	**0.126**	**0.148**	0.005 U	**0.0083**	0.005 U	**0.41**	0.005 U	**0.005**
Cyanide, available	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U
Nitrate as nitrogen	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--
Sulfide	--	--	--	--	--	--	--	--	--
Conventional Parameters, Dissolved (mg/L)									
Methane	--	--	--	--	--	--	--	--	--
Metals (µg/L)									
Aluminum	50 U	**40.4 J**	**351**	50 U	50 U	50 U	50 U	**523**	**446**
Antimony	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Arsenic	**3.6**	**3.47**	**3.63**	**0.66 J**	**0.645 J**	**8.73**	**9.04**	**7.72**	**7.7**
Barium	**39.3**	**39**	**42.1**	**44.2**	**48**	**41.2**	**140**	**45.4**	**44.3**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--	--	--	--	--	--
Chromium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**1.61 J**	2 U
Copper	2 UJ	2 UJ	2 U	2 UJ	2 U	2 U	2 U	2 UJ	2 U
Iron	**27500**	**27400**	**26700**	**17900**	**16500**	**49700**	**184000**	**27200**	**26000**
Lead	**0.194 J**	**0.123 J**	**0.582**	**0.172 J**	0.2 U	**0.167 J**	0.2 U	**0.379**	**0.321**
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	**911**	**857**	**937**	**2040**	**2000**	**2780**	**18700**	**3000**	**2870**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	2 U	2 U	**1.3 J**	2 U	2 U	**1.09 J**	2 U	**3.74**	**1.83 J**
Potassium	--	--	--	--	--	--	--	--	--
Selenium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--	--	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	**1.02 J**	**1.26 J**	**2.1**	2 U	2 U	2 U	2 U	2 U	2 U
Zinc	**4.39**	**4.33**	4 U	4 U	4 U	4 U	4 U	**12.9**	**9.04**

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-12-125	WS-12-125	WS-12-125	WS-12-161	WS-12-161	WS-13-105	WS-13-69	WS-16-161	WS-16-161
Sample ID	GS-031422-20	GS-031422-21	GS-091222-11	GS-031522-23	GS-091422-23	GS-091322-16	GS-091322-14	GS-031522-24	GS-091422-21
Sample Date	3/14/2022	3/14/2022	9/12/2022	3/15/2022	9/14/2022	9/13/2022	9/13/2022	3/15/2022	9/14/2022
Depth	109 - 124 ft	109 - 124 ft	109 - 124 ft	145 - 160 ft	145 - 160 ft	89 - 104 ft	52.6 - 67.6 ft	145 - 160 ft	145 - 160 ft
Sample Type	N	FD	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624836.249	7624836.249	7624836.249	7624836.249	7624836.249	7624575.103	7624575.103	7624326.815	7624326.815
Y	704998.746	704998.746	704998.746	704998.746	704998.746	704633.42	704633.42	704965.043	704965.043
Metals, Dissolved (µg/L)									
Iron	--	--	--	--	--	--	--	--	--
Magnesium	--	--	--	--	--	--	--	--	--
Manganese	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)									
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	200 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	**1.14**	100 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	**0.41**	**0.37 J**	**0.39 J**	**0.77**	**0.79**	**6.02**	**2030**	0.4 U	0.4 U
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	1000 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U	10 U	10 U	1000 U	10 U	10 U
Acetone	20 U	20 U	20 U	20 U	20 U	20 U	2000 U	20 U	20 U
Acrylonitrile	2 U	2 U	2 U	2 U	2 U	2 U	200 U	2 U	2 U
Benzene	**0.18 J**	**0.19 J**	**0.11 J**	0.2 U	0.2 U	**5.83**	**1660**	0.2 U	0.2 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	1000 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	**3.91**	**3.86**	0.5 U	50 U	0.5 U	0.5 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-12-125	WS-12-125	WS-12-125	WS-12-161	WS-12-161	WS-13-105	WS-13-69	WS-16-161	WS-16-161
Sample ID	GS-031422-20	GS-031422-21	GS-091222-11	GS-031522-23	GS-091422-23	GS-091322-16	GS-091322-14	GS-031522-24	GS-091422-21
Sample Date	3/14/2022	3/14/2022	9/12/2022	3/15/2022	9/14/2022	9/13/2022	9/13/2022	3/15/2022	9/14/2022
Depth	109 - 124 ft	109 - 124 ft	109 - 124 ft	145 - 160 ft	145 - 160 ft	89 - 104 ft	52.6 - 67.6 ft	145 - 160 ft	145 - 160 ft
Sample Type	N	FD	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624836.249	7624836.249	7624836.249	7624836.249	7624836.249	7624575.103	7624575.103	7624326.815	7624326.815
Y	704998.746	704998.746	704998.746	704998.746	704998.746	704633.42	704633.42	704965.043	704965.043
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 UJ	1 U	1 U	1 U	100 U	1 U	1 U
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U	10 U	10 U	1000 U	10 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.54**	**160**	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
m,p-Xylene	1 U	1 U	1 U	1 U	1 U	**2.05**	**103**	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U	10 U	10 U	**912 J**	10 U	10 U
Methyl tert-butyl ether (MTBE)	**8.78**	**8.92**	**8.22**	**9.54**	**8.62**	1 U	100 U	1 U	1 U
n-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.12**	**52**	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
Toluene	1 U	1 U	1 U	1 U	1 U	**0.82 J**	**91 J**	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	40 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U	2 U	2 U	200 U	2 U	2 U
Vinyl chloride	**0.25 J**	**0.22 J**	**0.29 J**	0.4 U	0.4 U	**7.55**	**13700**	0.4 U	0.4 U
Semivolatile Organics (µg/L)									
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U	200 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	**3.93**	**4.18**	0.5 U	50 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50 U	0.5 U	0.5 U
Polycyclic Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene	0.088 U	0.0966 U	0.0799 U	0.0857 UJ	0.0823 U	**1.2**	**72.3**	0.0762 UJ	0.0763 U
2-Methylnaphthalene	0.088 U	0.0966 U	0.0799 U	0.0857 UJ	0.0823 U	**0.869**	**94.2**	0.0762 UJ	0.0763 U
Acenaphthene	**0.0638**	**0.0664**	**0.0819**	0.0428 UJ	0.0411 U	**0.148**	**10.5**	**0.0252 J**	**0.0272 J**
Acenaphthylene	**0.18**	**0.229**	**0.321**	0.0428 UJ	0.0411 U	**0.0208 J**	**2.37**	0.0381 UJ	0.0381 U
Anthracene	**0.11**	**0.136**	**0.152**	0.0428 UJ	0.0411 U	0.0397 U	**0.643**	0.0381 UJ	**0.0224 J**
Benzo(a)anthracene	0.022 U	0.0242 U	0.02 U	0.0214 UJ	0.0206 U	0.0198 U	0.214 U	0.019 UJ	0.0191 U
Benzo(a)pyrene	0.022 U	0.0242 U	0.02 U	0.0214 UJ	0.0206 U	0.0198 U	0.214 U	0.019 UJ	0.0191 U
Benzo(b)fluoranthene	0.022 U	0.0242 U	0.02 U	0.0214 UJ	0.0206 U	0.0198 U	0.214 U	0.019 UJ	0.0191 U
Benzo(g,h,i)perylene	0.044 U	0.0483 U	0.0399 U	0.0428 UJ	0.0411 U	0.0397 U	0.429 U	0.0381 UJ	0.0381 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-12-125	WS-12-125	WS-12-125	WS-12-161	WS-12-161	WS-13-105	WS-13-69	WS-16-161	WS-16-161
Sample ID	GS-031422-20	GS-031422-21	GS-091222-11	GS-031522-23	GS-091422-23	GS-091322-16	GS-091322-14	GS-031522-24	GS-091422-21
Sample Date	3/14/2022	3/14/2022	9/12/2022	3/15/2022	9/14/2022	9/13/2022	9/13/2022	3/15/2022	9/14/2022
Depth	109 - 124 ft	109 - 124 ft	109 - 124 ft	145 - 160 ft	145 - 160 ft	89 - 104 ft	52.6 - 67.6 ft	145 - 160 ft	145 - 160 ft
Sample Type	N	FD	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624836.249	7624836.249	7624836.249	7624836.249	7624836.249	7624575.103	7624575.103	7624326.815	7624326.815
Y	704998.746	704998.746	704998.746	704998.746	704998.746	704633.42	704633.42	704965.043	704965.043
Benzo(j,k)fluoranthene	0.022 U	0.0242 U	0.02 U	0.0214 UJ	0.0206 U	0.0198 U	0.214 U	0.019 UJ	0.0191 U
Carbazole	0.044 U	0.0483 U	0.0399 U	0.0428 UJ	0.0411 U	0.0397 U	**9.11**	0.0381 UJ	0.0381 U
Chrysene	0.022 U	0.0242 U	0.02 U	0.0214 UJ	0.0206 U	0.0198 U	0.214 U	0.019 UJ	0.0191 U
Dibenzo(a,h)anthracene	0.022 U	0.0242 U	0.02 U	0.0214 UJ	0.0206 U	0.0198 U	0.214 U	0.019 UJ	0.0191 U
Dibenzofuran	0.044 U	0.0483 U	0.0399 U	0.0428 UJ	0.0411 U	0.0397 U	**0.44**	0.0381 UJ	0.0381 U
Fluoranthene	**0.0379 J**	**0.0344 J**	**0.0424**	0.0428 UJ	0.0411 U	0.0397 U	**0.284 J**	**0.049 J**	**0.0529**
Fluorene	**0.0346 J**	**0.035 J**	**0.0255 J**	0.0428 UJ	0.0411 U	0.0397 U	**2.42**	0.0381 UJ	**0.0229 J**
Indeno(1,2,3-c,d)pyrene	0.022 U	0.0242 U	0.02 U	0.0214 UJ	0.0206 U	0.0198 U	0.214 U	0.019 UJ	0.0191 U
Naphthalene	0.088 U	**0.0489 J**	0.0799 U	0.0857 UJ	**0.089**	**15.3**	**1820**	0.0762 UJ	**0.0424 J**
Phenanthrene	0.088 U	0.0966 U	**0.0554 J**	0.0857 UJ	0.0823 U	0.0793 U	**3.37**	**0.12 J**	**0.123**
Pyrene	**0.044**	**0.0429 J**	**0.0544**	0.0428 UJ	0.0411 U	0.0397 U	**0.295 J**	**0.0509 J**	**0.0567**
Pesticides (µg/L)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--	--	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--
Endosulfan sulfate	--	--	--	--	--	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--	--	--	--	--	--
Endosulfan, beta (II)	--	--	--	--	--	--	--	--	--
Endrin	--	--	--	--	--	--	--	--	--
Endrin aldehyde	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--	--	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--	--	--	--
Herbicides (µg/L)									
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--	--	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--	--	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--	--	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--	--	--	--	--	--
Dicamba	--	--	--	--	--	--	--	--	--
Dichloroprop	--	--	--	--	--	--	--	--	--

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-12-125	WS-12-125	WS-12-125	WS-12-161	WS-12-161	WS-13-105	WS-13-69	WS-16-161	WS-16-161
Sample ID	GS-031422-20	GS-031422-21	GS-091222-11	GS-031522-23	GS-091422-23	GS-091322-16	GS-091322-14	GS-031522-24	GS-091422-21
Sample Date	3/14/2022	3/14/2022	9/12/2022	3/15/2022	9/14/2022	9/13/2022	9/13/2022	3/15/2022	9/14/2022
Depth	109 - 124 ft	109 - 124 ft	109 - 124 ft	145 - 160 ft	145 - 160 ft	89 - 104 ft	52.6 - 67.6 ft	145 - 160 ft	145 - 160 ft
Sample Type	N	FD	N	N	N	N	N	N	N
Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG
X	7624836.249	7624836.249	7624836.249	7624836.249	7624836.249	7624575.103	7624575.103	7624326.815	7624326.815
Y	704998.746	704998.746	704998.746	704998.746	704998.746	704633.42	704633.42	704965.043	704965.043
Dinoseb	--	--	--	--	--	--	--	--	--
Mecoprop (MCPP)	--	--	--	--	--	--	--	--	--
Mephanac (MCPA)	--	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)									
C8-C10 Aliphatics unadjusted	0.04 UJ	0.04 UJ	0.04 UJ	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	0.04 UJ	0.04 UJ	0.04 UJ	--	--	--	--	--	--
C12-C16 Aliphatics unadjusted	0.04 U	0.04 U	0.04 U	--	--	--	--	--	--
C16-C21 Aliphatics unadjusted	0.04 U	0.04 U	0.04 U	--	--	--	--	--	--
C21-C34 Aliphatics unadjusted	**0.103 J**	**0.119 J**	0.04 U	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	--	--	--	--	--	--
C12-C16 Aromatics unadjusted	0.04 UJ	0.04 U	0.04 U	--	--	--	--	--	--
C16-C21 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	--	--	--	--	--	--
C21-C34 Aromatics unadjusted	0.04 U	0.04 U	0.04 U	--	--	--	--	--	--
Volatile Petroleum Hydrocarbons (mg/L)									
Benzene	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--
n-Decane (C10)	0.005 U	0.005 U	0.005 U	--	--	--	--	--	--
n-Dodecane (C12)	0.005 U	0.005 U	0.005 U	--	--	--	--	--	--
n-Hexane (C6)	0.005 U	0.005 U	0.005 U	--	--	--	--	--	--
n-Octane (C8)	0.005 U	0.005 U	0.005 U	--	--	--	--	--	--
n-Pentane (C5)	0.005 U	0.005 U	0.005 U	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--
C5-C6 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	--	--	--	--	--	--
C6-C8 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	--	--	--	--	--	--
C8-C10 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	--	--	--	--	--	--
C10-C12 Aliphatics unadjusted	0.05 U	0.05 U	0.05 U	--	--	--	--	--	--
C10-C12 Aromatics unadjusted	0.05 U	0.05 U	0.05 U	--	--	--	--	--	--
C8-C10 Aromatics unadjusted	0.05 U	0.05 U	0.05 U	--	--	--	--	--	--
C12-C13 Aromatics unadjusted	0.05 U	0.05 U	0.05 U	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/L)									
Diesel range hydrocarbons	0.19 U	0.189 U	0.192 U	0.19 U	0.19 U	0.19 U	**4.19**	0.189 U	0.189 U
Gasoline range hydrocarbons	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.142**	**12.6**	0.1 U	0.1 U
Oil range organics	**0.324 J**	**0.223 J**	0.385 U	0.381 U	0.381 U	0.381 U	0.4 U	0.377 U	0.377 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-17-52	WS-17-94	WS-47-183	WS-47-183
Sample ID	GS-091422-20	GS-091322-18	GS-031422-18	GS-091222-12
Sample Date	9/14/2022	9/13/2022	3/14/2022	9/12/2022
Depth	41 - 51 ft	78 - 93 ft	172 - 182 ft	172 - 182 ft
Sample Type	N	N	N	N
Matrix	WG	WG	WG	WG
X	7624607.501	7624607.501	7624602.8	7624602.8
Y	704484.331	704484.331	705154.333	705154.333
Conventional Parameters (mg/L)				
Alkalinity, bicarbonate as calcium carbonate (CaCO3)	--	--	--	--
Alkalinity, carbonate as calcium carbonate (CaCO3)	--	--	--	--
Alkalinity, hydroxide as calcium carbonate (CaCO3)	--	--	--	--
Alkalinity, total as calcium carbonate (CaCO3)	--	--	--	--
Ammonia as nitrogen	--	--	--	--
Chloride	--	--	--	--
Cyanide	**1.16**	0.005 U	**0.0362**	**0.0363**
Cyanide, available	**0.00322**	0.002 U	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate as nitrogen	--	--	--	--
Sulfate	--	--	--	--
Sulfide	--	--	--	--
Conventional Parameters, Dissolved (mg/L)				
Methane	--	--	--	--
Metals (µg/L)				
Aluminum	**79.2**	**52.9**	**94.6**	**90.4**
Antimony	1 U	1 U	1 U	1 U
Arsenic	**1.86**	**9.07**	**2.12**	**2.21**
Barium	**122**	**45.5**	**39**	**39**
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	--	--	--	--
Chromium	2 U	2 U	2 U	2 U
Copper	2 U	2 U	2 UJ	2 U
Iron	**23100**	**47600**	**20800**	**19400**
Lead	**0.193 J**	0.2 U	**0.151 J**	0.2 U
Magnesium	--	--	--	--
Manganese	**3790**	**2620**	**1590**	**1570**
Mercury	0.08 U	0.08 U	0.08 U	0.08 U
Nickel	**3.04**	**2.85**	**1.85 J**	**1.81 J**
Potassium	--	--	--	--
Selenium	1 U	1 U	1 U	1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	--	--	--
Thallium	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium	2 U	2 U	2 U	2 U
Zinc	**8.21**	4.42 U	**4.92**	4 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-17-52	WS-17-94	WS-47-183	WS-47-183
Sample ID	GS-091422-20	GS-091322-18	GS-031422-18	GS-091222-12
Sample Date	9/14/2022	9/13/2022	3/14/2022	9/12/2022
Depth	41 - 51 ft	78 - 93 ft	172 - 182 ft	172 - 182 ft
Sample Type	N	N	N	N
Matrix	WG	WG	WG	WG
X	7624607.501	7624607.501	7624602.8	7624602.8
Y	704484.331	704484.331	705154.333	705154.333
Metals, Dissolved (µg/L)				
Iron	--	--	--	--
Magnesium	--	--	--	--
Manganese	--	--	--	--
Volatile Organics (µg/L)				
1,1,1,2-Tetrachloroethane	0.4 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	0.4 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	0.4 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	1 U	1 U	1 U	1 U
1,2,3-Trimethylbenzene	--	--	--	--
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethene, cis-	0.4 U	0.4 U	0.4 U	**0.21 J**
1,2-Dichloroethene, trans-	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene (Mesitylene)	1 U	1 U	1 U	1 U
1,3-Dichloropropane	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	1 U	1 U	1 U	1 U
2,2-Dichloropropane	1 U	1 U	1 U	1 U
2-Chlorotoluene	1 U	1 U	1 U	1 U
2-Hexanone (Methyl butyl ketone)	10 U	10 U	10 U	10 U
4-Chlorotoluene	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	10 U	10 U	10 U	10 U
Acetone	20 U	20 U	20 UJ	20 U
Acrylonitrile	2 U	2 U	2 U	2 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	1 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	1 U
Bromoform (Tribromomethane)	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	5 U	5 U	5 U	5 U
Carbon disulfide	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)	1 U	1 U	1 U	1 U
Chlorobenzene	0.5 U	0.5 U	**7.44**	9 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-17-52	WS-17-94	WS-47-183	WS-47-183
Sample ID	GS-091422-20	GS-091322-18	GS-031422-18	GS-091222-12
Sample Date	9/14/2022	9/13/2022	3/14/2022	9/12/2022
Depth	41 - 51 ft	78 - 93 ft	172 - 182 ft	172 - 182 ft
Sample Type	N	N	N	N
Matrix	WG	WG	WG	WG
X	7624607.501	7624607.501	7624602.8	7624602.8
Y	704484.331	704484.331	705154.333	705154.333
Chloroethane	5 U	5 U	5 U	5 U
Chloroform	1 U	1 U	1 U	1 U
Chloromethane	5 U	5 U	5 U	5 U
Cymene, p- (4-Isopropyltoluene)	1 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	1 U
Dibromomethane	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	1 U	1 U	1 U	1 UJ
Dichloromethane (Methylene chloride)	10 U	10 U	10 U	10 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	5 U	5 U	5 U	5 U
Isopropylbenzene (Cumene)	1 U	1 U	1 U	1 U
m,p-Xylene	1 U	1 U	1 U	1 U
Methyl ethyl ketone (2-Butanone)	10 U	10 U	10 U	10 U
Methyl tert-butyl ether (MTBE)	1 U	1 U	**3.65**	**4.49**
n-Butylbenzene	1 U	1 U	1 U	1 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	1 U	1 U	1 U	1 U
Styrene	1 U	1 U	1 U	1 U
tert-Butylbenzene	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	0.4 U	0.4 U	0.4 U	0.4 U
Toluene	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.4 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane (Fluorotrichloromethane)	2 U	2 U	2 U	2 U
Vinyl chloride	0.4 U	0.4 U	0.4 U	0.4 U
Semivolatile Organics (µg/L)				
1,2,4-Trichlorobenzene	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	0.5 U	0.5 U	**28.4**	**30.7**
1,3-Dichlorobenzene	0.5 U	0.5 U	**0.88**	**0.99**
1,4-Dichlorobenzene	0.5 U	0.5 U	**11.4**	**12.4**
Polycyclic Aromatic Hydrocarbons (µg/L)				
1-Methylnaphthalene	**0.28**	**1.55**	0.103 U	0.0743 U
2-Methylnaphthalene	0.0904 U	0.12 U	0.103 U	0.0743 U
Acenaphthene	**5.5**	**2.64**	0.0513 U	**0.0218 J**
Acenaphthylene	**1.06**	0.0955 U	0.0513 U	0.0372 U
Anthracene	**0.934**	**0.13**	**0.0302 J**	**0.0237 J**
Benzo(a)anthracene	**0.0171 J**	0.0255 U	0.0257 U	0.0186 U
Benzo(a)pyrene	0.0184 U	0.0255 U	0.0257 U	**0.0107 J**
Benzo(b)fluoranthene	0.0184 U	0.0255 U	0.0257 U	**0.0111 J**
Benzo(g,h,i)perylene	0.0369 U	0.0509 U	0.0513 U	0.0372 U

Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-17-52	WS-17-94	WS-47-183	WS-47-183
Sample ID	GS-091422-20	GS-091322-18	GS-031422-18	GS-091222-12
Sample Date	9/14/2022	9/13/2022	3/14/2022	9/12/2022
Depth	41 - 51 ft	78 - 93 ft	172 - 182 ft	172 - 182 ft
Sample Type	N	N	N	N
Matrix	WG	WG	WG	WG
X	7624607.501	7624607.501	7624602.8	7624602.8
Y	704484.331	704484.331	705154.333	705154.333
Benzo(j,k)fluoranthene	0.0184 U	0.0255 U	0.0257 U	0.0186 U
Carbazole	**0.443**	0.0509 U	0.0513 U	0.0372 U
Chrysene	**0.0161 J**	0.0255 U	0.0257 U	**0.00975 J**
Dibenzo(a,h)anthracene	0.0184 U	0.0255 U	0.0257 U	0.0186 U
Dibenzofuran	**0.426**	**0.174**	0.0513 U	0.0372 U
Fluoranthene	**0.377**	**0.256**	0.0513 U	**0.0204 J**
Fluorene	**2.83**	**1.21**	0.0513 U	0.0372 U
Indeno(1,2,3-c,d)pyrene	0.0184 U	0.0255 U	0.0257 U	**0.00975 J**
Naphthalene	**0.23**	**0.435**	0.103 U	0.174 U
Phenanthrene	**0.2**	**2.83**	0.103 U	0.0743 U
Pyrene	**0.45**	**0.237**	0.0513 U	**0.0283 J**
Pesticides (µg/L)				
4,4'-DDD (p,p'-DDD)	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--
Aldrin	--	--	--	--
Chlordane, alpha- (Chlordane, cis-)	--	--	--	--
Chlordane, beta- (Chlordane, trans-)	--	--	--	--
Dieldrin	--	--	--	--
Endosulfan sulfate	--	--	--	--
Endosulfan, alpha- (I)	--	--	--	--
Endosulfan, beta (II)	--	--	--	--
Endrin	--	--	--	--
Endrin aldehyde	--	--	--	--
Endrin ketone	--	--	--	--
Heptachlor	--	--	--	--
Heptachlor epoxide	--	--	--	--
Hexachlorocyclohexane (BHC), alpha-	--	--	--	--
Hexachlorocyclohexane (BHC), beta-	--	--	--	--
Hexachlorocyclohexane (BHC), delta-	--	--	--	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	--	--	--	--
Methoxychlor	--	--	--	--
Toxaphene	--	--	--	--
Herbicides (µg/L)				
2,2-Dichloropropionic acid (Dalapon)	--	--	--	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	--	--	--	--
2,4,5-TP (Silvex)	--	--	--	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	--	--	--	--
2,4-DB (2,4-D derivative)	--	--	--	--
Dicamba	--	--	--	--
Dichloroprop	--	--	--	--

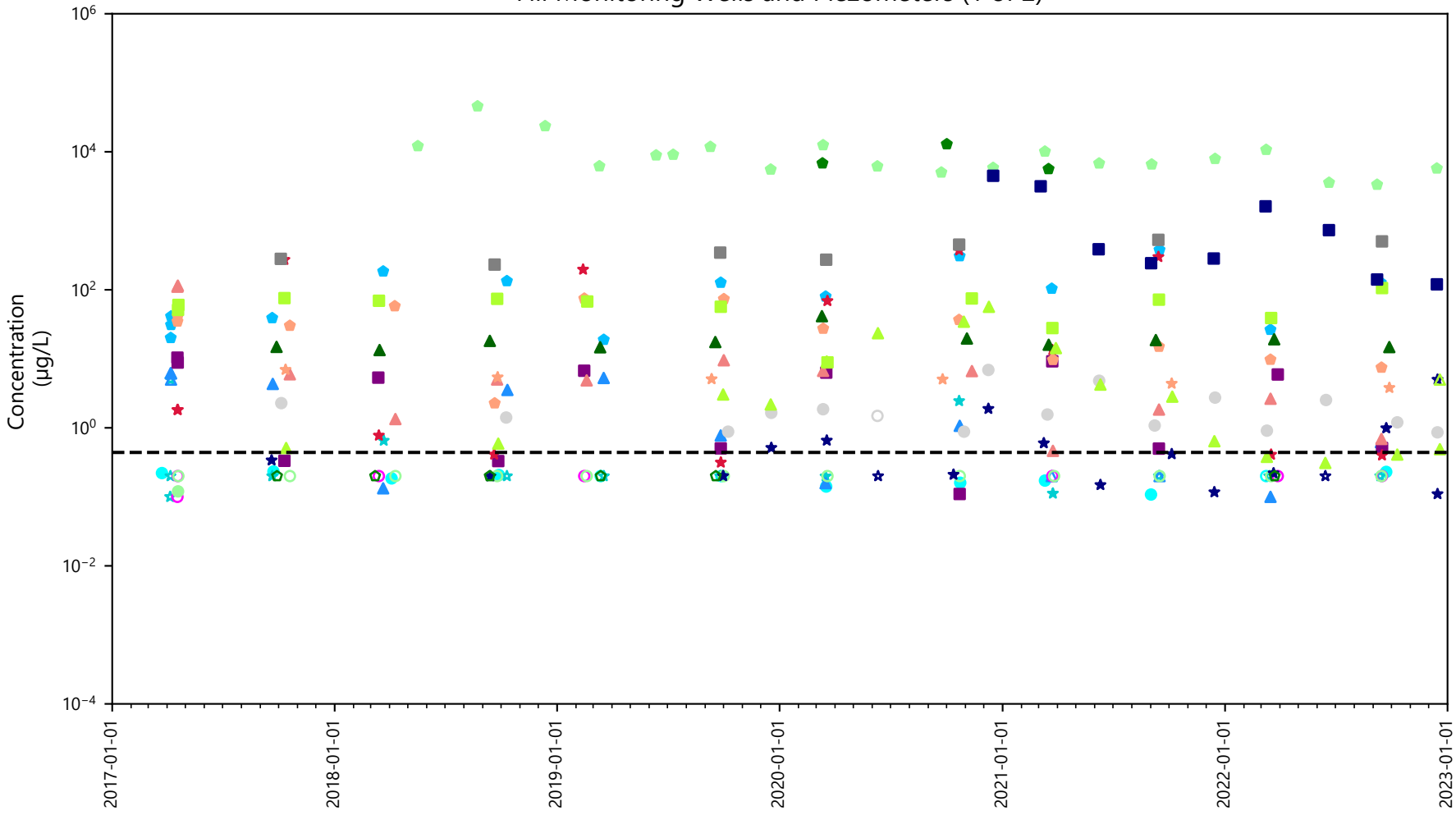
Appendix C2
2022 Data Summary Table

Task	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022	Source Control Groundwater 2022
Location ID	WS-17-52	WS-17-94	WS-47-183	WS-47-183
Sample ID	GS-091422-20	GS-091322-18	GS-031422-18	GS-091222-12
Sample Date	9/14/2022	9/13/2022	3/14/2022	9/12/2022
Depth	41 - 51 ft	78 - 93 ft	172 - 182 ft	172 - 182 ft
Sample Type	N	N	N	N
Matrix	WG	WG	WG	WG
X	7624607.501	7624607.501	7624602.8	7624602.8
Y	704484.331	704484.331	705154.333	705154.333
Dinoseb	--	--	--	--
Mecoprop (MCPP)	--	--	--	--
Mephanac (MCPA)	--	--	--	--
Extractable Petroleum Hydrocarbons (mg/L)				
C8-C10 Aliphatics unadjusted	--	--	0.04 UJ	0.04 UJ
C10-C12 Aliphatics unadjusted	--	--	0.04 UJ	0.04 UJ
C12-C16 Aliphatics unadjusted	--	--	0.04 U	0.04 U
C16-C21 Aliphatics unadjusted	--	--	0.04 U	0.04 U
C21-C34 Aliphatics unadjusted	--	--	**0.072 J**	0.04 U
C10-C12 Aromatics unadjusted	--	--	0.04 U	0.04 U
C8-C10 Aromatics unadjusted	--	--	0.04 U	0.04 U
C12-C16 Aromatics unadjusted	--	--	0.04 UJ	0.04 U
C16-C21 Aromatics unadjusted	--	--	0.04 U	0.04 U
C21-C34 Aromatics unadjusted	--	--	0.04 U	0.04 U
Volatile Petroleum Hydrocarbons (mg/L)				
Benzene	--	--	--	--
Ethylbenzene	--	--	--	--
m,p-Xylene	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--
n-Decane (C10)	--	--	0.005 U	0.005 U
n-Dodecane (C12)	--	--	0.005 U	0.005 U
n-Hexane (C6)	--	--	0.005 U	0.005 U
n-Octane (C8)	--	--	0.005 U	0.005 U
n-Pentane (C5)	--	--	0.005 U	0.005 U
o-Xylene	--	--	--	--
Toluene	--	--	--	--
C5-C6 Aliphatics unadjusted	--	--	0.05 U	0.05 U
C6-C8 Aliphatics unadjusted	--	--	0.05 U	0.05 U
C8-C10 Aliphatics unadjusted	--	--	0.05 U	0.05 U
C10-C12 Aliphatics unadjusted	--	--	0.05 U	0.05 U
C10-C12 Aromatics unadjusted	--	--	0.05 U	0.05 U
C8-C10 Aromatics unadjusted	--	--	0.05 U	0.05 U
C12-C13 Aromatics unadjusted	--	--	0.05 U	0.05 U
Total Petroleum Hydrocarbons (mg/L)				
Diesel range hydrocarbons	**0.259**	0.19 U	0.19 U	0.192 U
Gasoline range hydrocarbons	**0.0557 J**	0.1 U	**0.115**	**0.122**
Oil range organics	0.381 U	0.381 U	**0.55**	0.385 U

Appendix C2
2022 Data Summary Table

Notes:
Bold: Detected result
J: Estimated value
U: Compound analyzed for, but not detected above detection limit
UJ: Compound analyzed for, but not detected above estimated detection limit

Appendix C3
Concentrations of Contaminants by WBZ



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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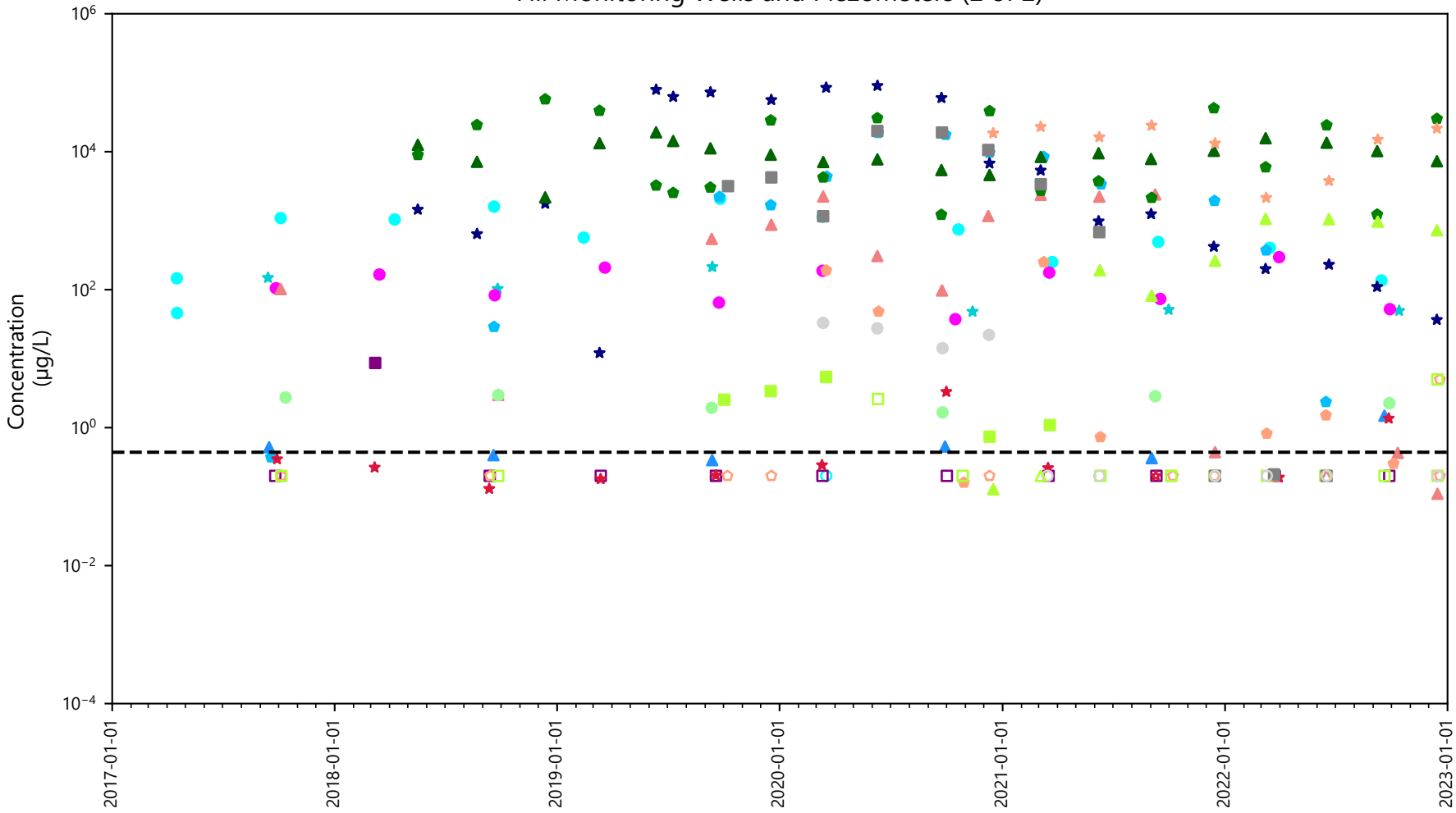
ANCHOR QEA

- Benzene CUL
- MW-40F
- MW-42F
- OW-1F
- OW-2F
- NWN-02-20
- NWN-03-17
- NWN-07-30
- NWN-09-31
- WS-08-33
- NWN-11-24
- WS-09-34
- MW-04-35
- PZ8-5
- PZ5-5
- NWN-01-20
- OW-5F
- MW-01-22
- MW-23-27
- MW-46F
- MW-51F

C.3.a.1
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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CUL= Cleanup Level

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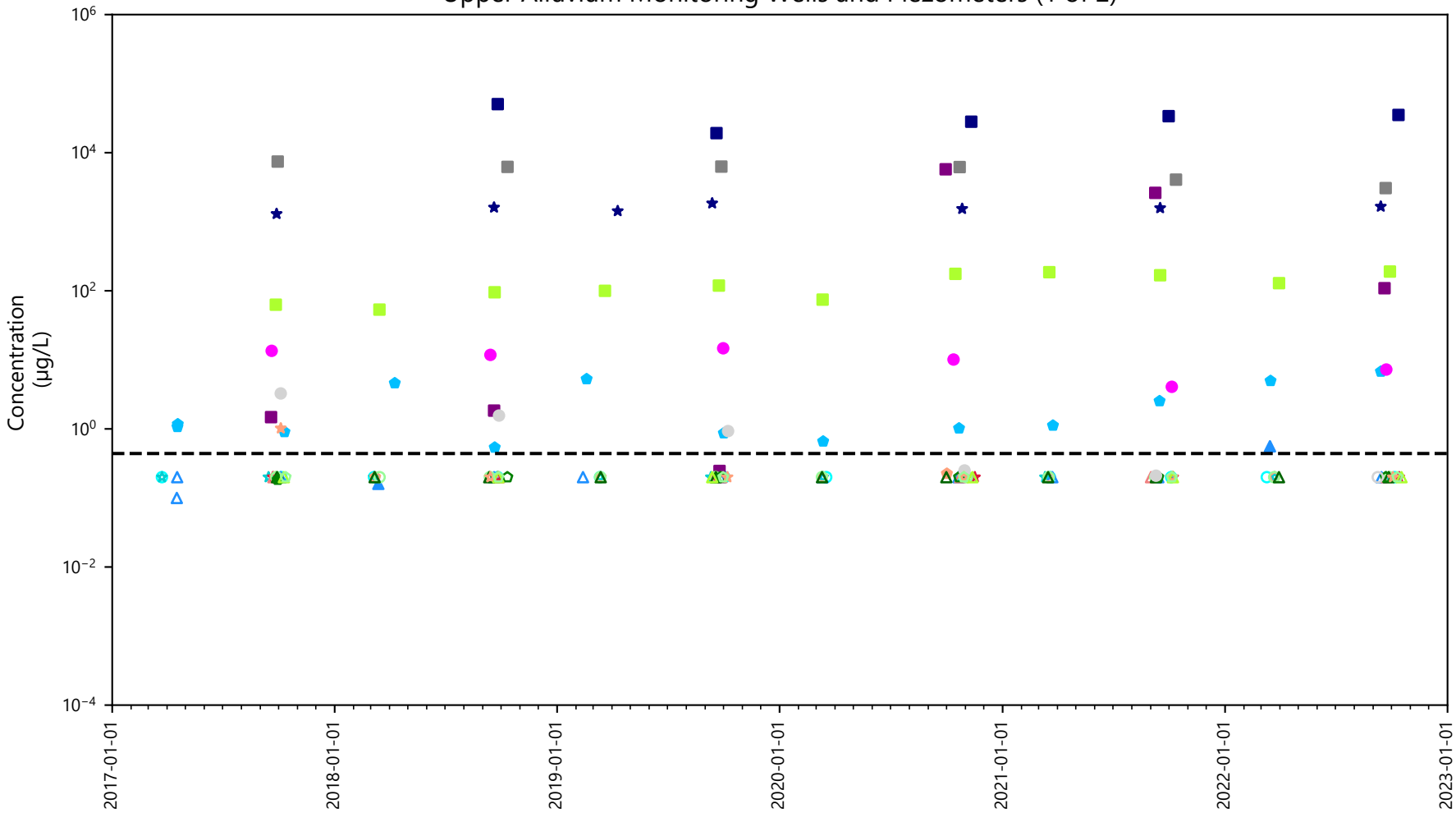
ANCHOR QEA

Benzene CUL
NWN-13-23
MW-08-29
MW-19-22
MW-21-12
PZ7-5
PZ9-5
PZ6-5
OW-7-17
MW-03-26
MW-02-32
OW-10F
MW-49F
MW-47F
MW-48F
OW-8-15
OW-9-25
MW-52F
MW-53F

C.3.a.2
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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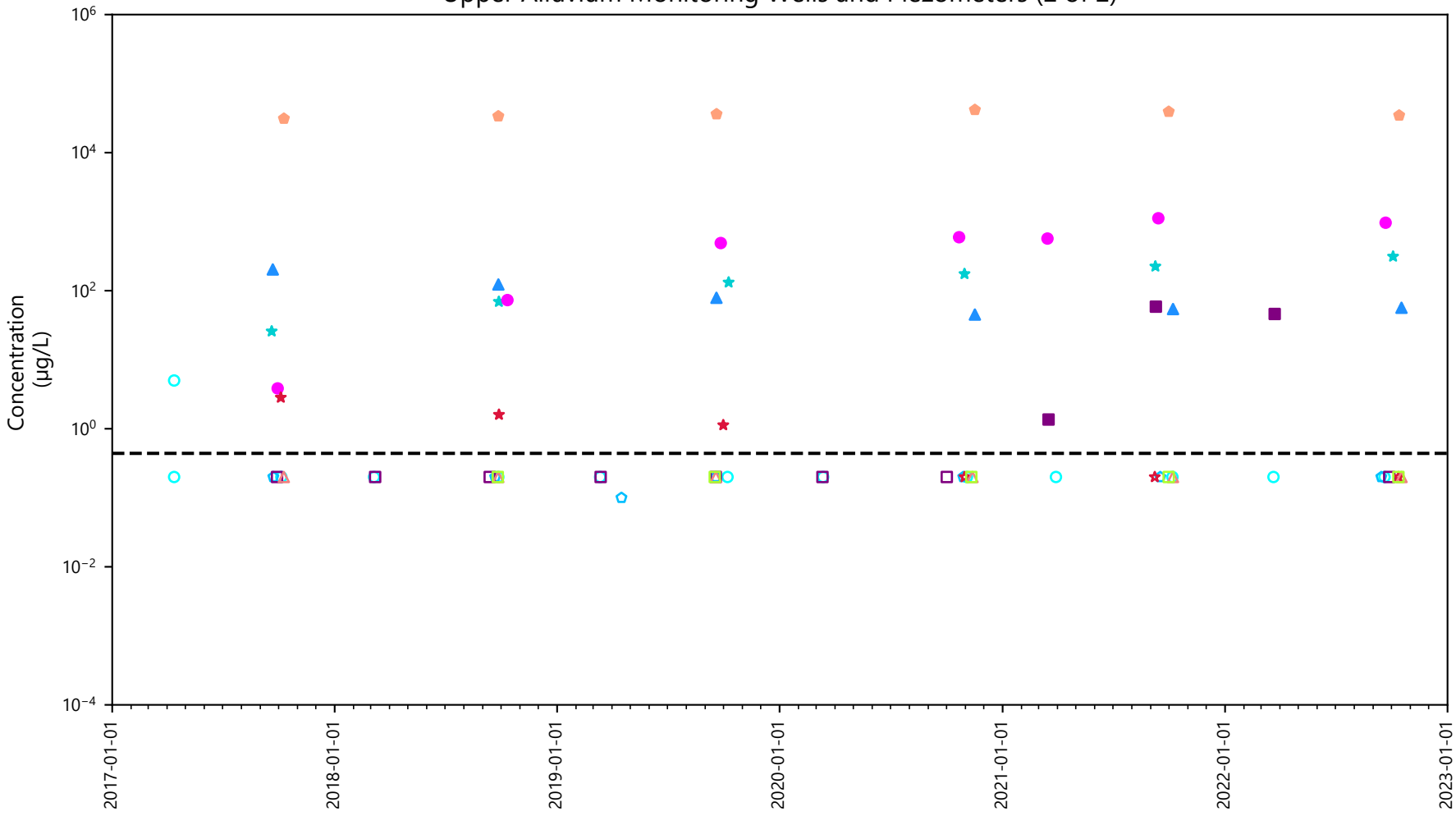
ANCHOR QEA

Benzene CUL
MW-02-61
MW-01-55
NWN-13-73
WS-08-59
MW-21U
MW-04-57
MW-07-60
MW-41U
PZ7-50
PZ9-50
PZ8-50
WS-13-69
PZ6-50
MW-05-32
MW-34U
MW-31U
MW-03-56
MW-10-61
MW-23U
MW-15-50

C.3.a.3
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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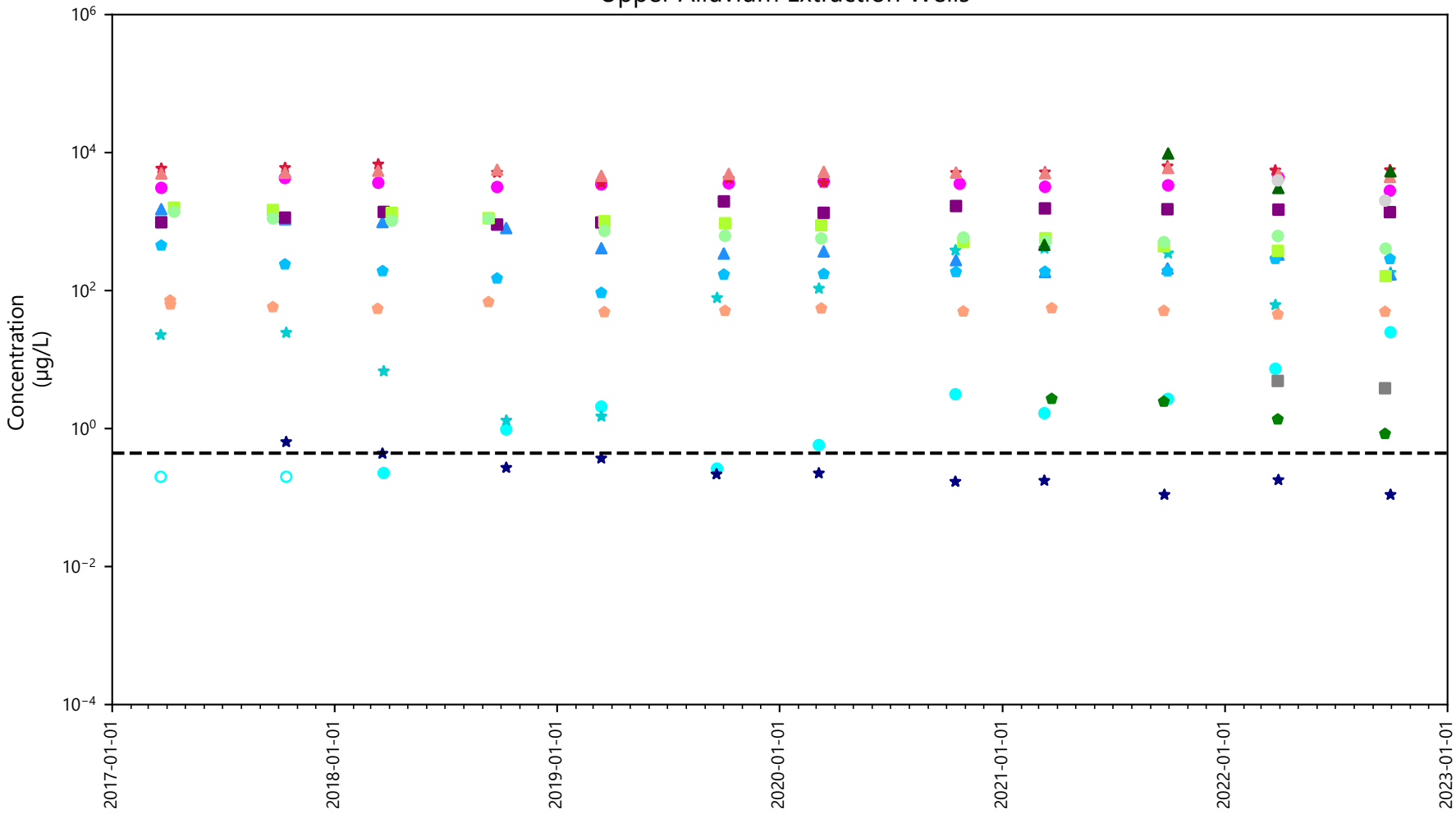
ANCHOR QEA

Benzene CUL
MW-22U
MW-16-65
MW-12-36
WS-17-52
PZ5-20
MW-05-100
MW-28U
MW-09-29
MW-08-56
MW-15-66

C.3.a.4
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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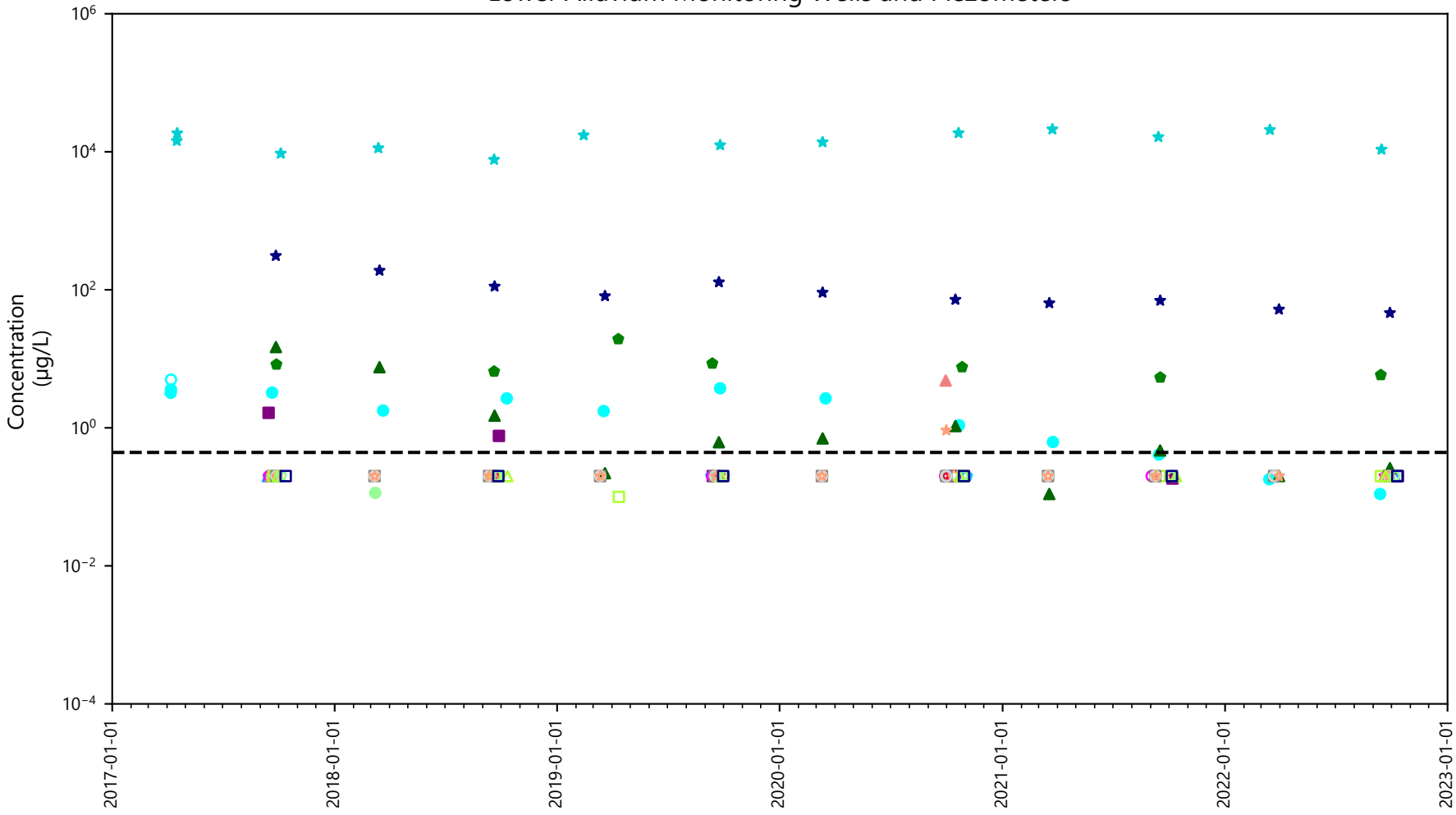
ANCHOR QEA

Benzene CUL
PW-16U
PW-15U
PW-06U
PW-04U
PW-12U
PW-13U
PW-05U
PW-14U
PW-02U
PW-11U
PW-03U
PW-10U
PW-08Ub
PW-01U
PW-01Uc
PW-11Ub

C.3.a.5
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
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CUL= Cleanup Level

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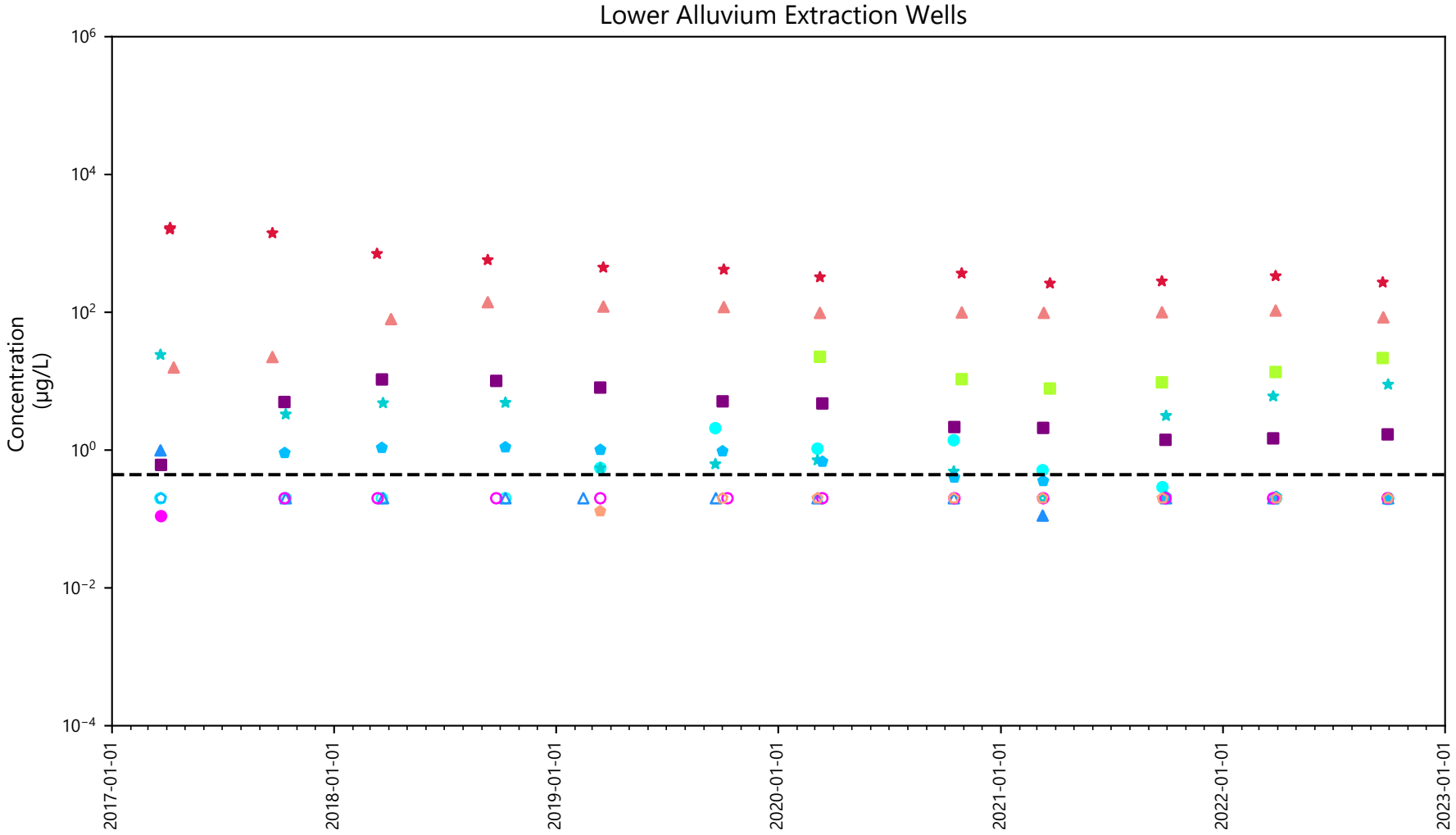
ANCHOR QEA

- Benzene CUL
- WS-12-125
- NWN-13-106
- MW-14-110
- MW-01-82
- MW-18-125
- MW-19-125
- MW-21-115
- MW-21-75
- MW-04-101
- WS-17-94
- PZ7-100
- PZ9-75
- PZ9-110
- WS-13-105
- PZ5-55
- PZ5-85
- PZ6-115
- MW-20-120
- MW-02-104
- MW-23-123

C.3.a.6
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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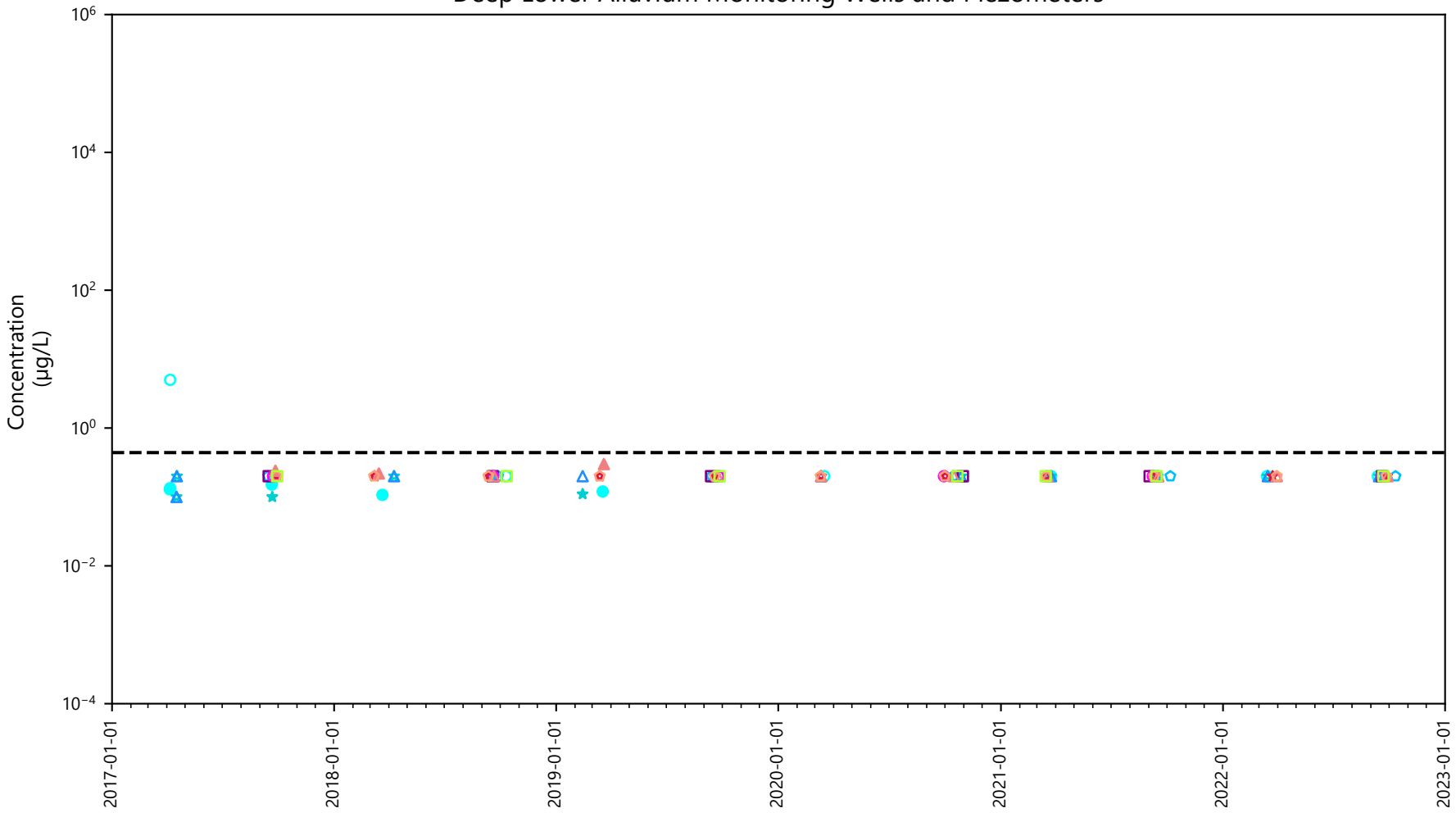
ANCHOR QEA

Benzene CUL
PW-09-92
PW-08-68
PW-07-93
PW-06L
PW-04L
PW-05L
PW-02L
PW-03-118
PW-10Lb
PW-01Lb

C.3.a.7
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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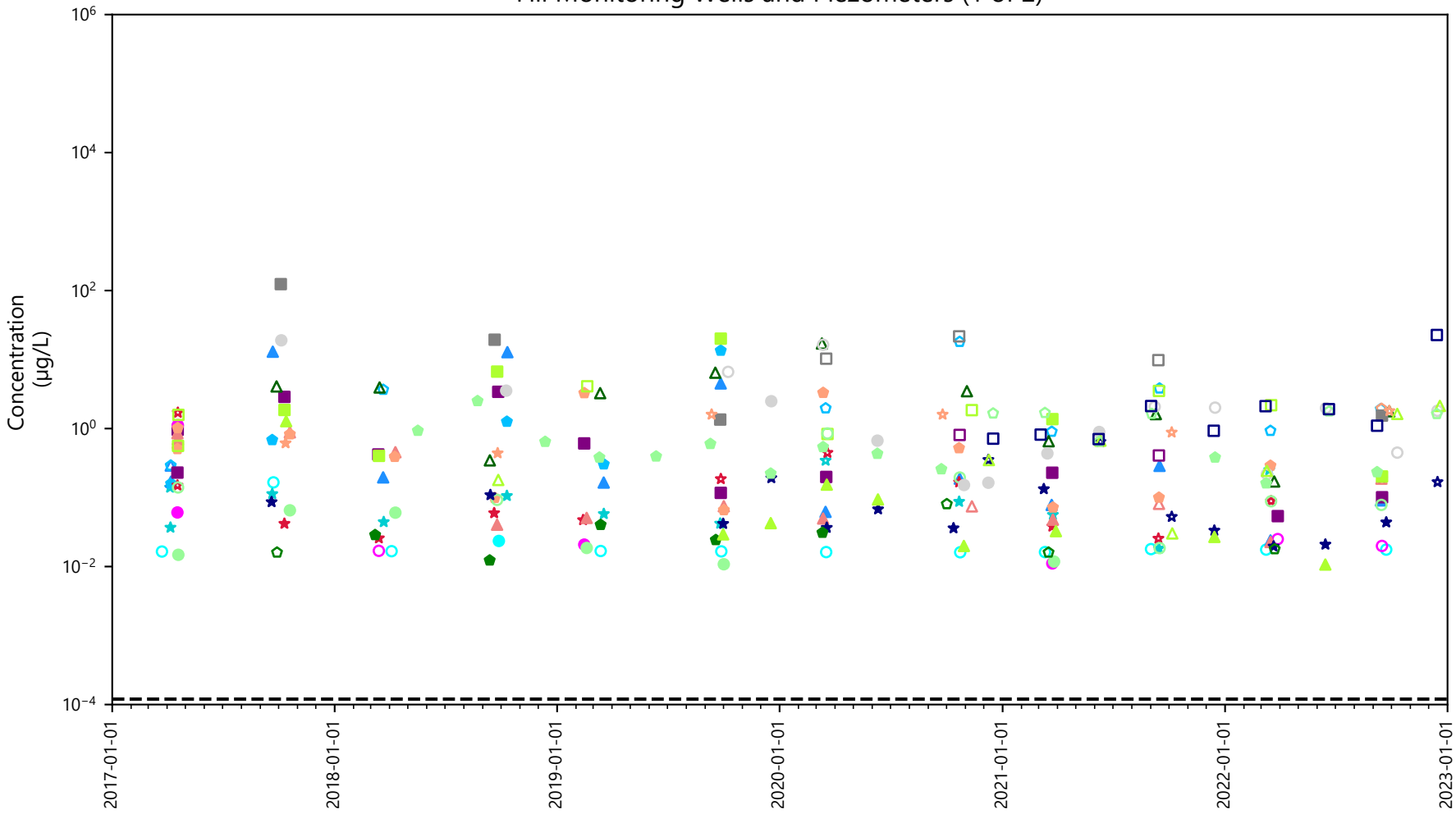
ANCHOR QEA

Benzene CUL
WS-47-183
WS-12-161
WS-16-161
MW-18-180
MW-19-180
MW-21-165
PZ7-150
PZ9-150
PZ6-150
MW-05-175

C.3.a.8
Benzene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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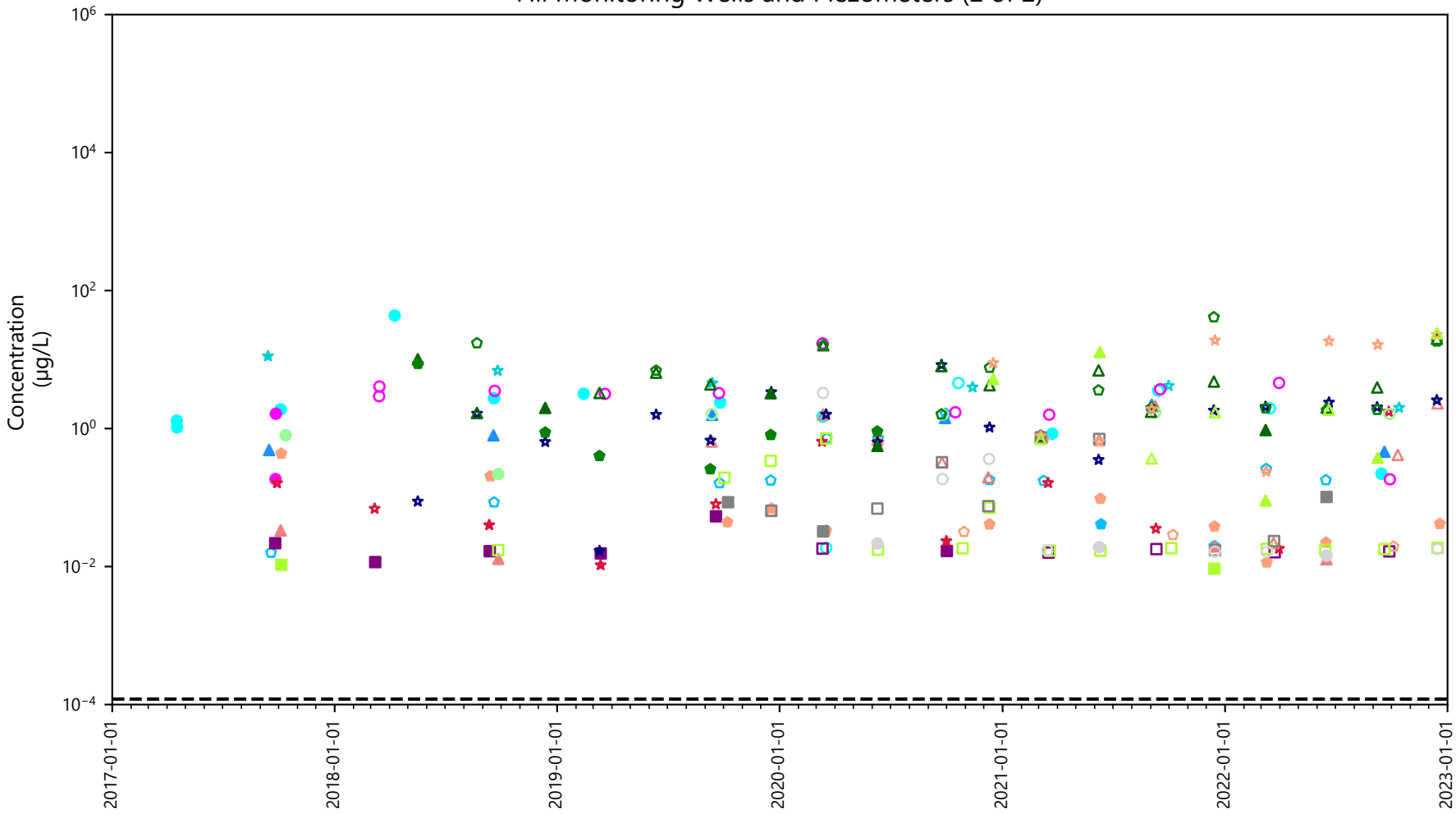
ANCHOR QEA

- Benzo(a)pyrene CUL
- MW-40F
- MW-42F
- OW-1F
- OW-2F
- NWN-02-20
- NWN-03-17
- NWN-07-30
- NWN-09-31
- WS-08-33
- NWN-11-24
- WS-09-34
- MW-04-35
- PZ8-5
- PZ5-5
- NWN-01-20
- OW-5F
- MW-01-22
- MW-23-27
- MW-46F
- MW-51F

C.3.b.1
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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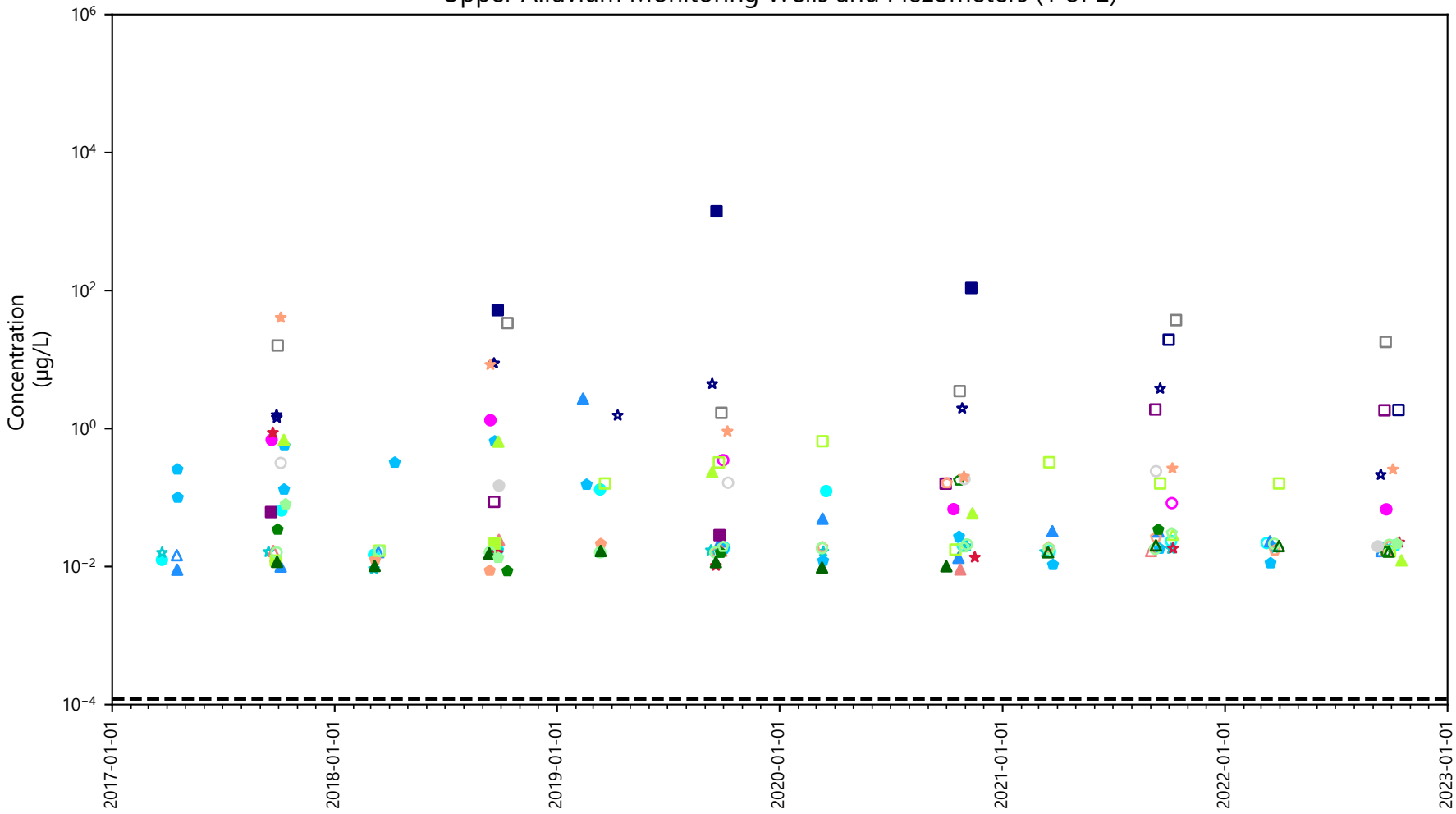
\\fuji\anchor\Projects\NW Natural\Gasco\Source_Control_OPMDR\HC&C Annual Rpt\2022\2. Analyses\TimeSeriesConcentrationPlots\Water_Chemistry_OneChemical_AllWells.py

ANCHOR QEA

- Benzo(a)pyrene CUL
- NWN-13-23
- MW-08-29
- MW-19-22
- MW-21-12
- PZ7-5
- PZ9-5
- PZ6-5
- OW-7-17
- MW-03-26
- MW-02-32
- OW-10F
- MW-49F
- MW-47F
- MW-48F
- OW-8-15
- OW-9-25
- MW-52F
- MW-53F

C.3.b.2
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
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CUL= Cleanup Level

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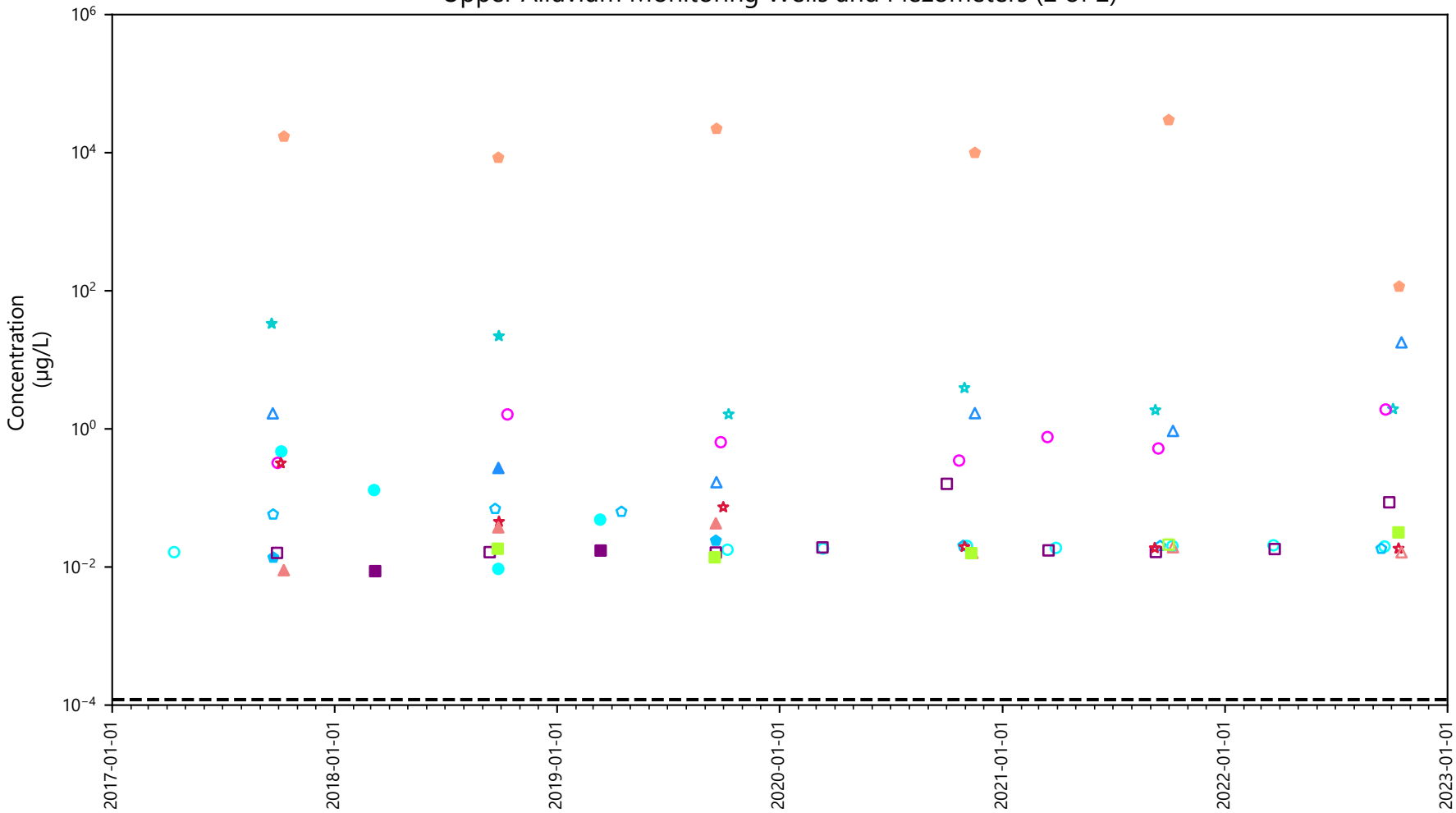
ANCHOR QEA

- Benzo(a)pyrene CUL
- MW-02-61
- MW-01-55
- NWN-13-73
- WS-08-59
- MW-21U
- MW-04-57
- MW-07-60
- MW-41U
- PZ7-50
- PZ9-50
- PZ8-50
- WS-13-69
- PZ6-50
- MW-05-32
- MW-34U
- MW-31U
- MW-03-56
- MW-10-61
- MW-23U
- MW-15-50

C.3.b.3
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



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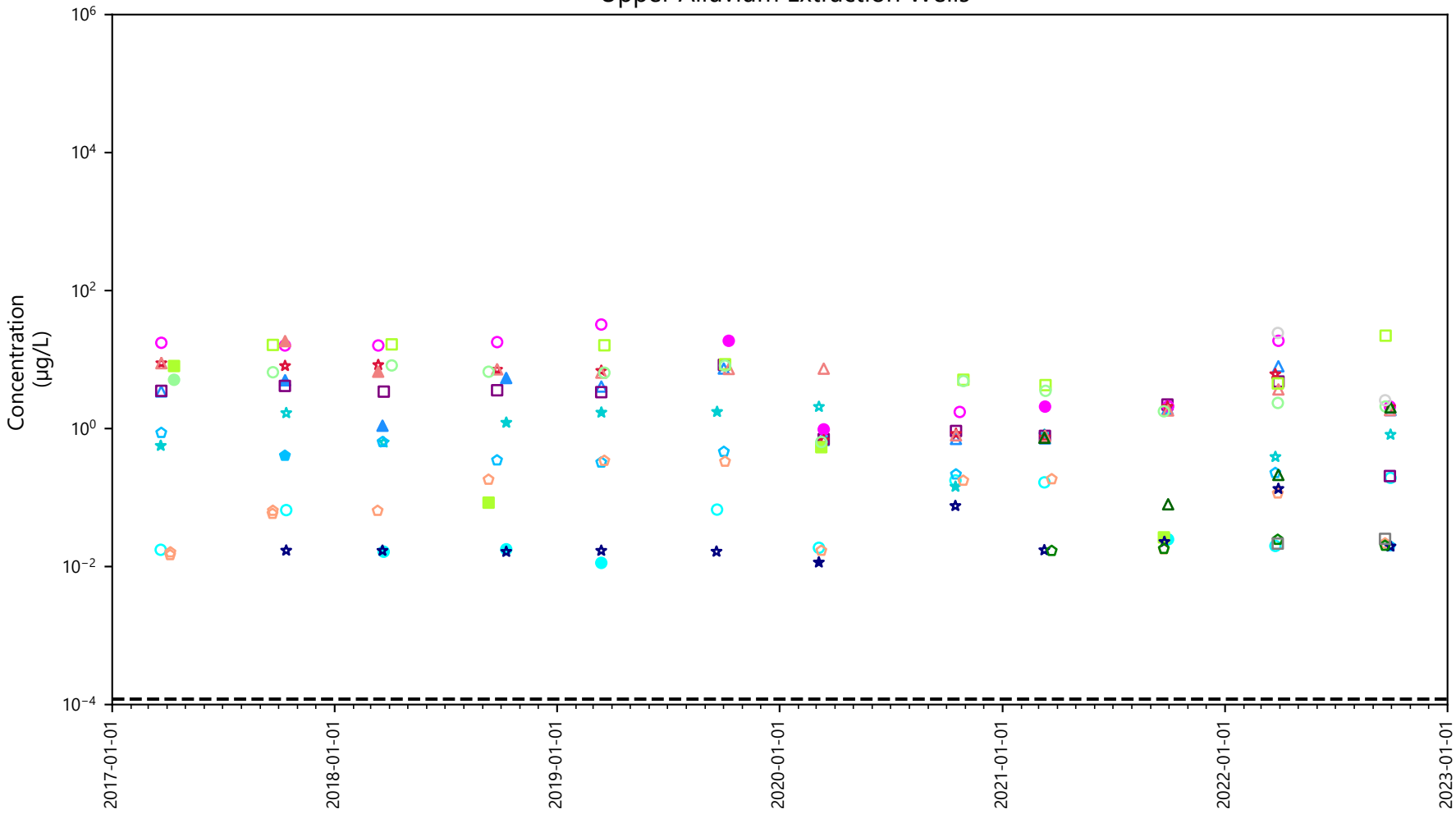
ANCHOR QEA

Benzo(a)pyrene CUL
MW-22U
MW-16-65
MW-12-36
WS-17-52
PZ5-20
MW-05-100
MW-28U
MW-09-29
MW-08-56
MW-15-66

C.3.b.4
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



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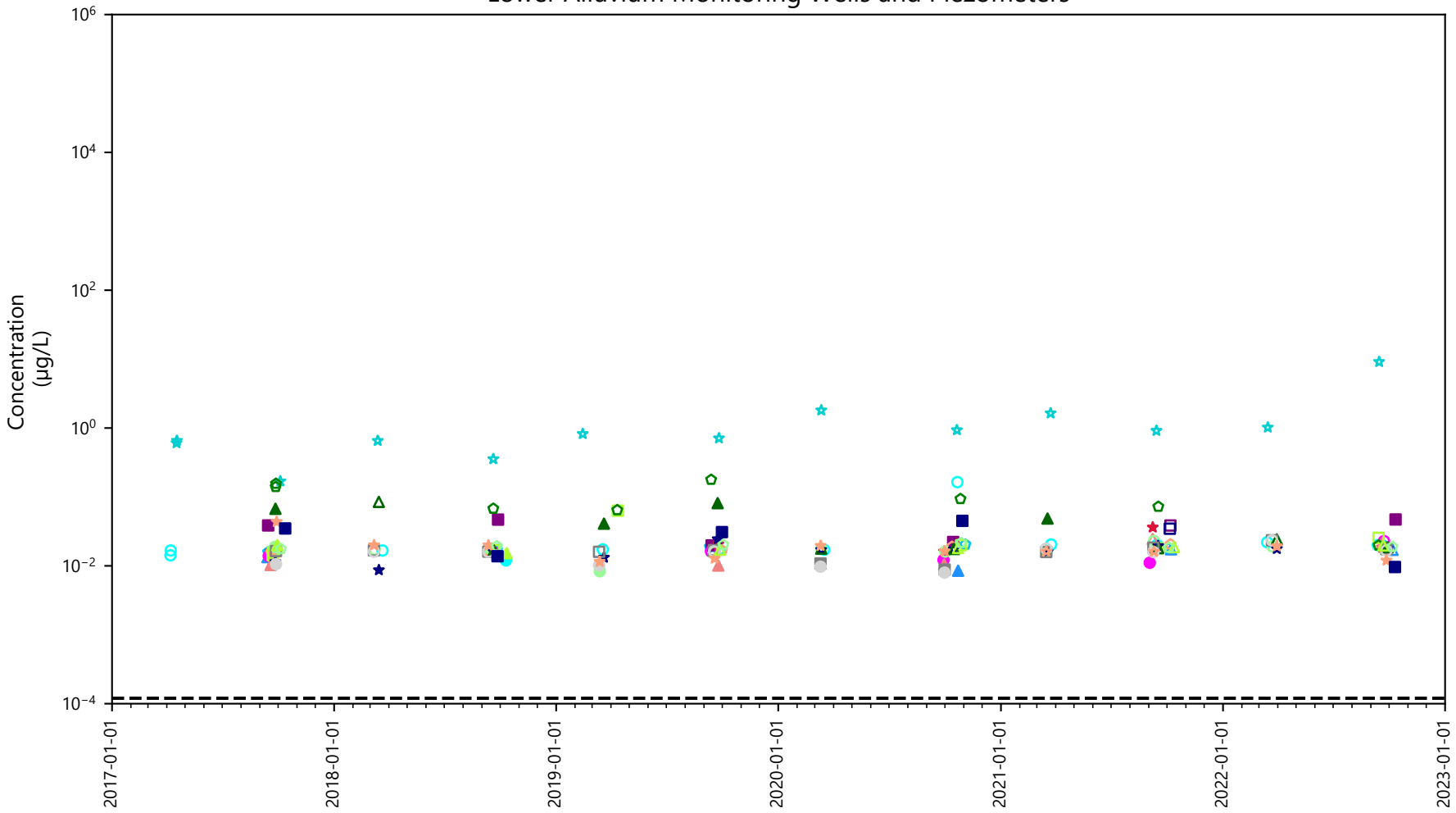
ANCHOR QEA

Benzo(a)pyrene CUL
PW-16U
PW-15U
PW-06U
PW-04U
PW-12U
PW-13U
PW-05U
PW-14U
PW-02U
PW-11U
PW-03U
PW-10U
PW-08Ub
PW-01U
PW-01Uc
PW-11Ub

C.3.b.5
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



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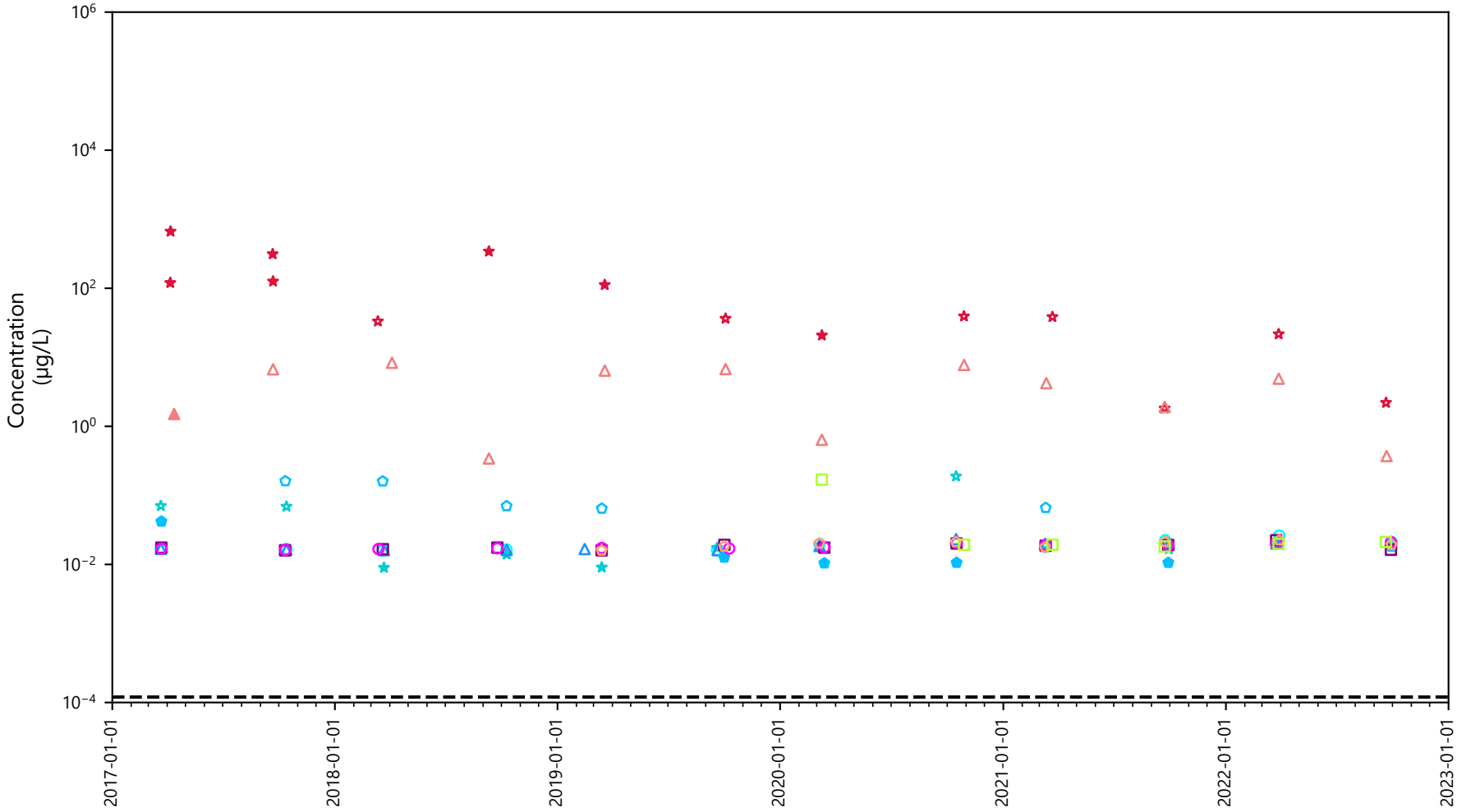
ANCHOR QEA

- Benzo(a)pyrene CUL
- WS-12-125
- NWN-13-106
- MW-14-110
- MW-01-82
- MW-18-125
- MW-19-125
- MW-21-115
- MW-21-75
- MW-04-101
- WS-17-94
- PZ7-100
- PZ9-75
- PZ9-110
- WS-13-105
- PZ5-55
- PZ5-85
- PZ6-115
- MW-20-120
- MW-02-104
- MW-23-123

C.3.b.6
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



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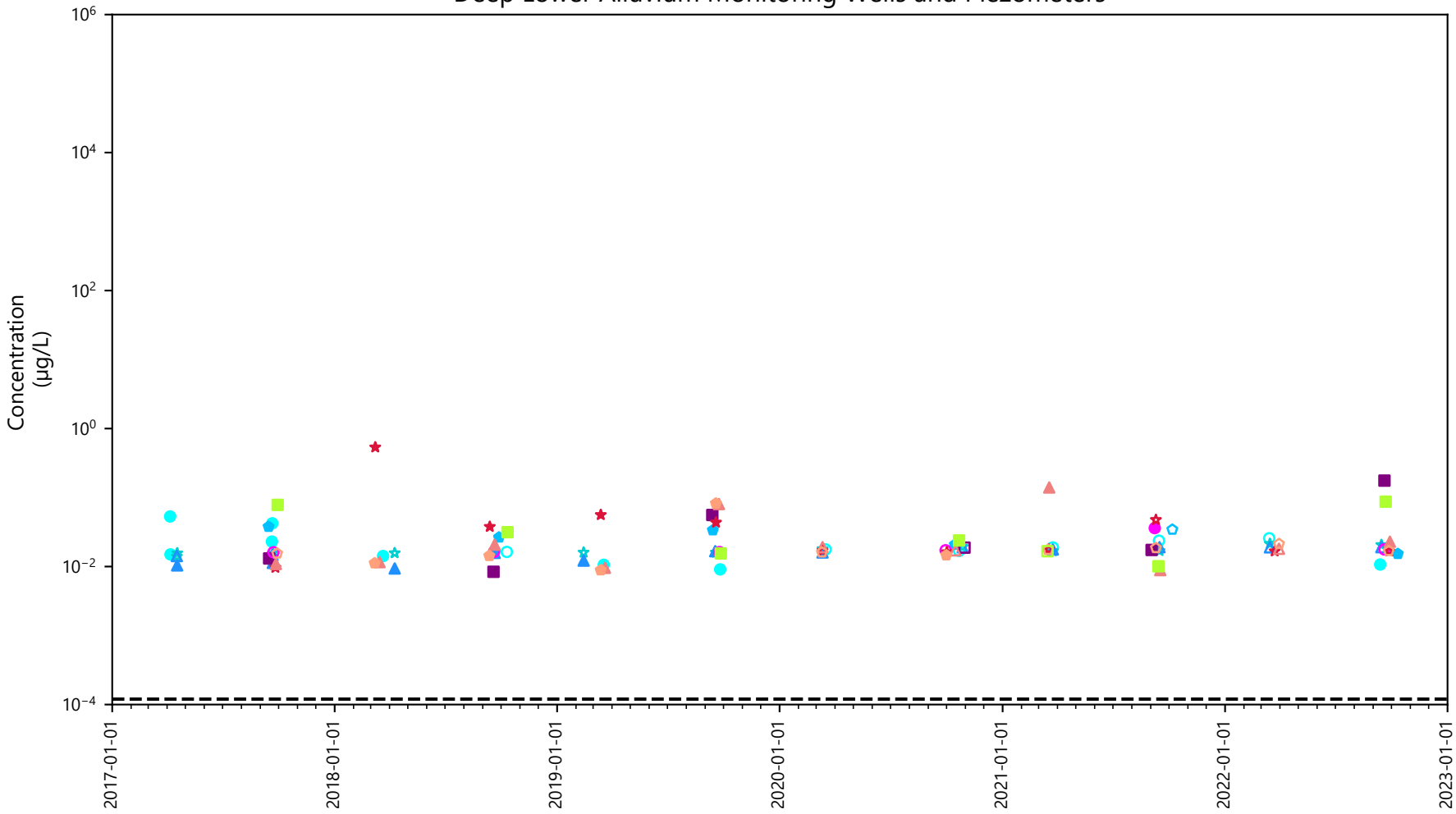
ANCHOR QEA

Benzo(a)pyrene CUL
PW-09-92
PW-08-68
PW-07-93
PW-06L
PW-04L
PW-05L
PW-02L
PW-03-118
PW-10Lb
PW-01Lb

C.3.b.7
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



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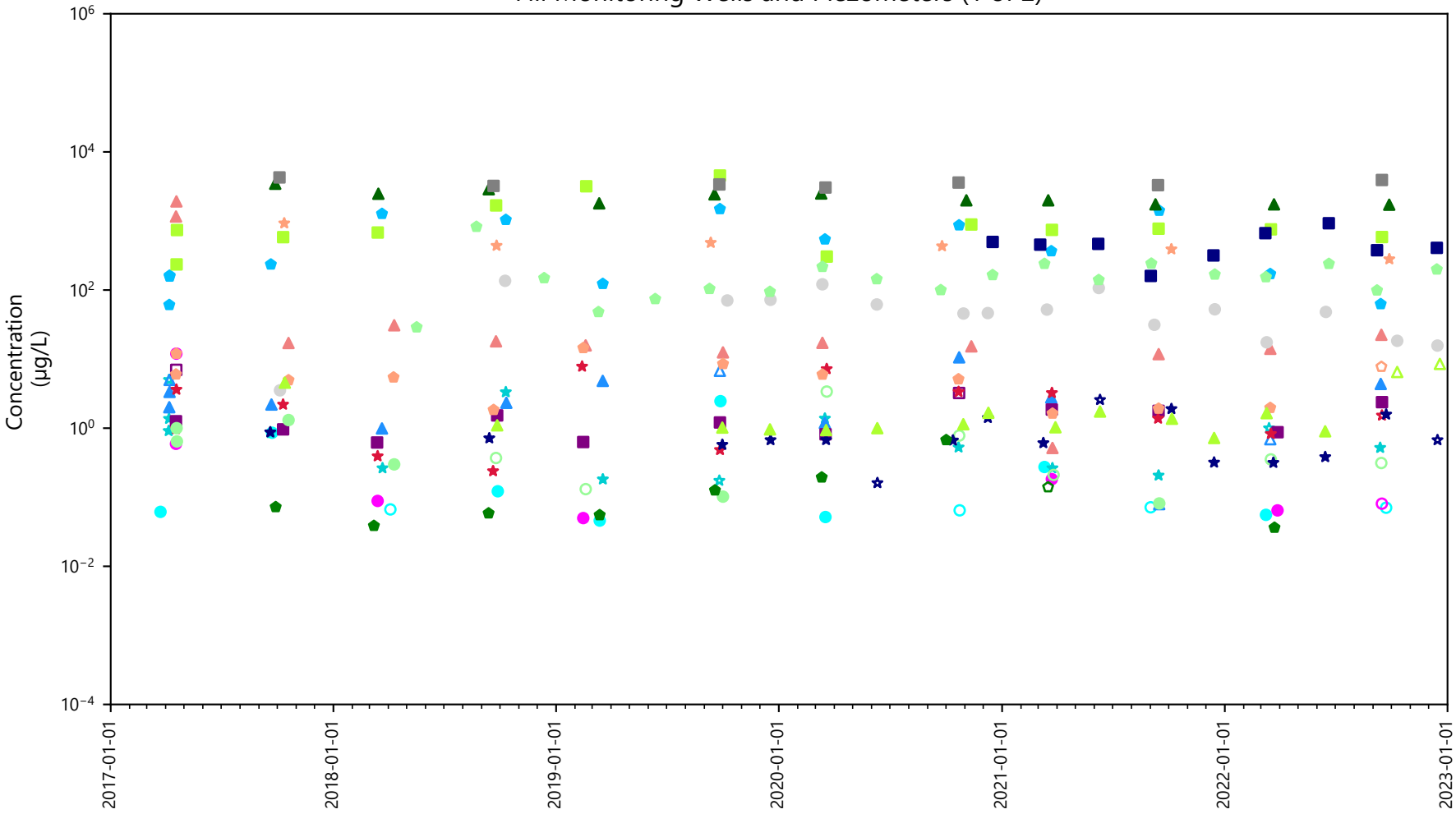
ANCHOR QEA

Benzo(a)pyrene CUL
WS-47-183
WS-12-161
WS-16-161
MW-18-180
MW-19-180
MW-21-165
PZ7-150
PZ9-150
PZ6-150
MW-05-175

C.3.b.8
Benzo(a)pyrene Concentration
2022 HC&C System Annual Report
Gasco OU



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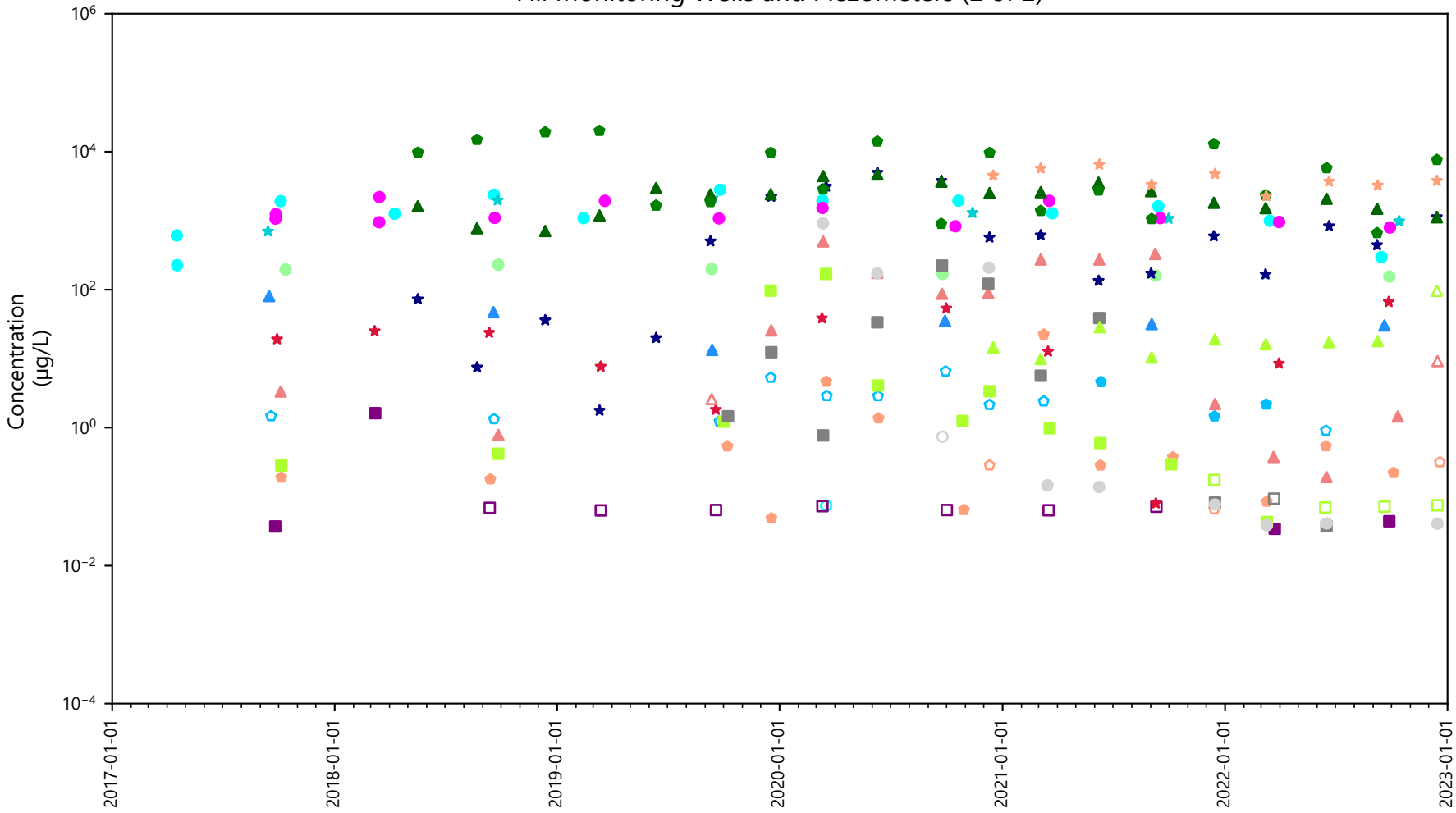
ANCHOR QEA

MW-40F, MW-42F, OW-1F, OW-2F, NWN-02-20, NWN-03-17, NWN-07-30, NWN-09-31, WS-08-33, NWN-11-24, WS-09-34, MW-04-35, PZ8-5, PZ5-5, NWN-01-20, OW-5F, MW-01-22, MW-23-27, MW-46F, MW-51F

C.3.c.1
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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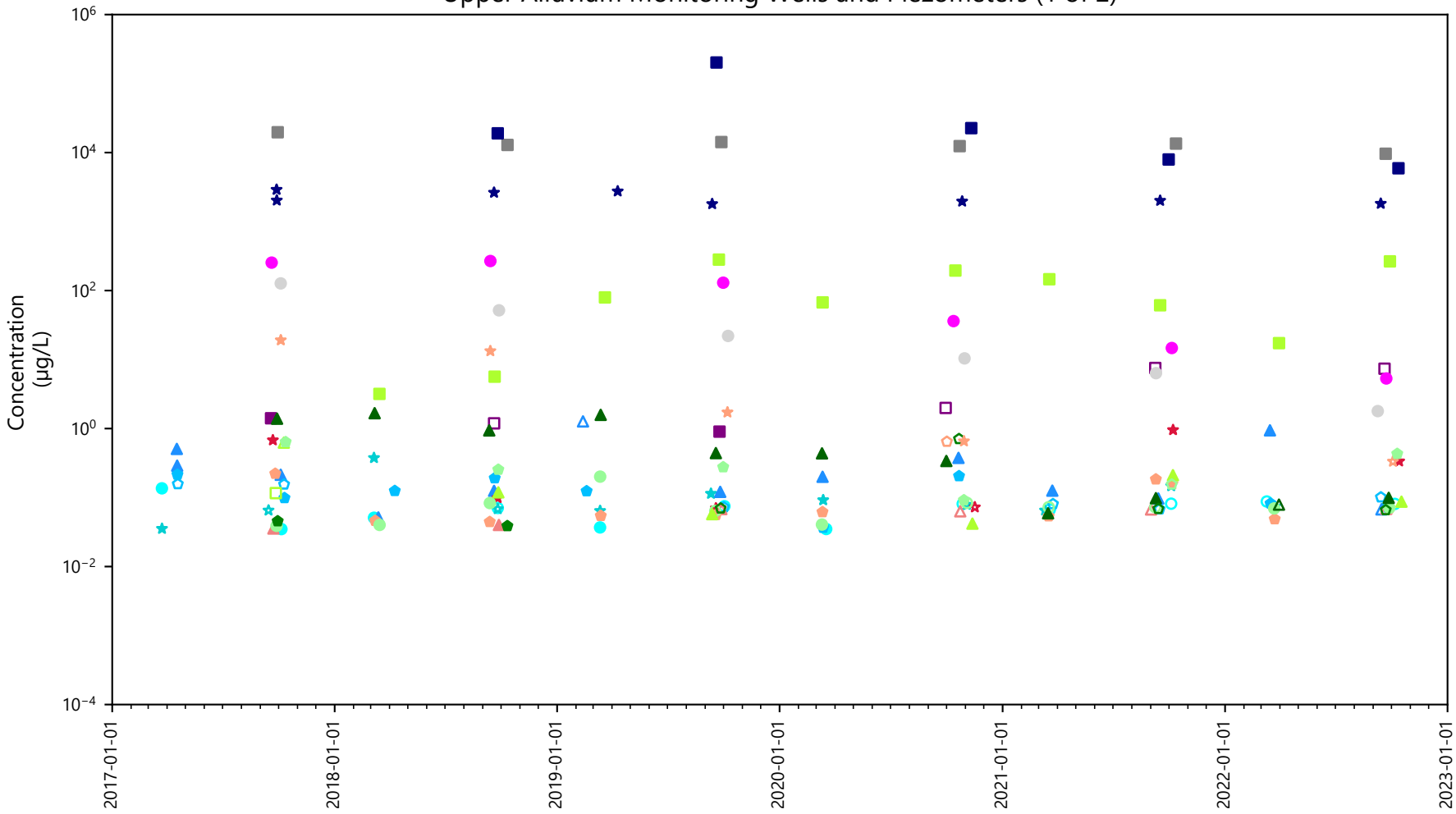
ANCHOR QEA

NWN-13-23, MW-08-29, MW-19-22, MW-21-12, PZ7-5, PZ9-5, PZ6-5, OW-7-17, MW-03-26, MW-02-32, OW-10F, MW-49F, MW-47F, MW-48F, OW-8-15, OW-9-25, MW-52F, MW-53F

C.3.c.2
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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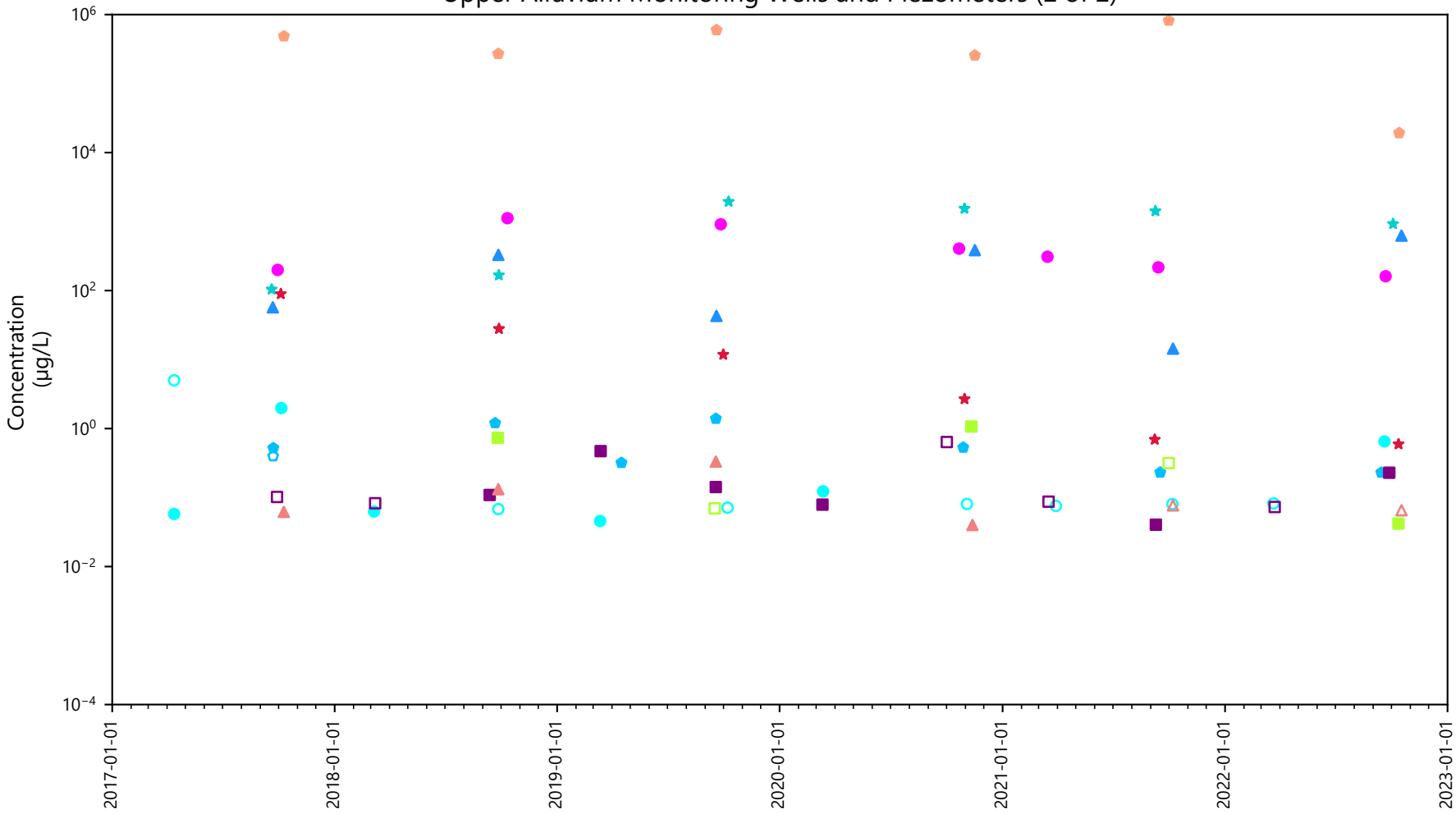
ANCHOR QEA

MW-02-61, MW-01-55, NWN-13-73, WS-08-59, MW-21U, MW-04-57, MW-07-60, MW-41U, PZ7-50, PZ9-50, PZ8-50, WS-13-69, PZ6-50, MW-05-32, MW-34U, MW-31U, MW-03-56, MW-10-61, MW-23U, MW-15-50

C.3.c.3
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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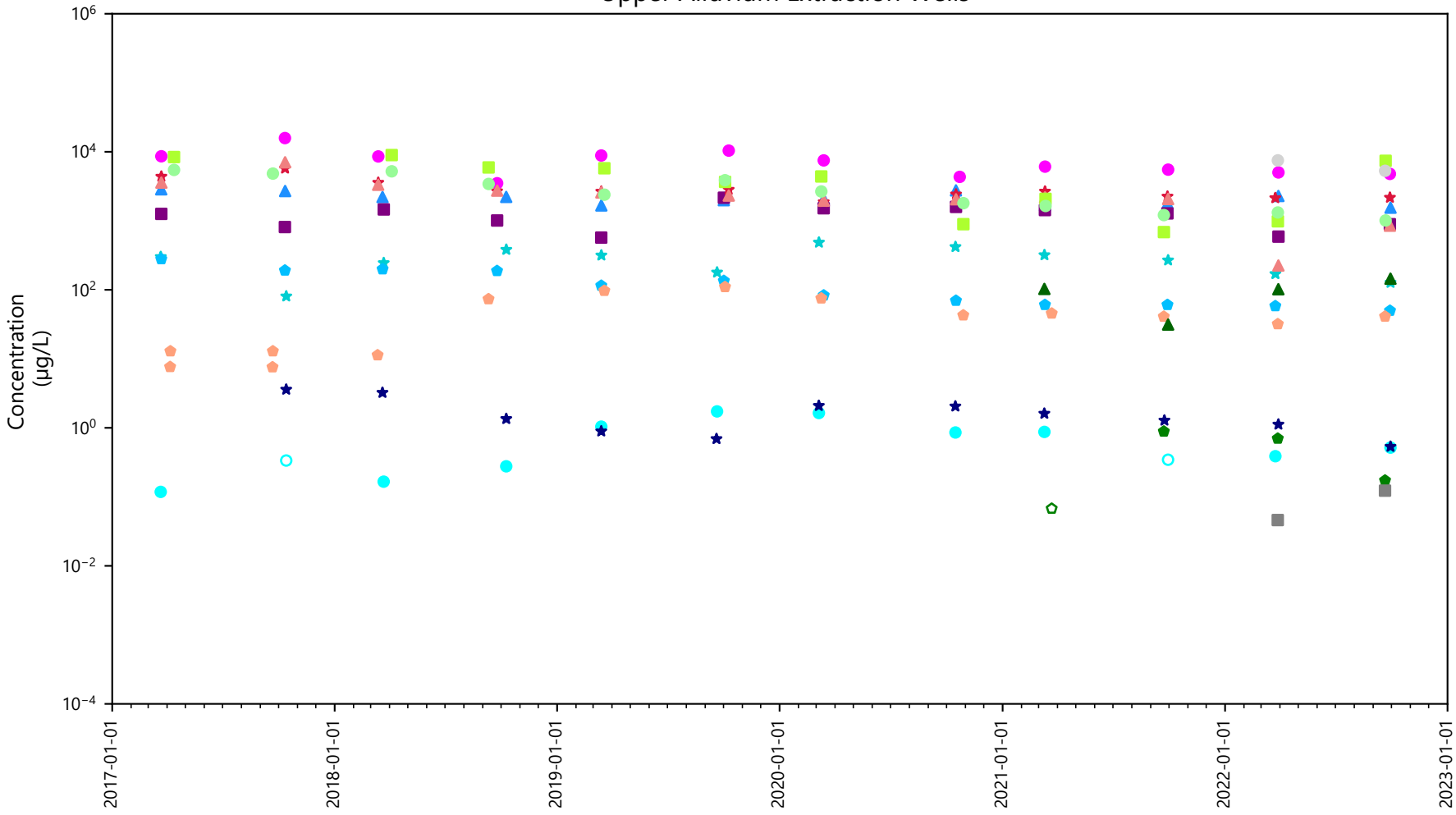
ANCHOR QEA

MW-22U MW-12-36 PZ5-20 MW-28U MW-08-56
MW-16-65 WS-17-52 MW-05-100 MW-09-29 MW-15-66

C.3.c.4
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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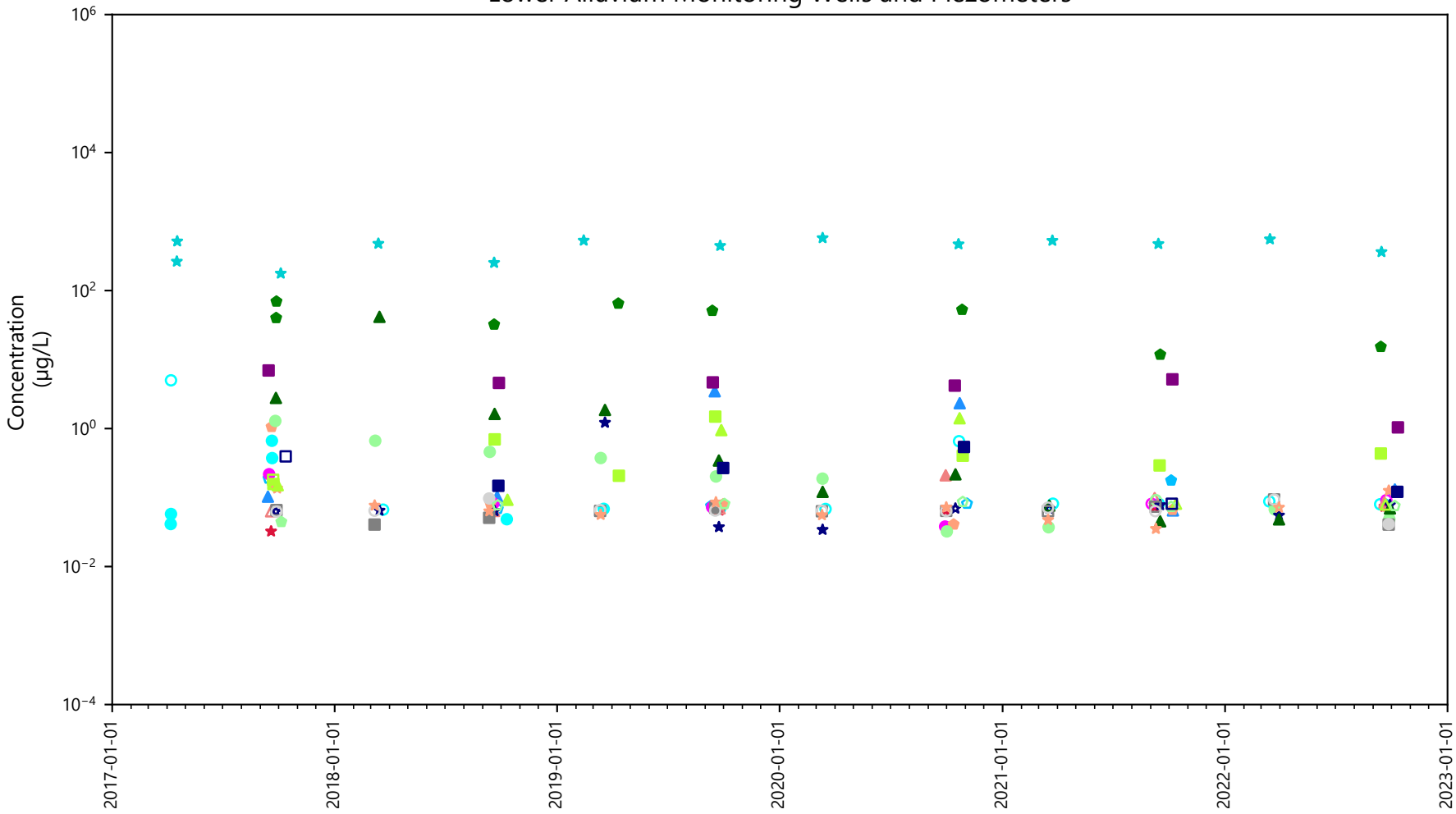
ANCHOR QEA

PW-16U PW-12U PW-14U PW-03U PW-01U
PW-15U PW-13U PW-02U PW-10U PW-01Uc
PW-06U PW-05U PW-11U PW-08Ub PW-11Ub
PW-04U

C.3.c.5
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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ANCHOR QEA

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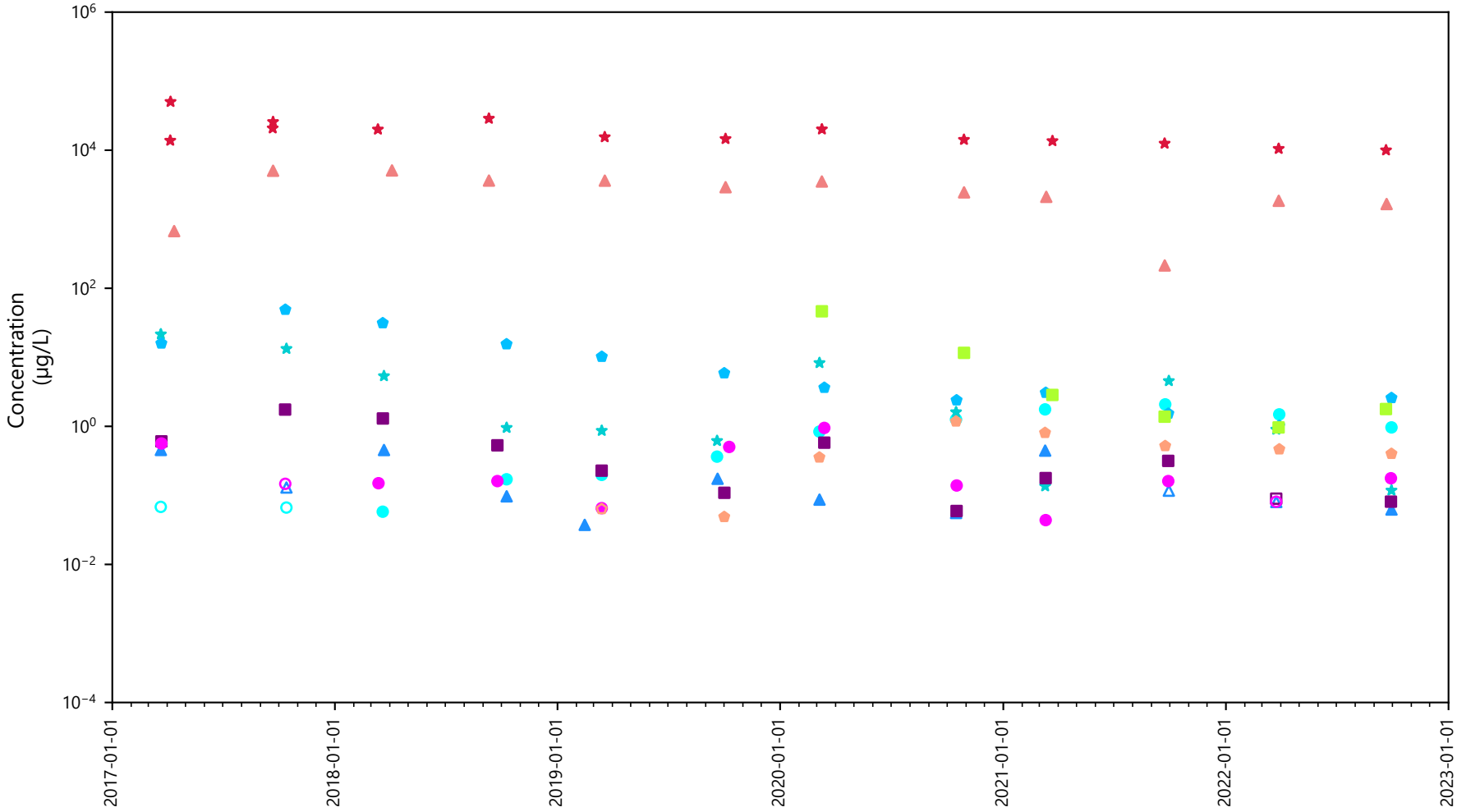
C.3.c.6
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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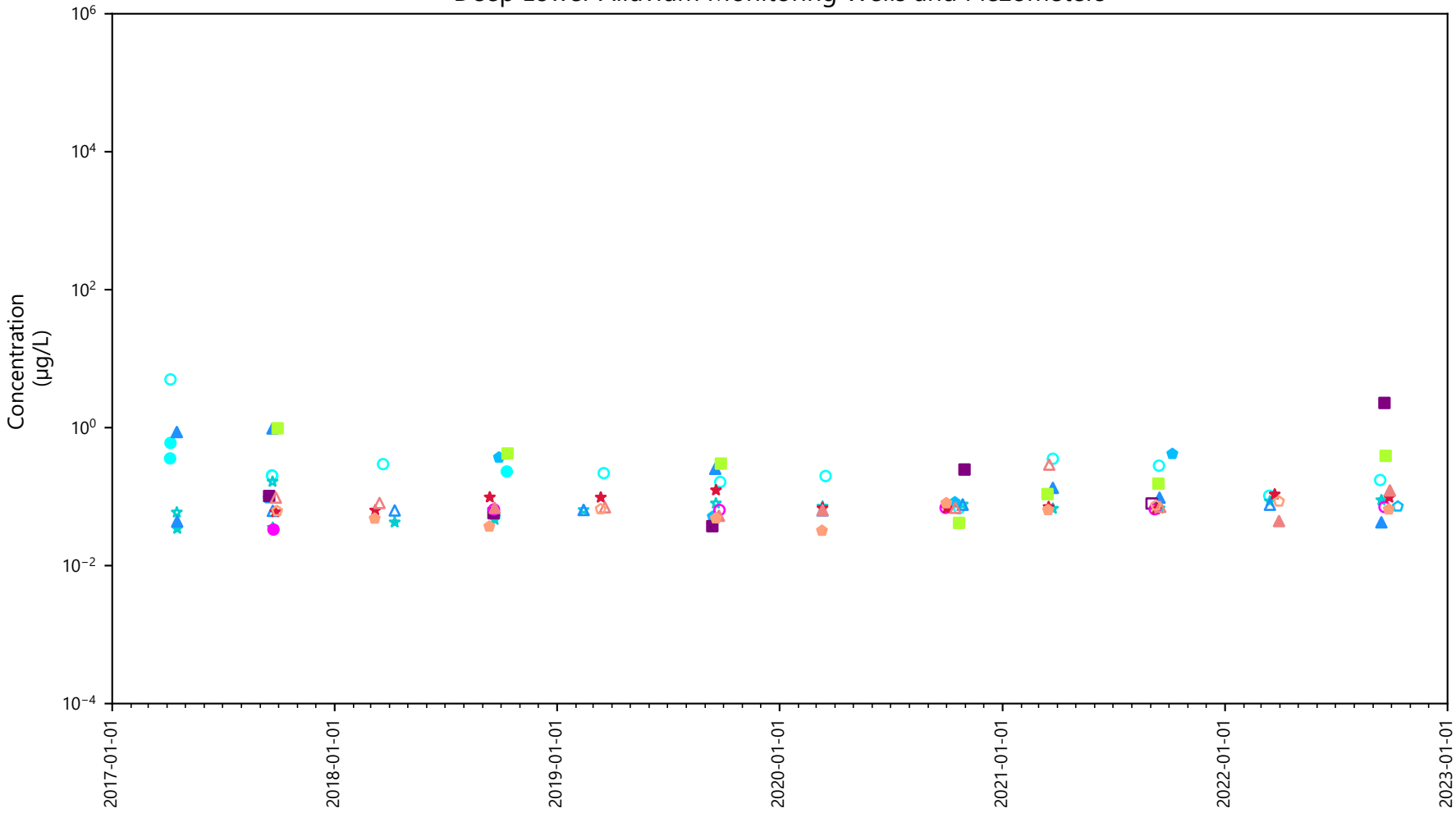
ANCHOR QEA

PW-09-92 PW-07-93 PW-04L PW-02L PW-10Lb
PW-08-68 PW-06L PW-05L PW-03-118 PW-01Lb

C.3.c.7
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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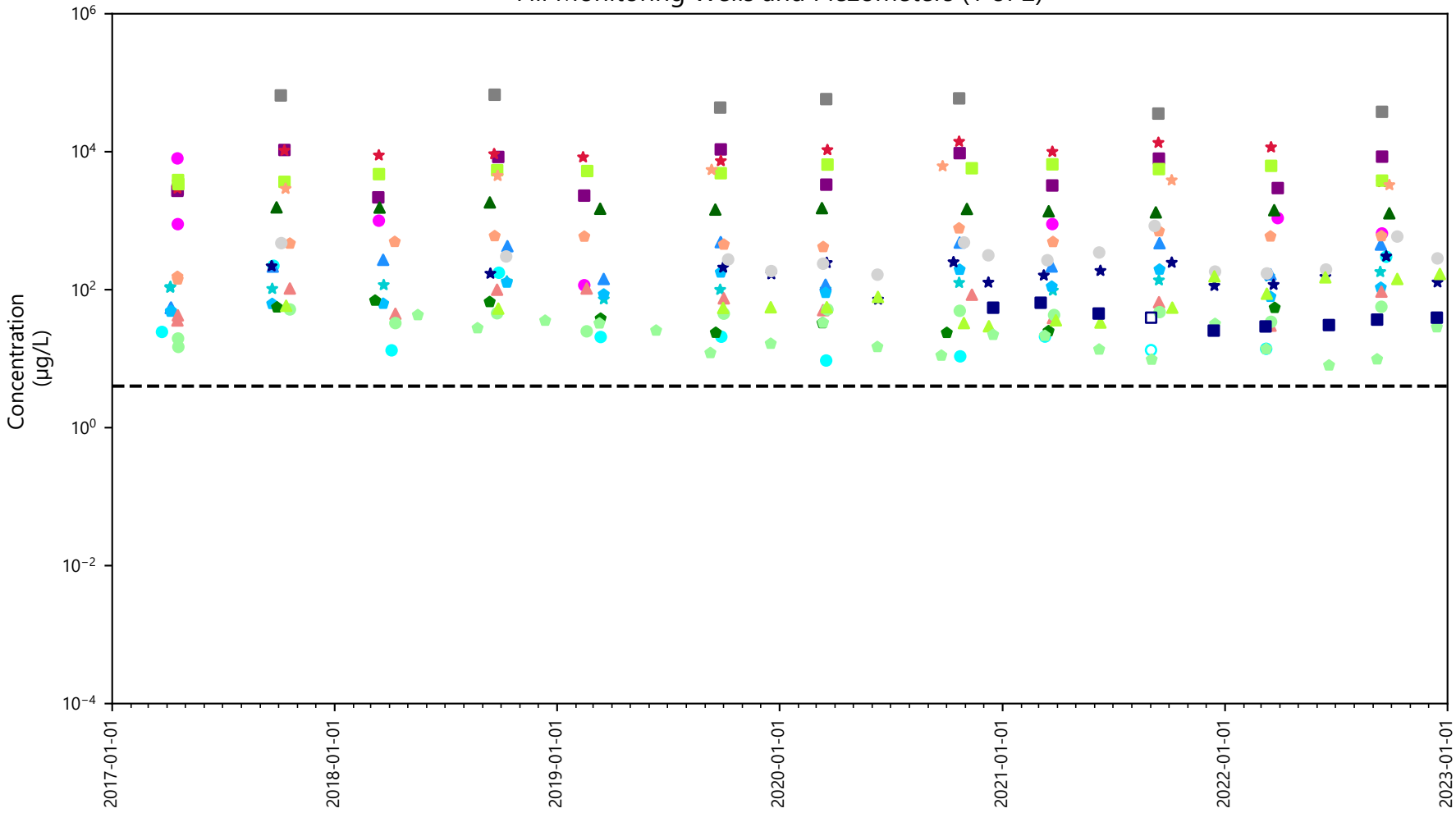
ANCHOR QEA

WS-47-183 WS-16-161 MW-19-180 PZ7-150 PZ6-150
WS-12-161 MW-18-180 MW-21-165 PZ9-150 MW-05-175

C.3.c.8
Naphthalene Concentration
2022 HC&C System Annual Report
Gasco OU



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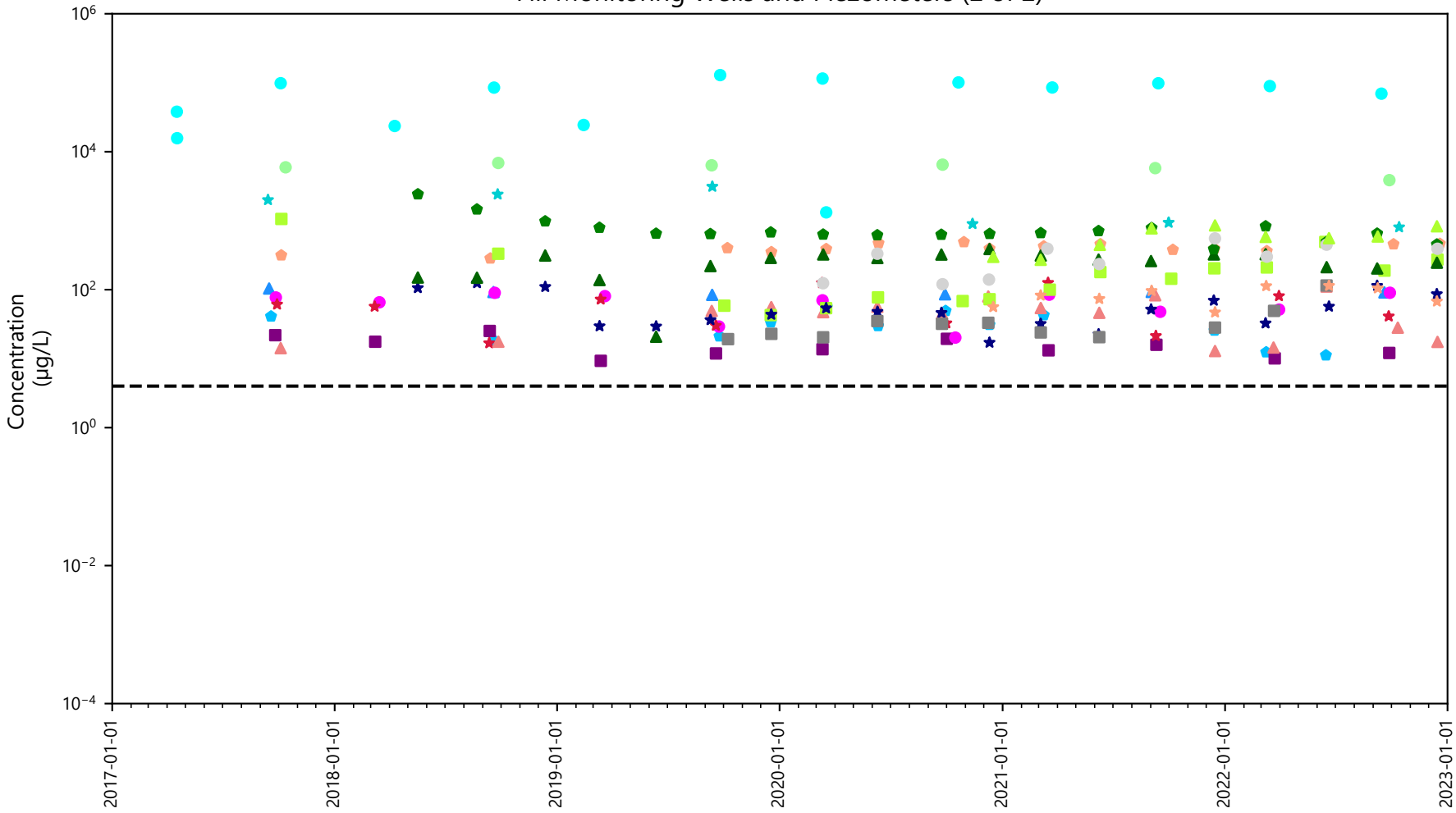
ANCHOR QEA

- Cyanide CUL
- MW-40F
- MW-42F
- OW-1F
- OW-2F
- NWN-02-20
- NWN-03-17
- NWN-07-30
- NWN-09-31
- WS-08-33
- NWN-11-24
- WS-09-34
- MW-04-35
- PZ8-5
- PZ5-5
- NWN-01-20
- OW-5F
- MW-01-22
- MW-23-27
- MW-46F
- MW-51F

C.3.d.1
Cyanide Concentration
2022 HC&C System Annual Report
Gasco OU



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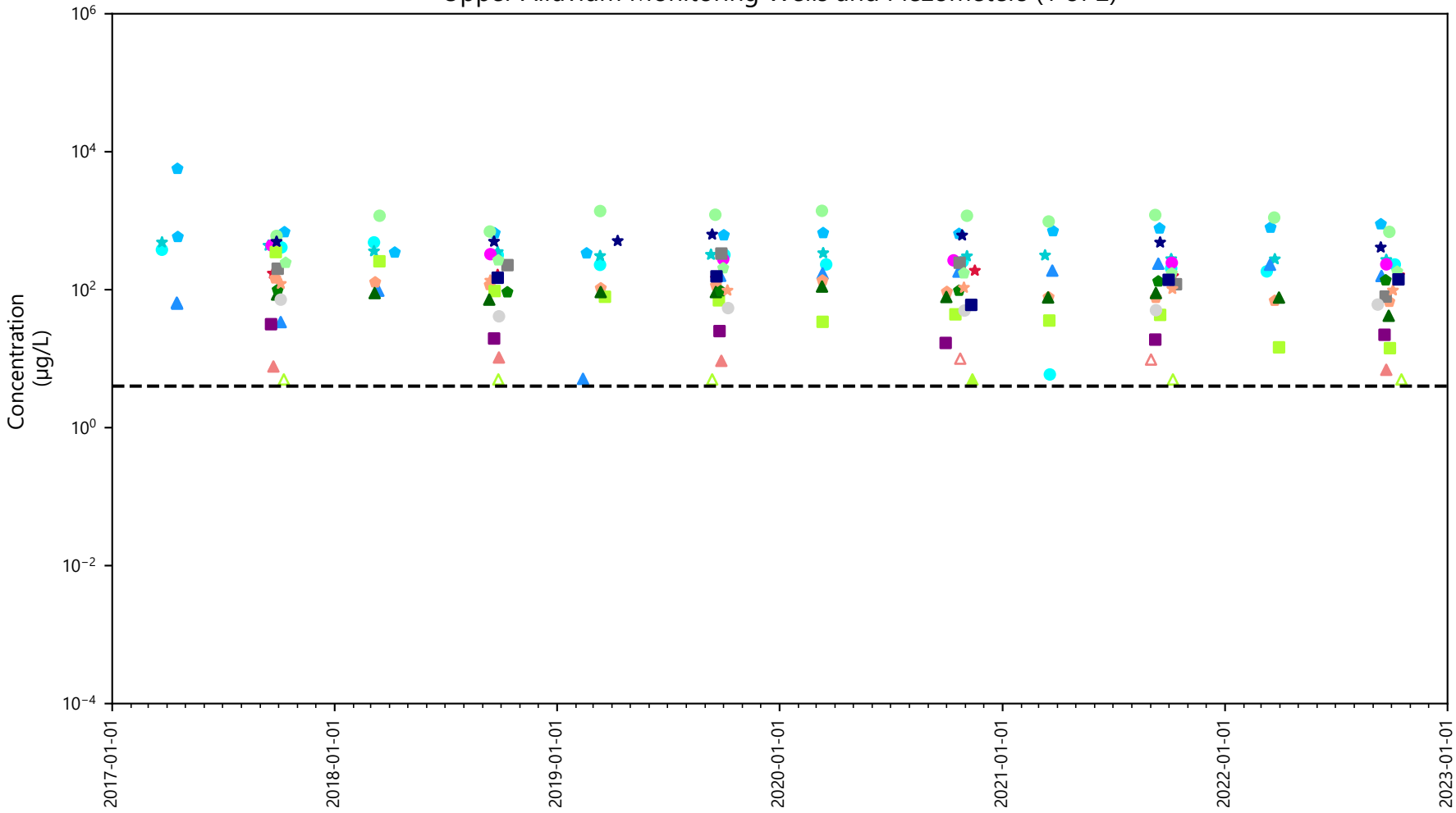
ANCHOR QEA

Cyanide CUL
NWN-13-23
MW-08-29
MW-19-22
MW-21-12
PZ7-5
PZ9-5
PZ6-5
OW-7-17
MW-03-26
MW-02-32
OW-10F
MW-49F
MW-47F
MW-48F
OW-8-15
OW-9-25
MW-52F
MW-53F

C.3.d.2
Cyanide Concentration
2022 HC&C System Annual Report
Gasco OU



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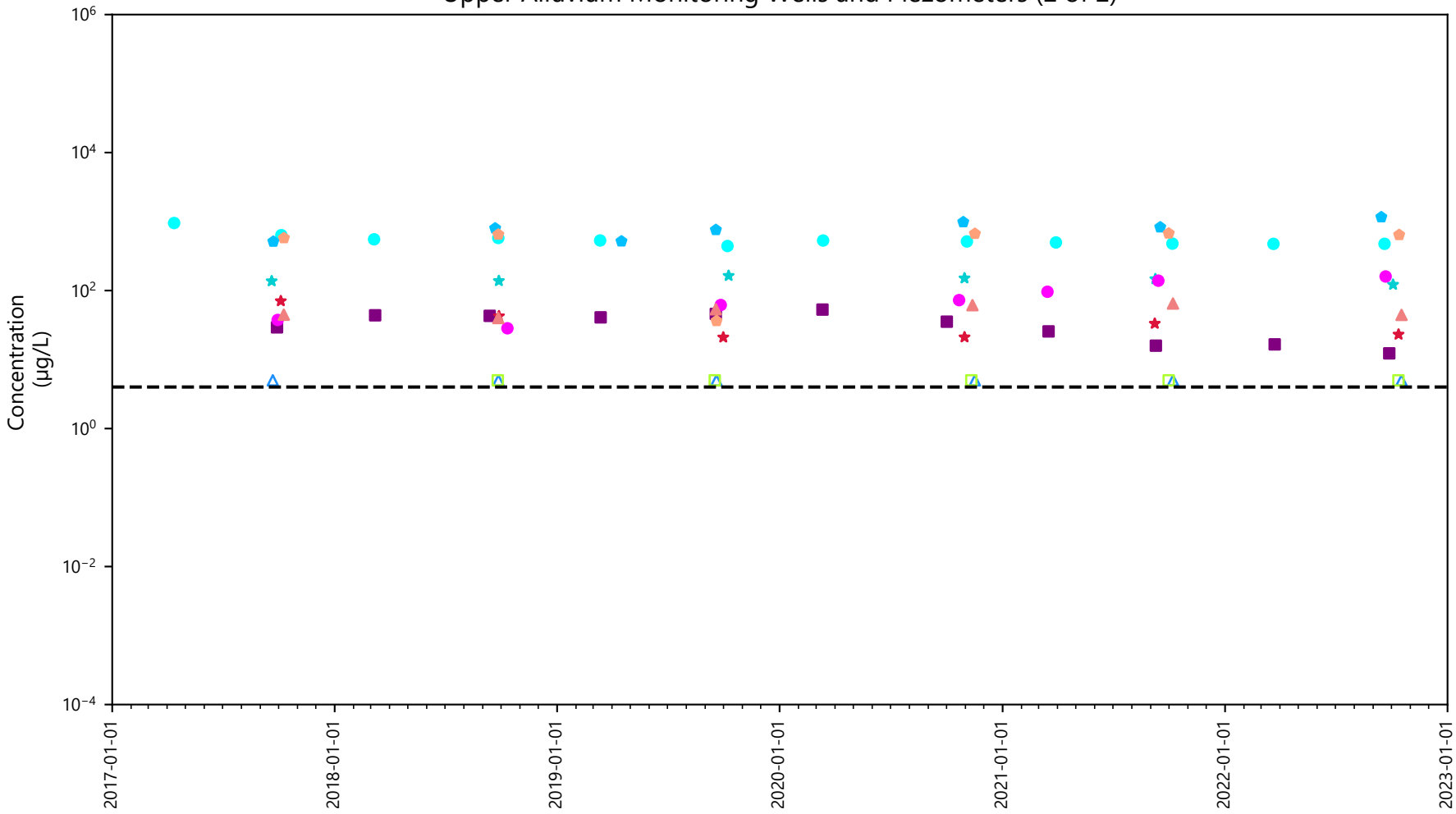
ANCHOR QEA

Cyanide CUL
MW-02-61
MW-01-55
NWN-13-73
WS-08-59
MW-21U
MW-04-57
MW-07-60
MW-41U
PZ7-50
PZ9-50
PZ8-50
WS-13-69
PZ6-50
MW-05-32
MW-34U
MW-31U
MW-03-56
MW-10-61
MW-23U
MW-15-50

C.3.d.3
Cyanide Concentration
2022 HC&C System Annual Report
Gasco OU



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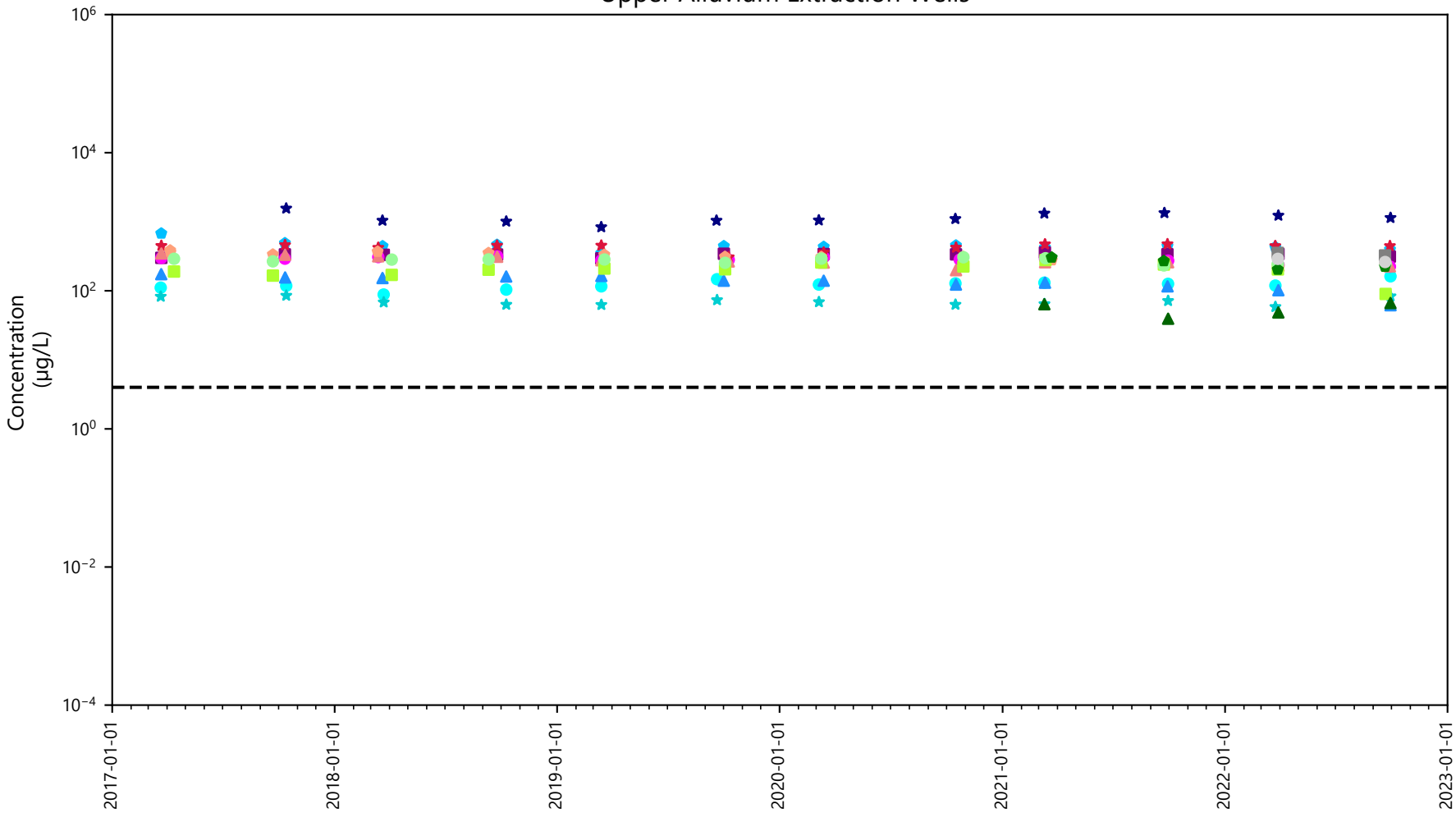
ANCHOR QEA

Cyanide CUL
MW-22U
MW-16-65
MW-12-36
WS-17-52
PZ5-20
MW-05-100
MW-28U
MW-09-29
MW-08-56
MW-15-66

C.3.d.4
Cyanide Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
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µg/L= micrograms per liter
CUL= Cleanup Level

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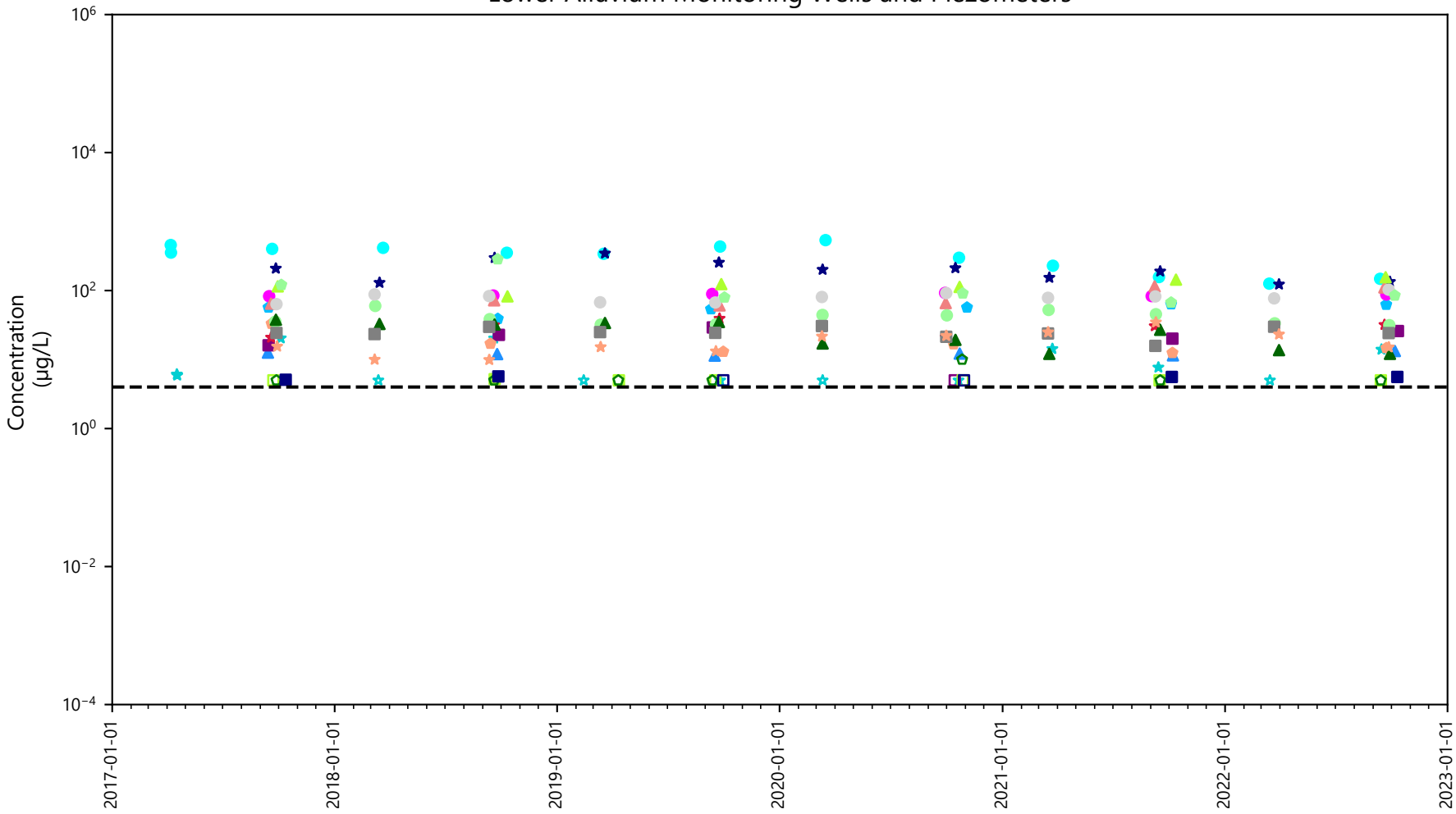
ANCHOR QEA

Cyanide CUL
PW-16U
PW-15U
PW-06U
PW-04U
PW-12U
PW-13U
PW-05U
PW-14U
PW-02U
PW-11U
PW-03U
PW-10U
PW-08Ub
PW-01U
PW-01Uc
PW-11Ub

C.3.d.5
Cyanide Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
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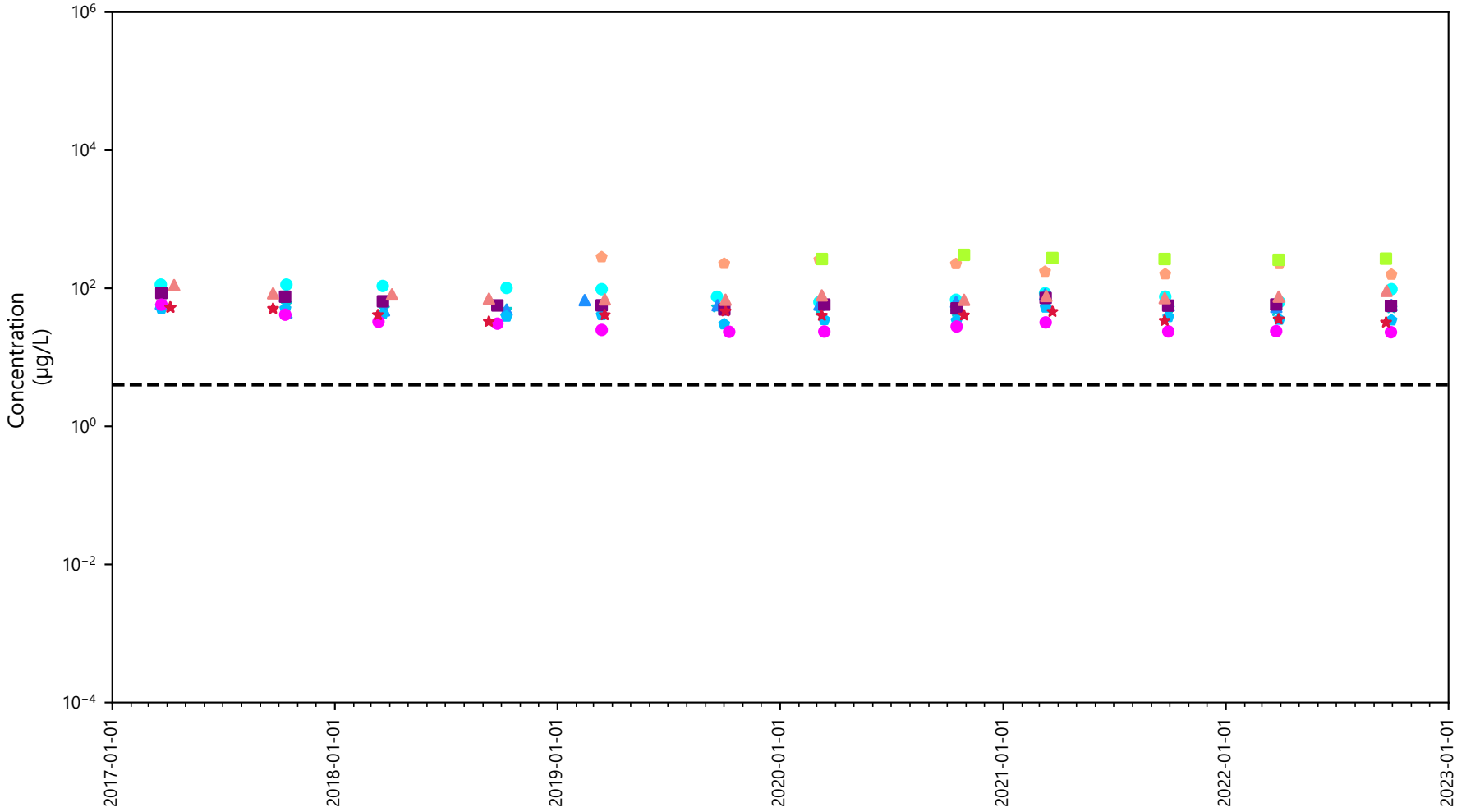
ANCHOR QEA

- Cyanide CUL
- WS-12-125
- NWN-13-106
- MW-14-110
- MW-01-82
- MW-18-125
- MW-19-125
- MW-21-115
- MW-21-75
- MW-04-101
- WS-17-94
- PZ7-100
- PZ9-75
- PZ9-110
- WS-13-105
- PZ5-55
- PZ5-85
- PZ6-115
- MW-20-120
- MW-02-104
- MW-23-123

C.3.d.6
Cyanide Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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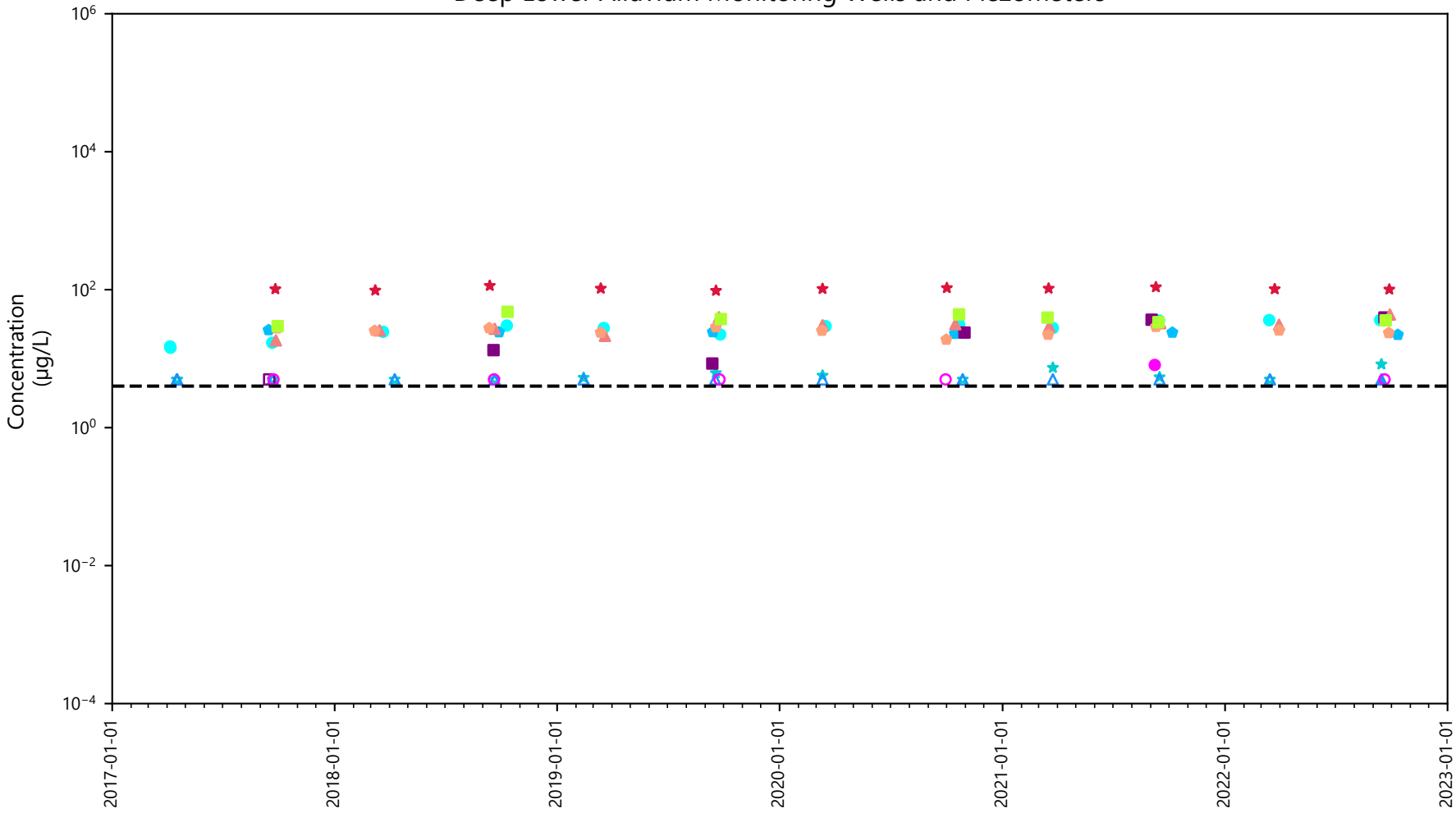
ANCHOR QEA

Cyanide CUL
PW-09-92
PW-08-68
PW-07-93
PW-06L
PW-04L
PW-05L
PW-02L
PW-03-118
PW-10Lb
PW-01Lb

C.3.d.7
Cyanide Concentration
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
CUL= Cleanup Level

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ANCHOR QEA

Cyanide CUL
WS-47-183
WS-12-161
WS-16-161
MW-18-180
MW-19-180
MW-21-165
PZ7-150
PZ9-150
PZ6-150
MW-05-175

C.3.d.8
Cyanide Concentration
2022 HC&C System Annual Report
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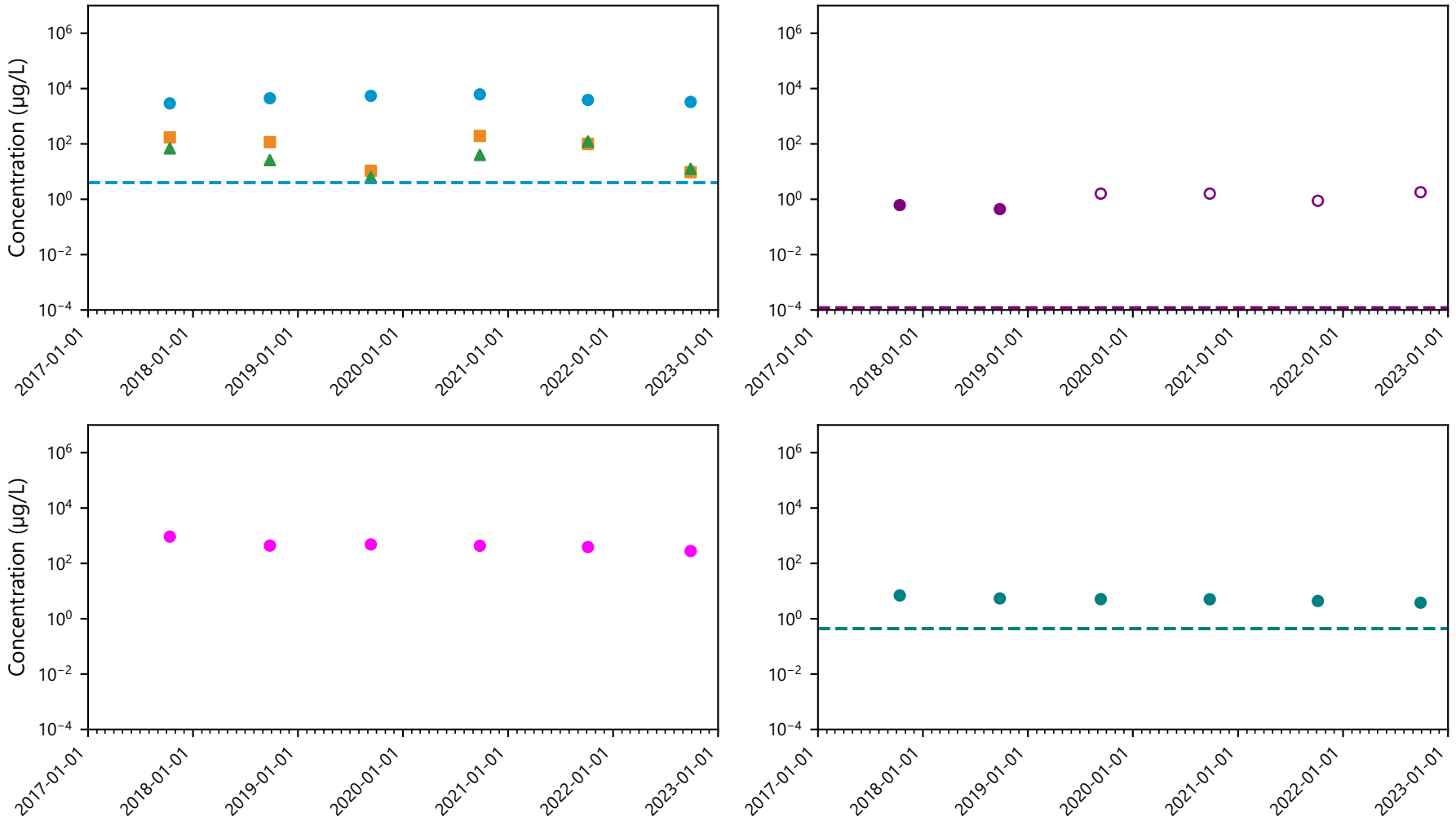
Appendix C4
Concentrations of Contaminants for Individual Wells



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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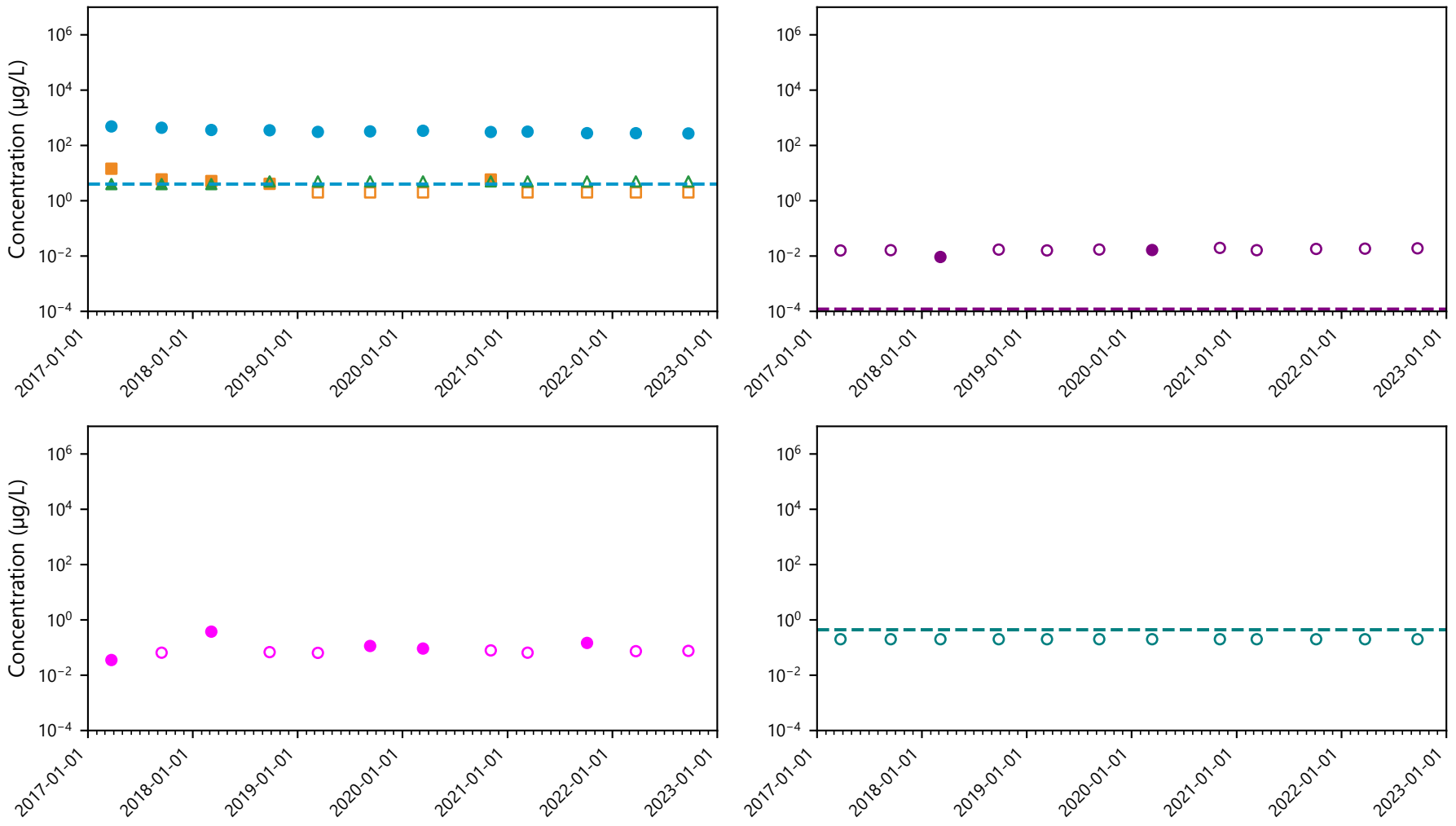
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.1
Monitoring Wells and Piezometers: MW-01-22
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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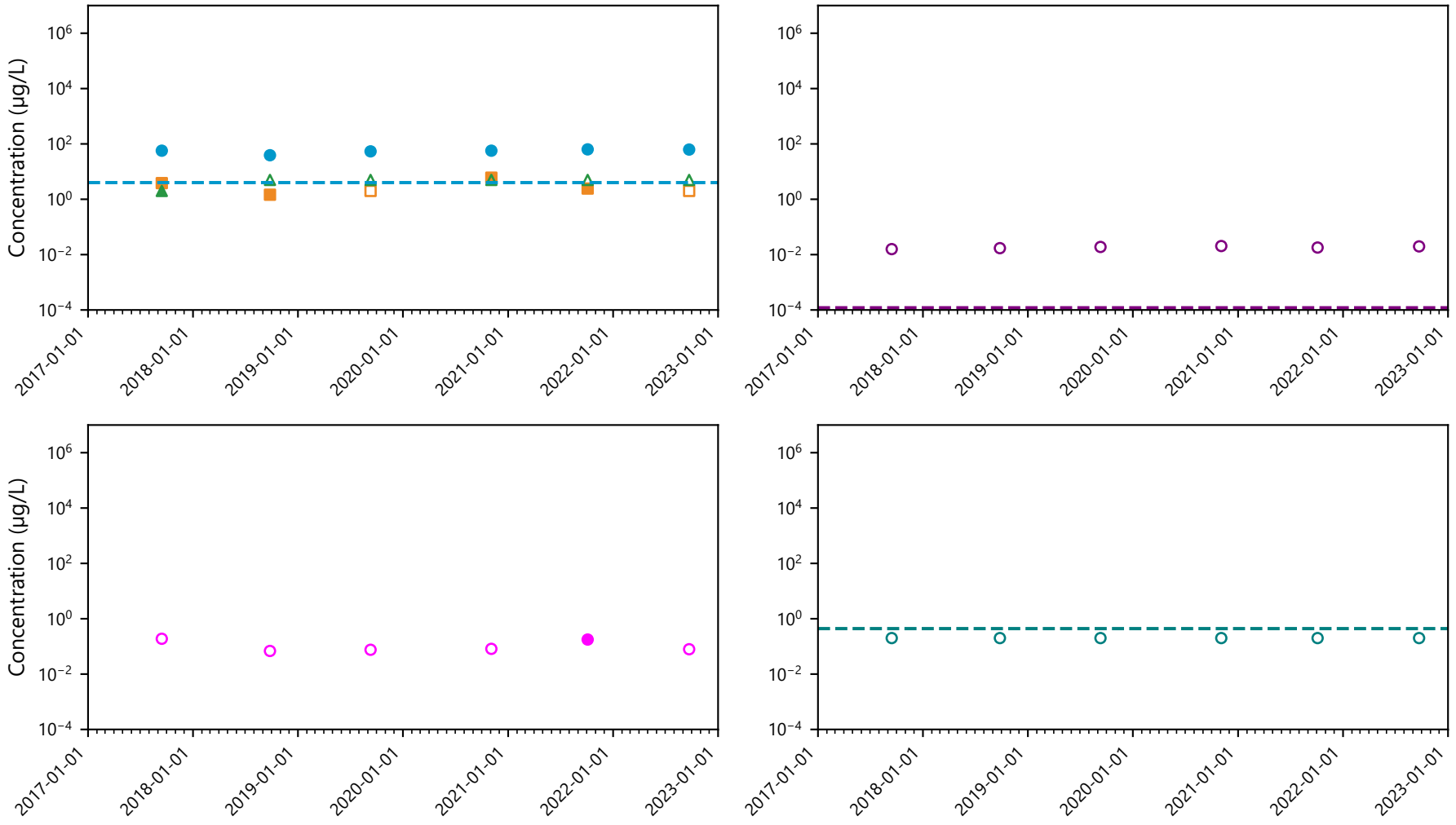
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.2
Monitoring Wells and Piezometers: MW-01-55
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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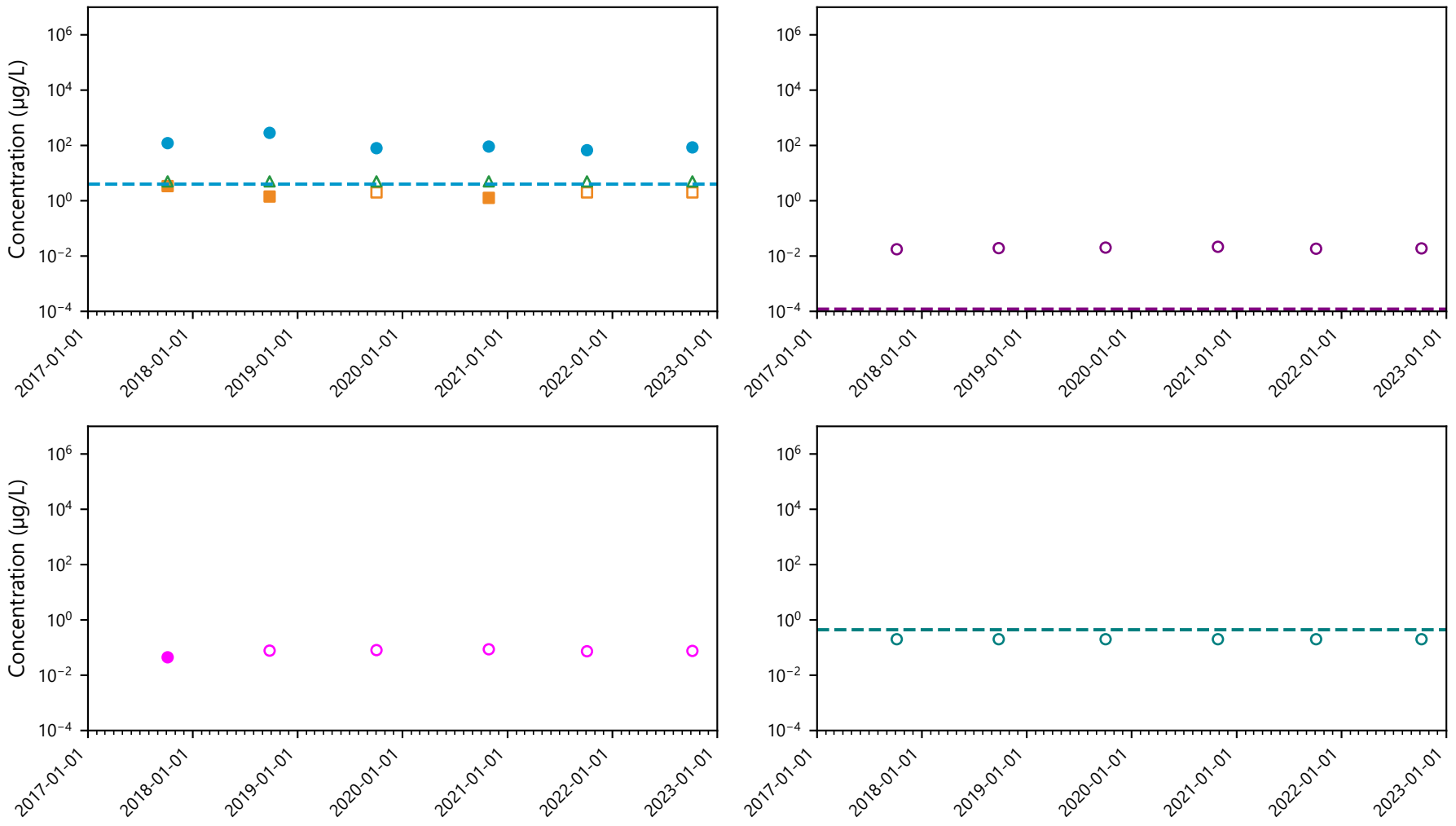
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.3
Monitoring Wells and Piezometers: MW-01-82
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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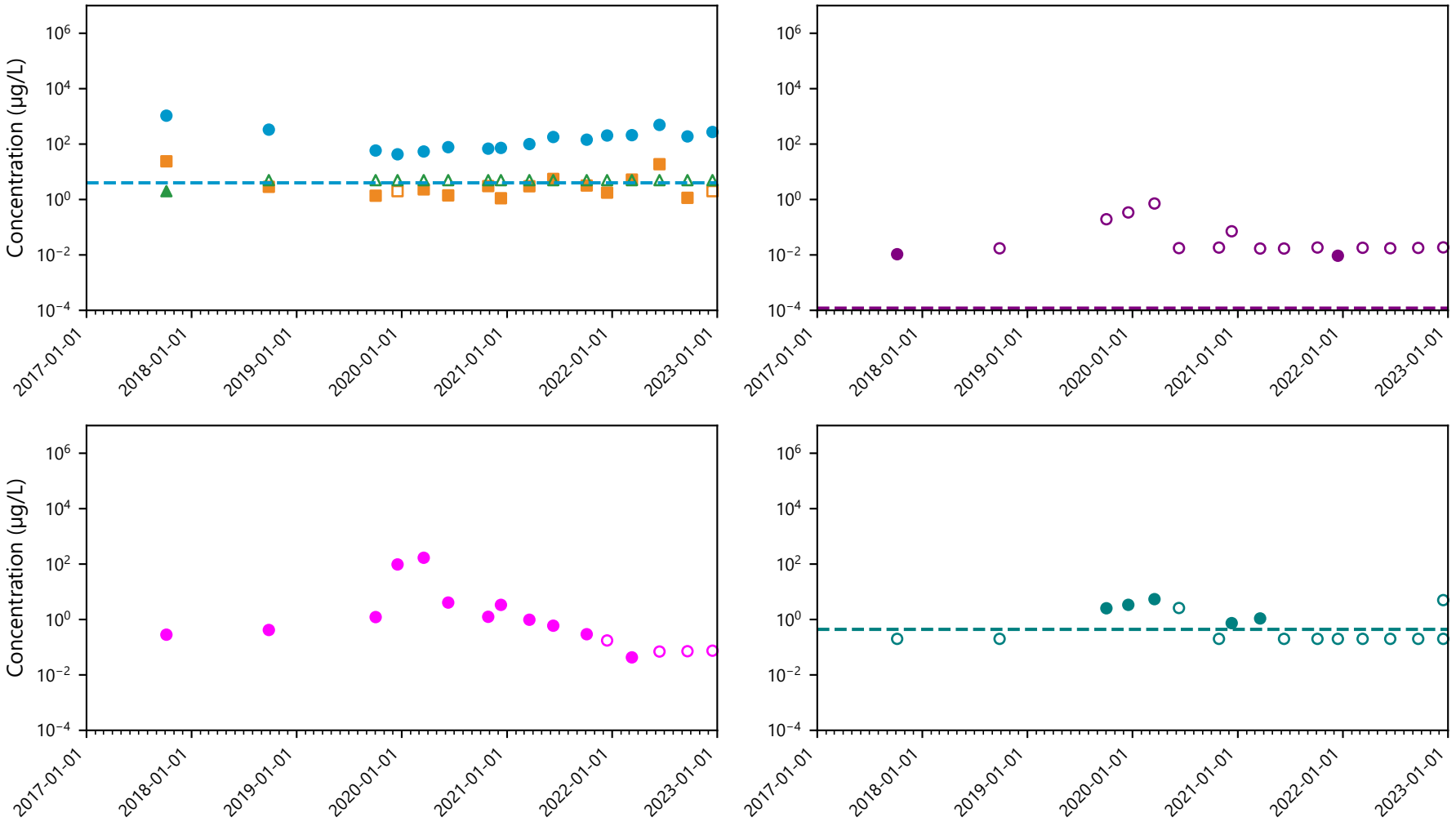
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.4
Monitoring Wells and Piezometers: MW-02-104
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
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CUL= Cleanup Level

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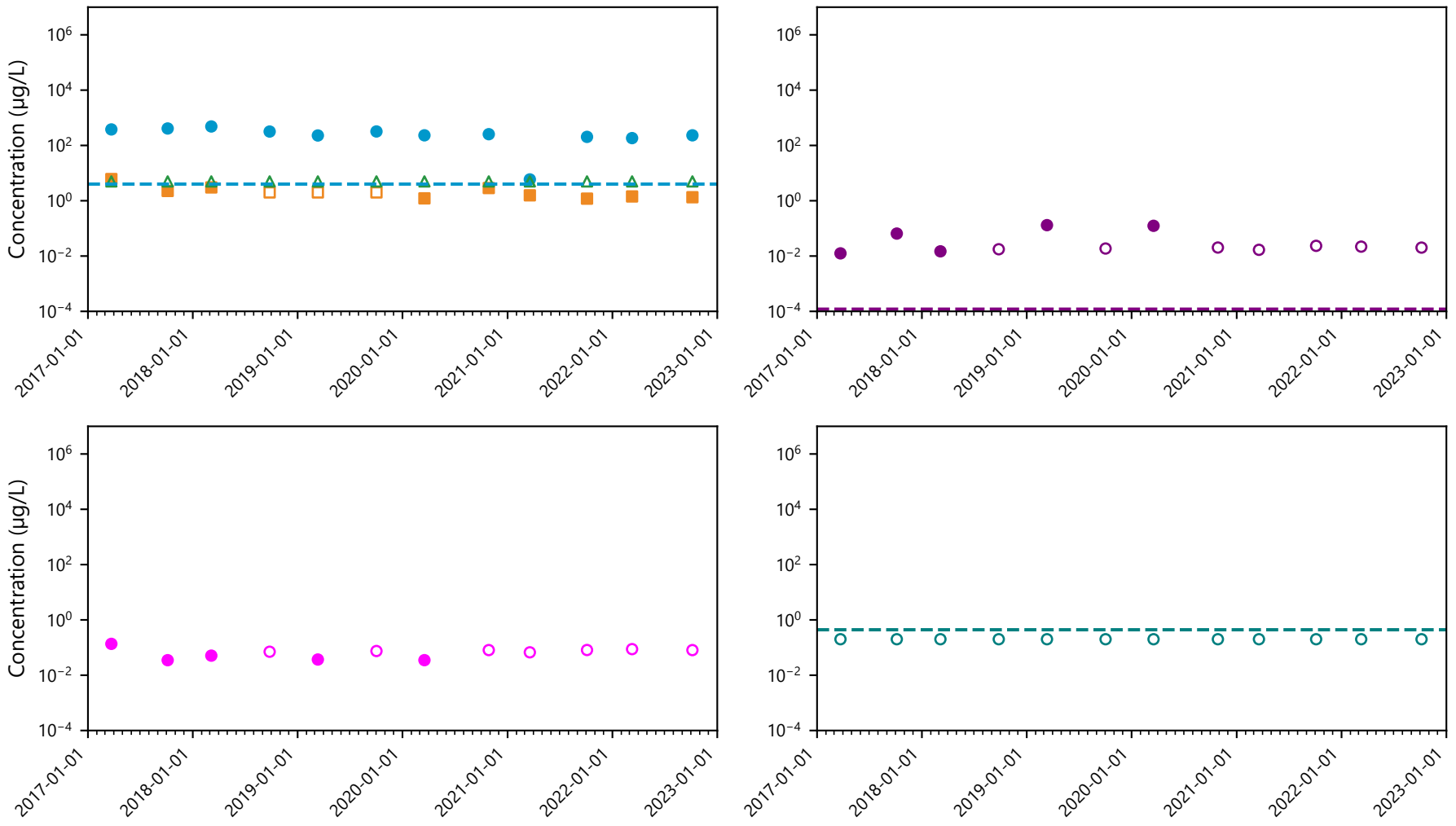
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.5
Monitoring Wells and Piezometers: MW-02-32
2022 HC&C System Annual Report
Gasco OU



Notes:
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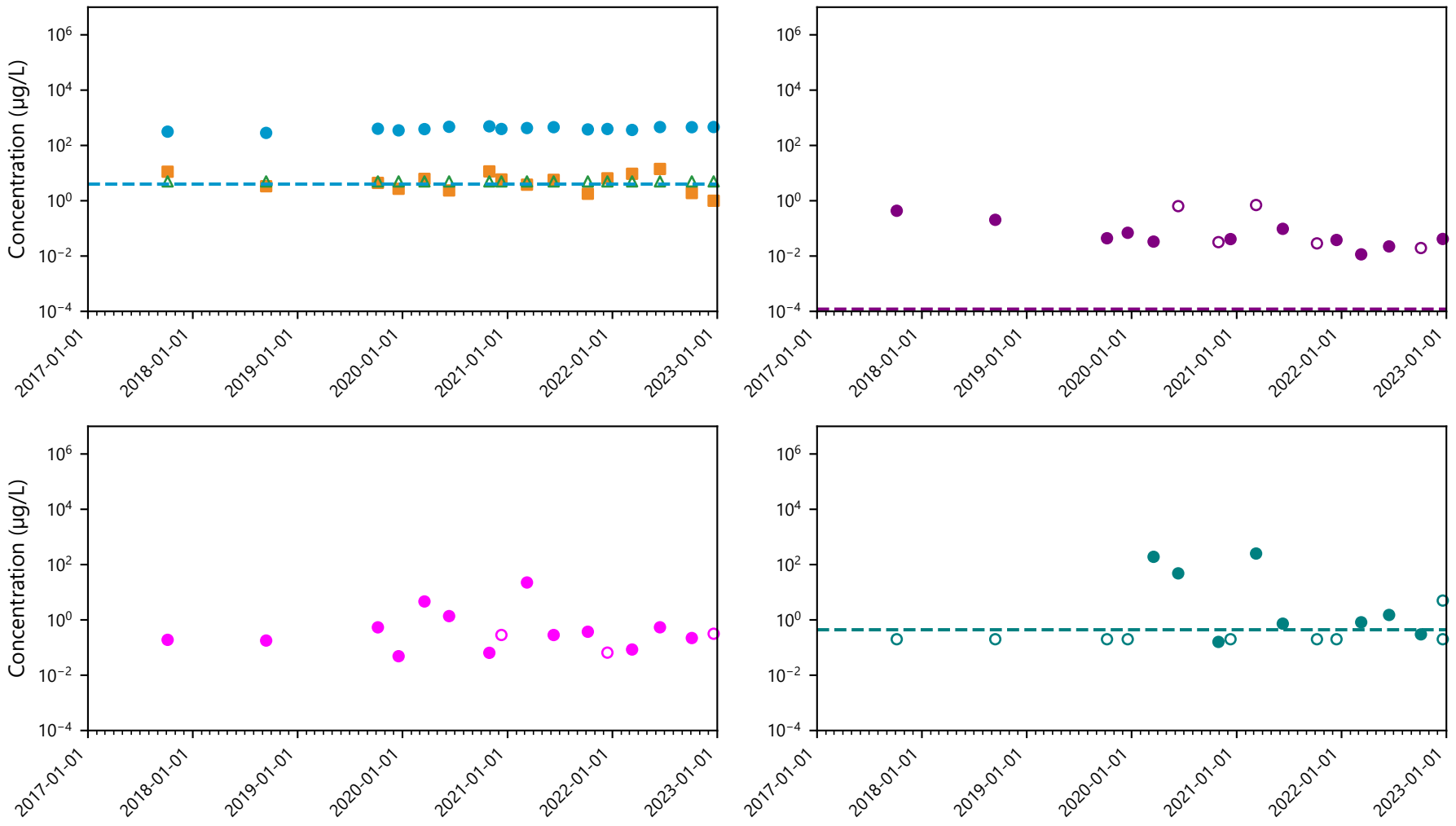
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.6
Monitoring Wells and Piezometers: MW-02-61
2022 HC&C System Annual Report
Gasco OU



Notes:
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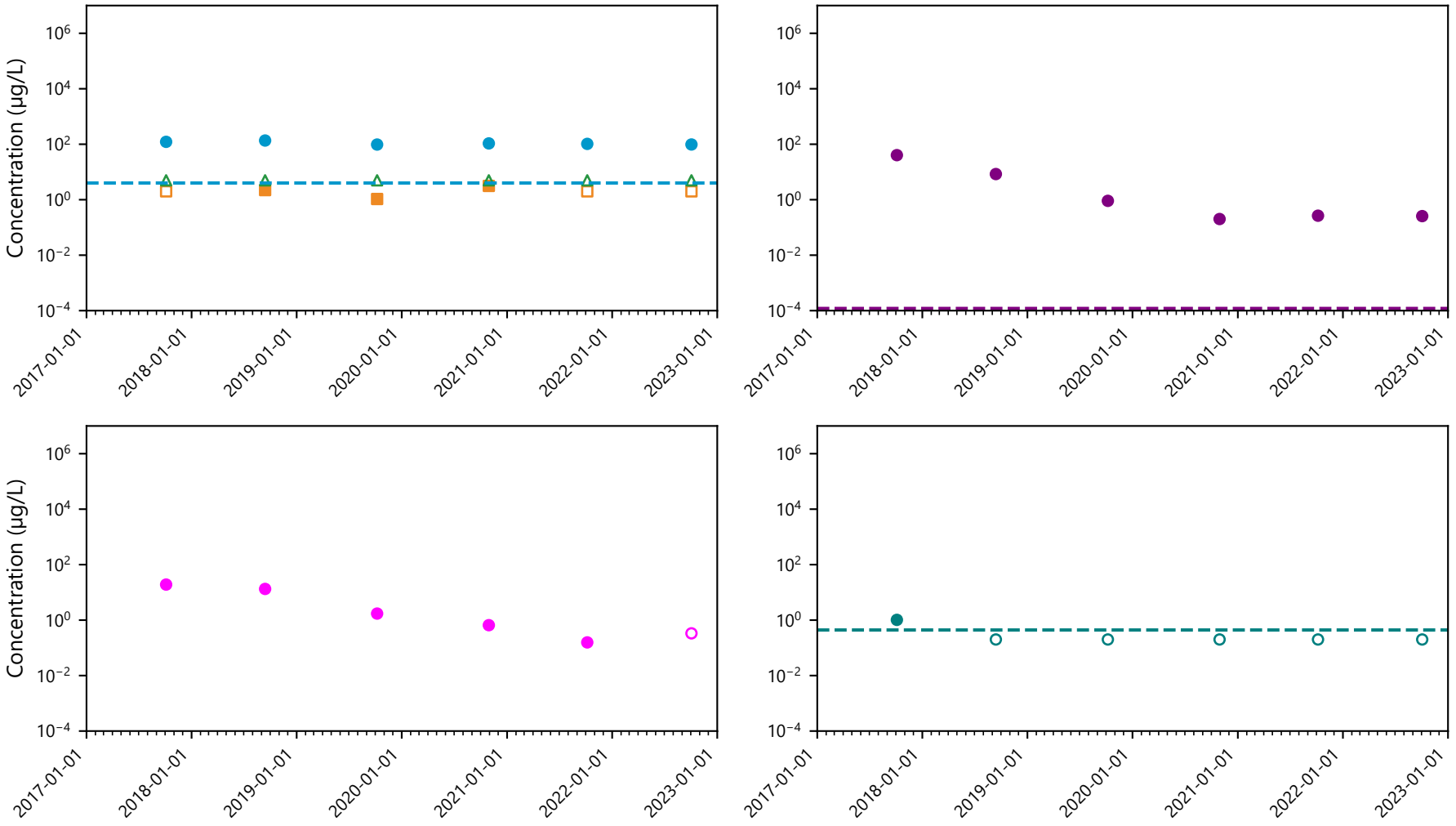
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.7
Monitoring Wells and Piezometers: MW-03-26
2022 HC&C System Annual Report
Gasco OU



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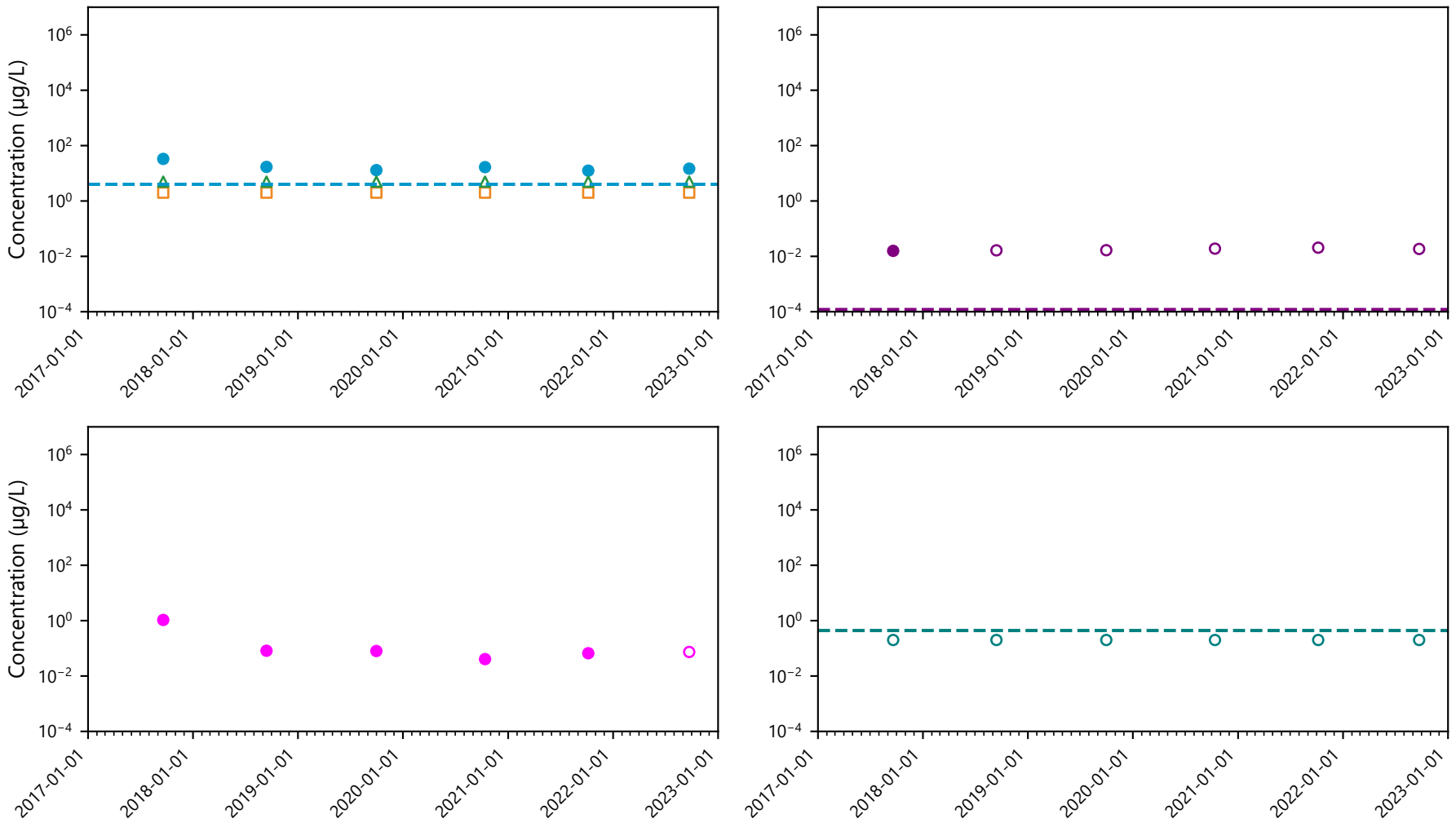
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.8
Monitoring Wells and Piezometers: MW-03-56
2022 HC&C System Annual Report
Gasco OU



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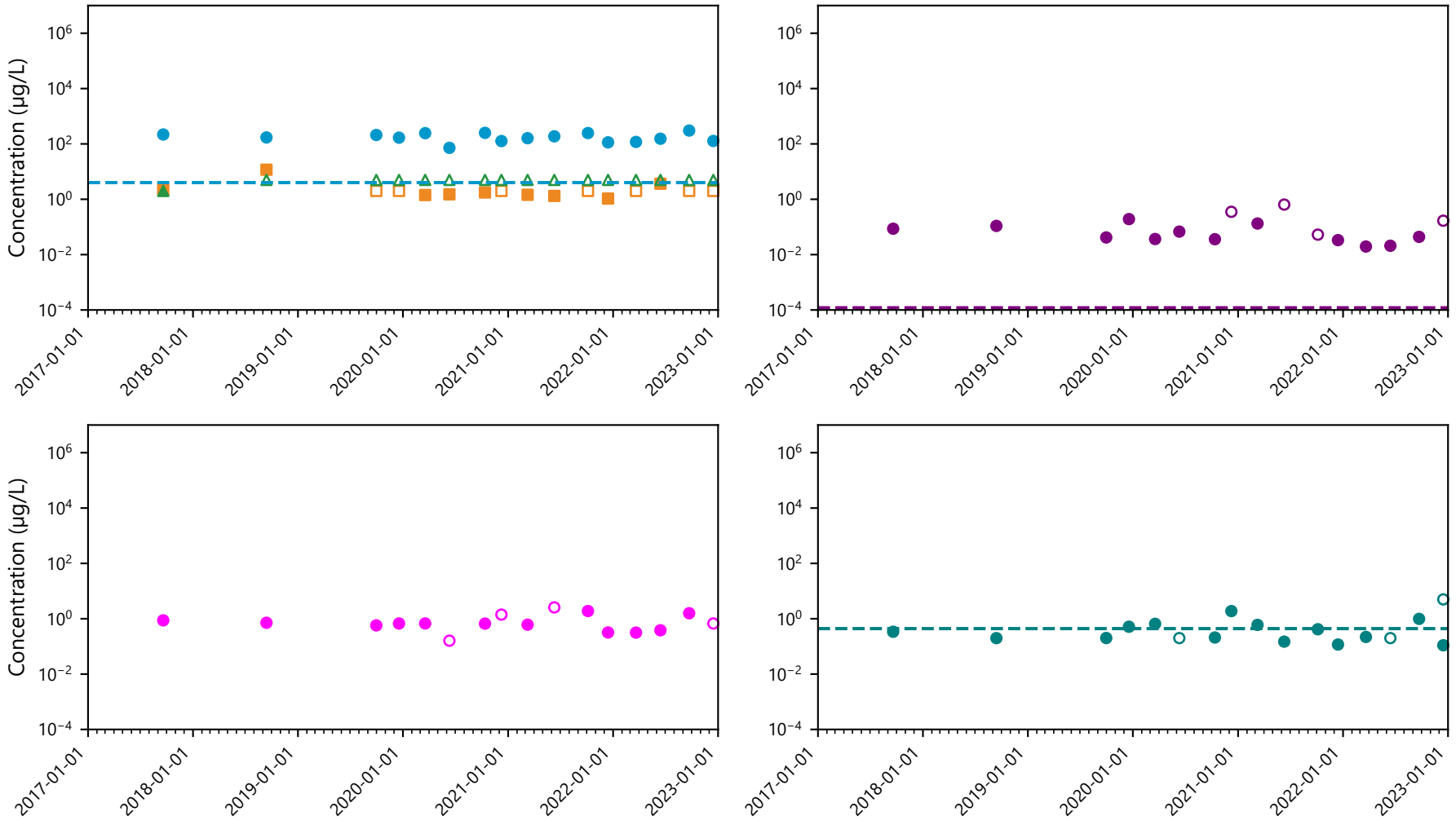
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.9
Monitoring Wells and Piezometers: MW-04-101
2022 HC&C System Annual Report
Gasco OU



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CUL= Cleanup Level

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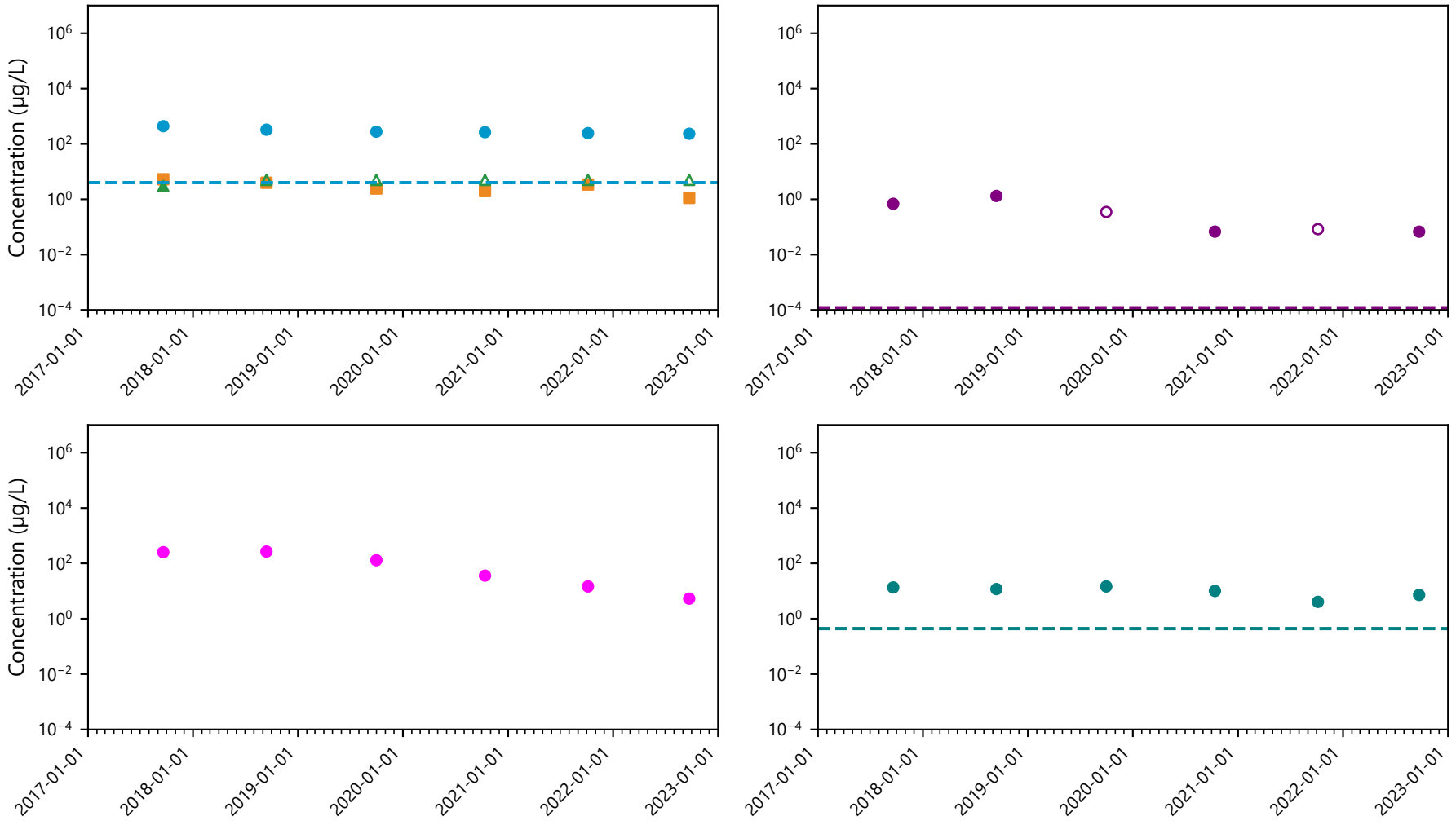
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.10
Monitoring Wells and Piezometers: MW-04-35
2022 HC&C System Annual Report
Gasco OU



Notes:
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CUL= Cleanup Level

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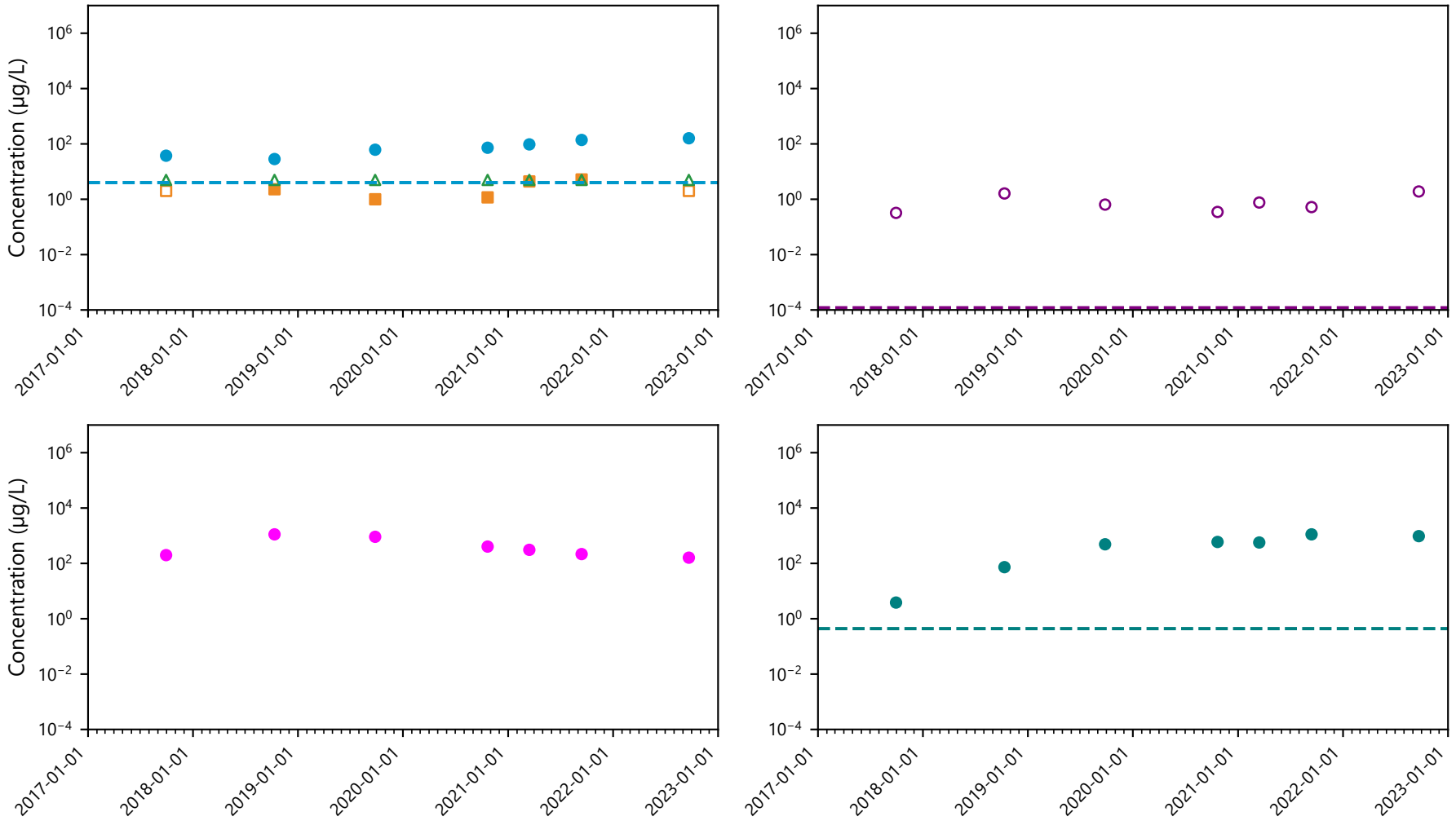
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.11
Monitoring Wells and Piezometers: MW-04-57
2022 HC&C System Annual Report
Gasco OU



Notes:
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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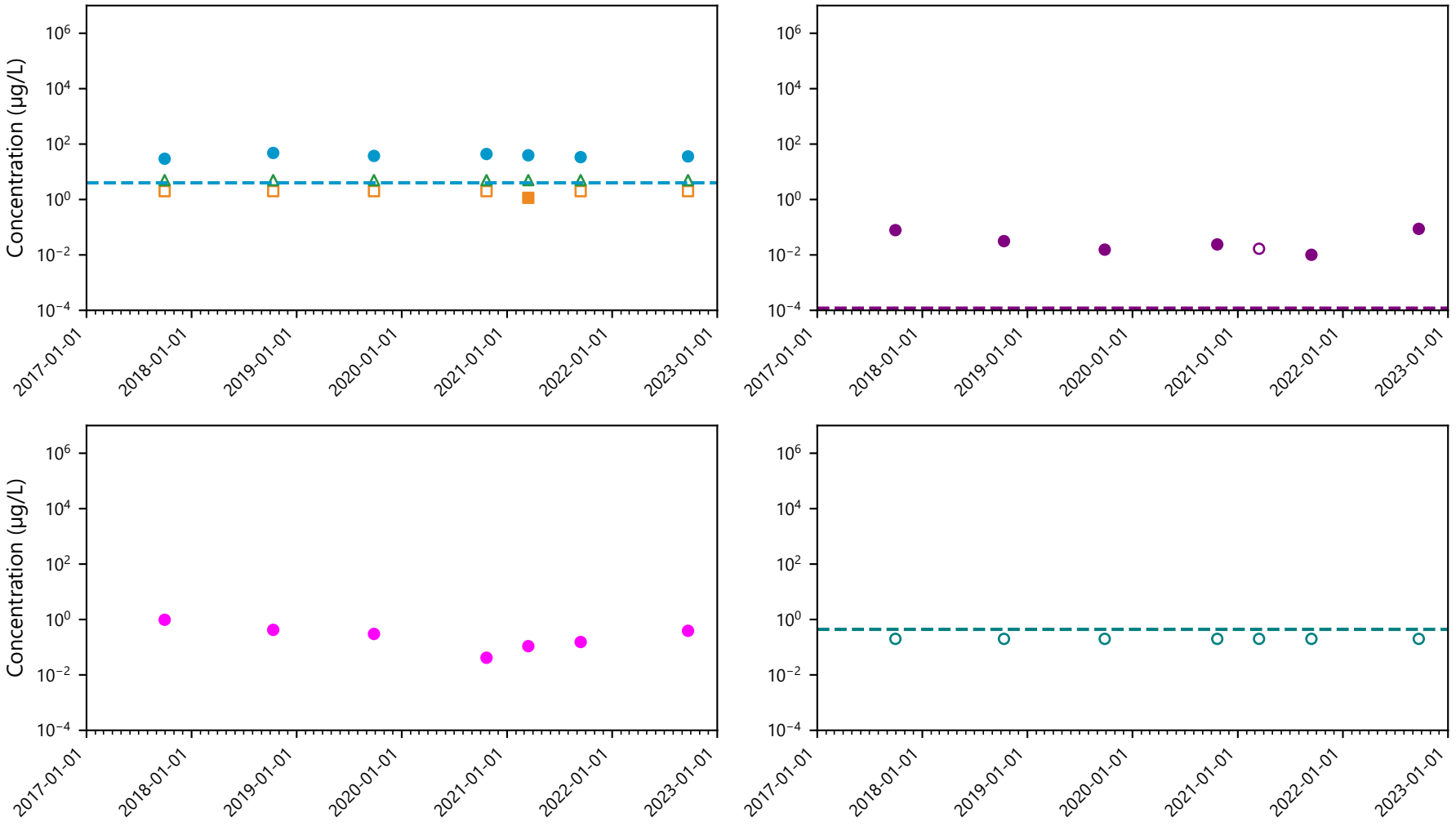
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.12
Monitoring Wells and Piezometers: MW-05-100
2022 HC&C System Annual Report
Gasco OU



Notes:
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µg/L= micrograms per liter
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CUL= Cleanup Level

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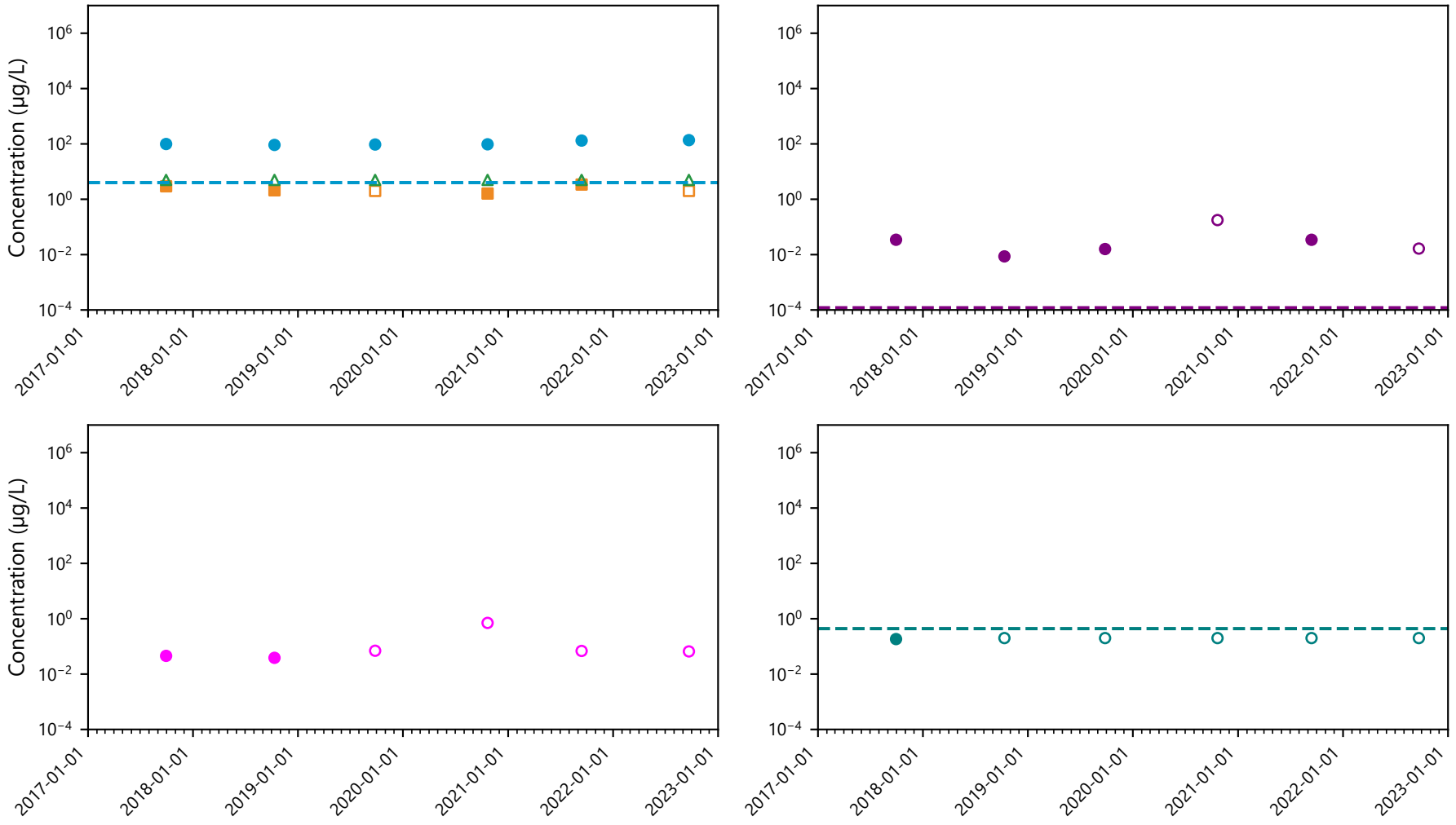
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.13
Monitoring Wells and Piezometers: MW-05-175
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
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CUL= Cleanup Level

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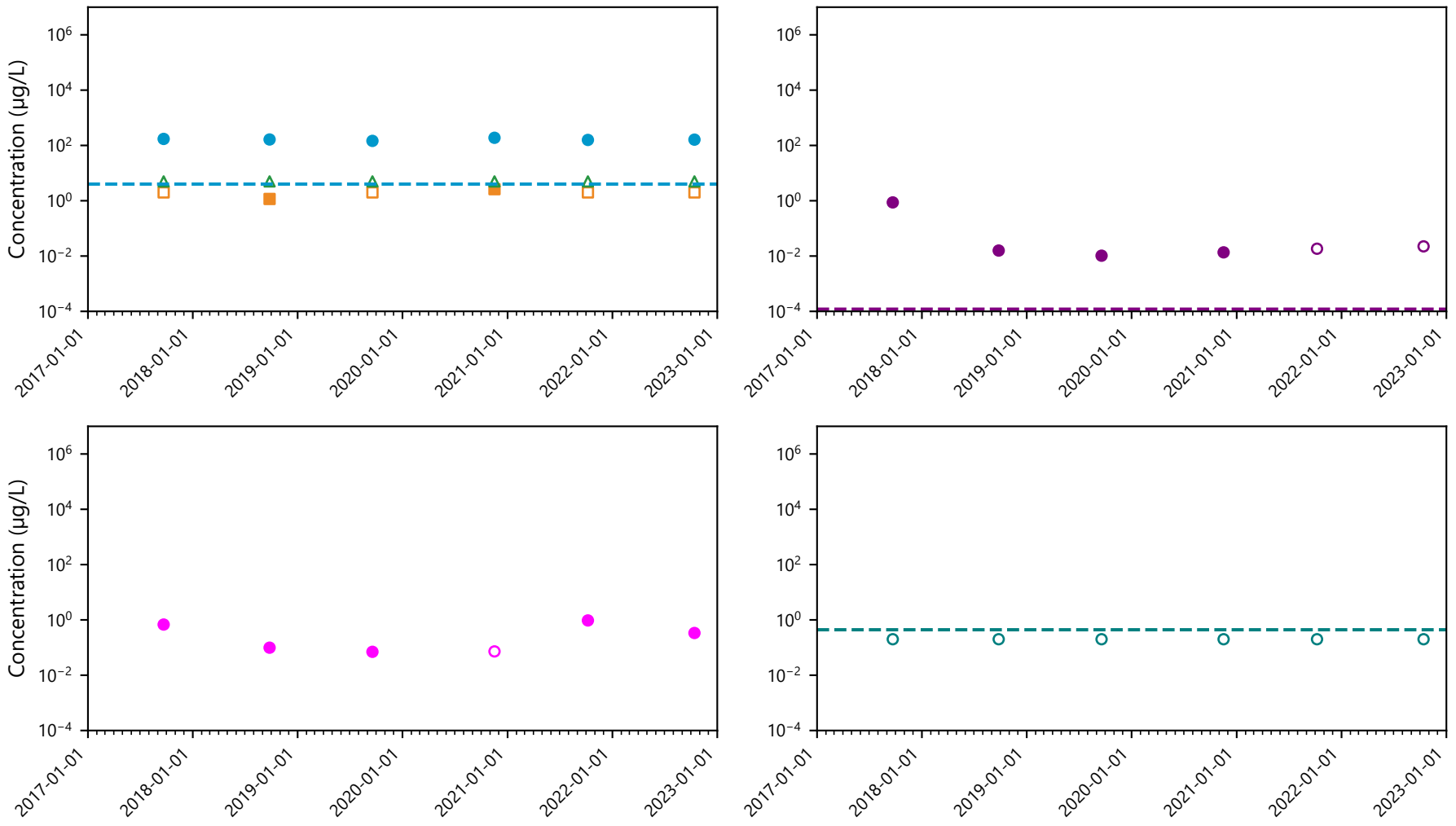
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.14
Monitoring Wells and Piezometers: MW-05-32
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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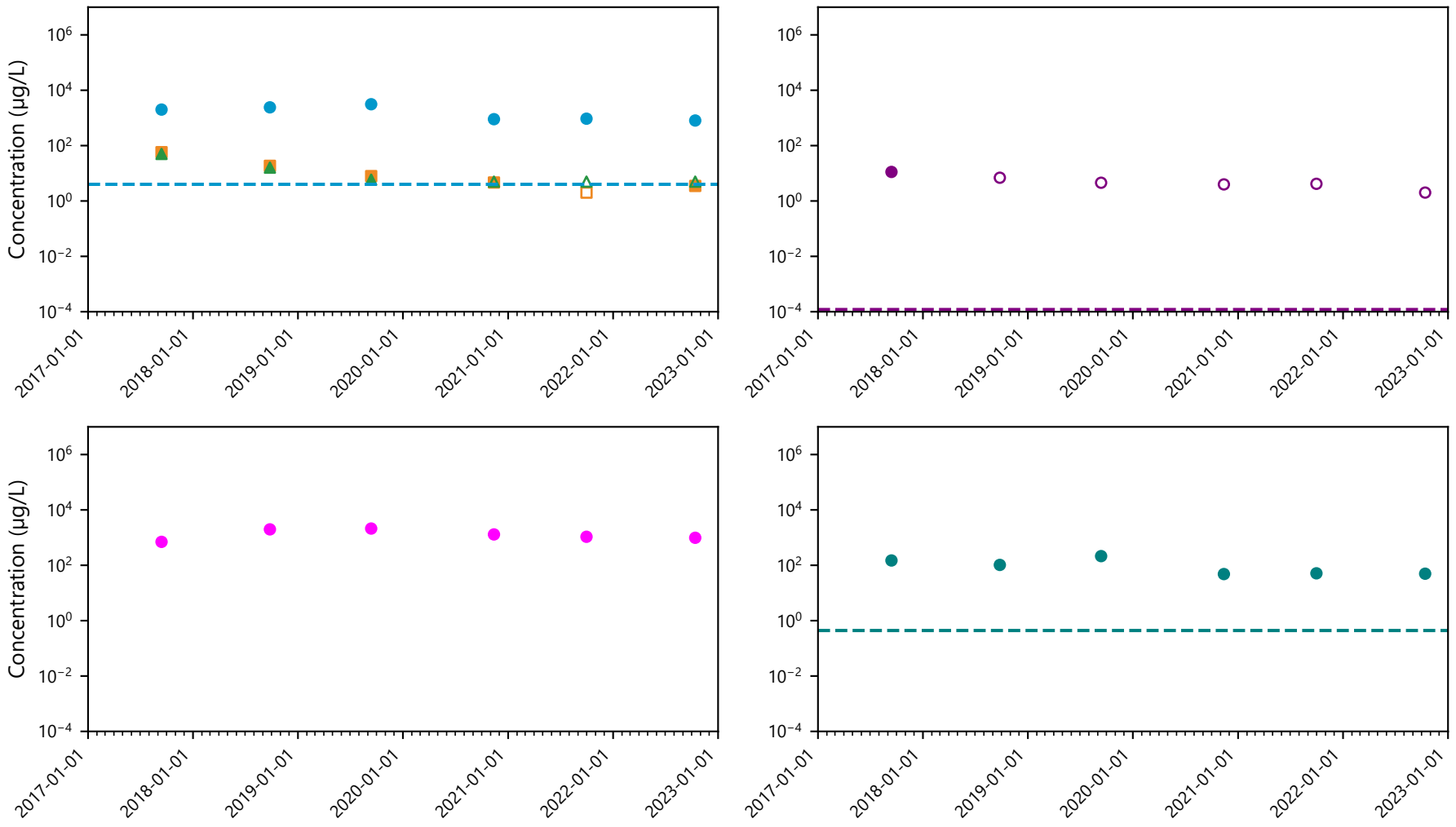
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.15
Monitoring Wells and Piezometers: MW-07-60
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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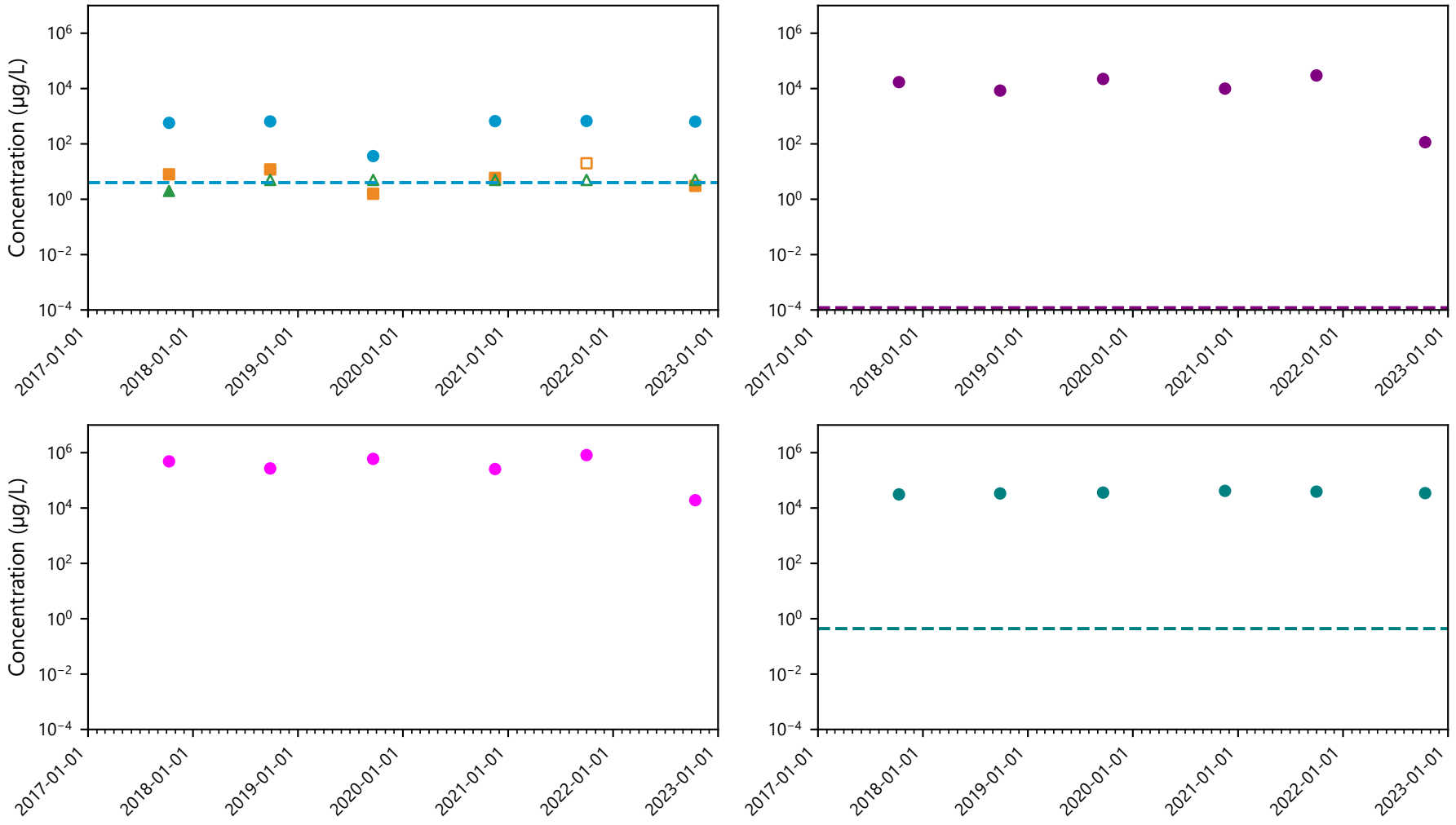
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.16
Monitoring Wells and Piezometers: MW-08-29
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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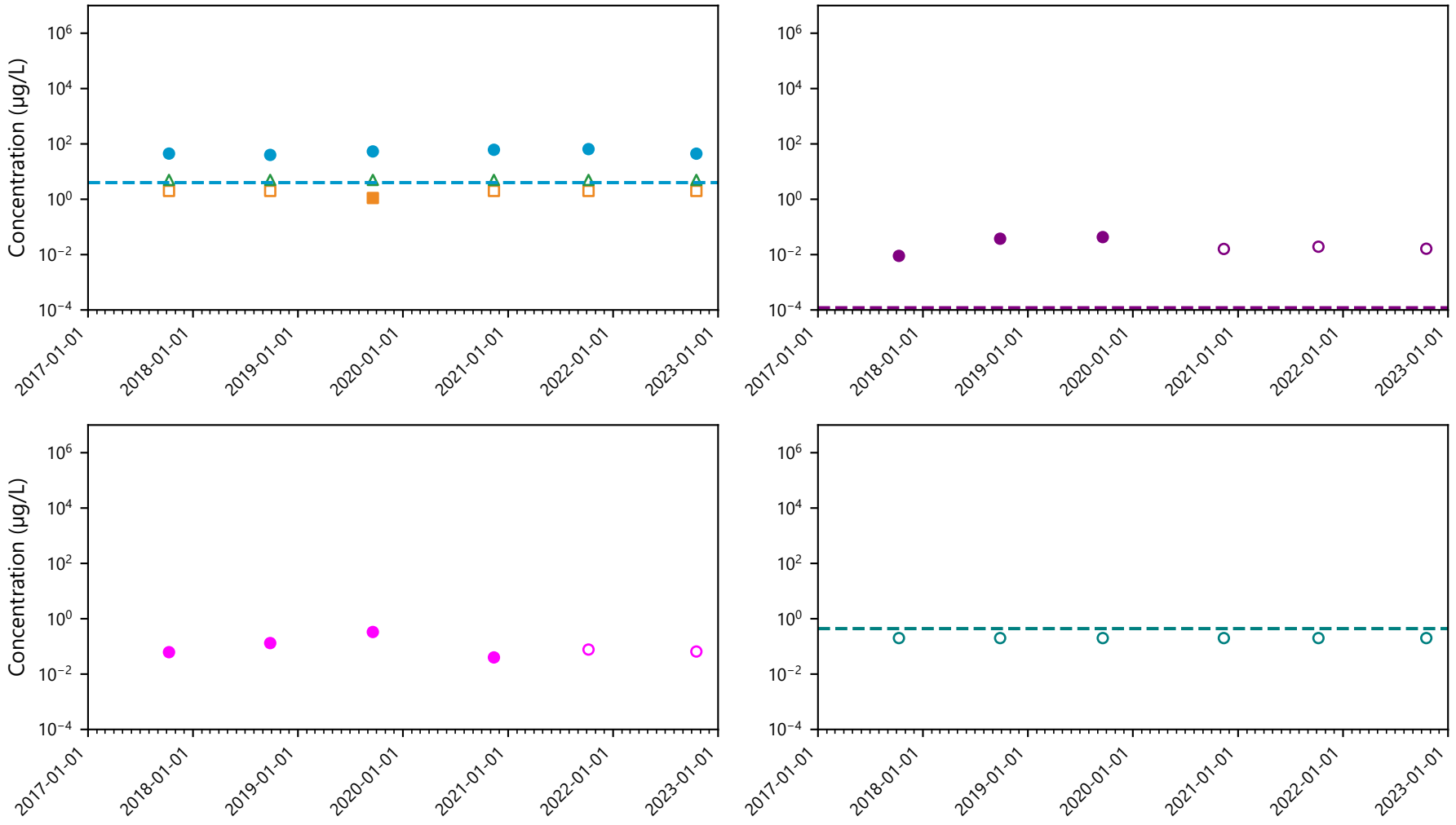
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.17
Monitoring Wells and Piezometers: MW-08-56
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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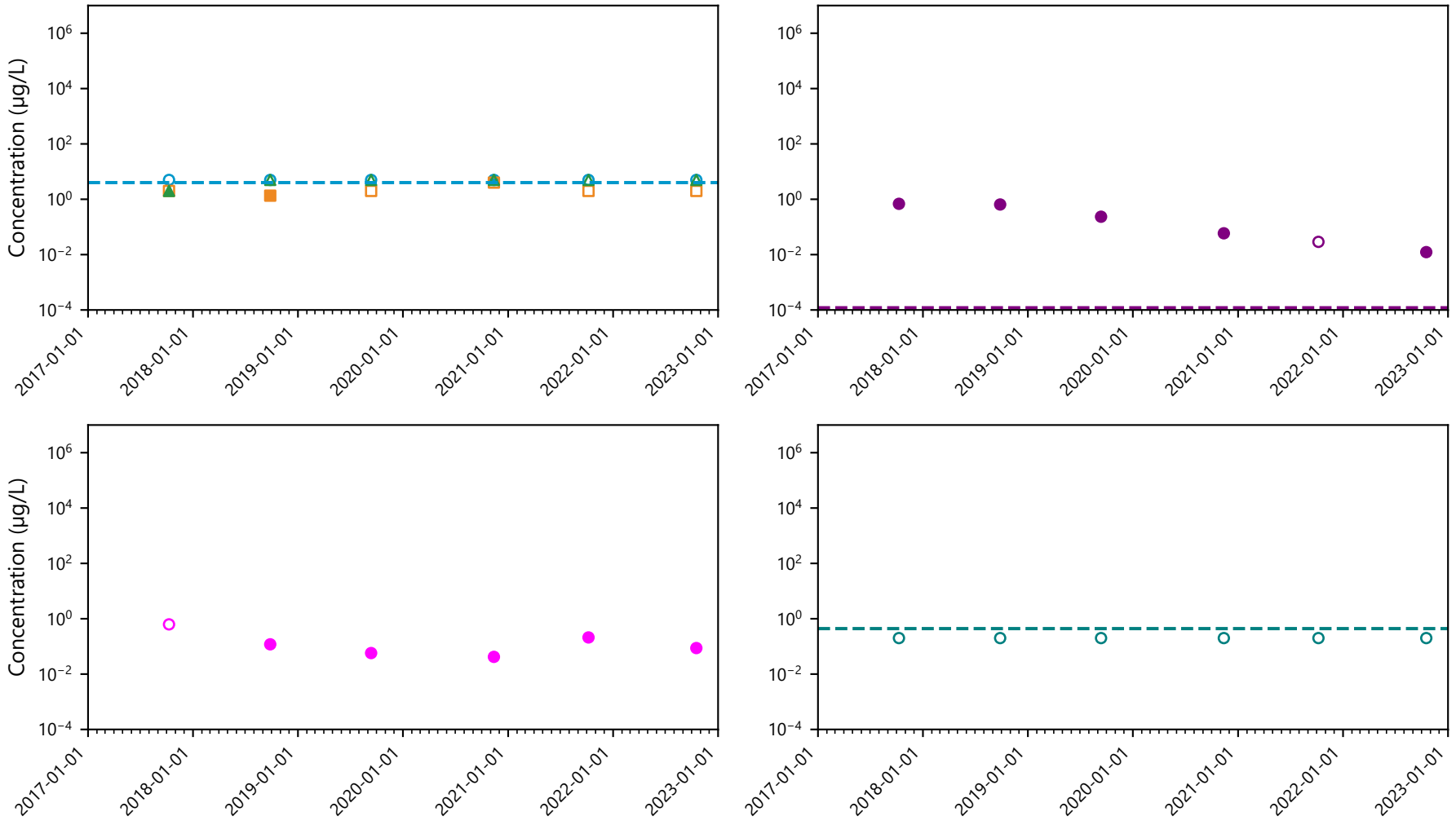
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.18
Monitoring Wells and Piezometers: MW-09-29
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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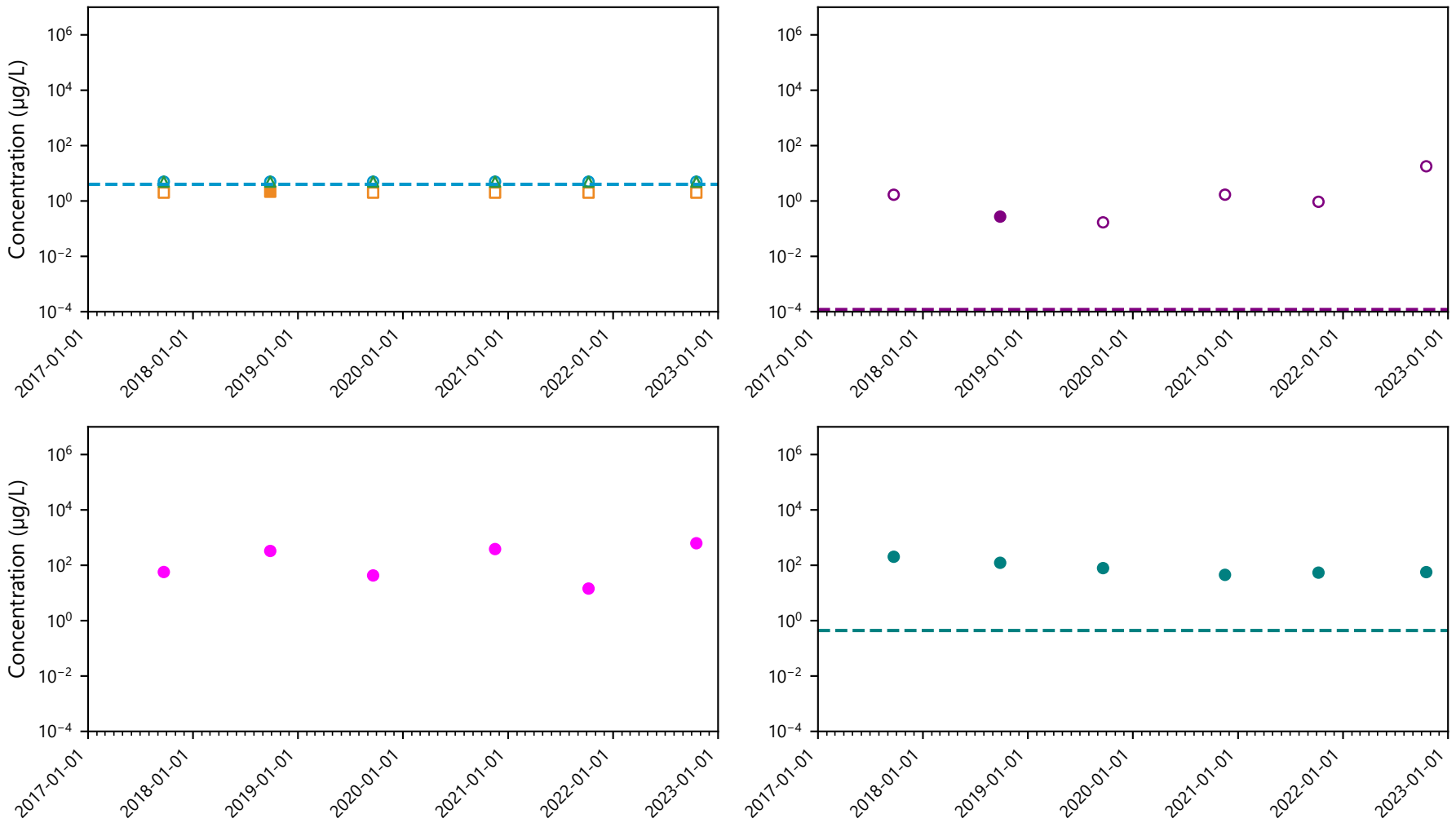
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.19
Monitoring Wells and Piezometers: MW-10-61
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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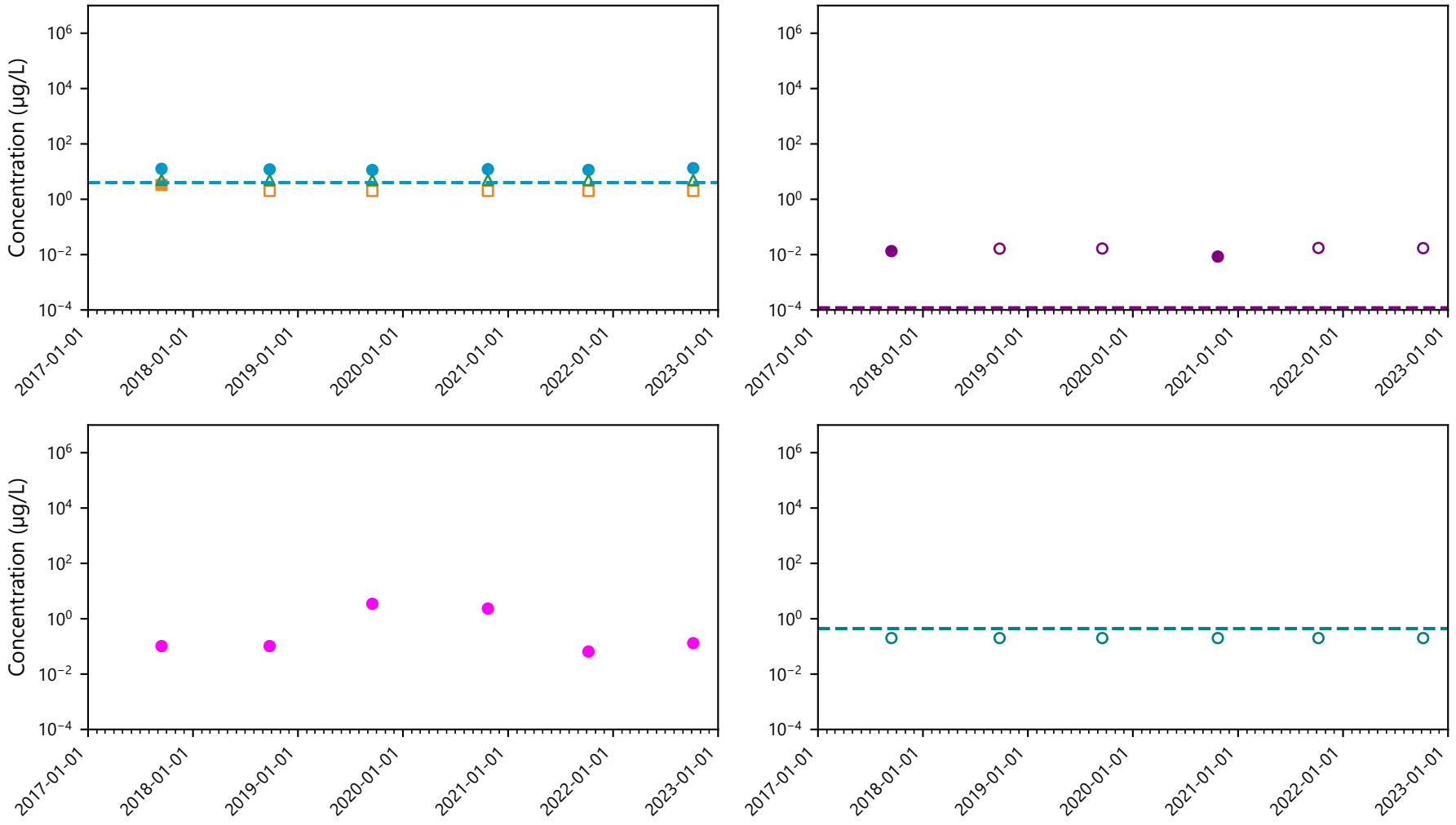
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.20
Monitoring Wells and Piezometers: MW-12-36
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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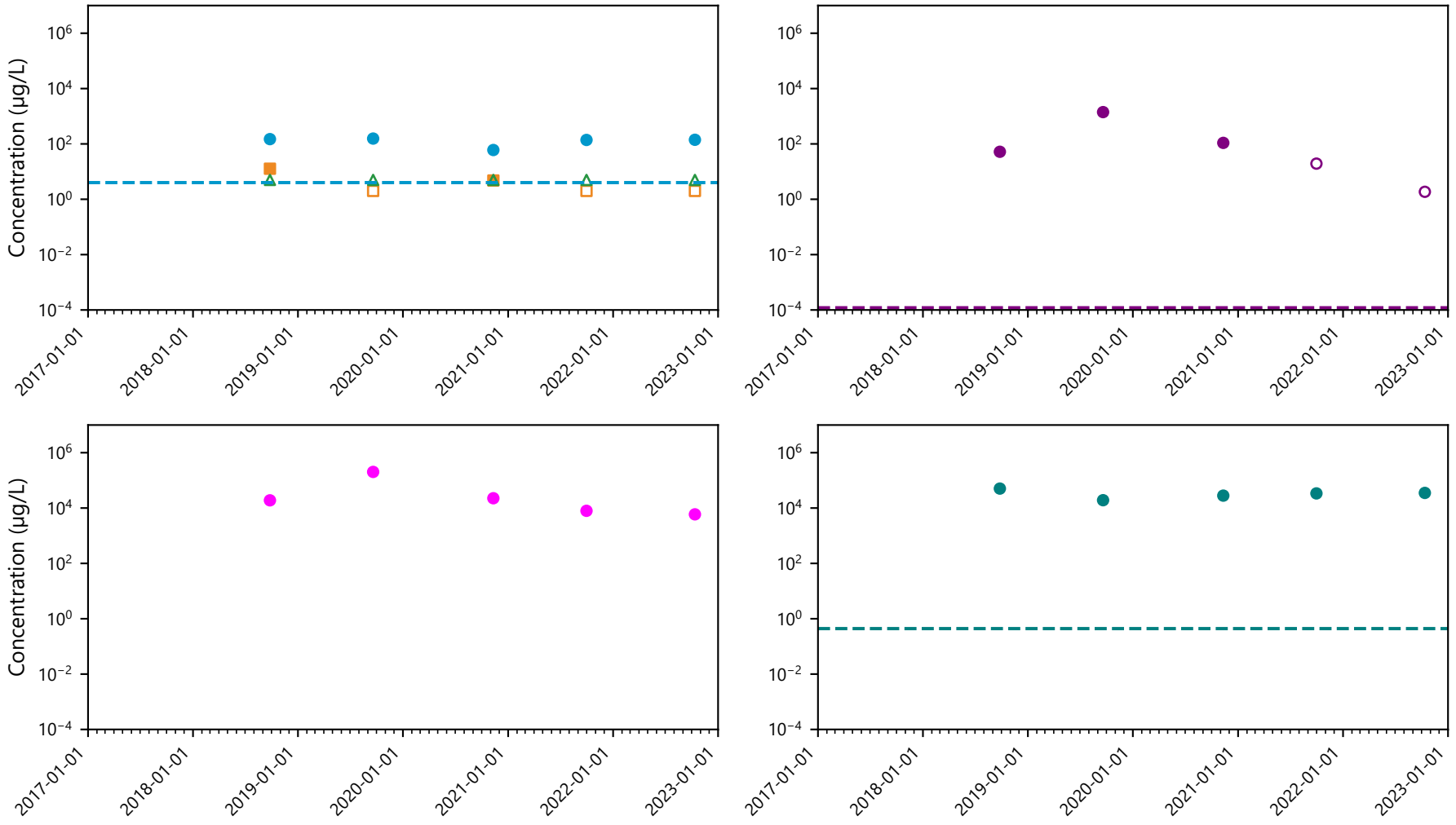
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.21
Monitoring Wells and Piezometers: MW-14-110
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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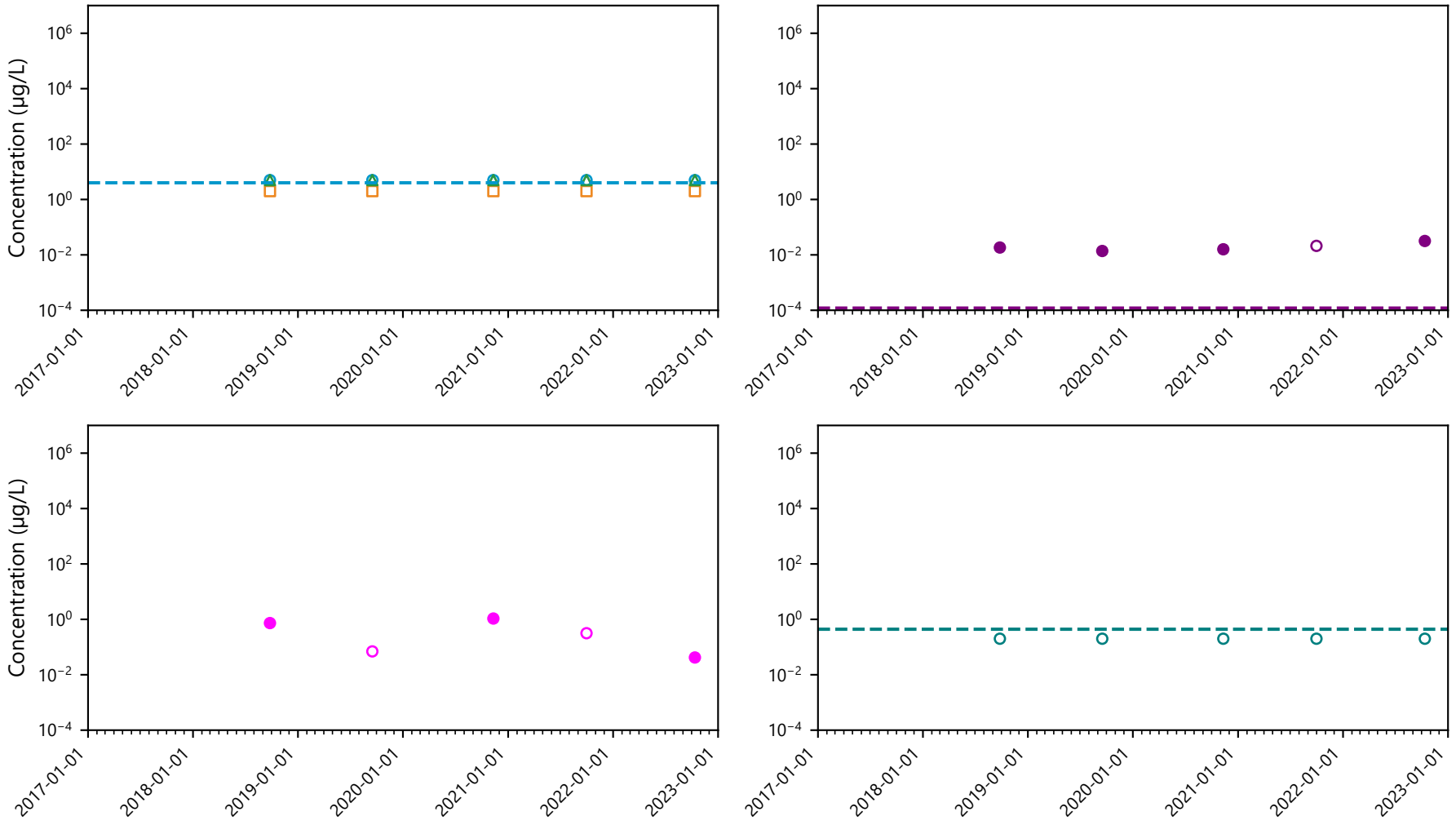
ANCHOR QEA

C.4.a.22
Monitoring Wells and Piezometers: MW-15-50
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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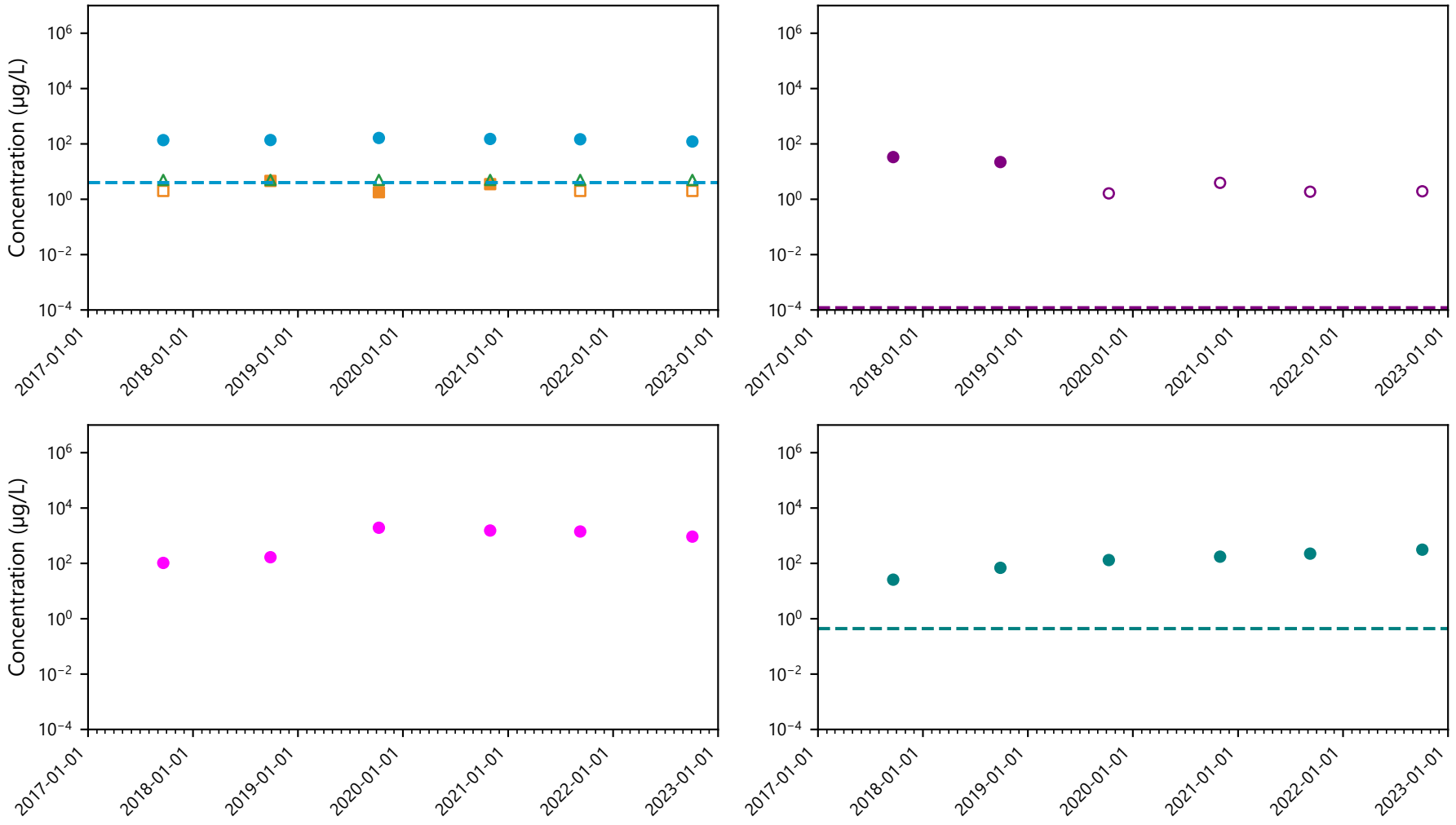
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.23
Monitoring Wells and Piezometers: MW-15-66
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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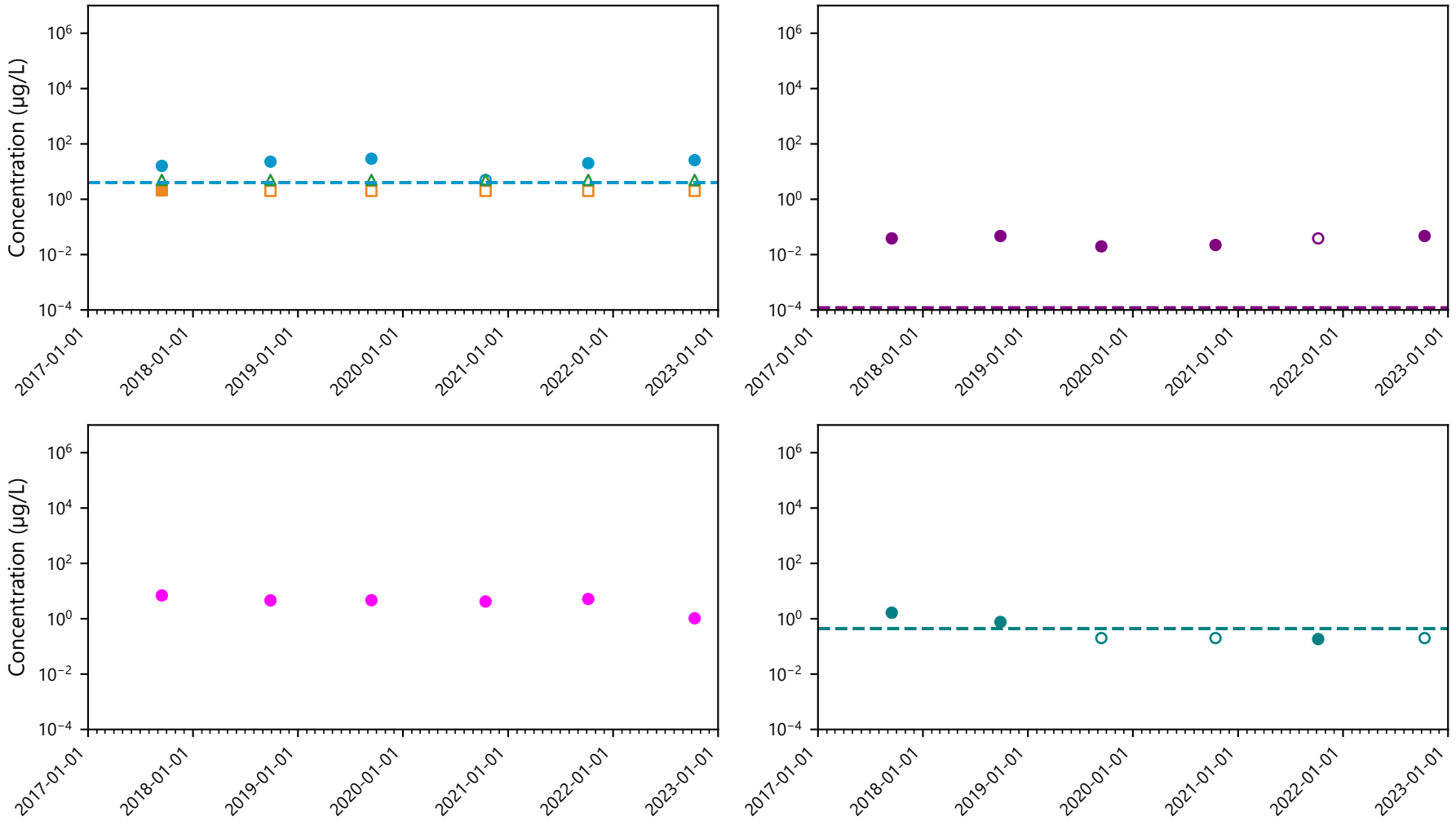
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.24
Monitoring Wells and Piezometers: MW-16-65
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
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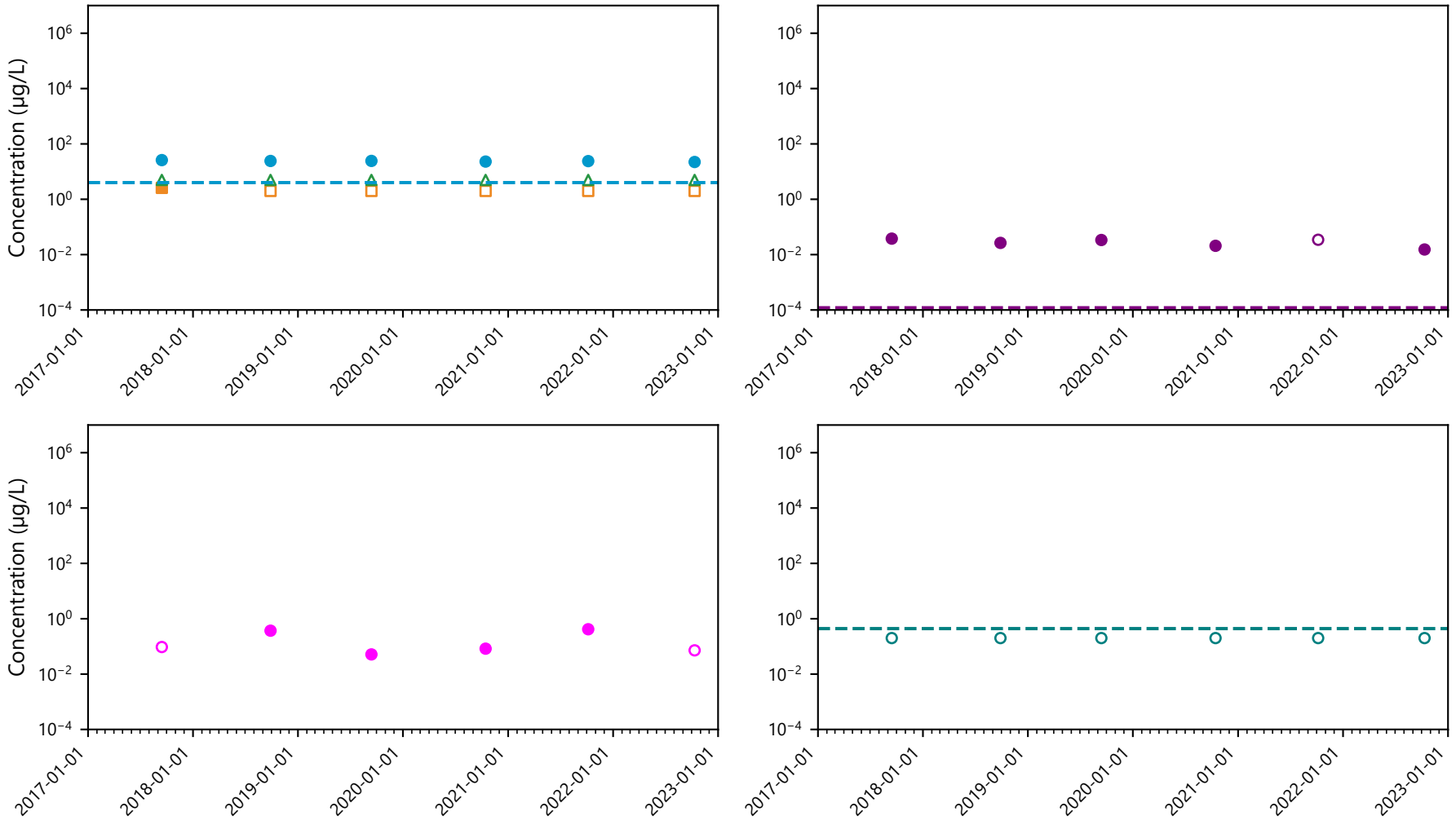
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.25
Monitoring Wells and Piezometers: MW-18-125
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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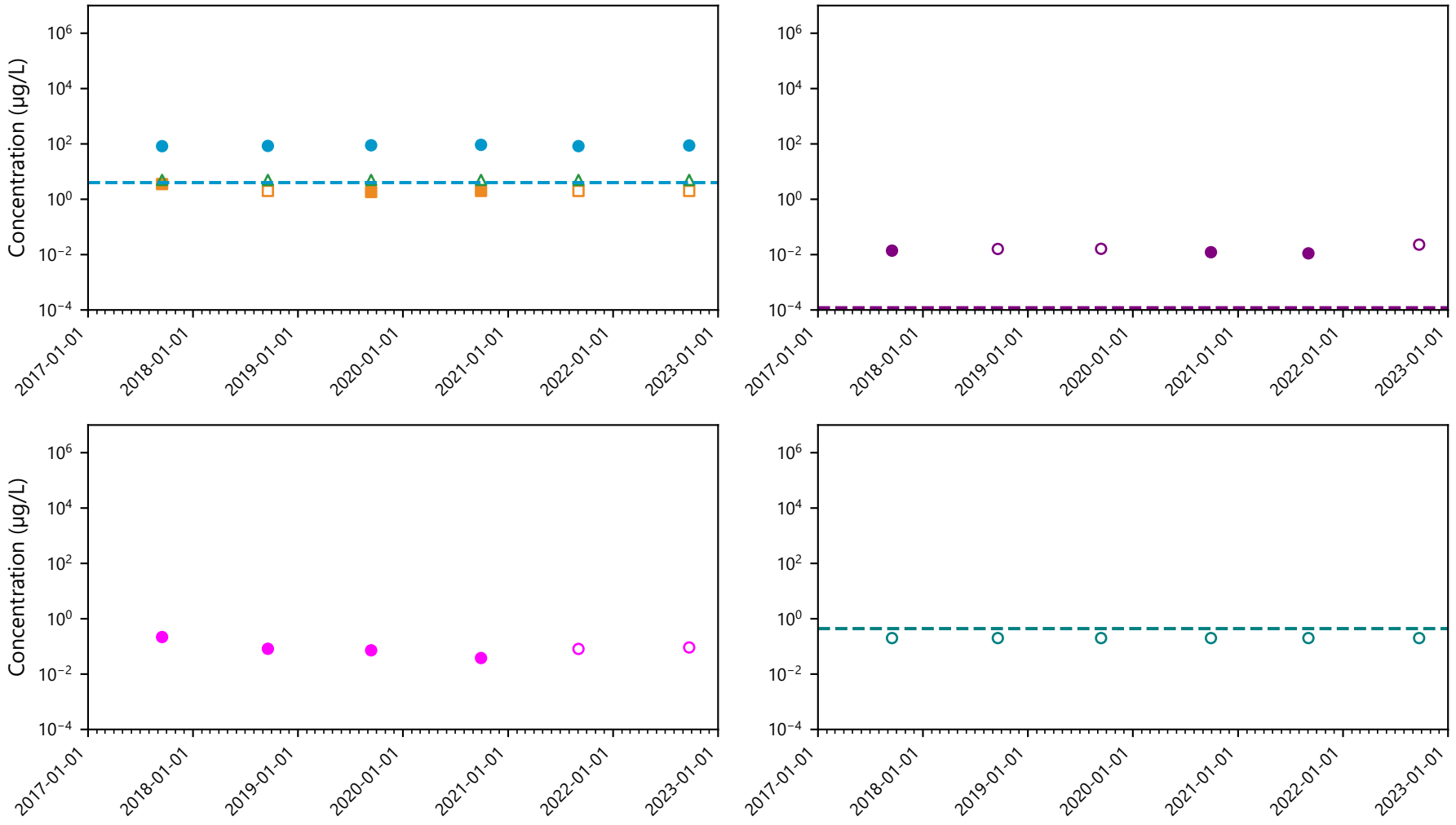
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.26
Monitoring Wells and Piezometers: MW-18-180
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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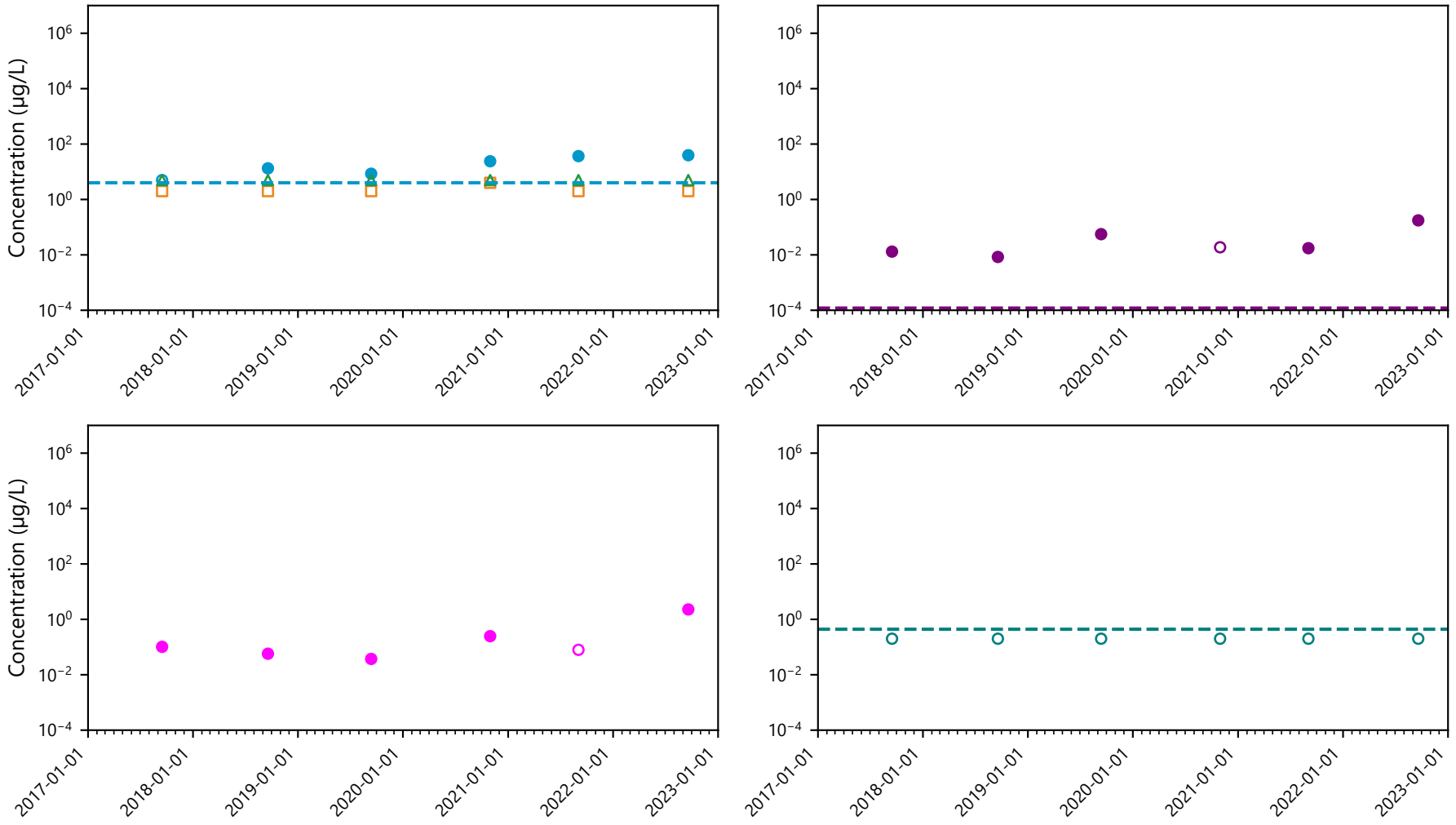
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.27
Monitoring Wells and Piezometers: MW-19-125
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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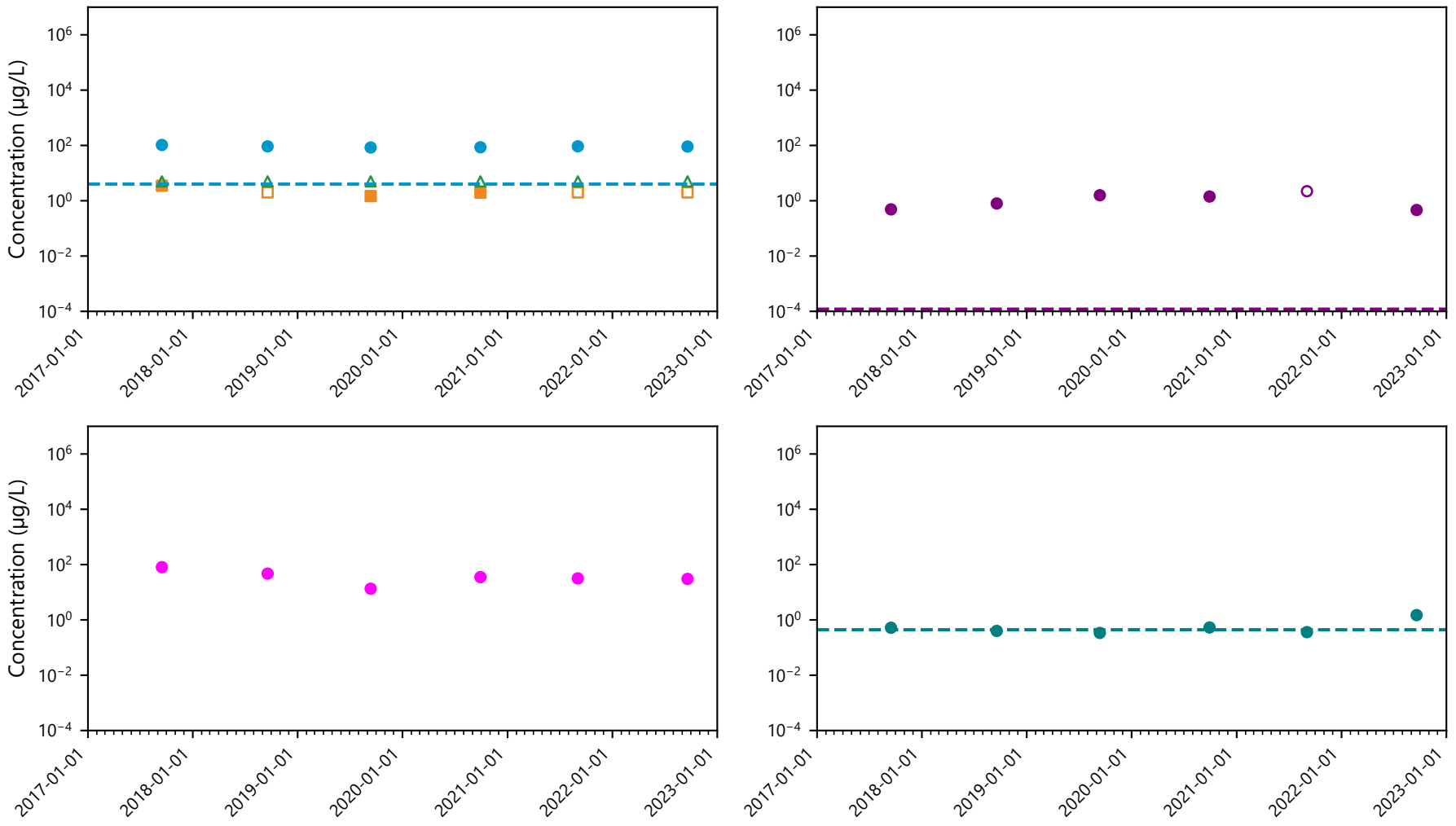
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.28
Monitoring Wells and Piezometers: MW-19-180
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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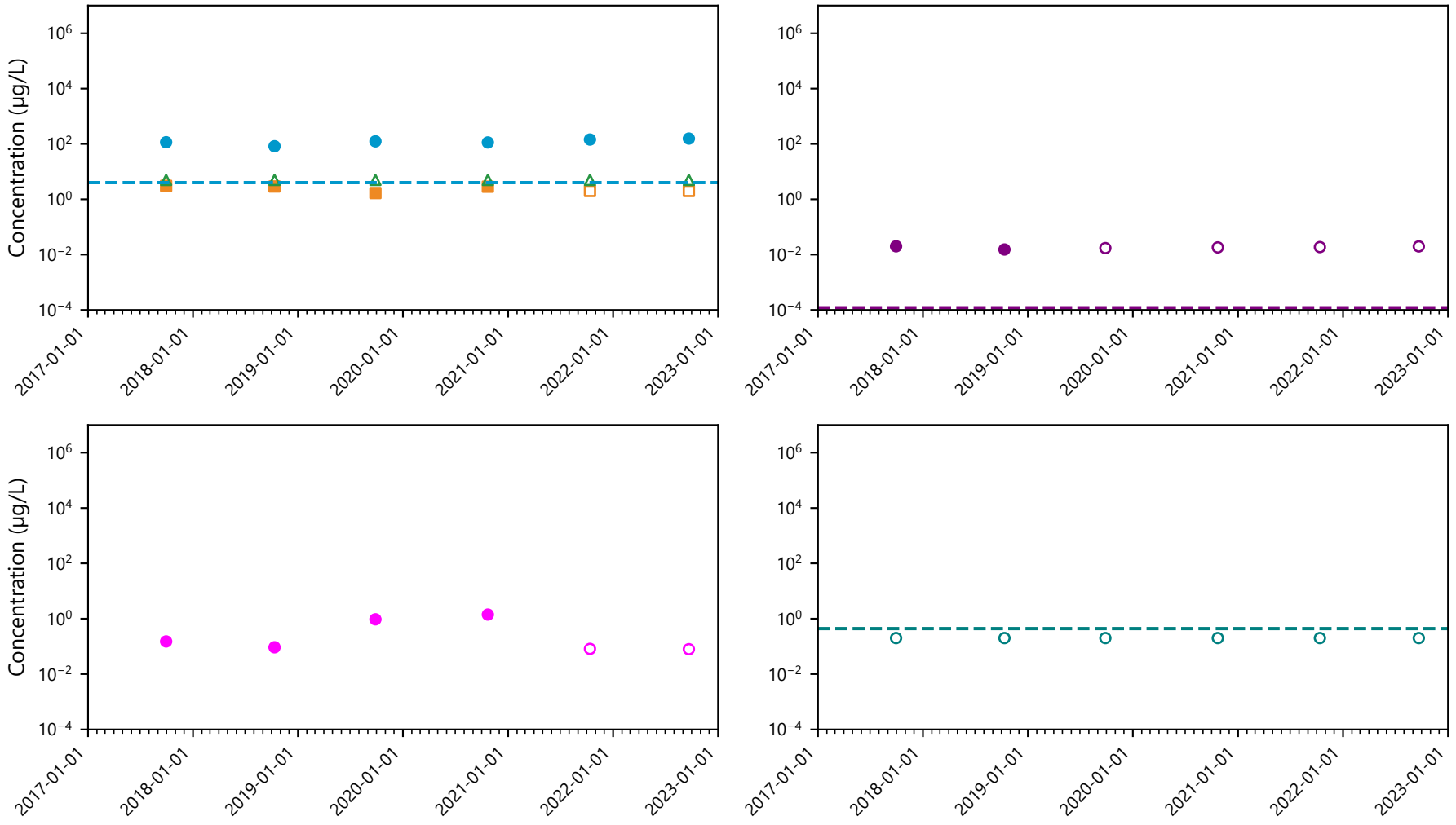
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.29
Monitoring Wells and Piezometers: MW-19-22
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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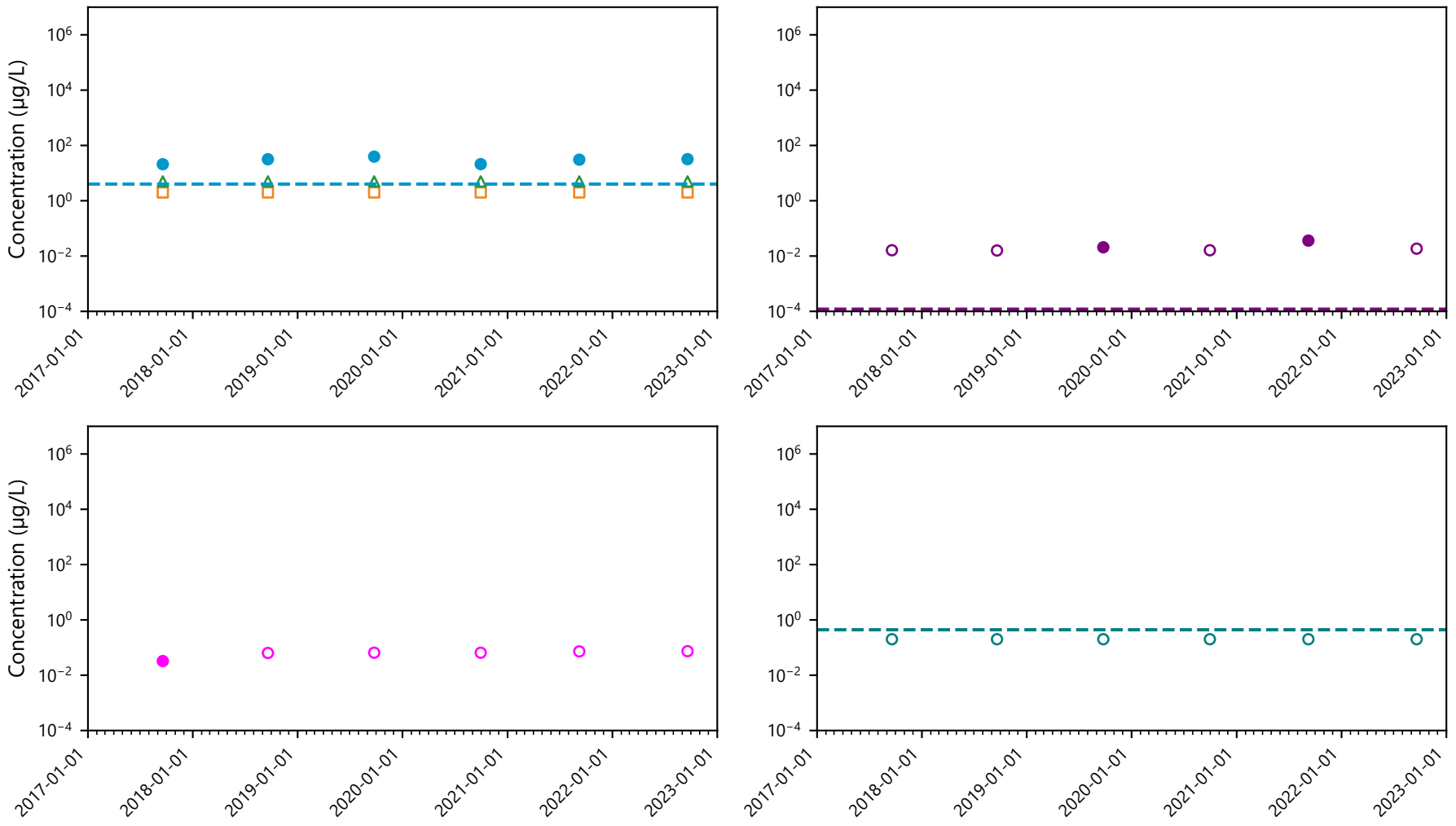
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.30
Monitoring Wells and Piezometers: MW-20-120
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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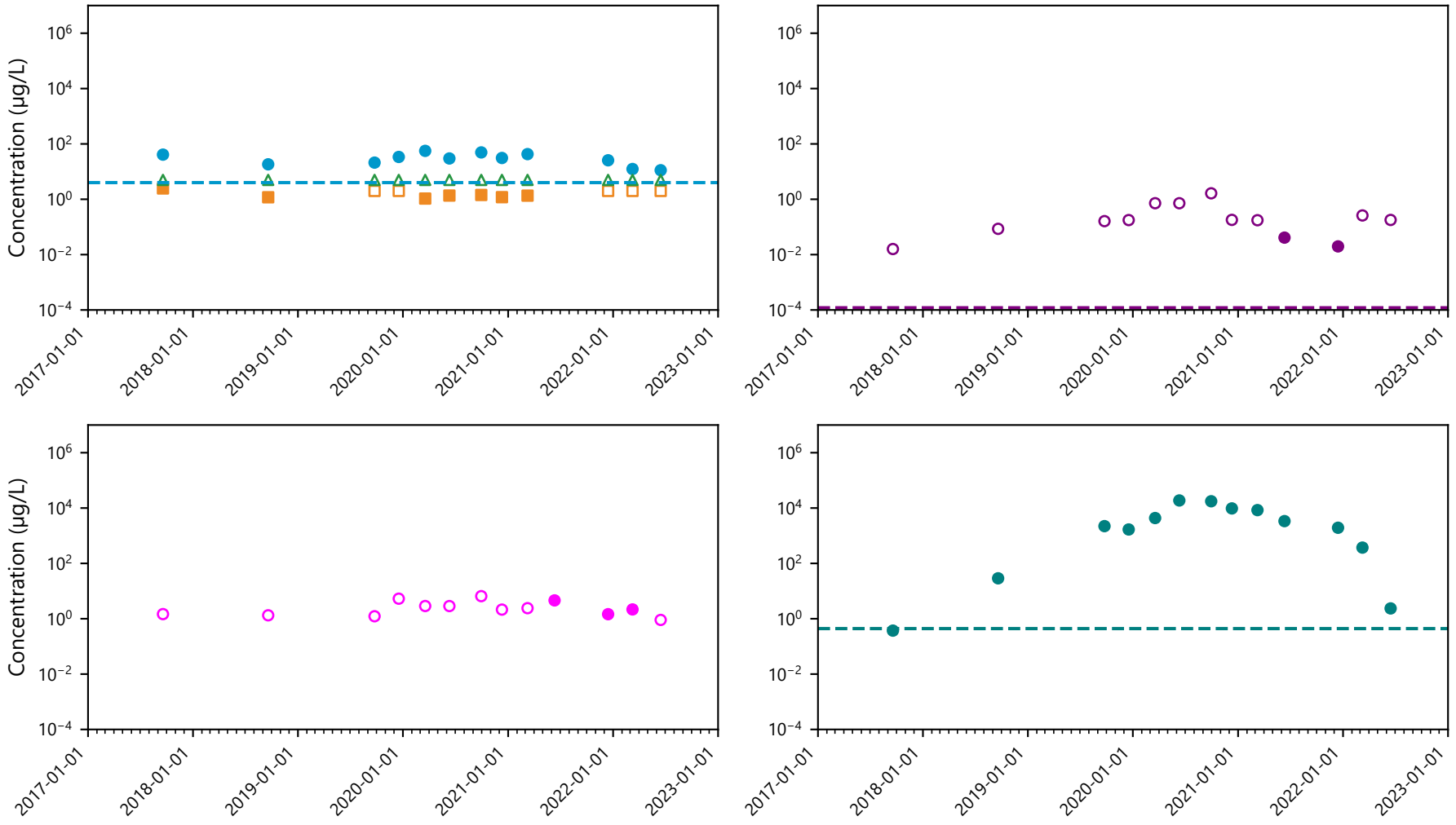
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.31
Monitoring Wells and Piezometers: MW-21-115
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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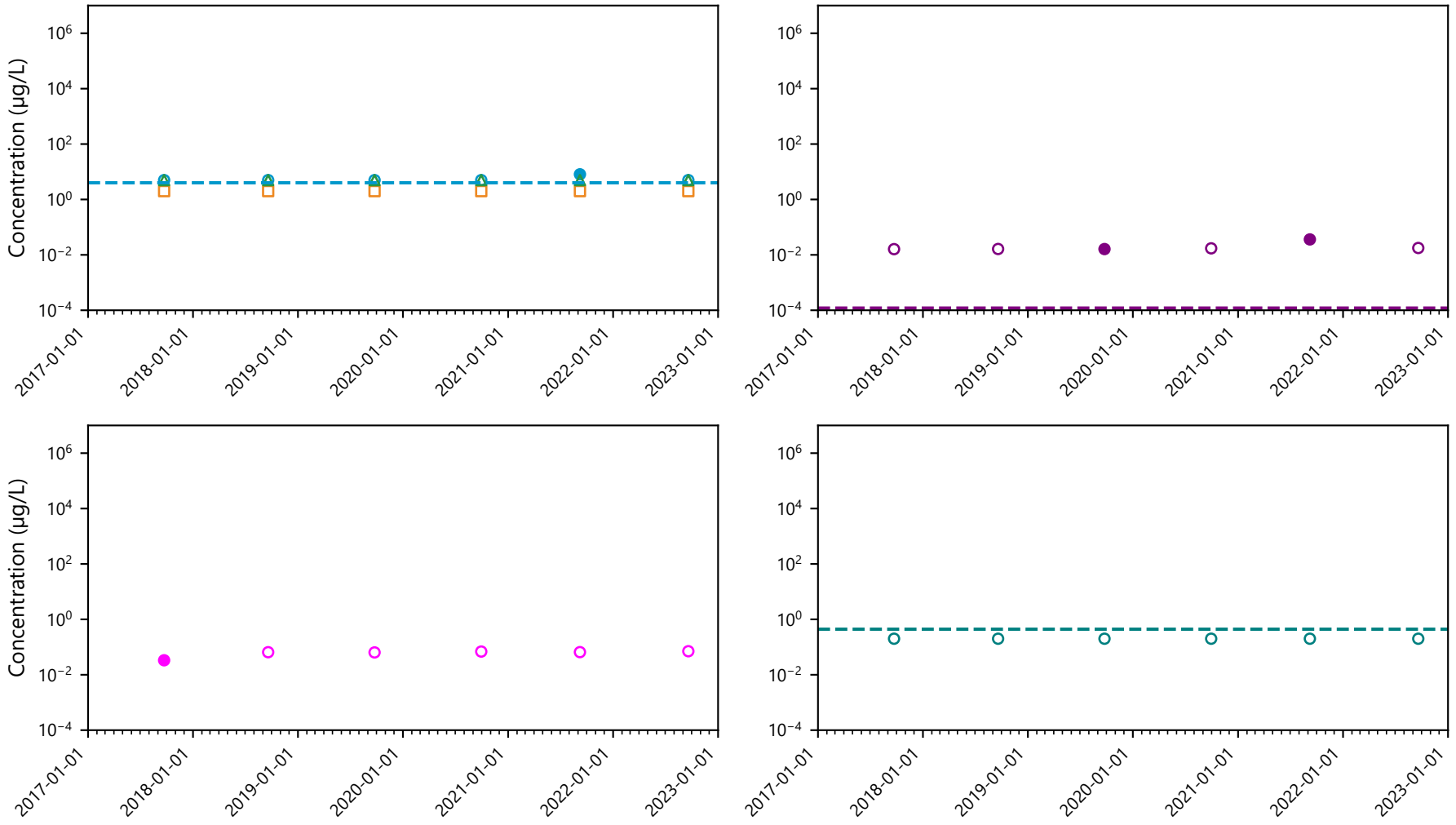
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.32
Monitoring Wells and Piezometers: MW-21-12
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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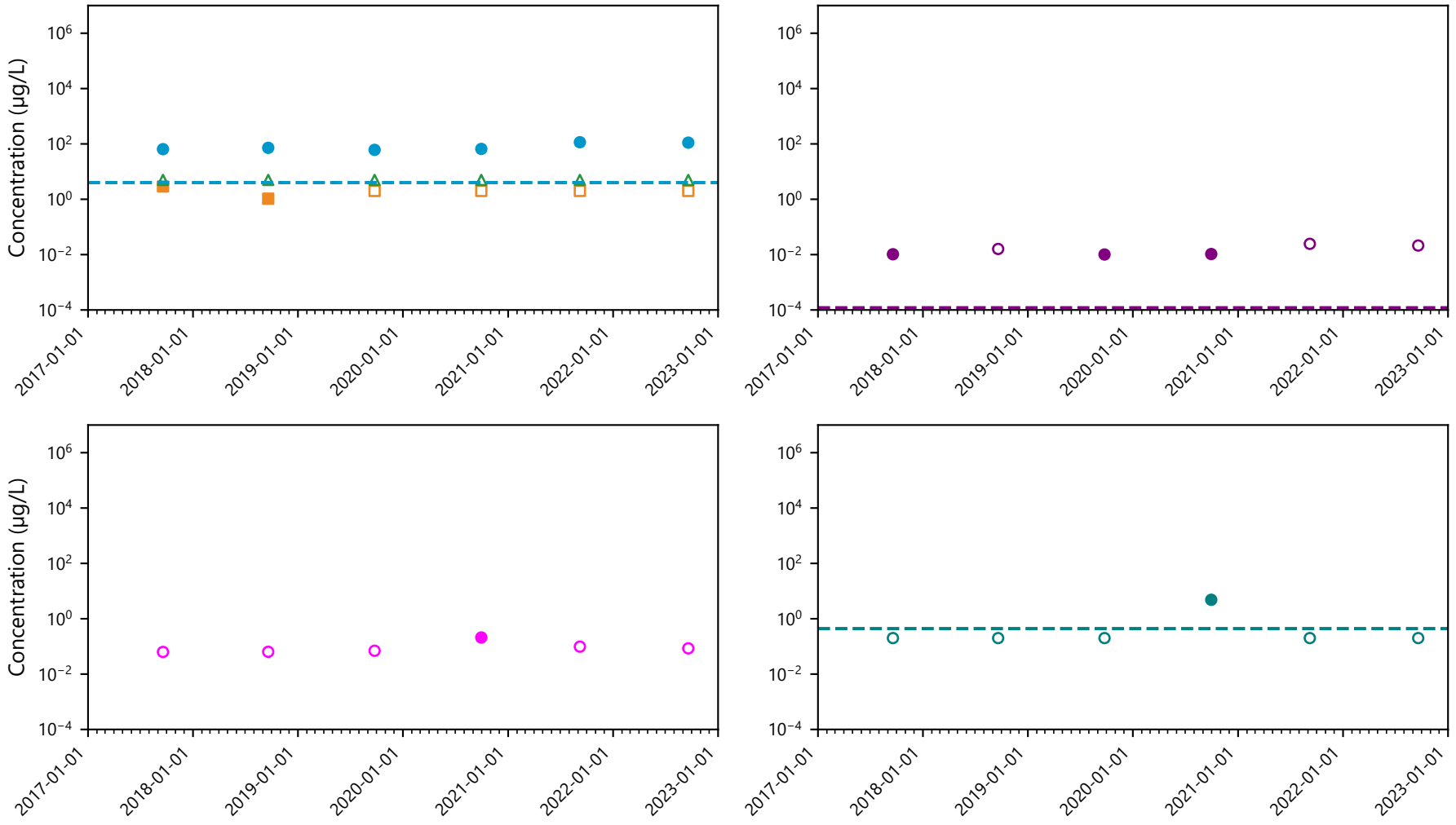
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.33
Monitoring Wells and Piezometers: MW-21-165
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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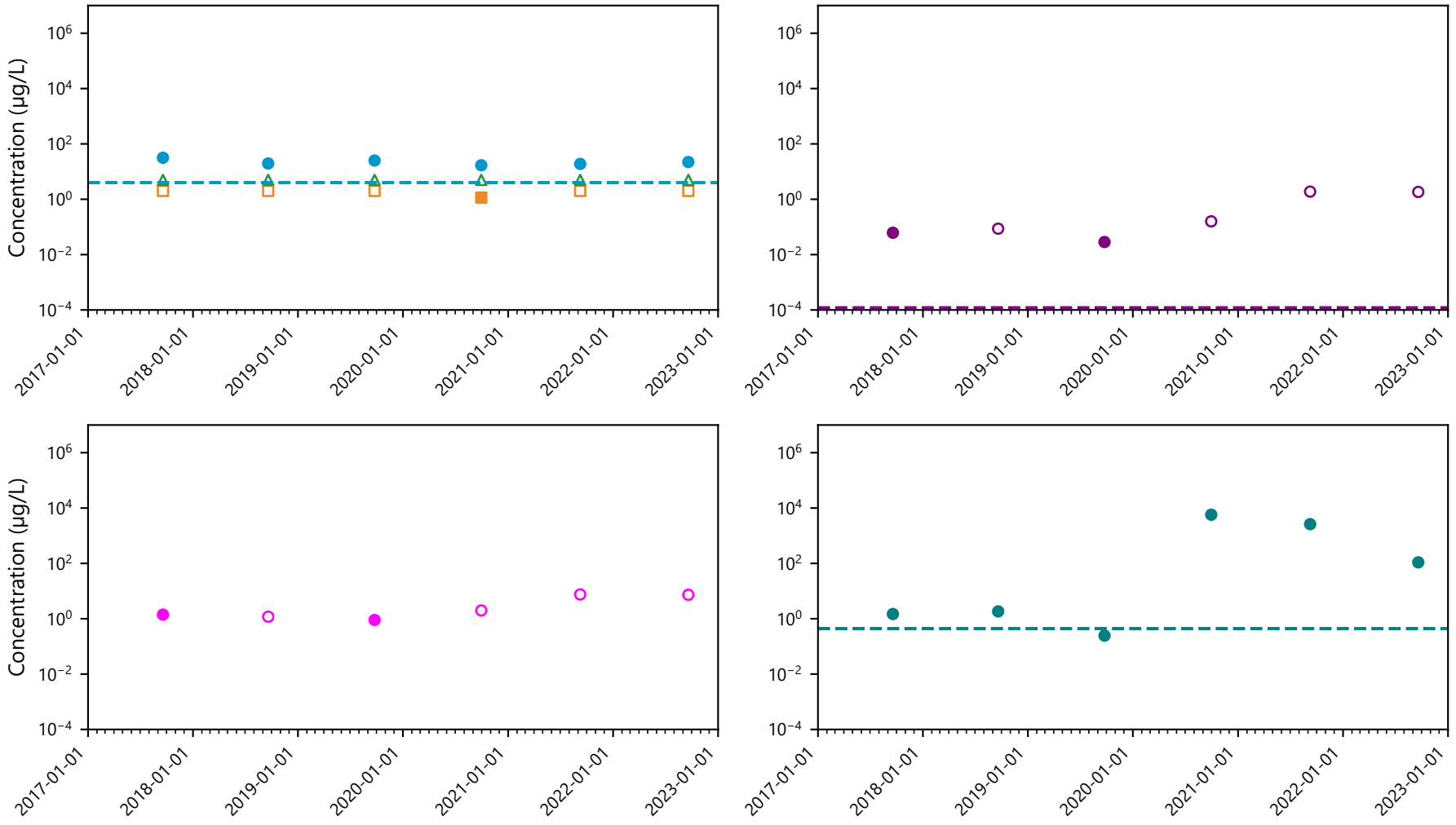
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.34
Monitoring Wells and Piezometers: MW-21-75
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
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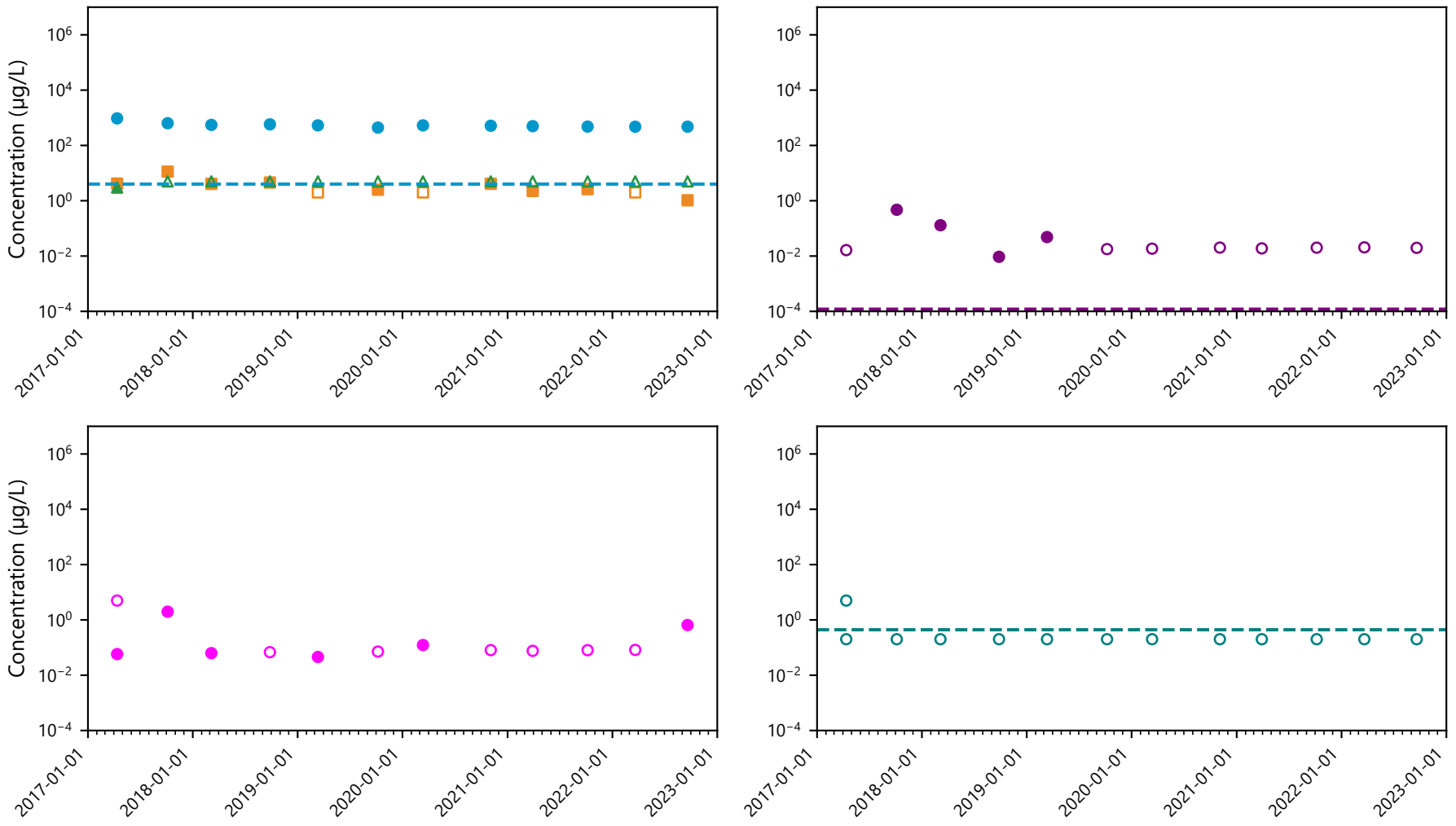
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.35
Monitoring Wells and Piezometers: MW-21U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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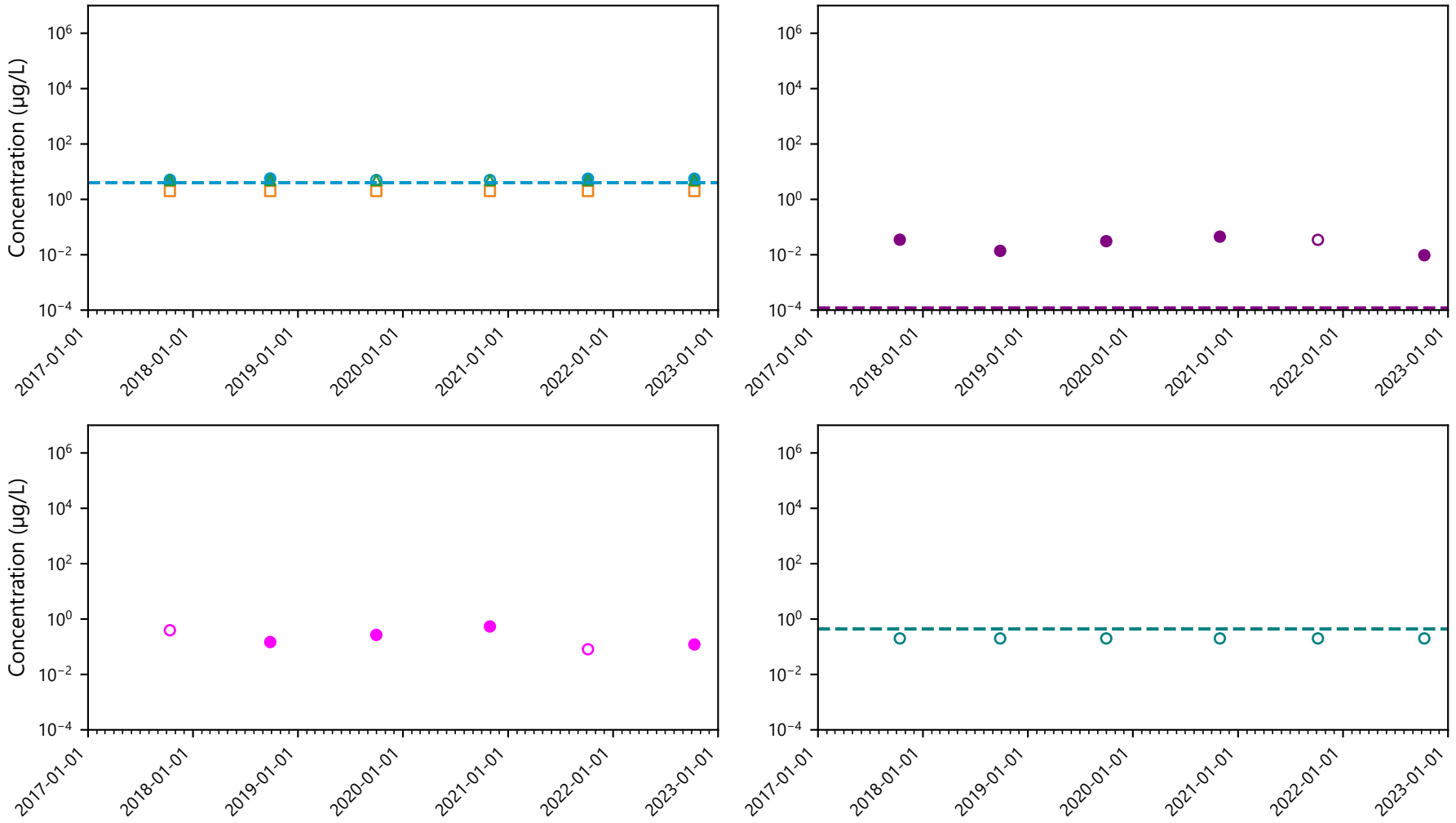
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.36
Monitoring Wells and Piezometers: MW-22U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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CUL= Cleanup Level

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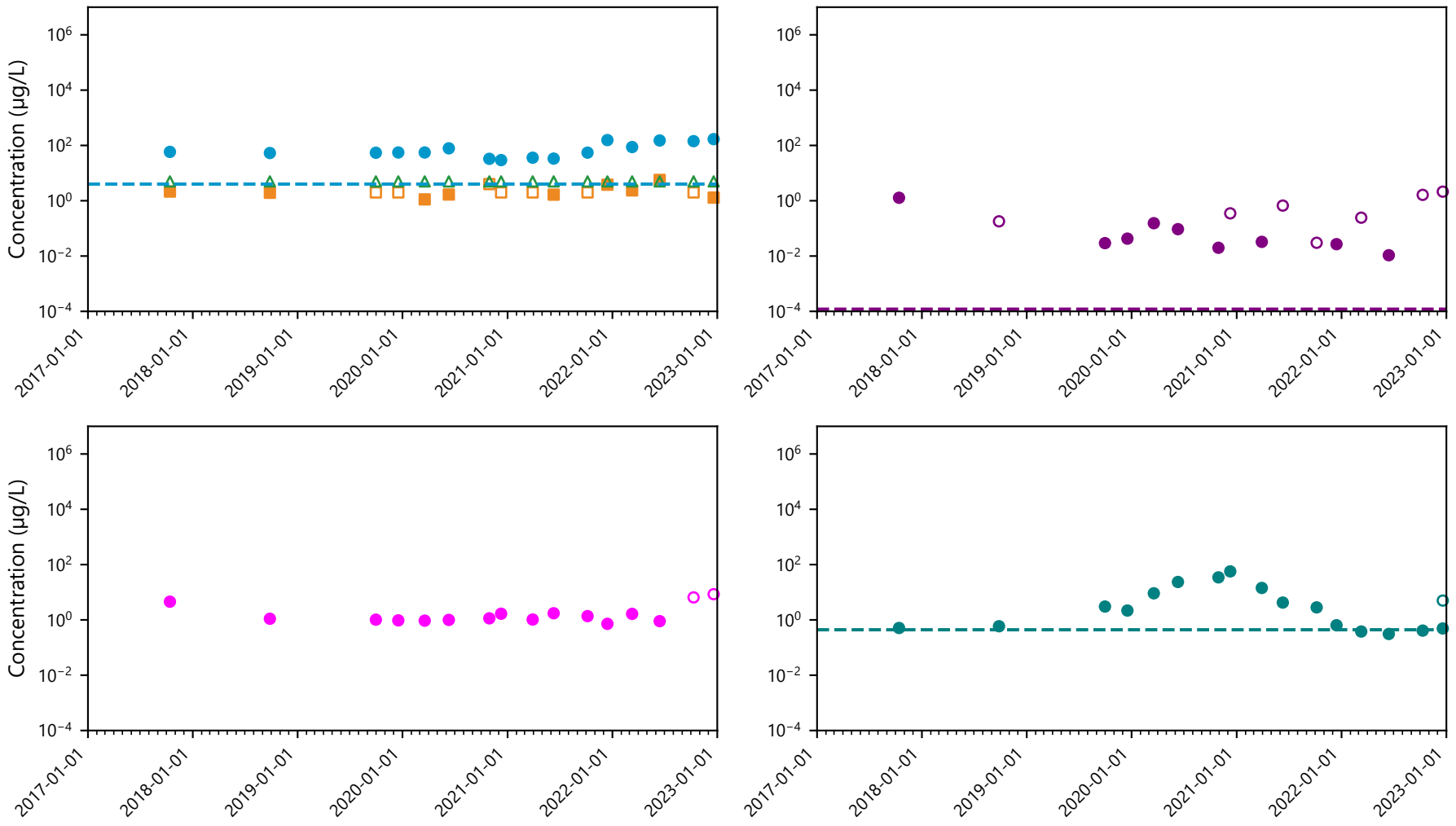
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.37
Monitoring Wells and Piezometers: MW-23-123
2022 HC&C System Annual Report
Gasco OU



Notes:
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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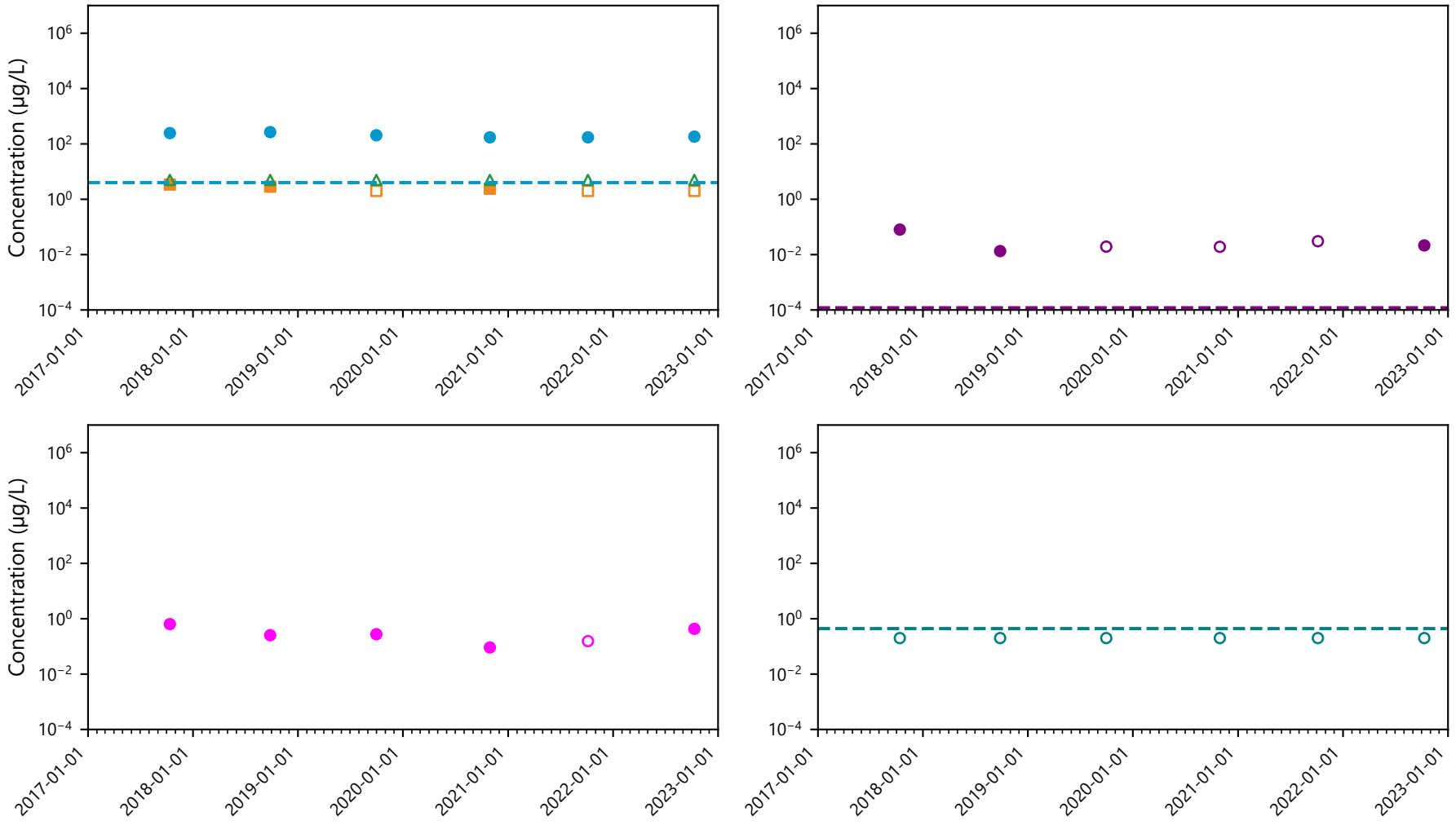
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.38
Monitoring Wells and Piezometers: MW-23-27
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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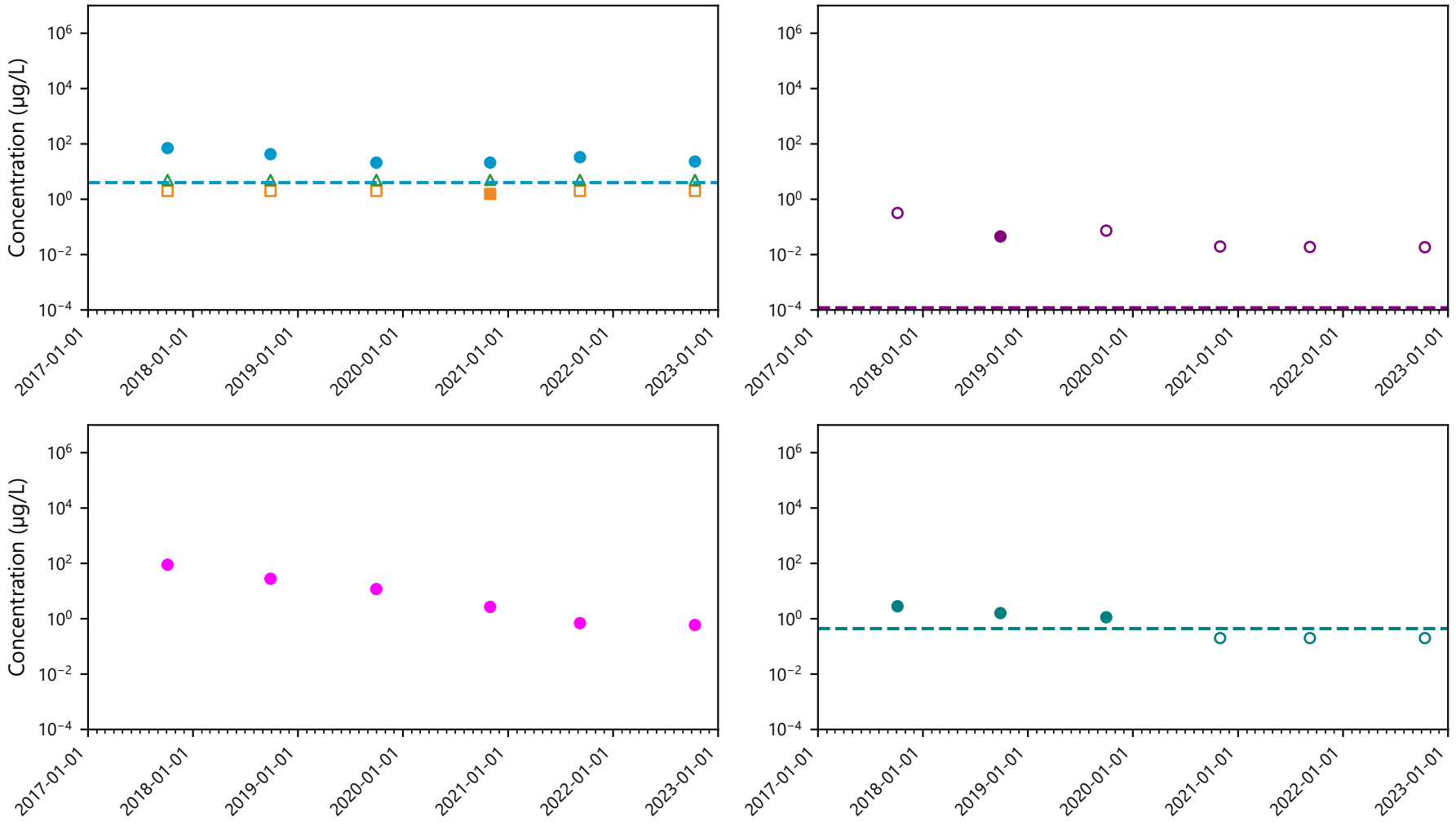
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.39
Monitoring Wells and Piezometers: MW-23U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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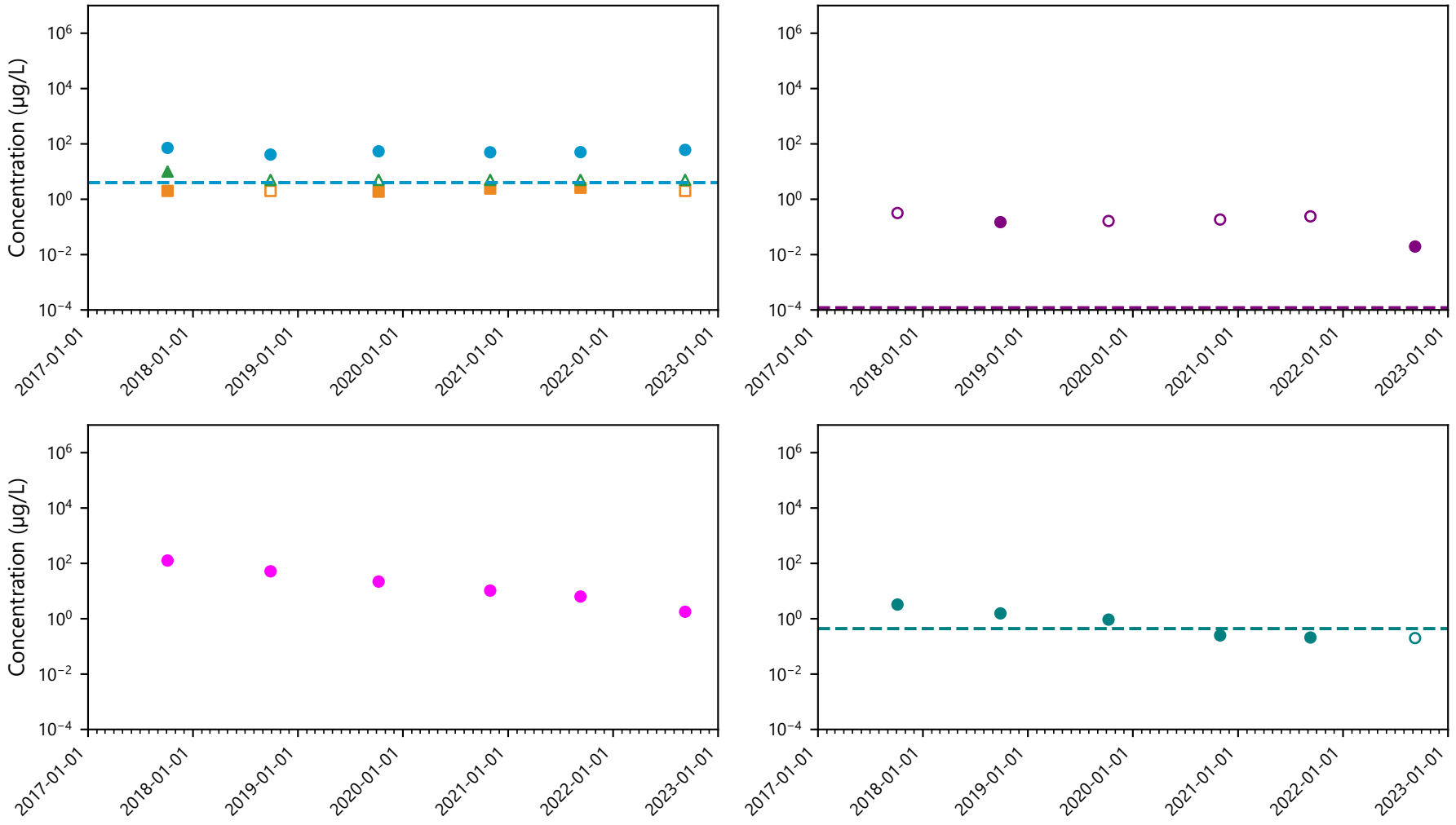
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.40
Monitoring Wells and Piezometers: MW-28U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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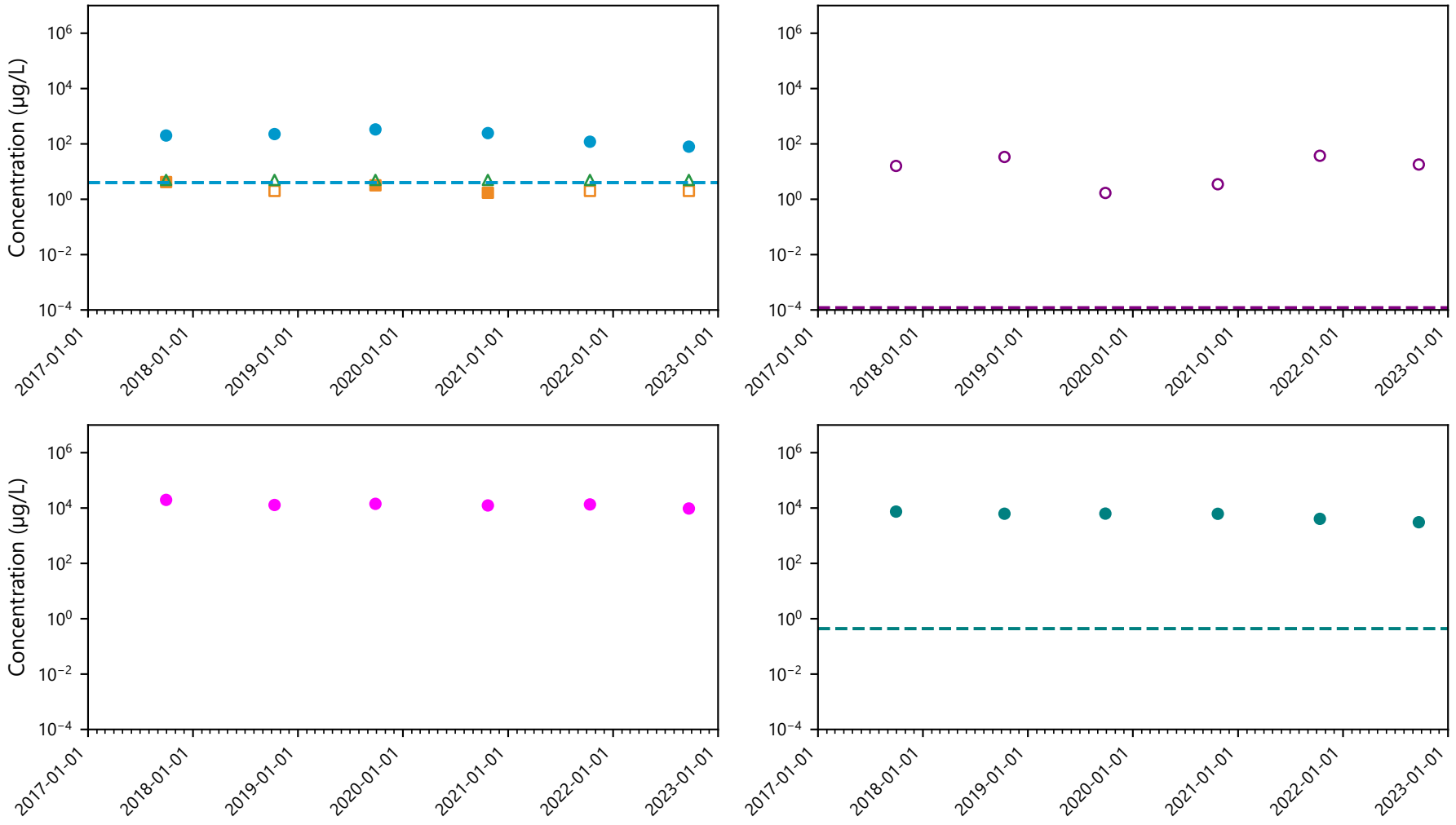
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.41
Monitoring Wells and Piezometers: MW-31U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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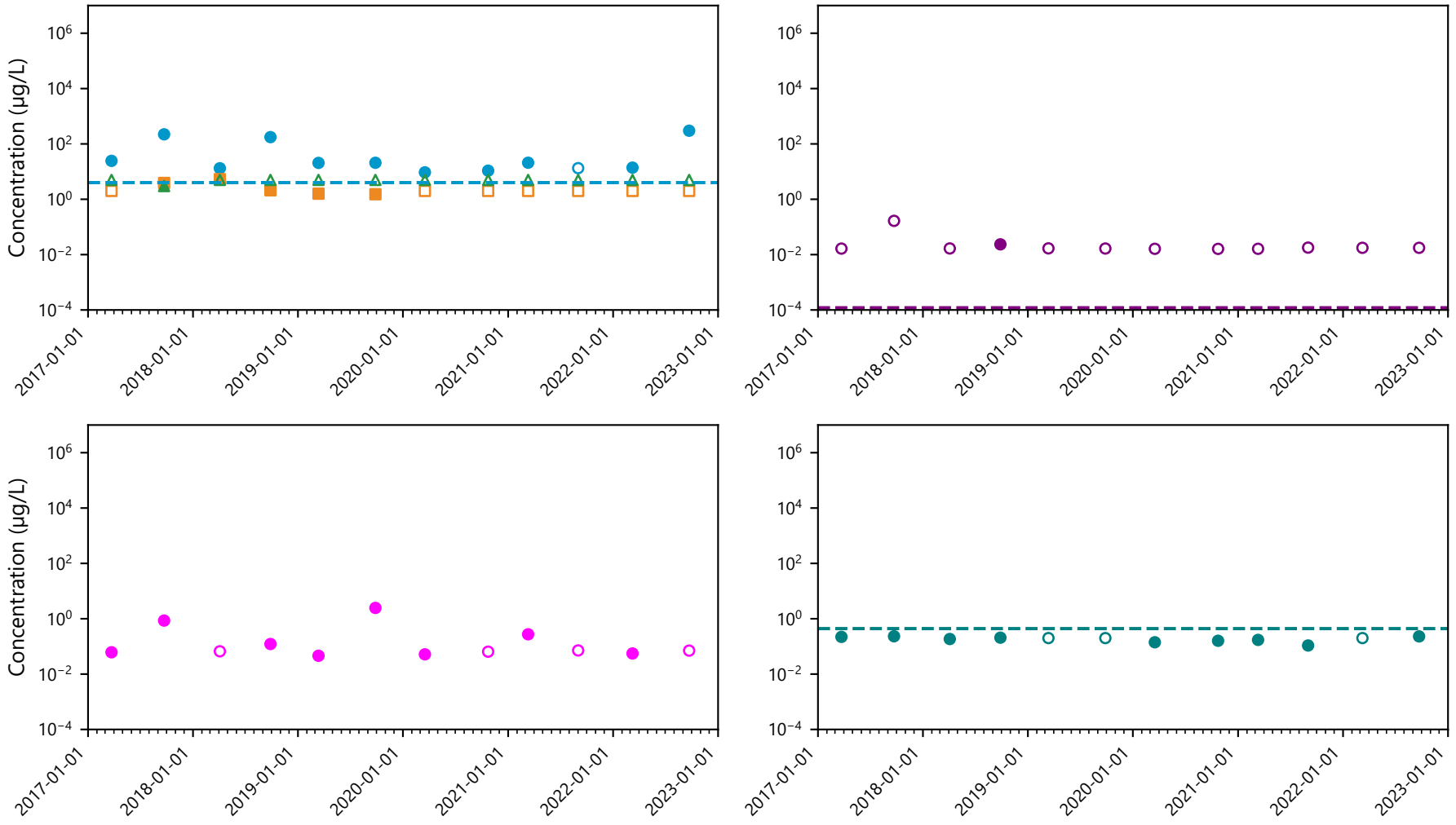
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.42
Monitoring Wells and Piezometers: MW-34U
2022 HC&C System Annual Report
Gasco OU



Notes:
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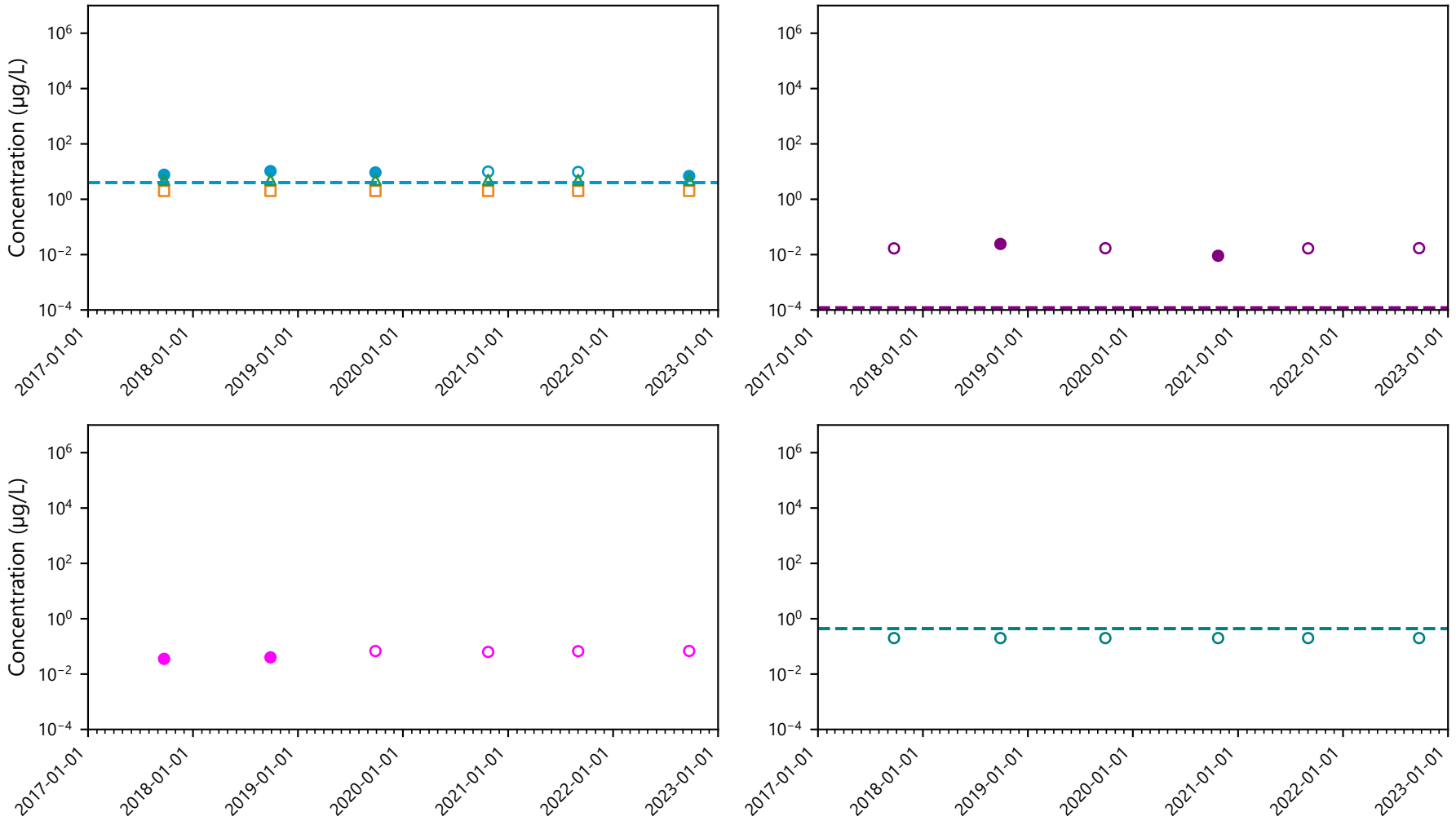
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.43
Monitoring Wells and Piezometers: MW-40F
2022 HC&C System Annual Report
Gasco OU



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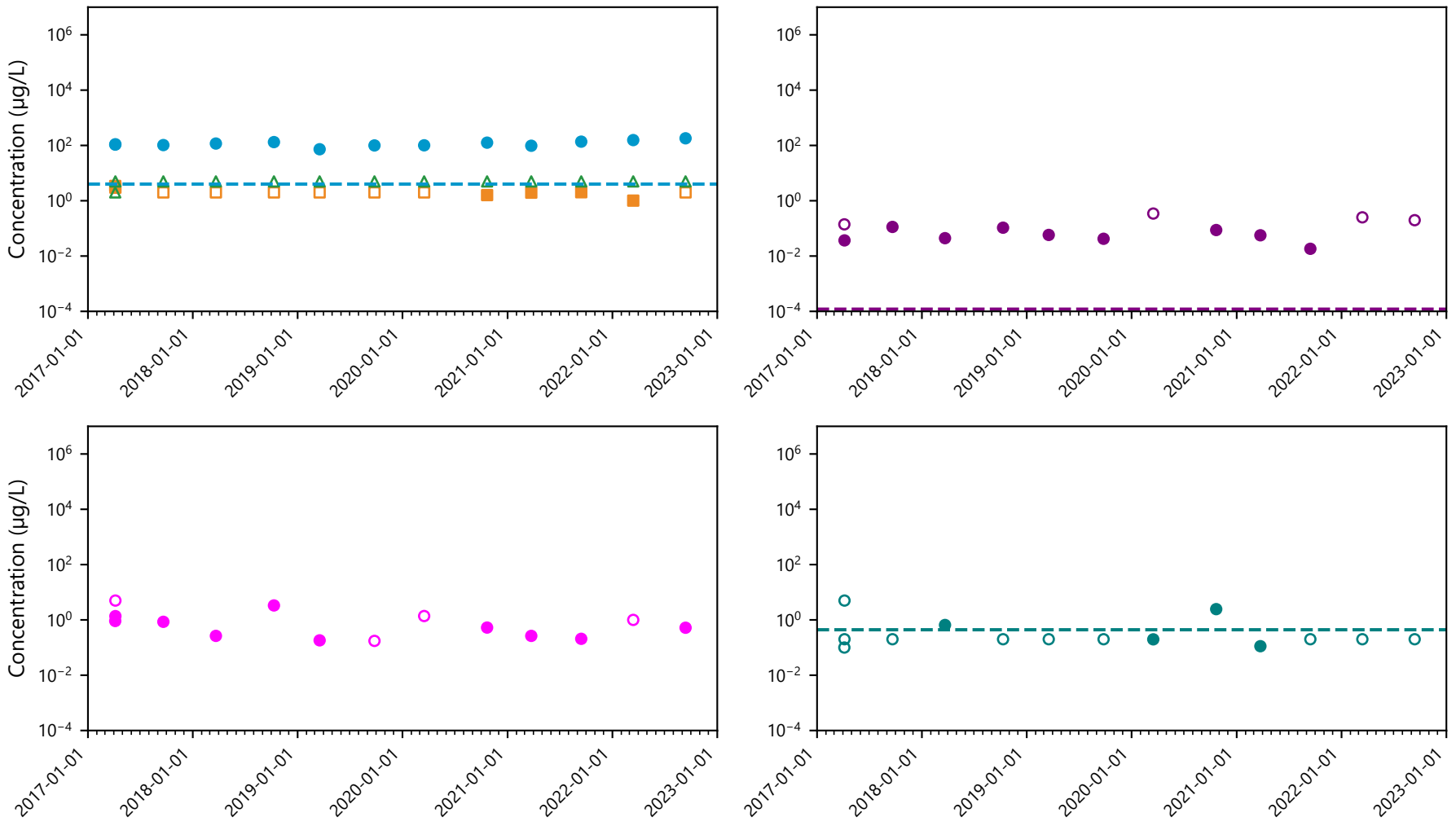
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.44
Monitoring Wells and Piezometers: MW-41U
2022 HC&C System Annual Report
Gasco OU



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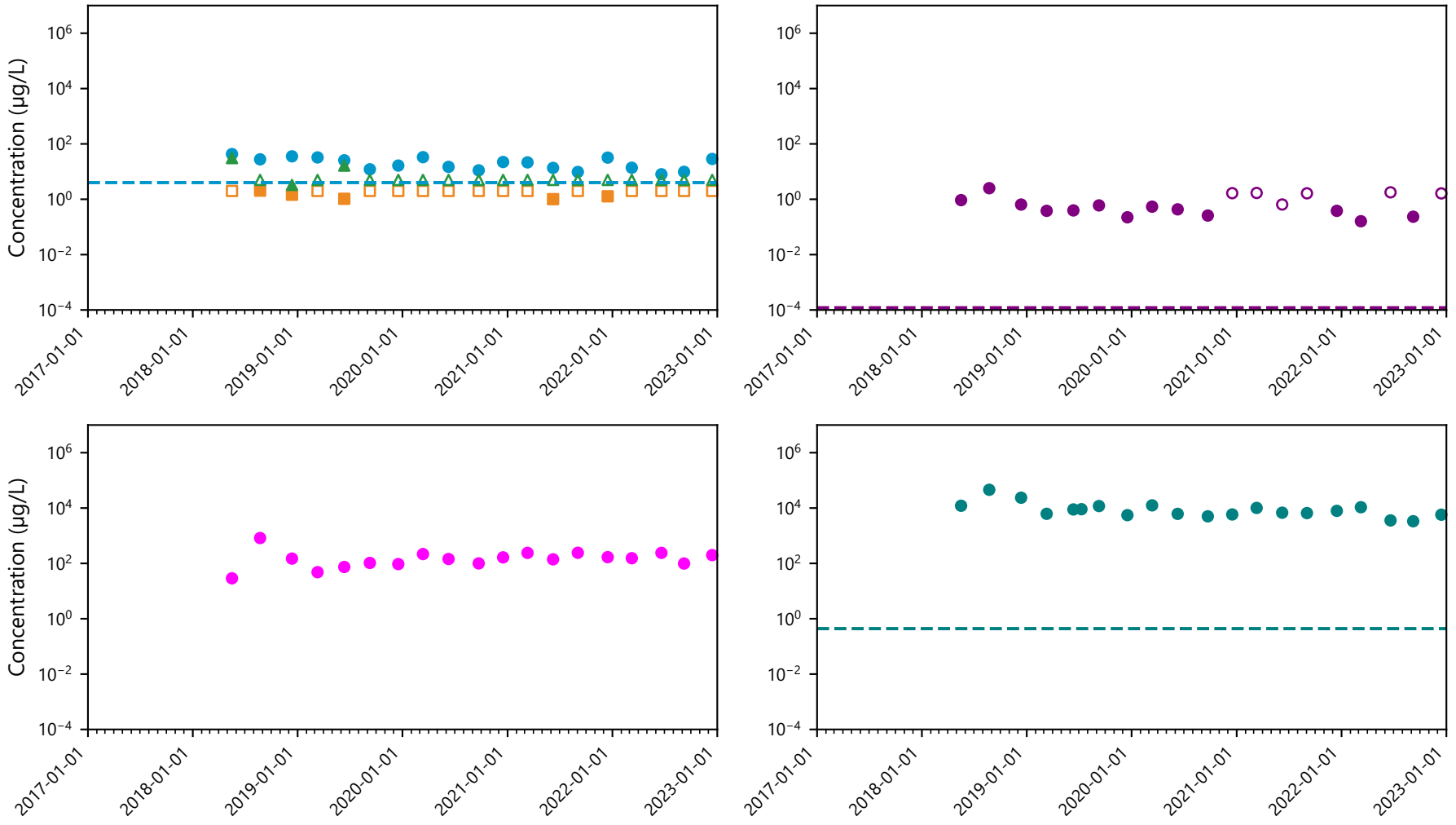
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.45
Monitoring Wells and Piezometers: MW-42F
2022 HC&C System Annual Report
Gasco OU



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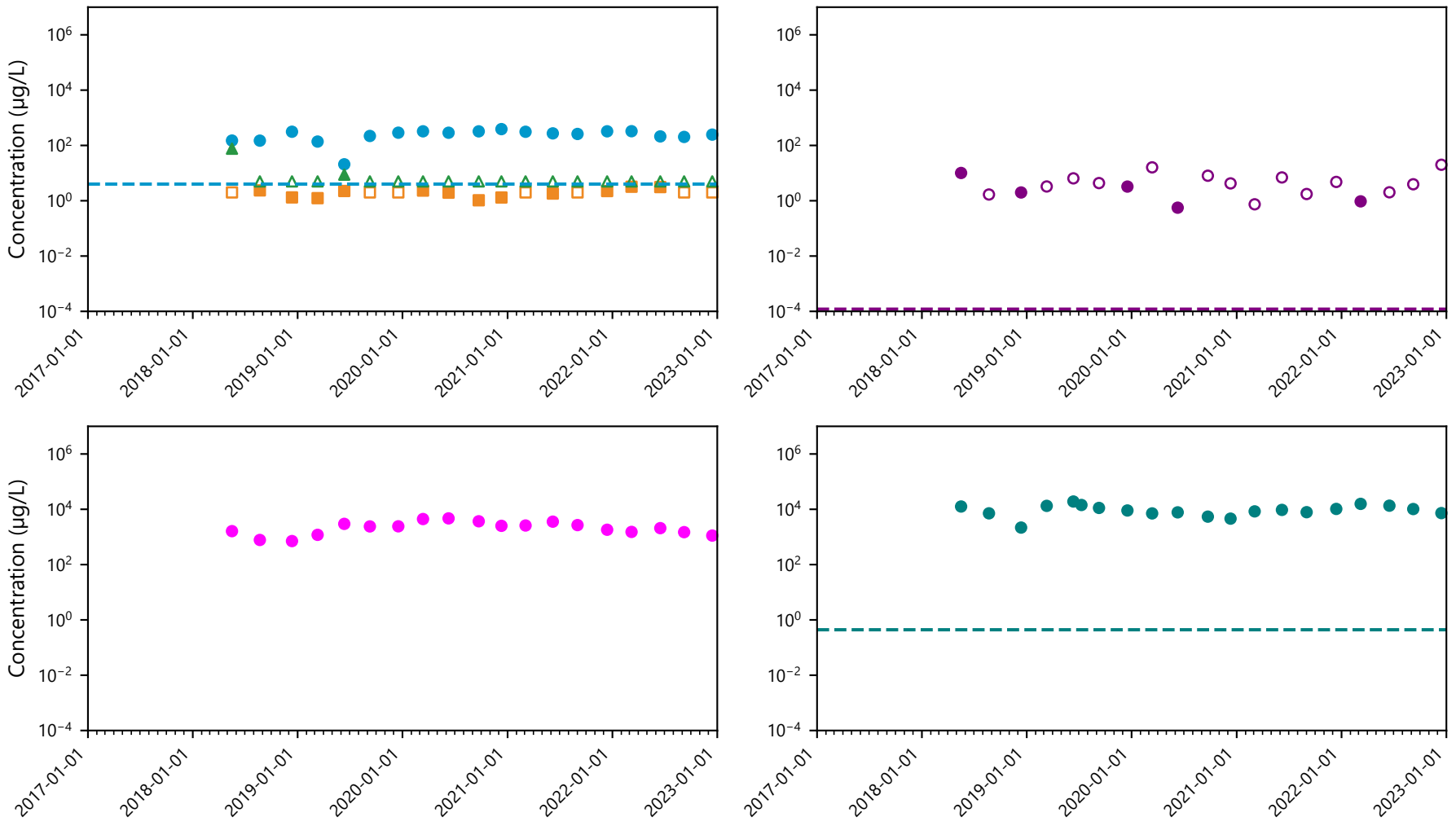
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.46
Monitoring Wells and Piezometers: MW-46F
2022 HC&C System Annual Report
Gasco OU



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CUL= Cleanup Level

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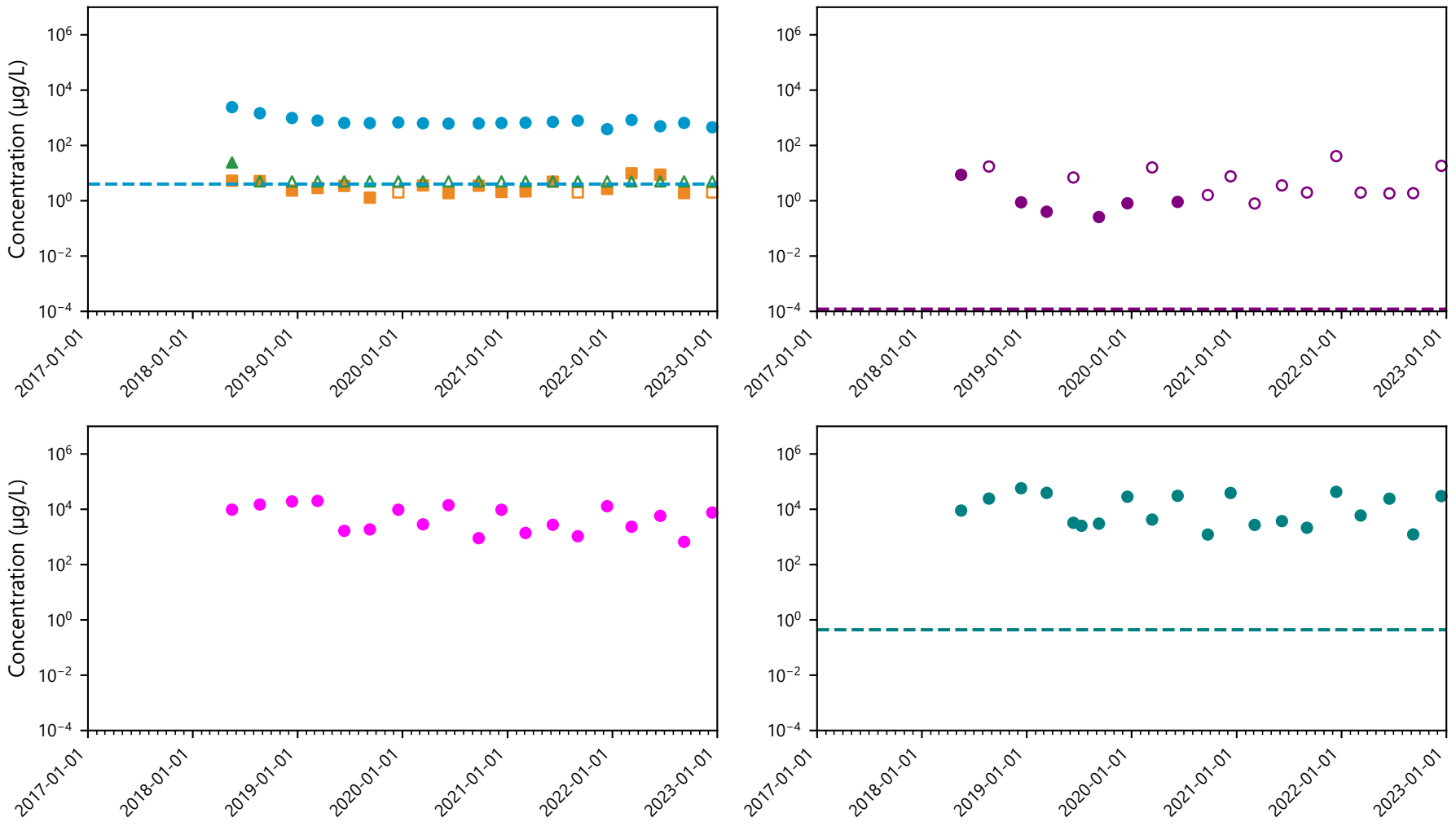
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.47
Monitoring Wells and Piezometers: MW-47F
2022 HC&C System Annual Report
Gasco OU



Notes:
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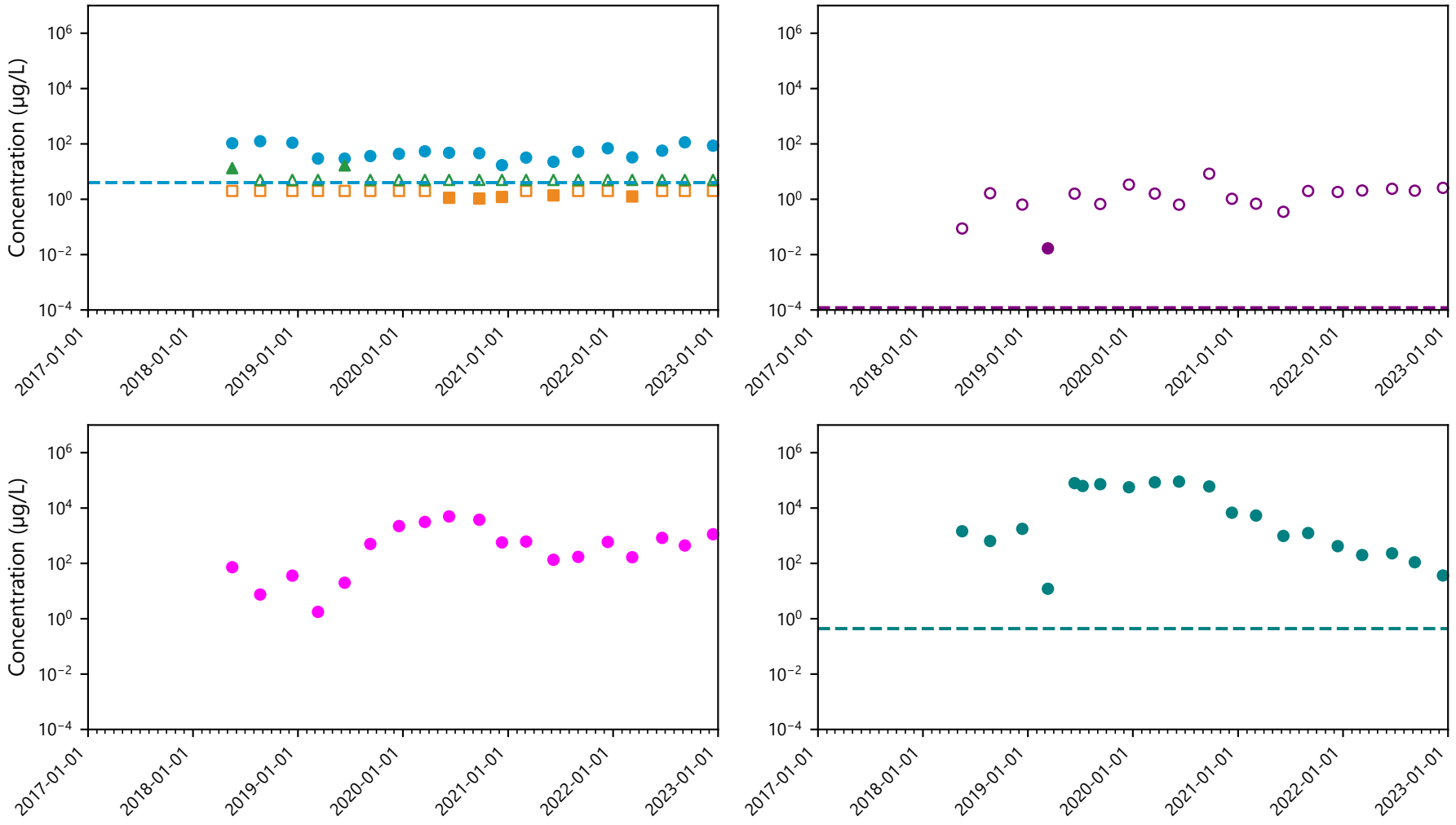
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.48
Monitoring Wells and Piezometers: MW-48F
2022 HC&C System Annual Report
Gasco OU



Notes:
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CUL= Cleanup Level

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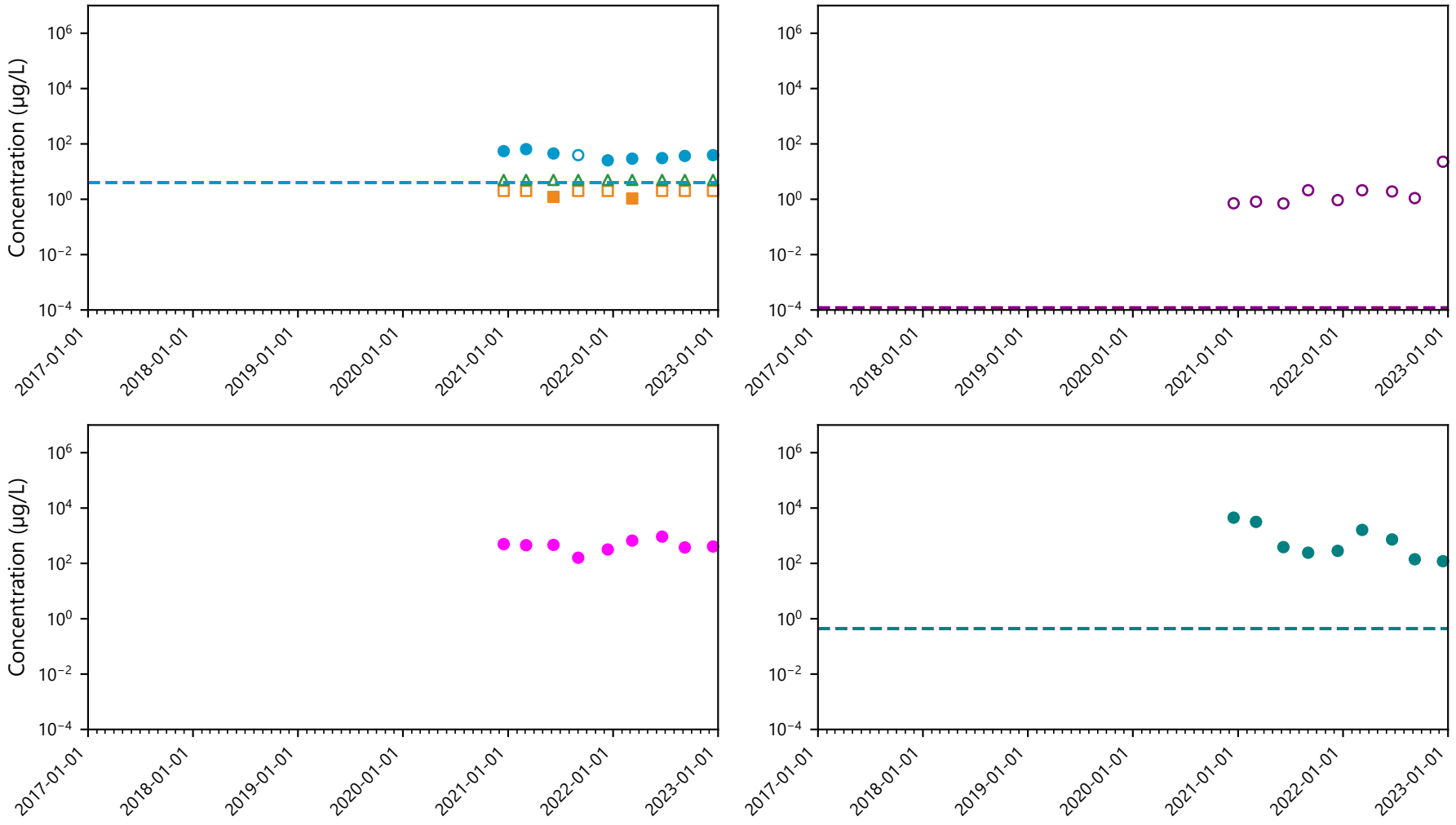
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.49
Monitoring Wells and Piezometers: MW-49F
2022 HC&C System Annual Report
Gasco OU



Notes:
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CUL= Cleanup Level

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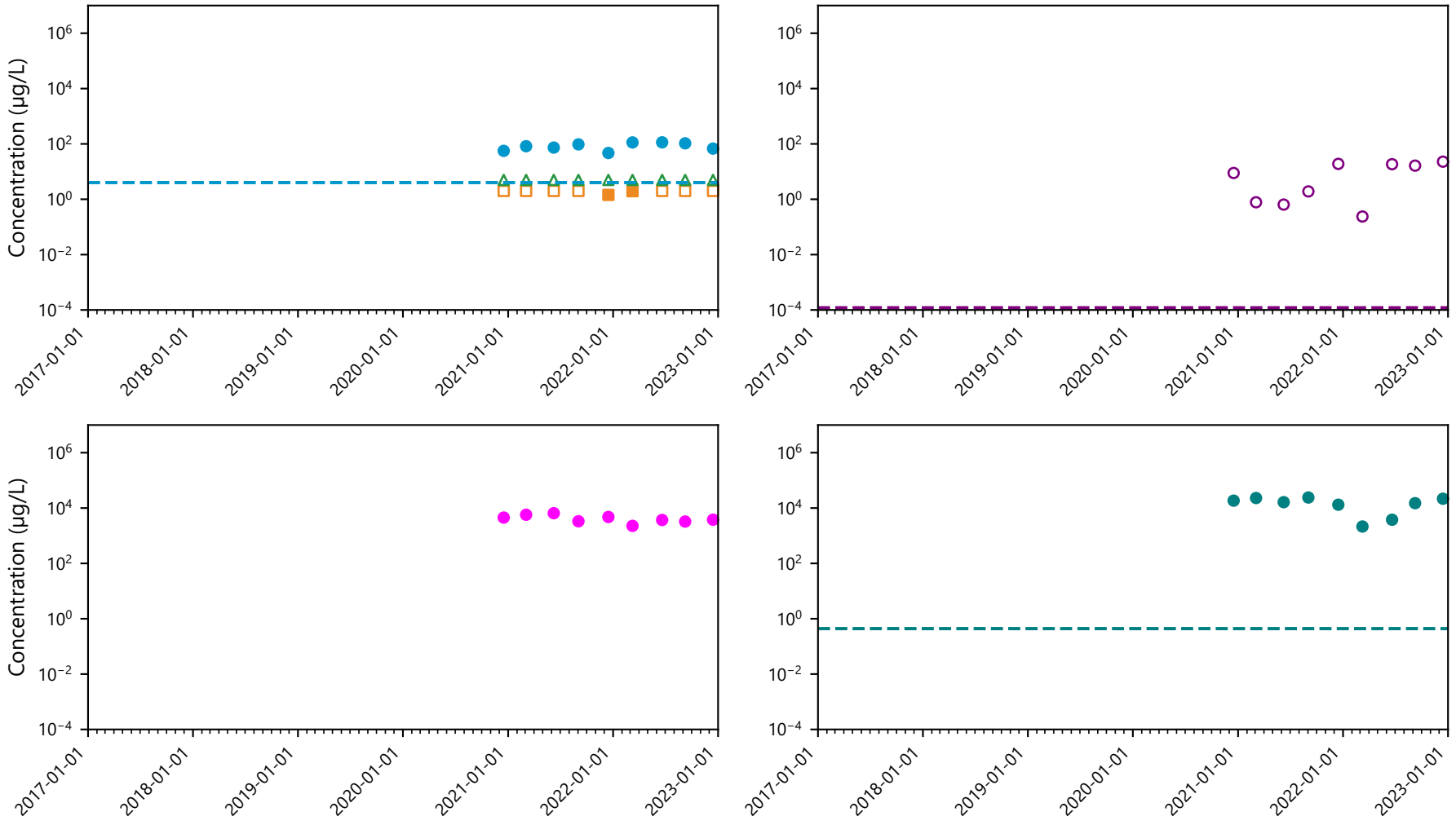
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.50
Monitoring Wells and Piezometers: MW-51F
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
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CUL= Cleanup Level

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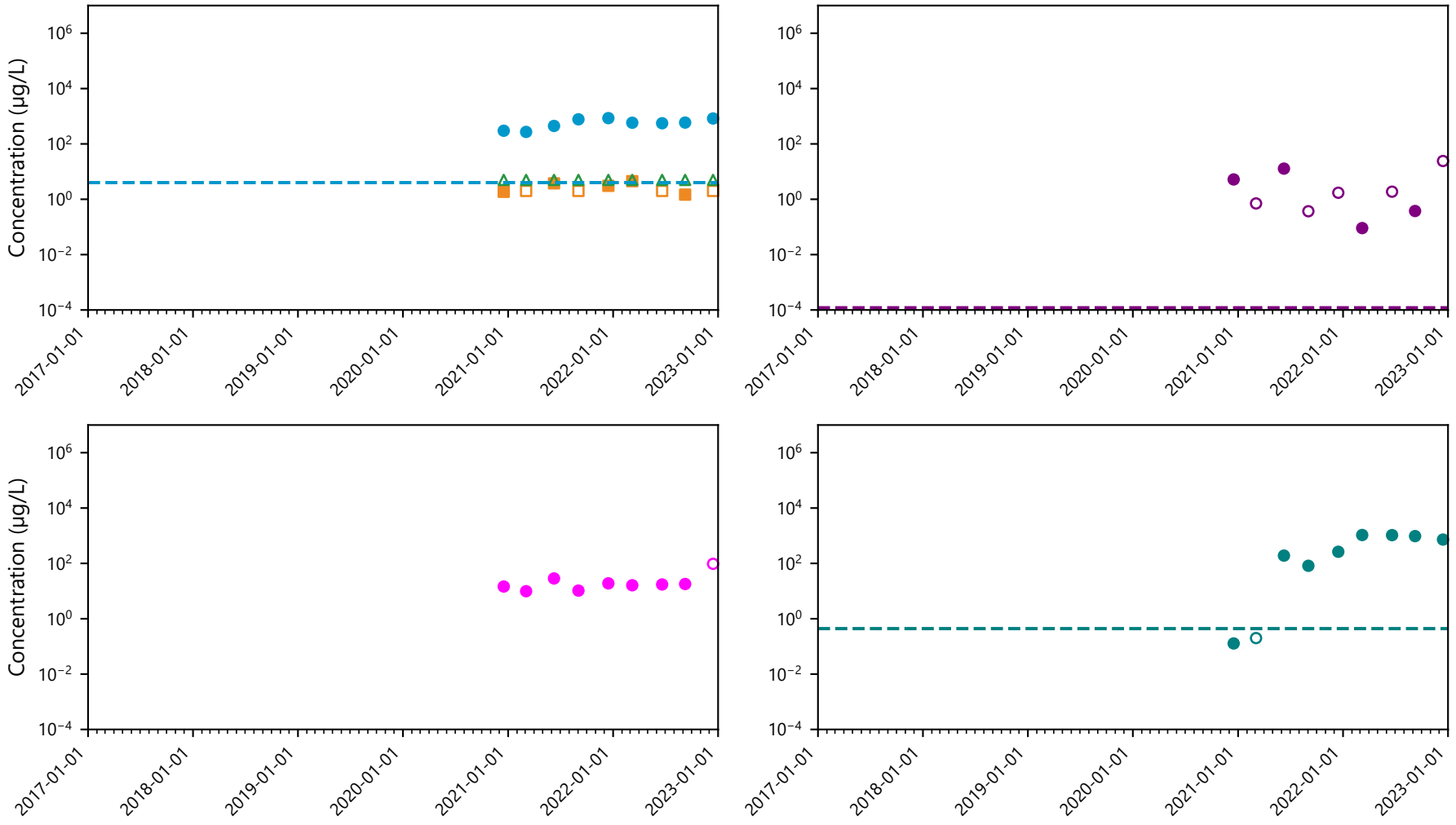
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.51
Monitoring Wells and Piezometers: MW-52F
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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CUL= Cleanup Level

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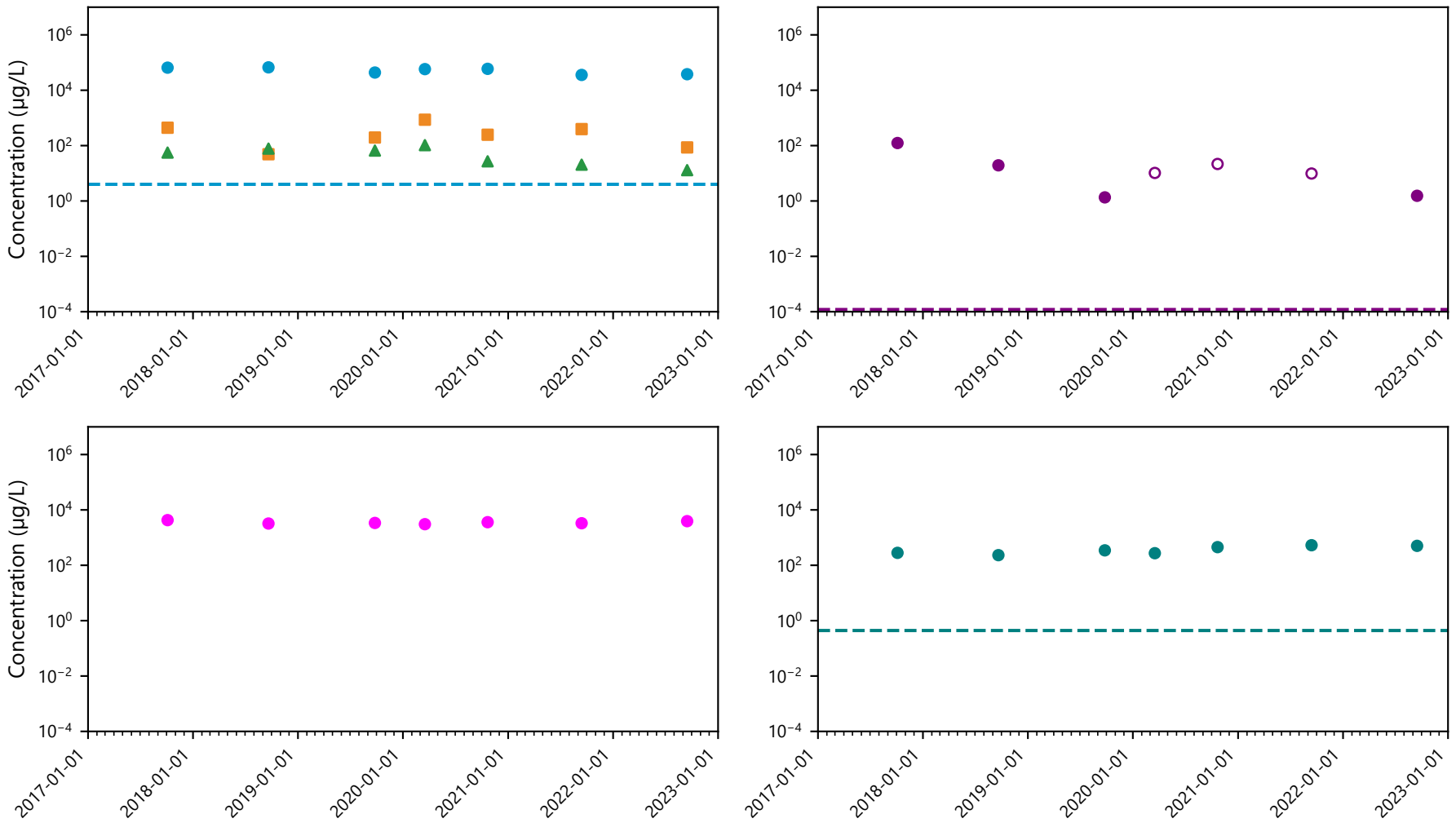
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.52
Monitoring Wells and Piezometers: MW-53F
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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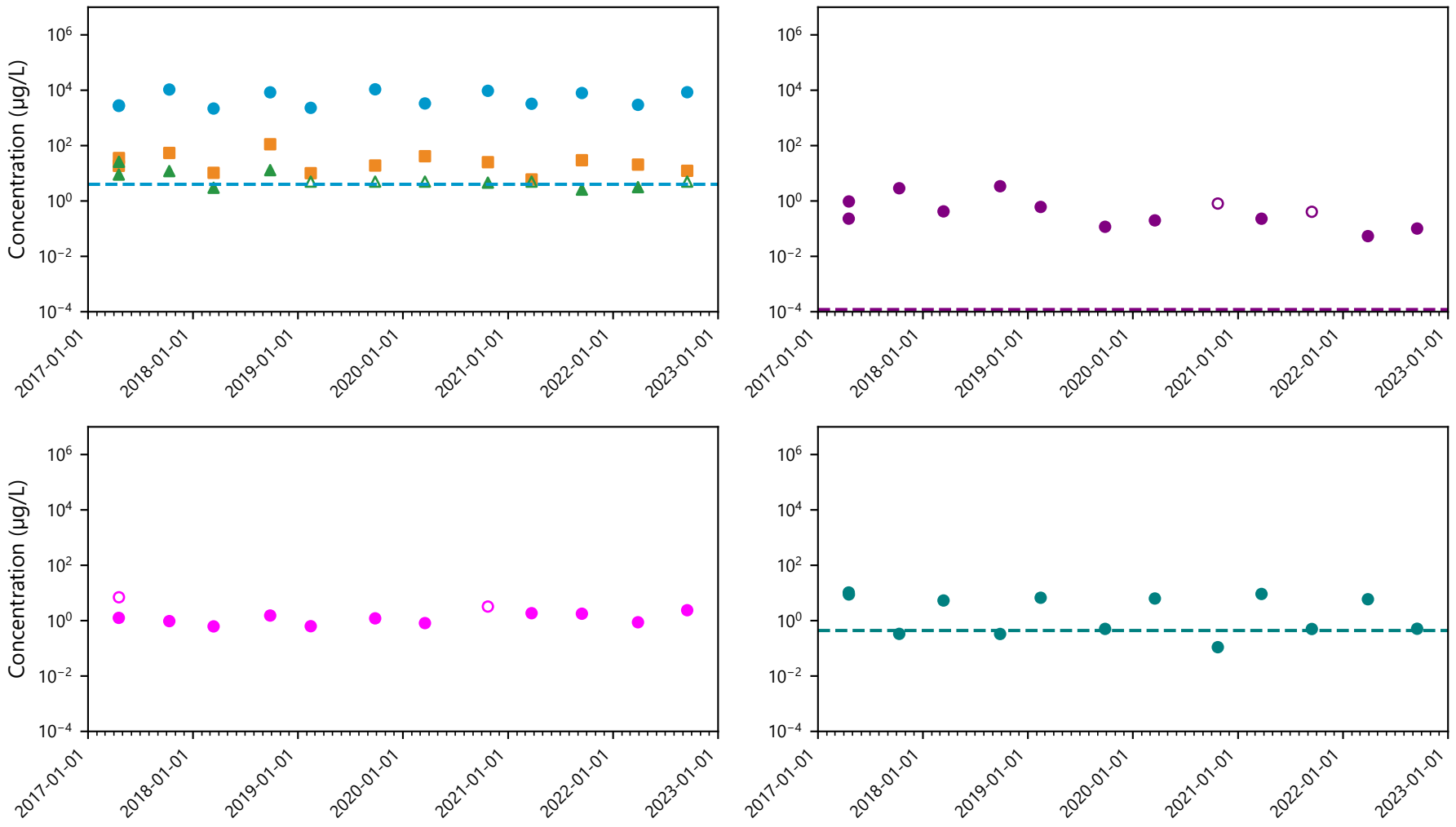
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.53
Monitoring Wells and Piezometers: NWN-01-20
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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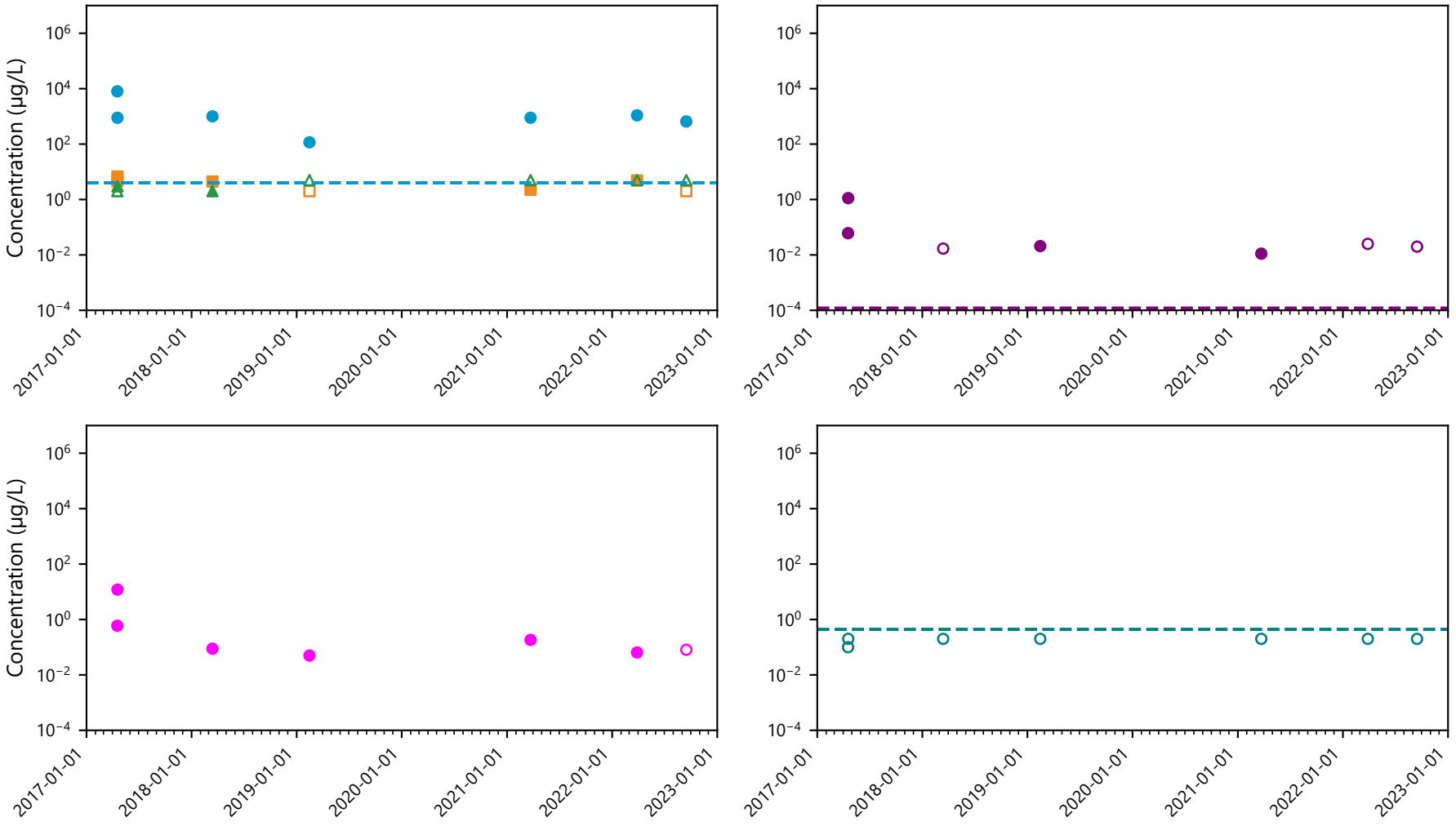
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.54
Monitoring Wells and Piezometers: NWN-02-20
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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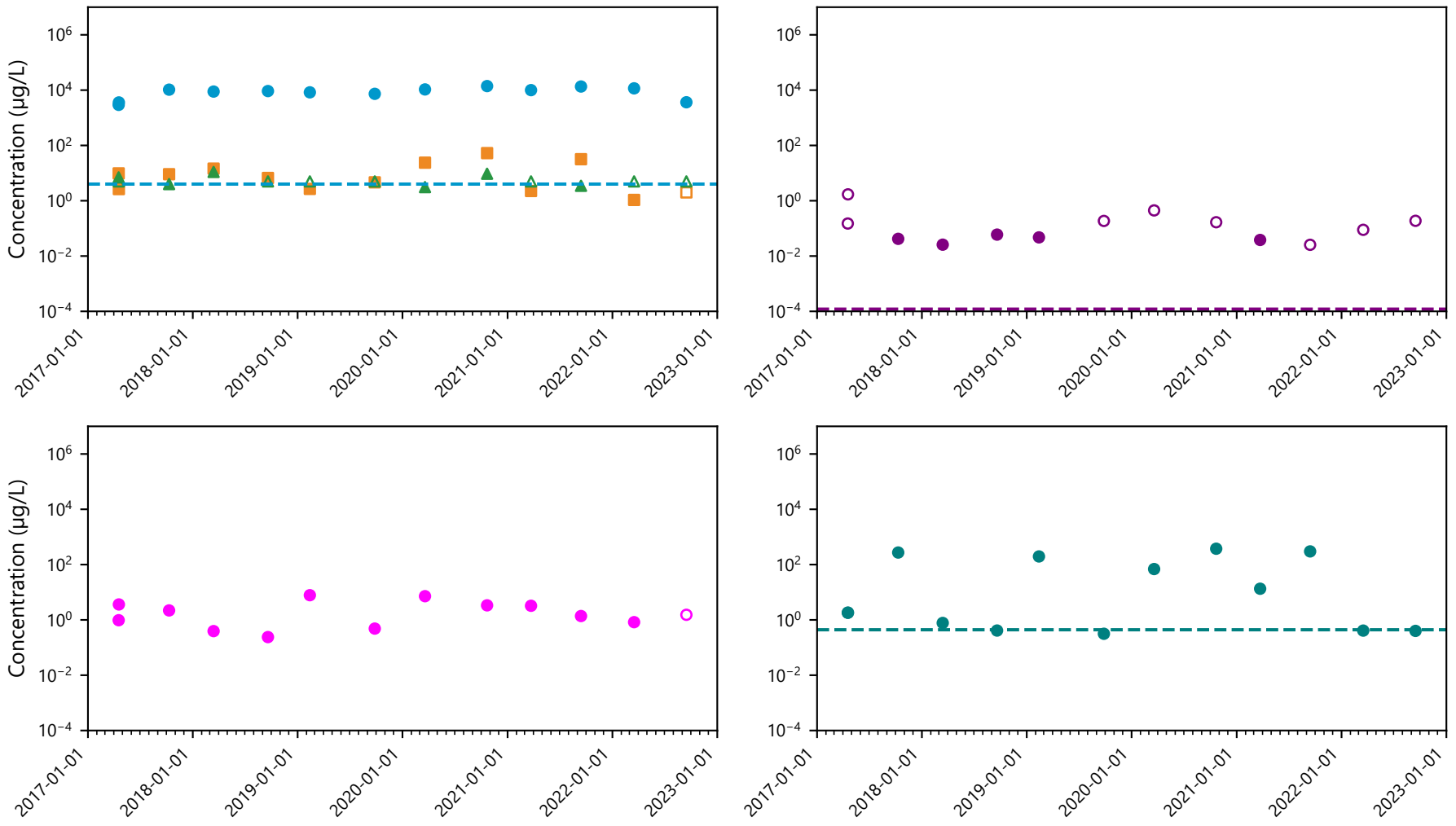
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.55
Monitoring Wells and Piezometers: NWN-03-17
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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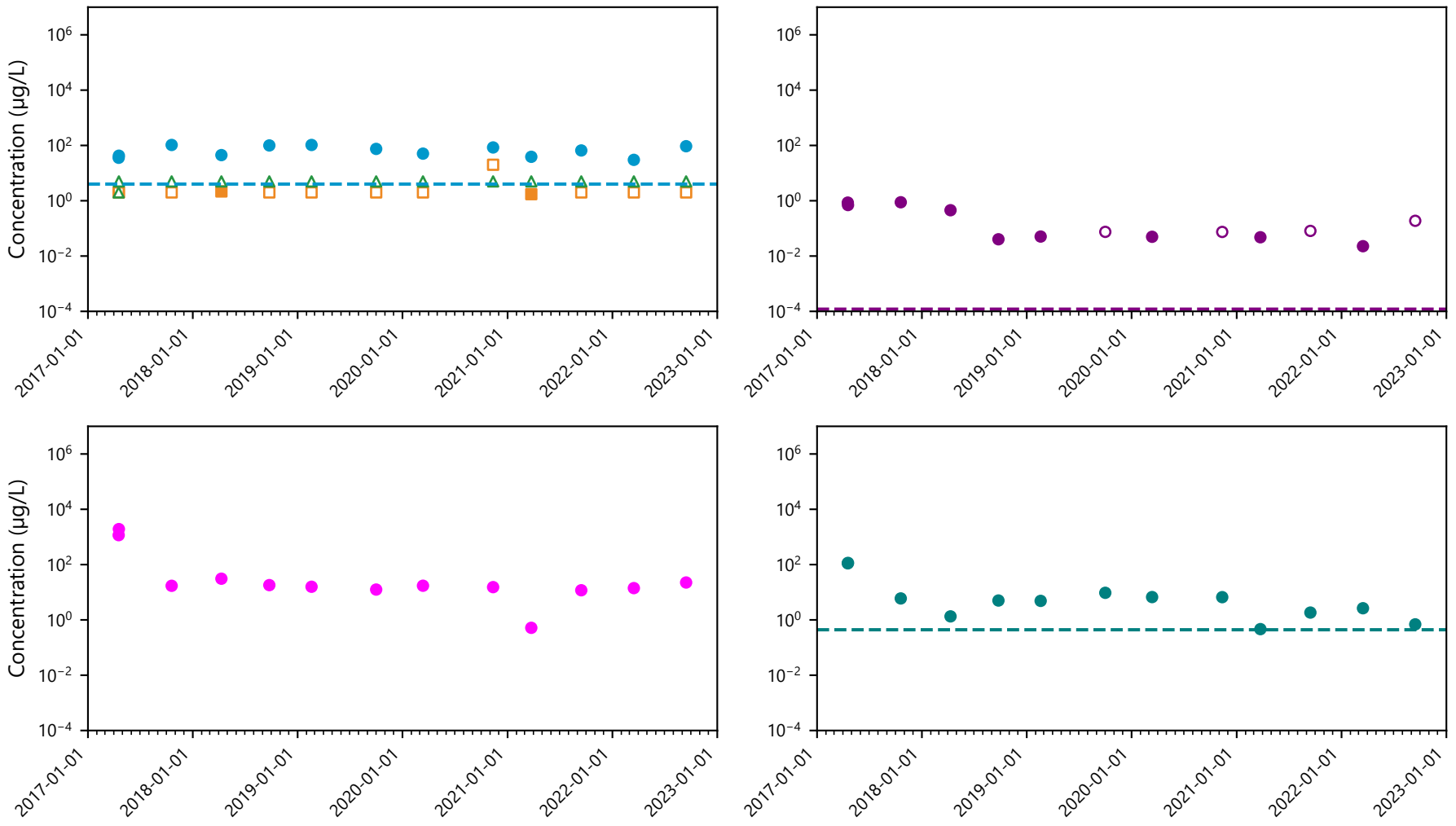
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.56
Monitoring Wells and Piezometers: NWN-07-30
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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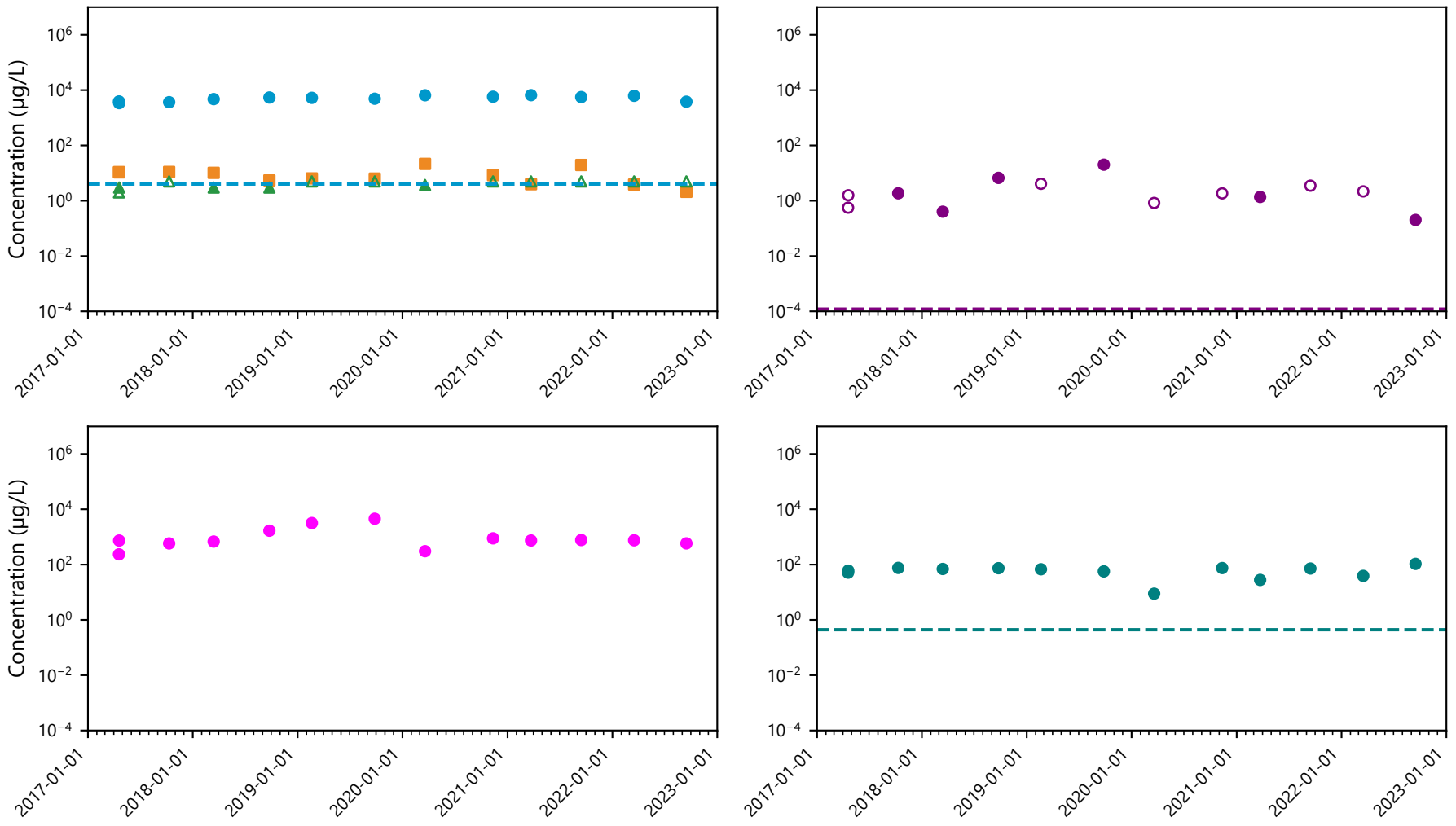
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.57
Monitoring Wells and Piezometers: NWN-09-31
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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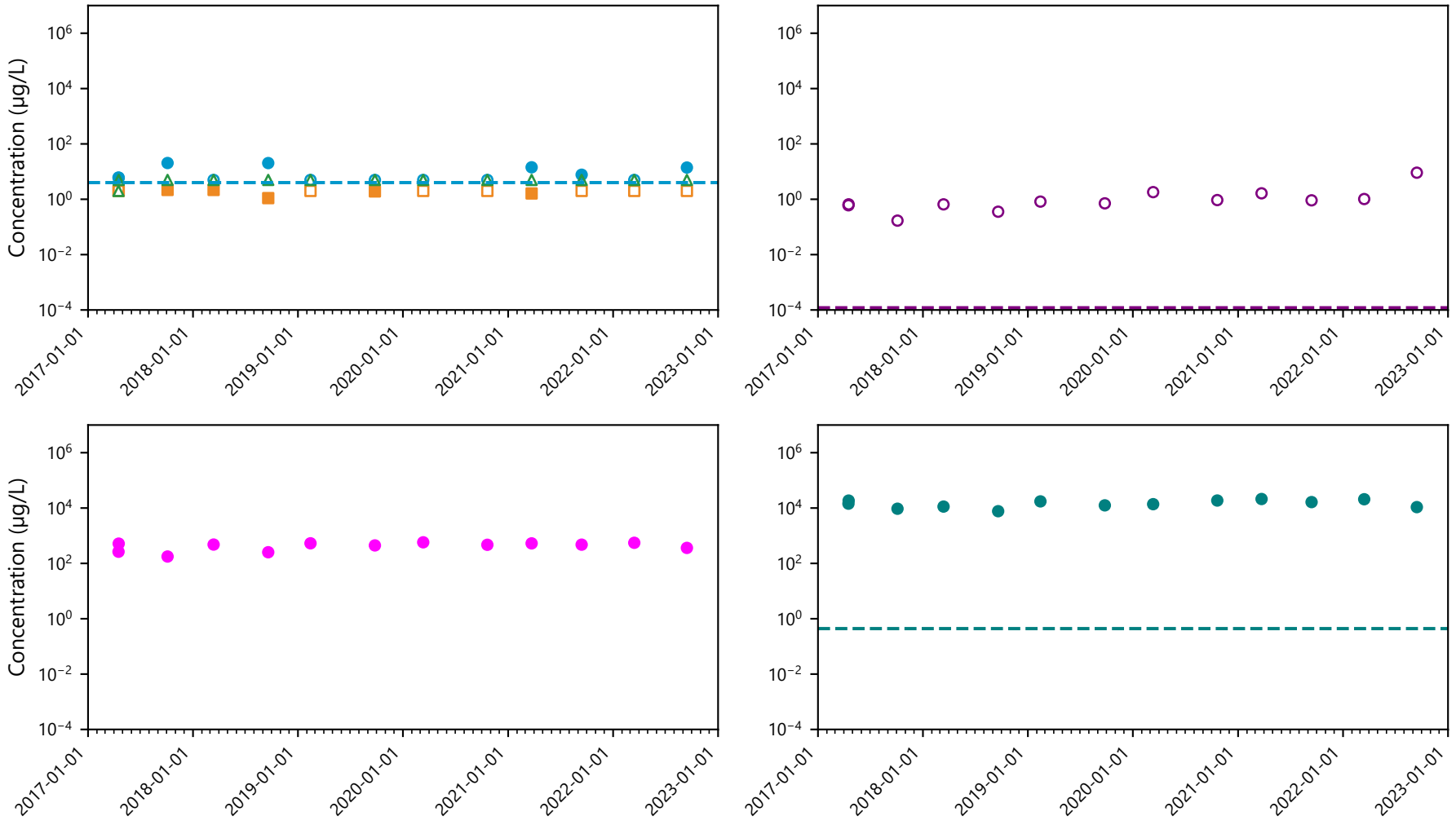
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.58
Monitoring Wells and Piezometers: NWN-11-24
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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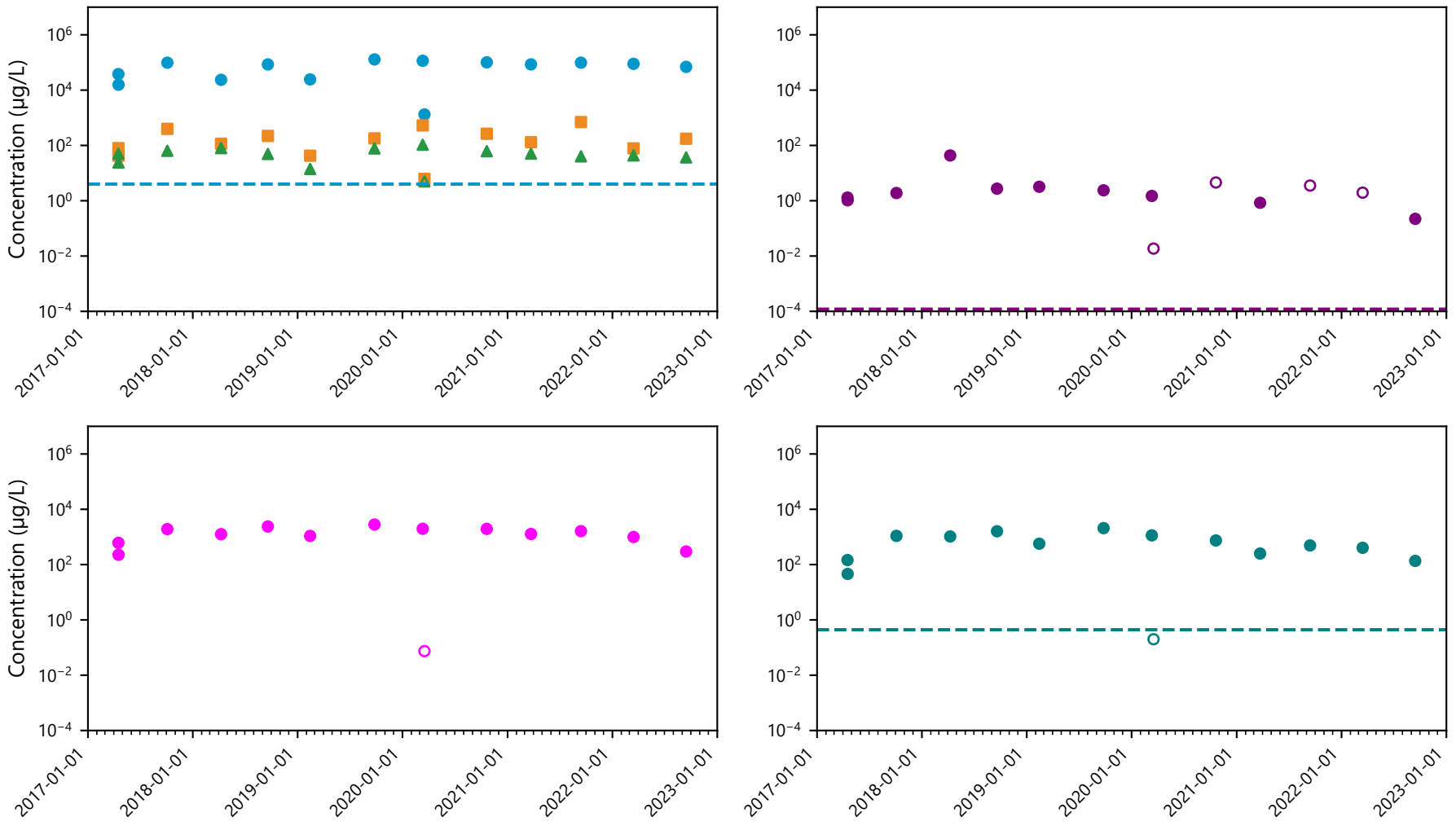
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.59
Monitoring Wells and Piezometers: NWN-13-106
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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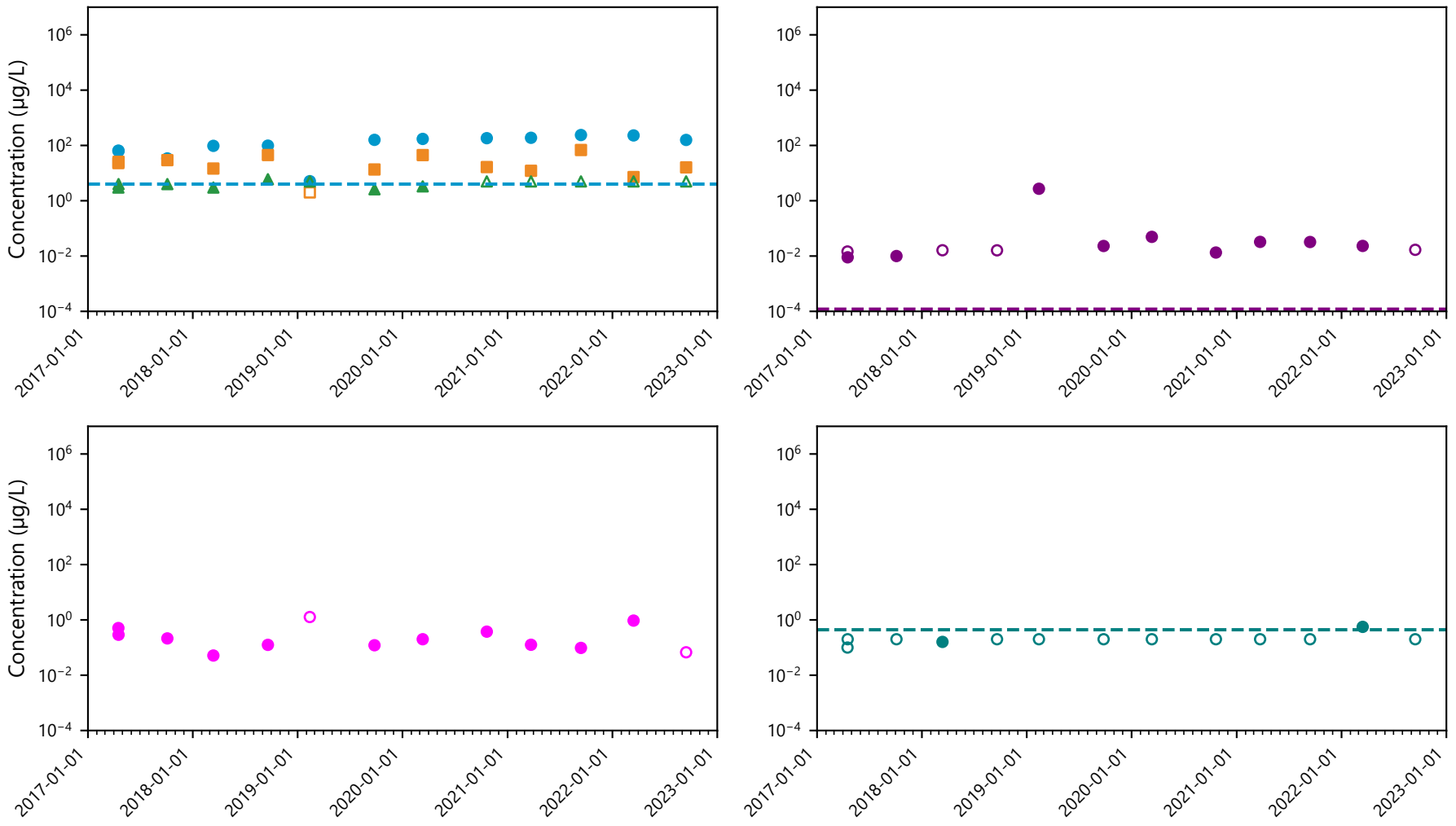
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.60
Monitoring Wells and Piezometers: NWN-13-23
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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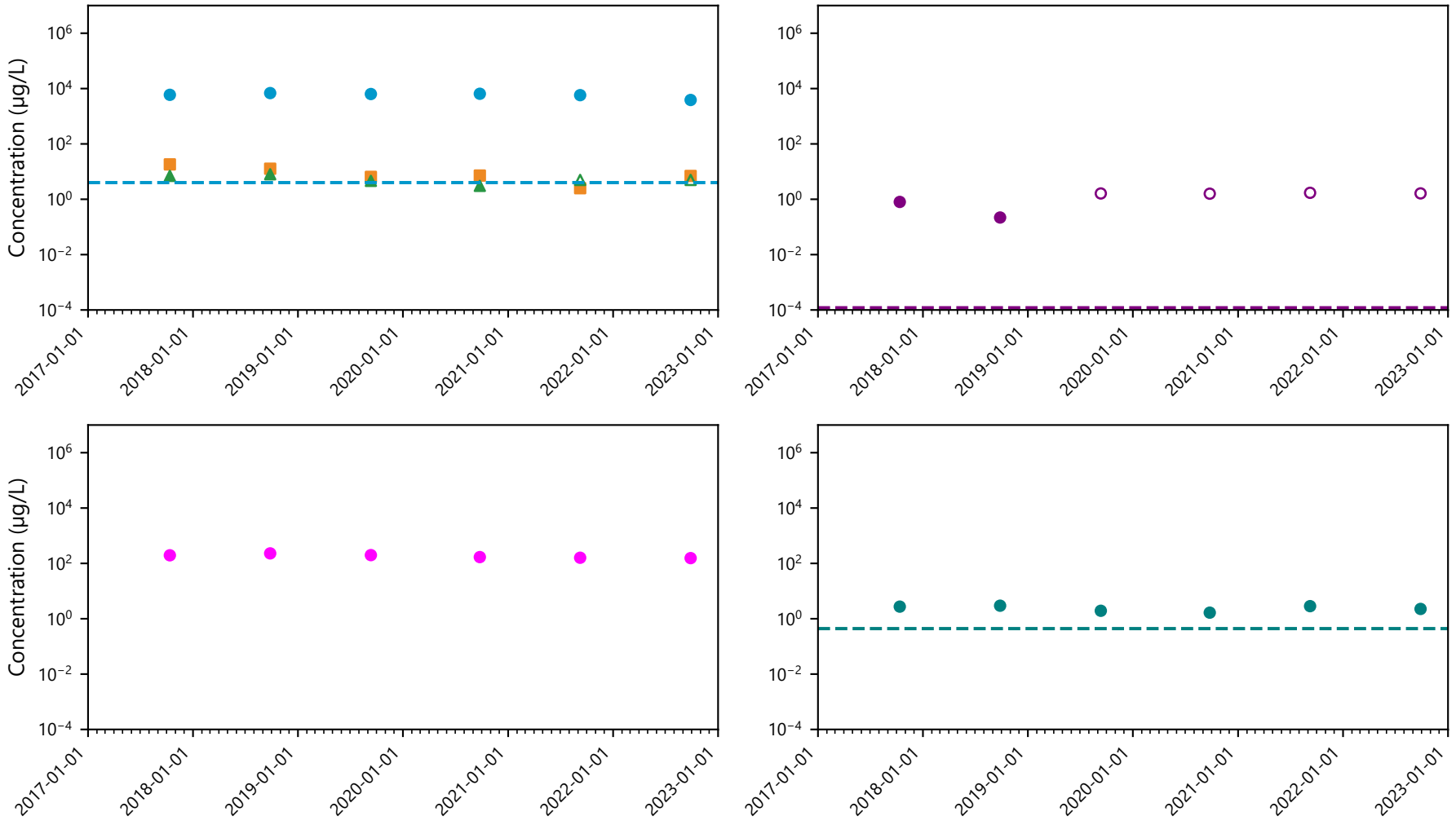
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.61
Monitoring Wells and Piezometers: NWN-13-73
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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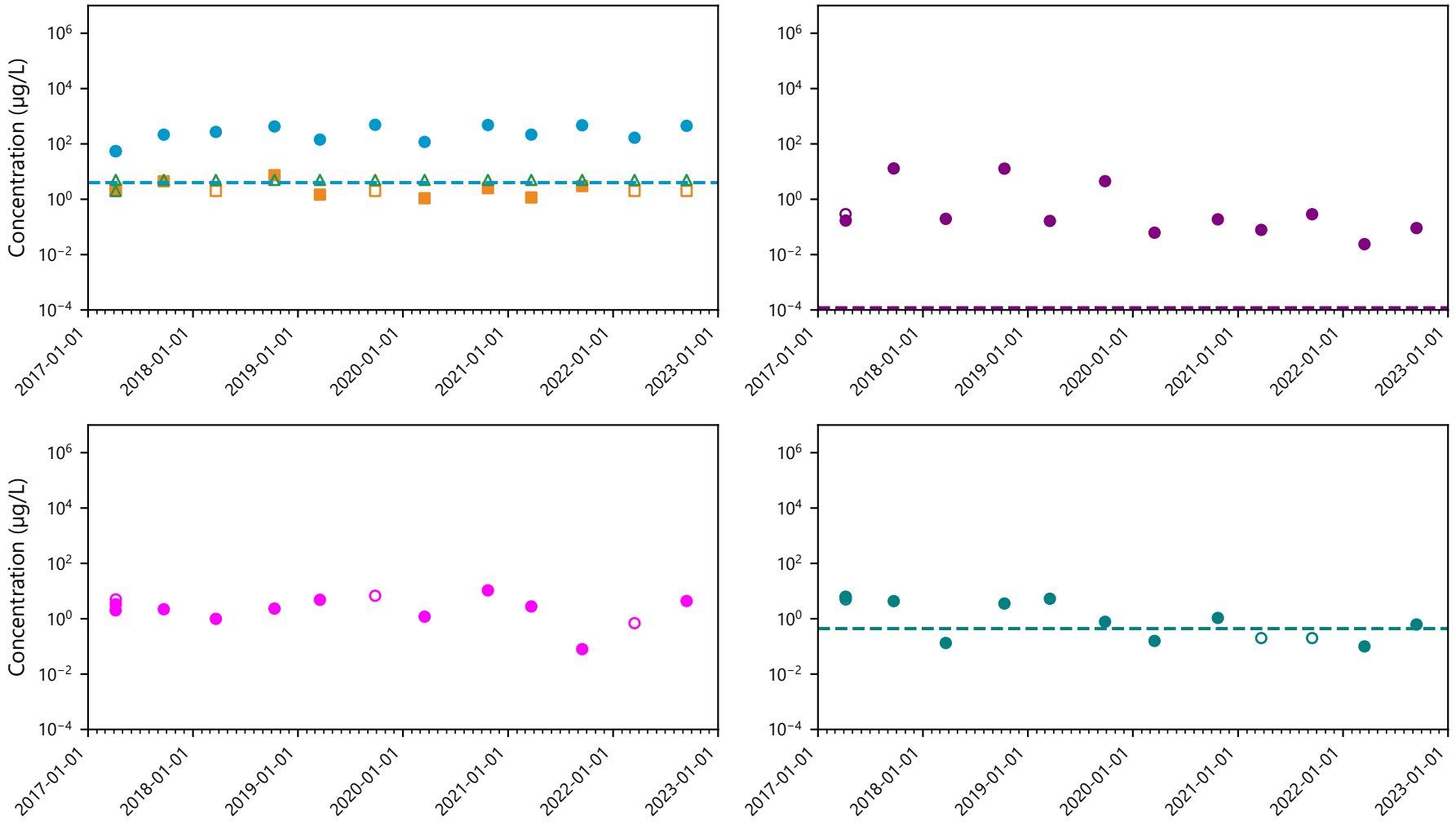
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.62
Monitoring Wells and Piezometers: OW-10F
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
RL= reporting limit
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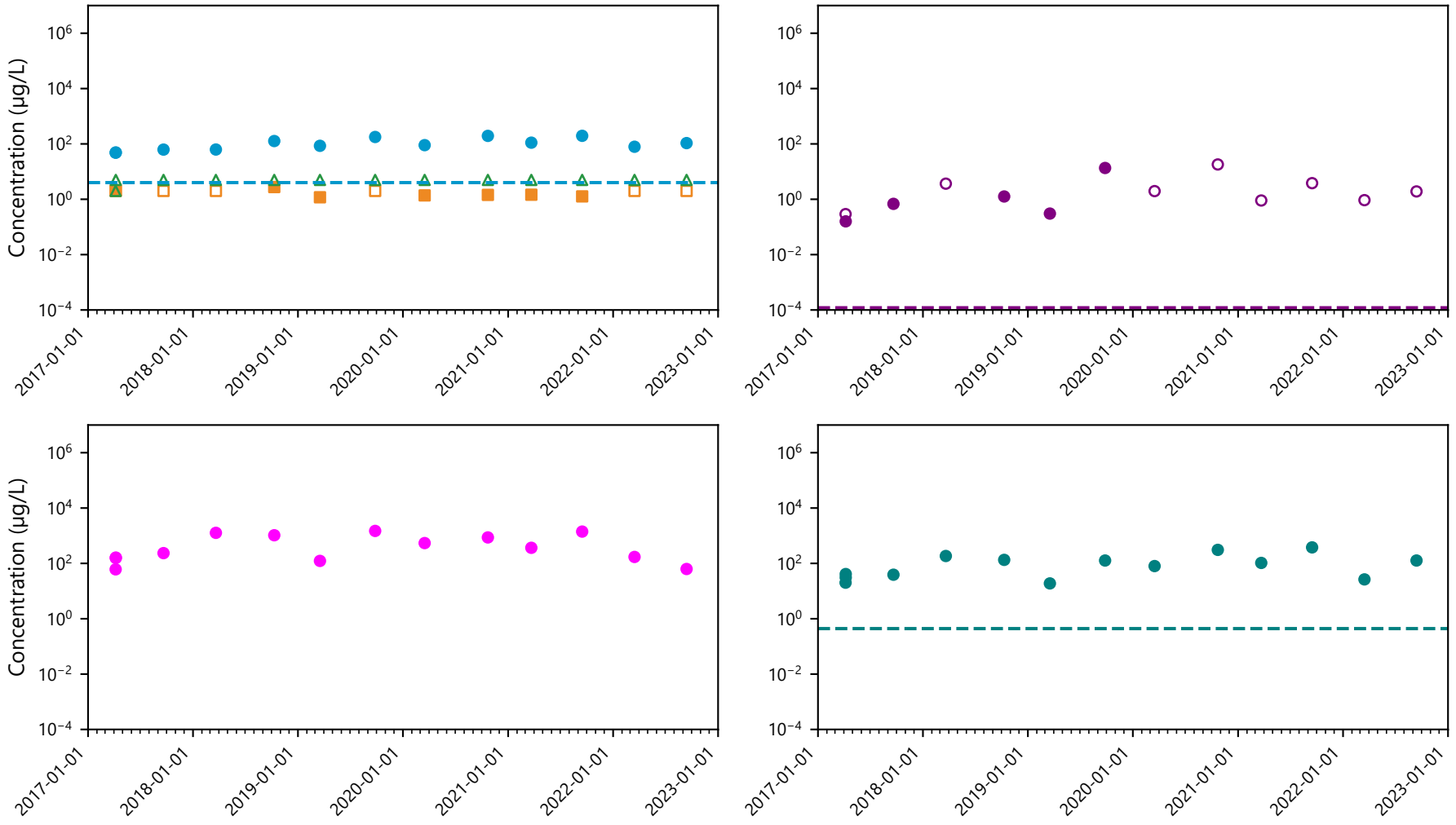
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.63
Monitoring Wells and Piezometers: OW-1F
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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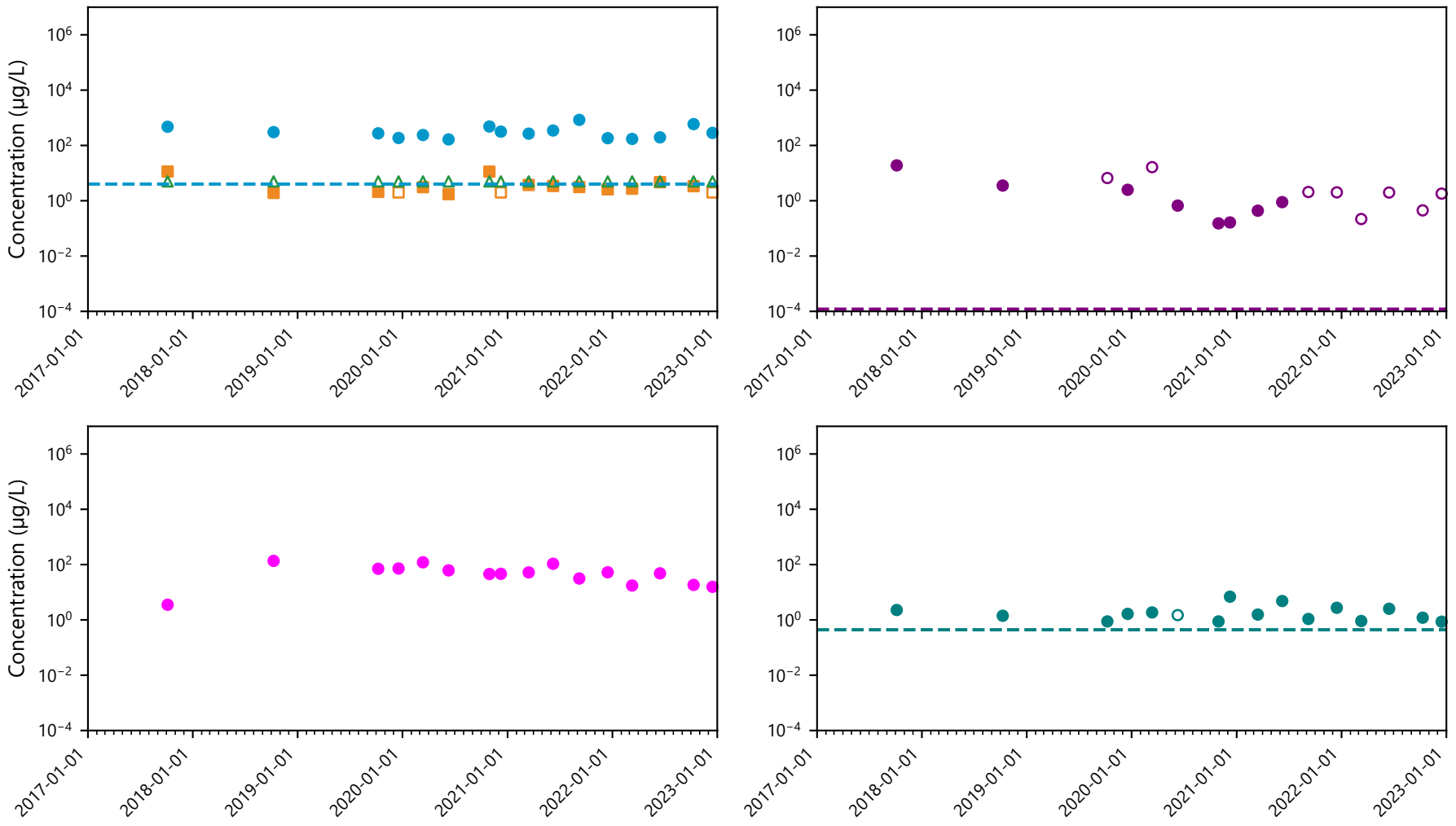
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.64
Monitoring Wells and Piezometers: OW-2F
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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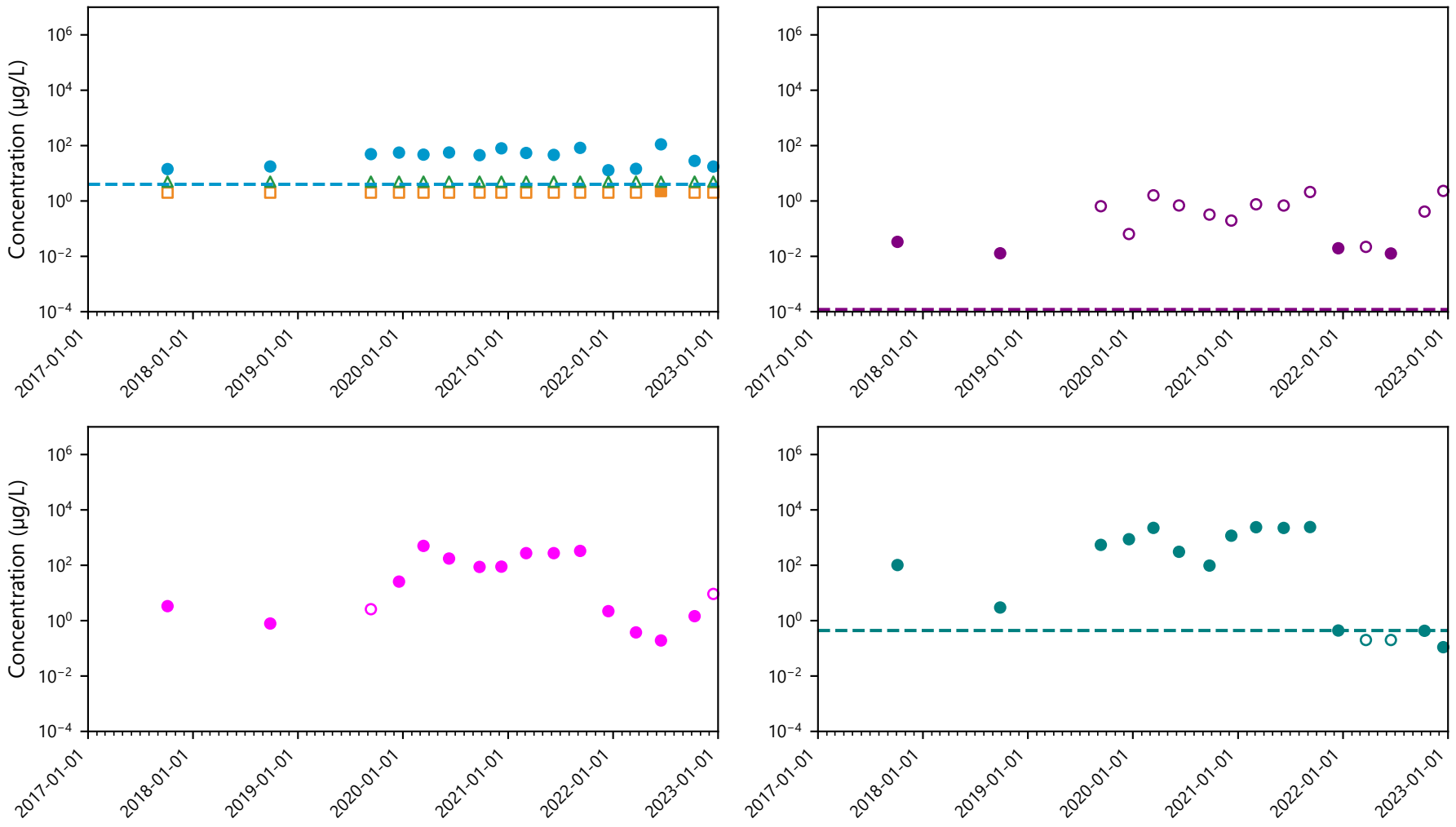
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.65
Monitoring Wells and Piezometers: OW-5F
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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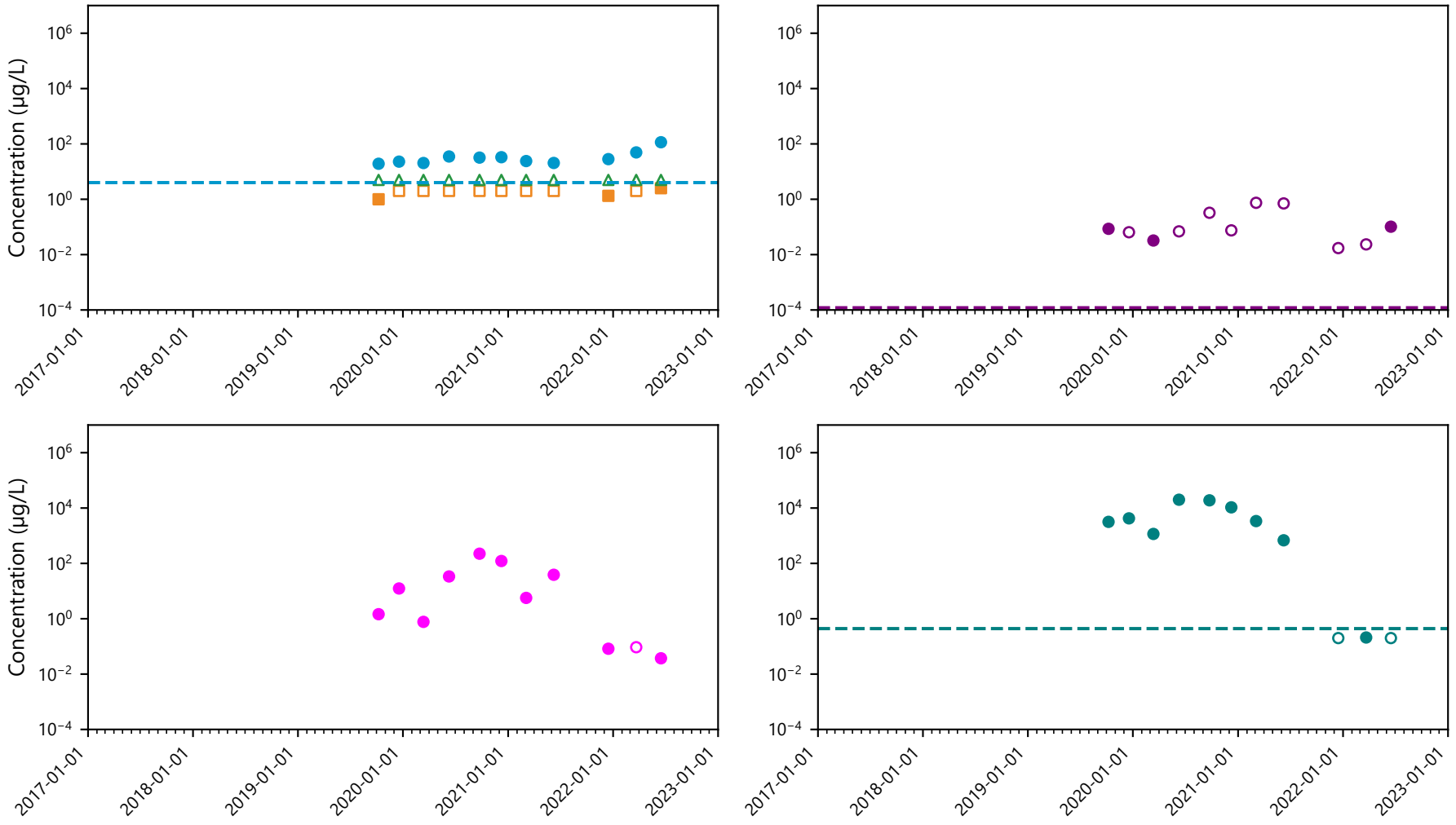
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.66
Monitoring Wells and Piezometers: OW-7-17
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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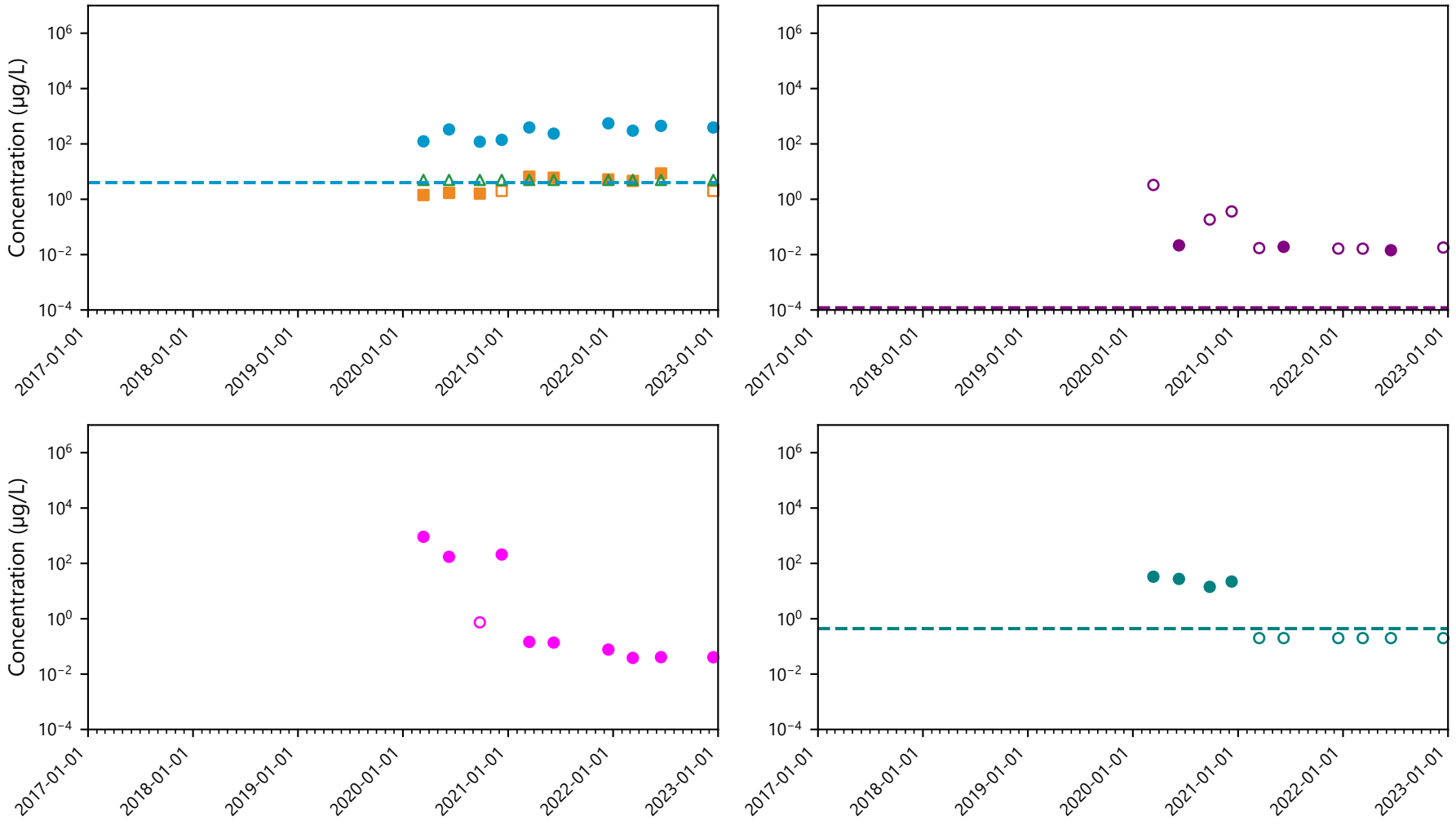
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.67
Monitoring Wells and Piezometers: OW-8-15
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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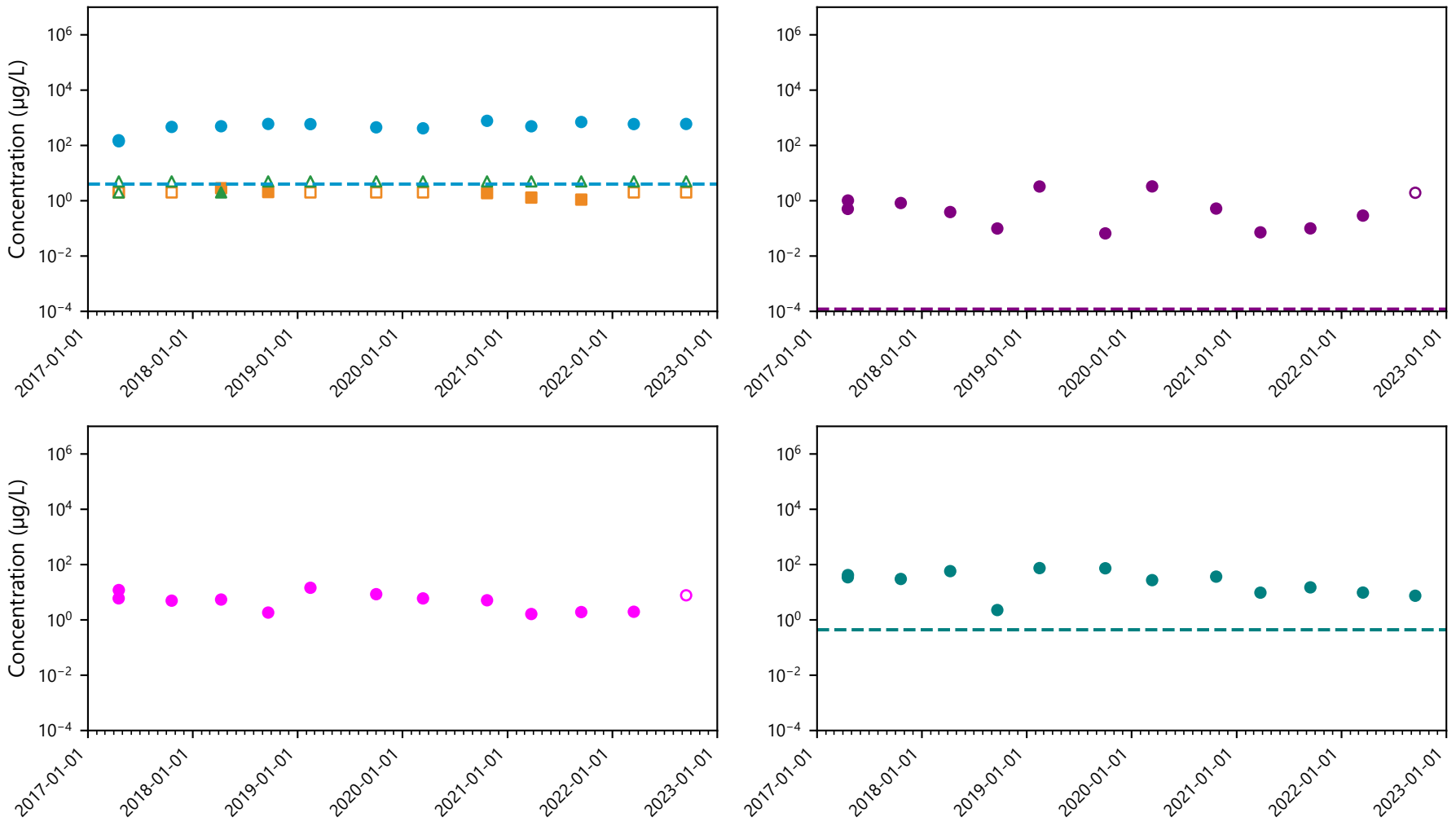
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.68
Monitoring Wells and Piezometers: OW-9-25
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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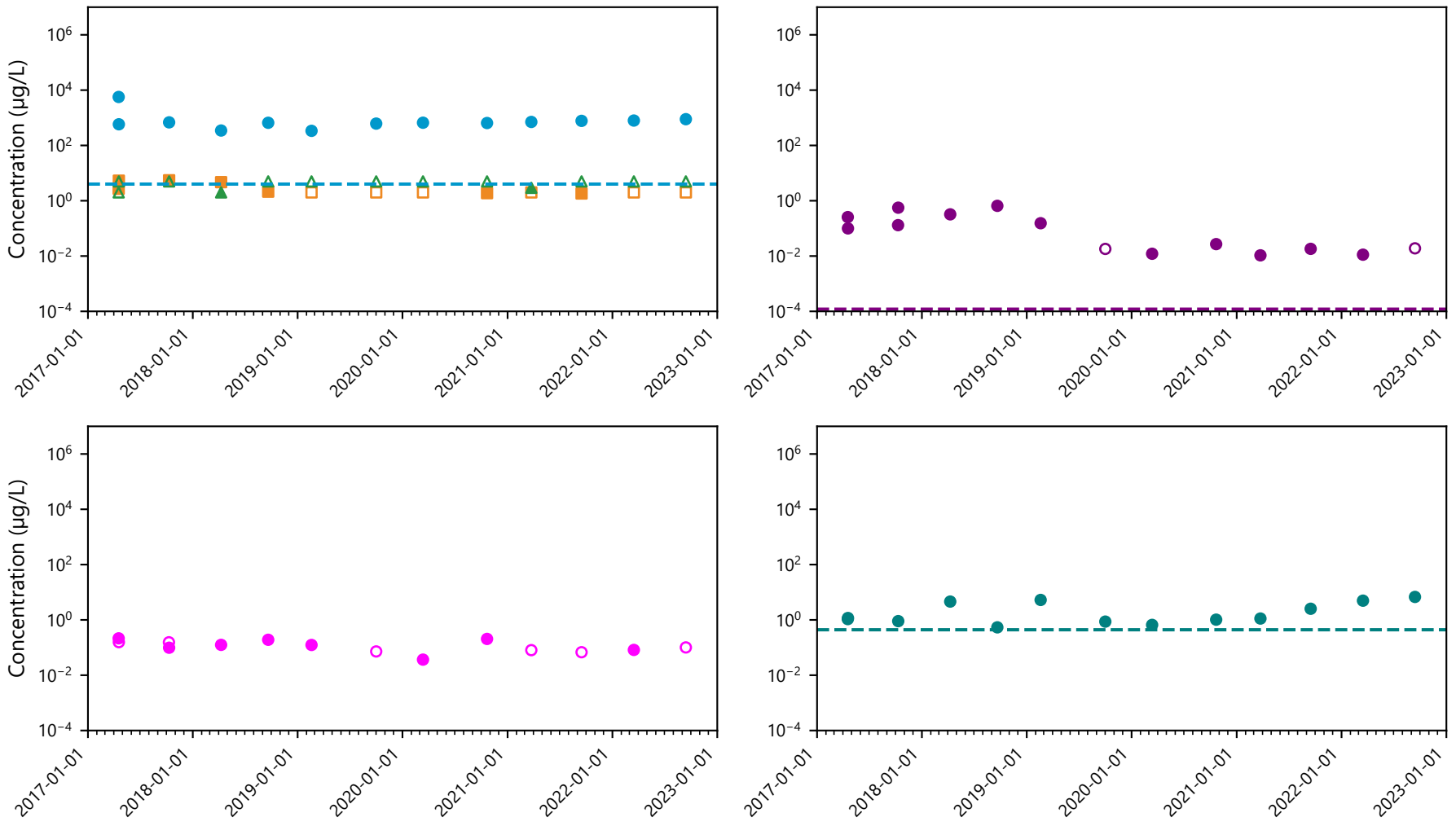
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.69
Monitoring Wells and Piezometers: WS-08-33
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
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CUL= Cleanup Level

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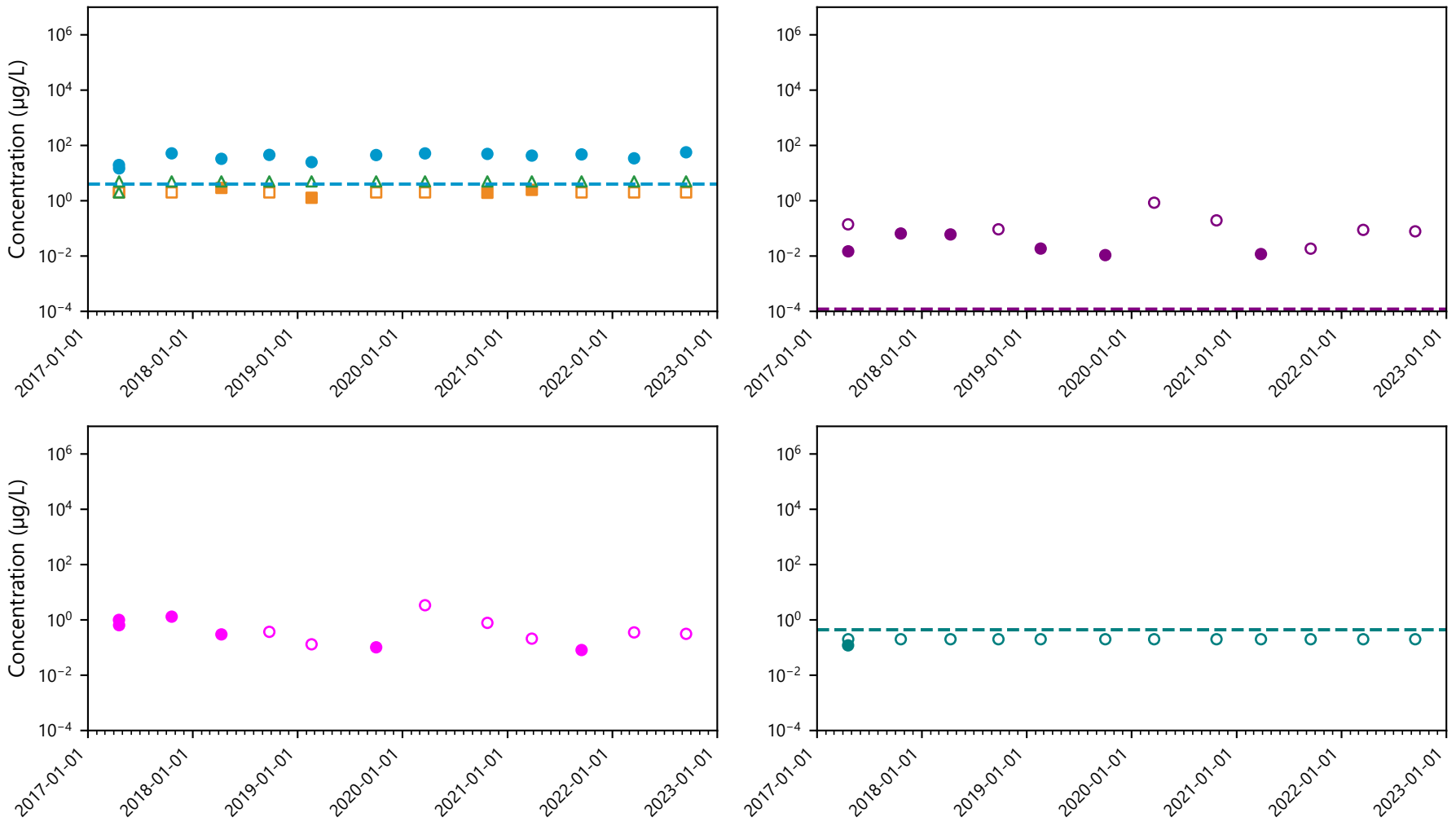
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.70
Monitoring Wells and Piezometers: WS-08-59
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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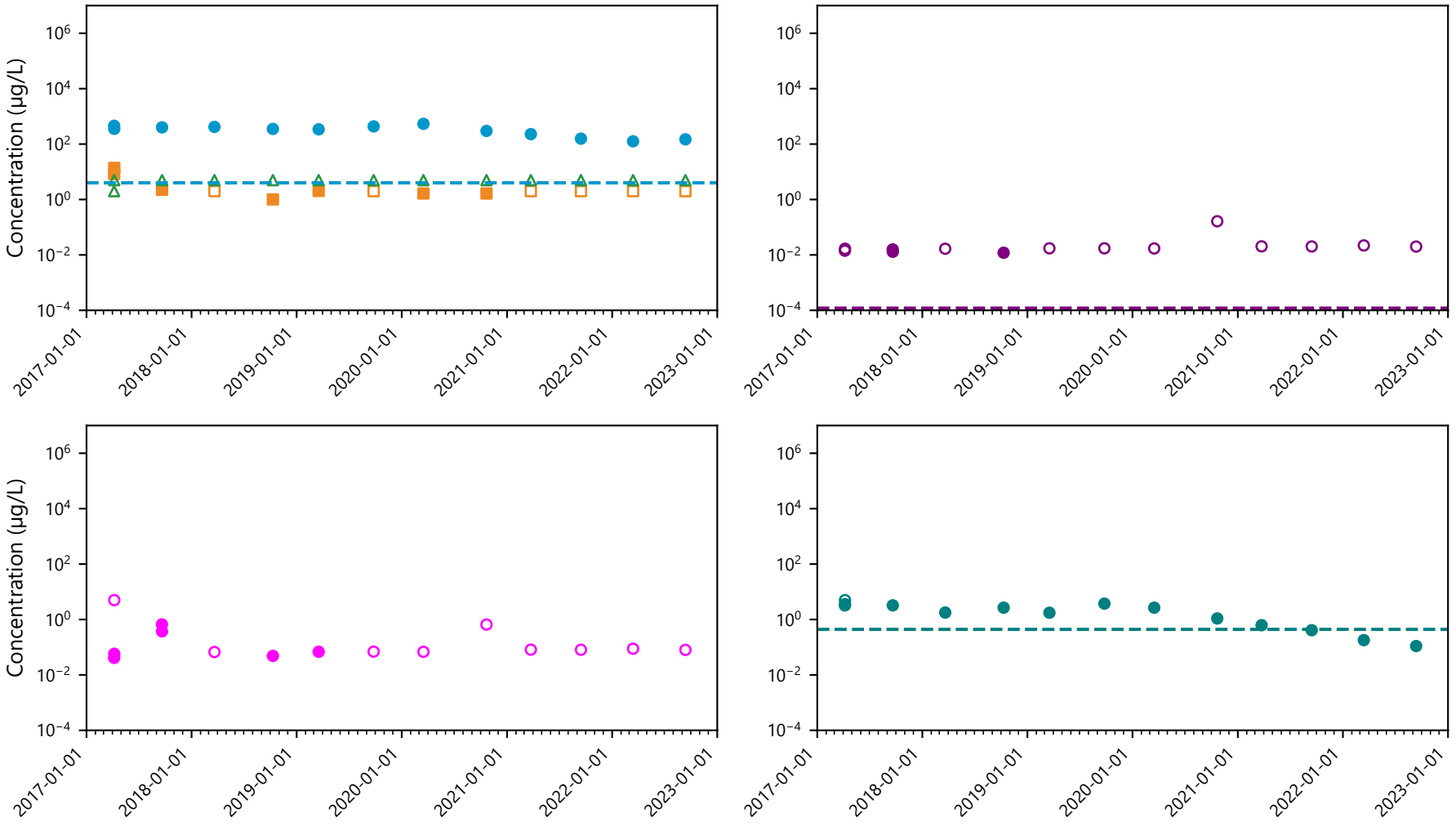
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.71
Monitoring Wells and Piezometers: WS-09-34
2022 HC&C System Annual Report
Gasco OU



Notes:
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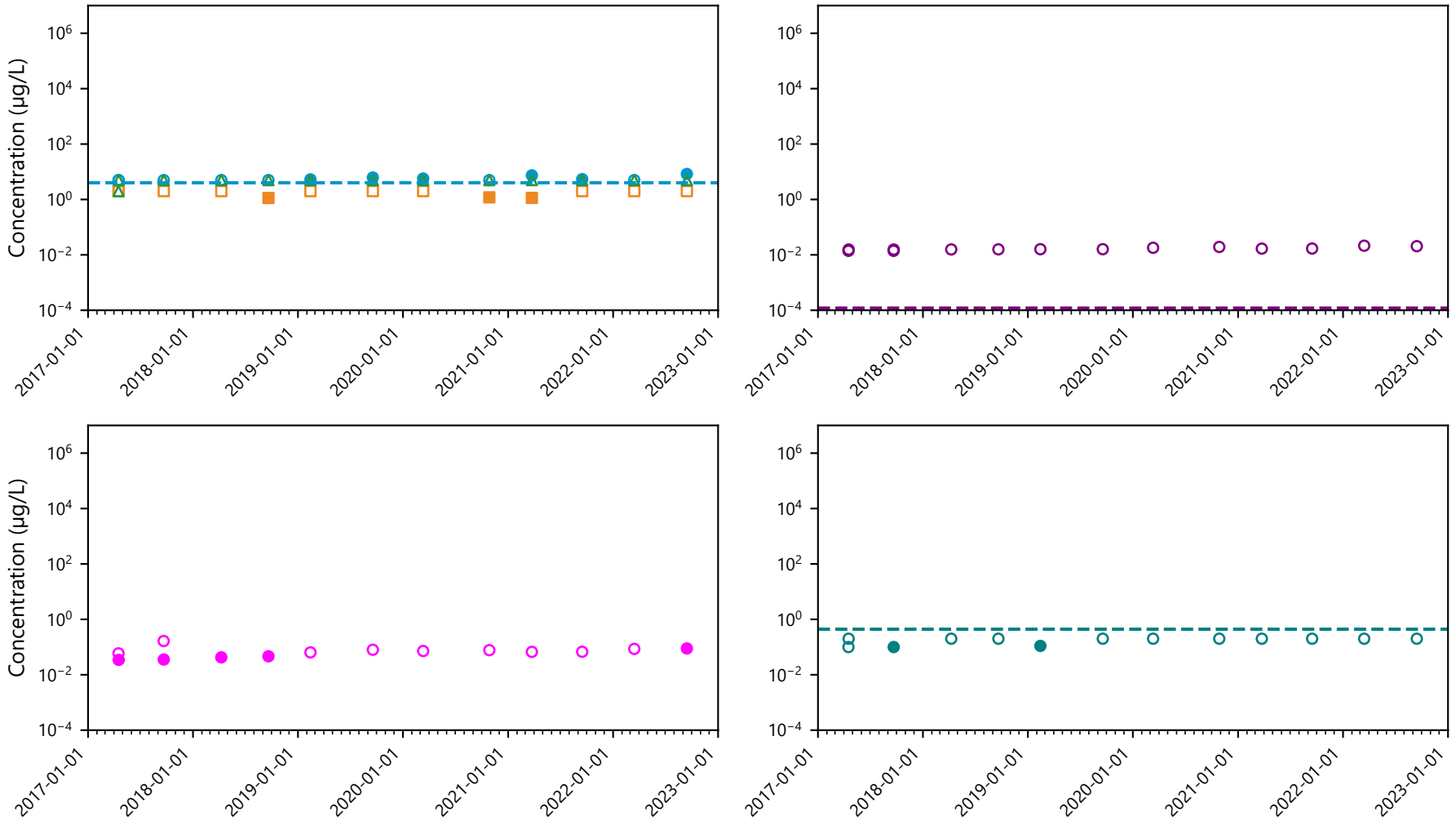
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.72
Monitoring Wells and Piezometers: WS-12-125
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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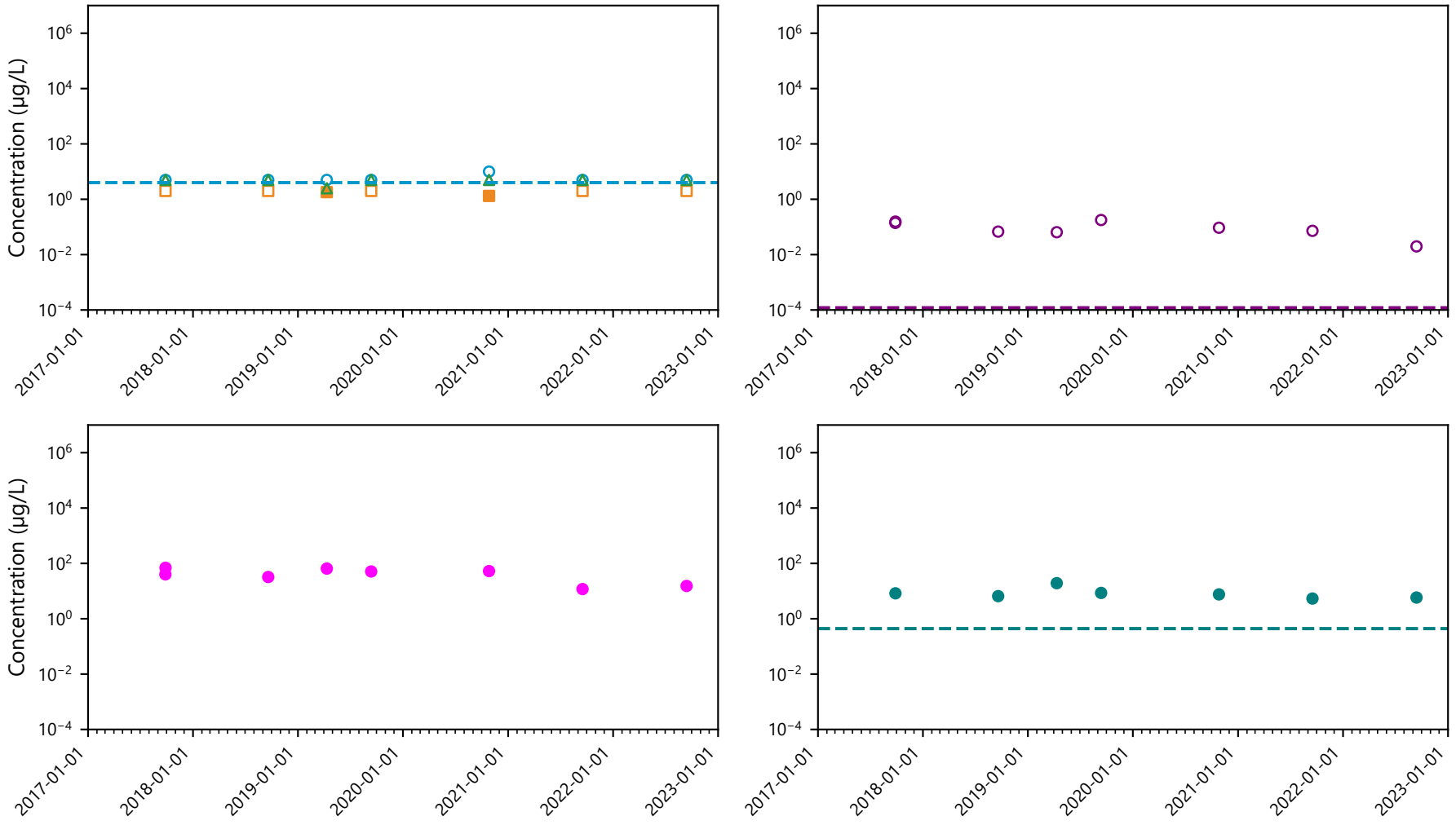
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.73
Monitoring Wells and Piezometers: WS-12-161
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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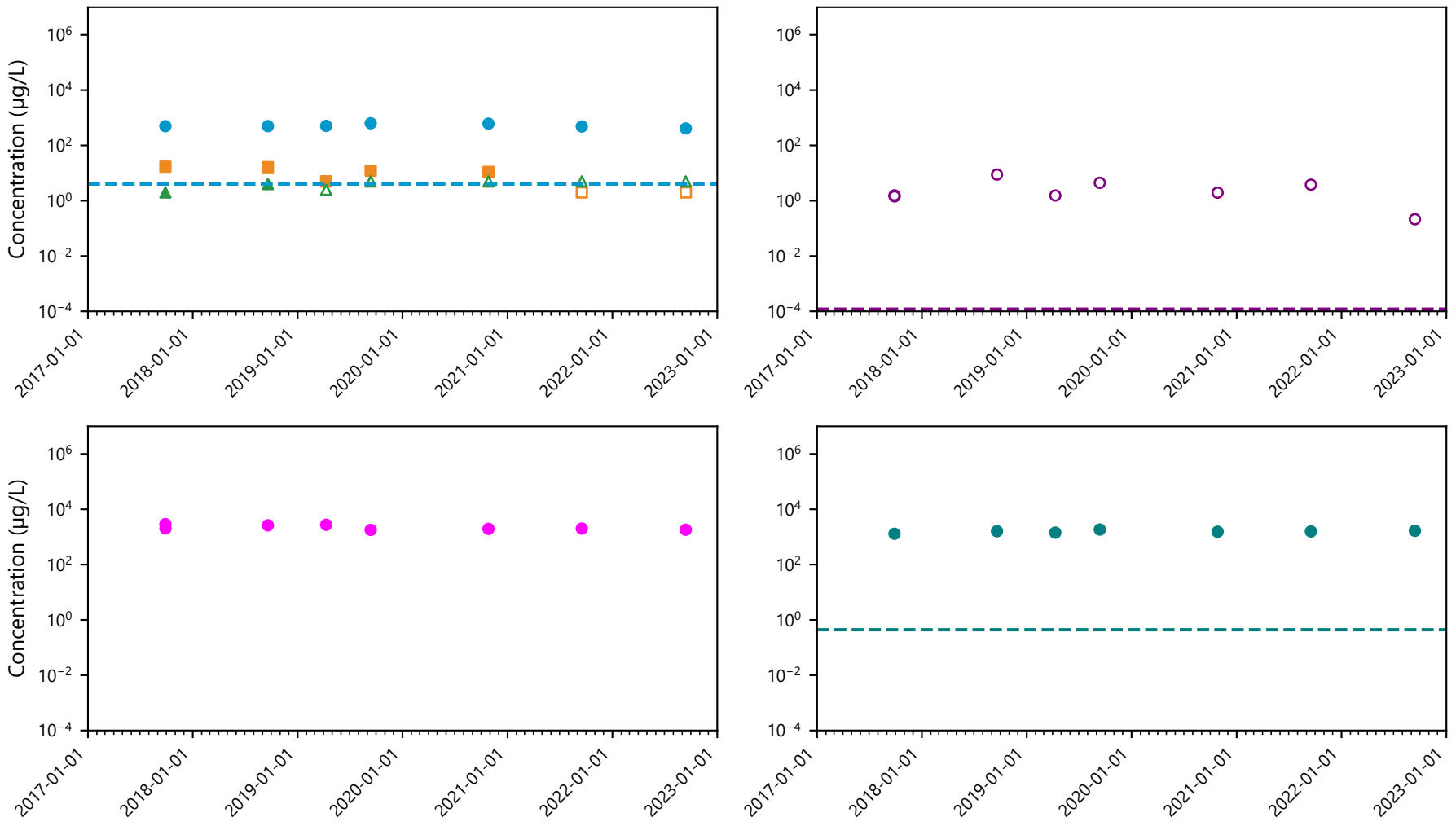
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.74
Monitoring Wells and Piezometers: WS-13-105
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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CUL= Cleanup Level

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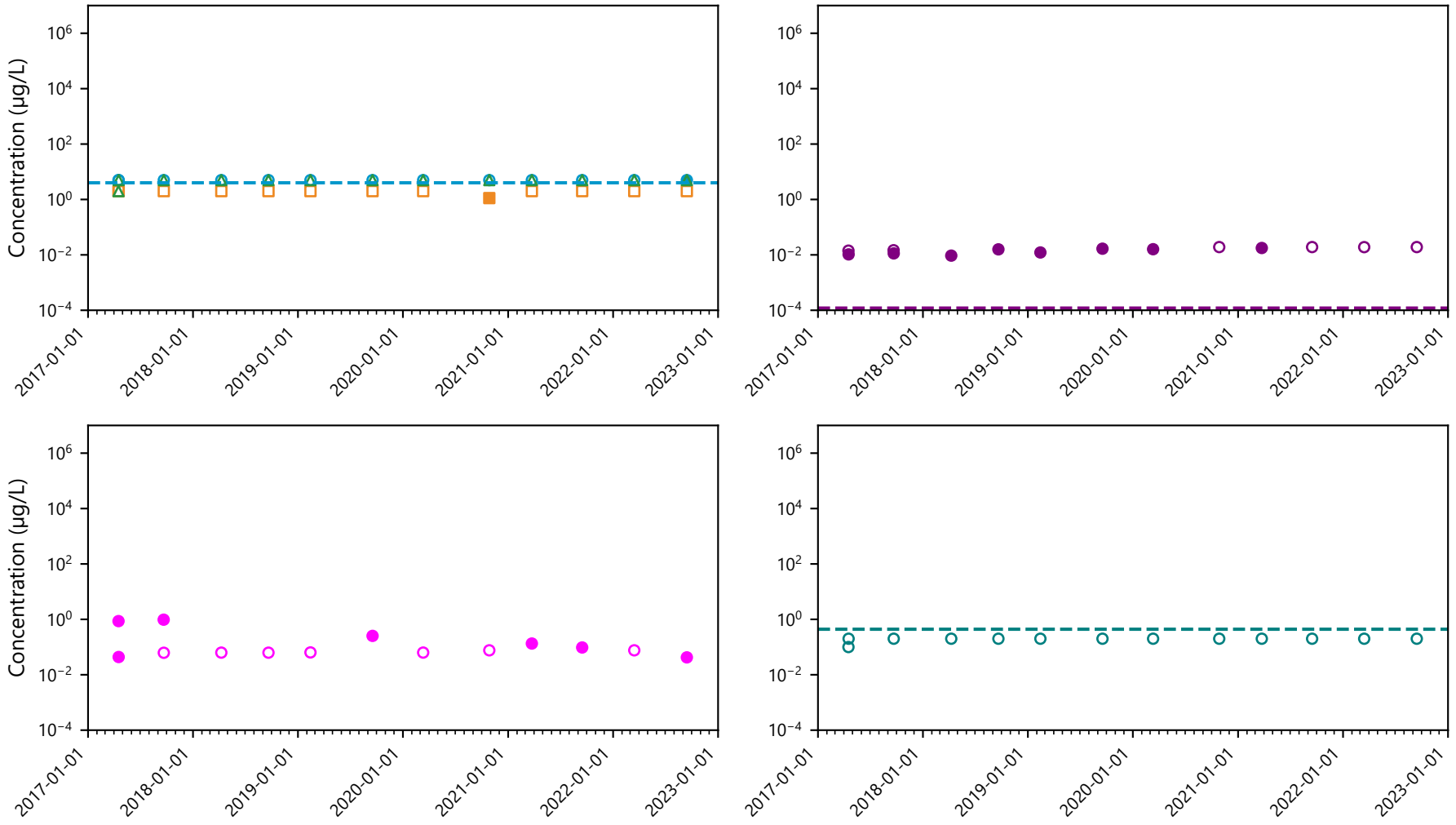
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.75
Monitoring Wells and Piezometers: WS-13-69
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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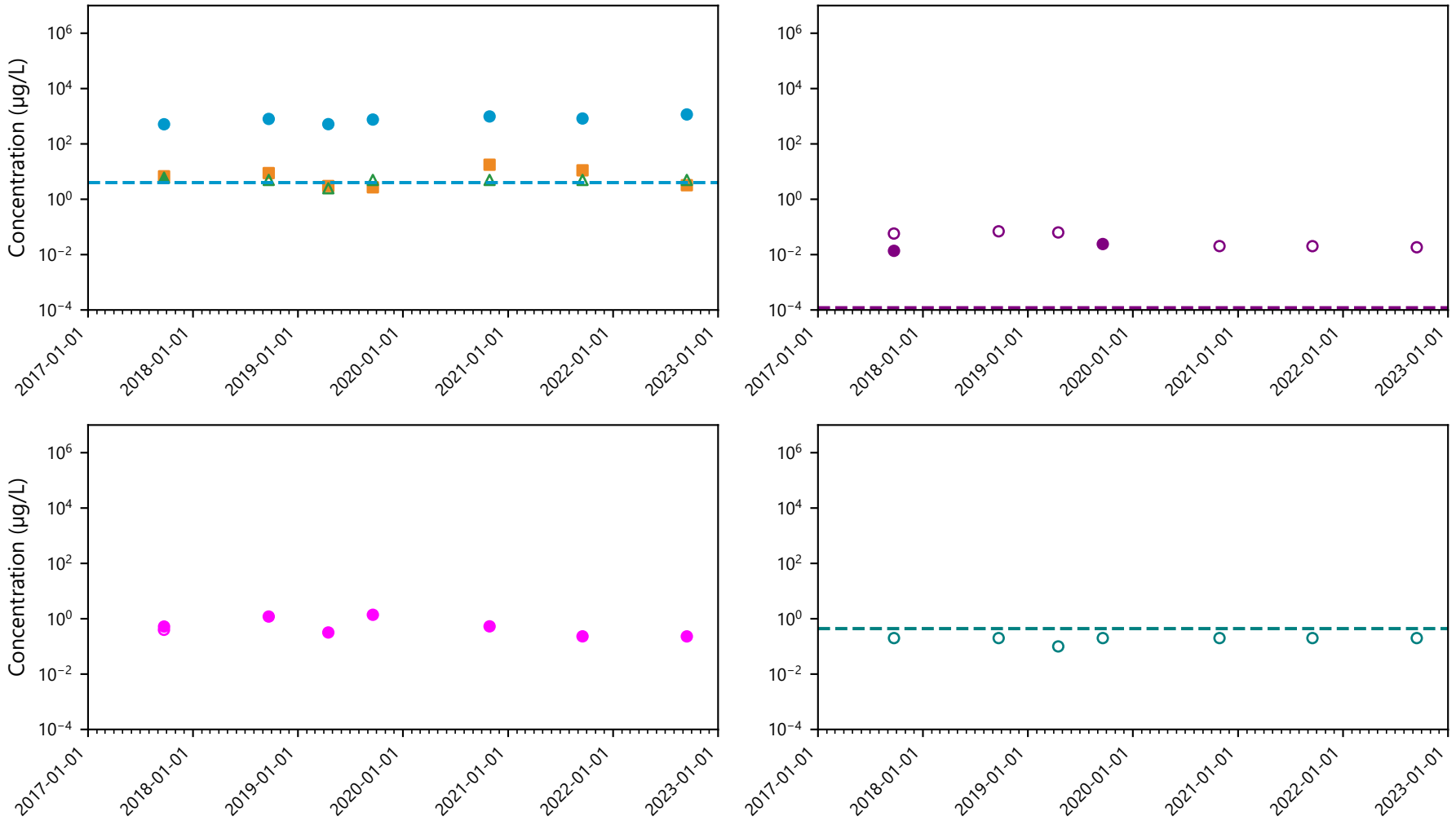
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.76
Monitoring Wells and Piezometers: WS-16-161
2022 HC&C System Annual Report
Gasco OU



Notes:
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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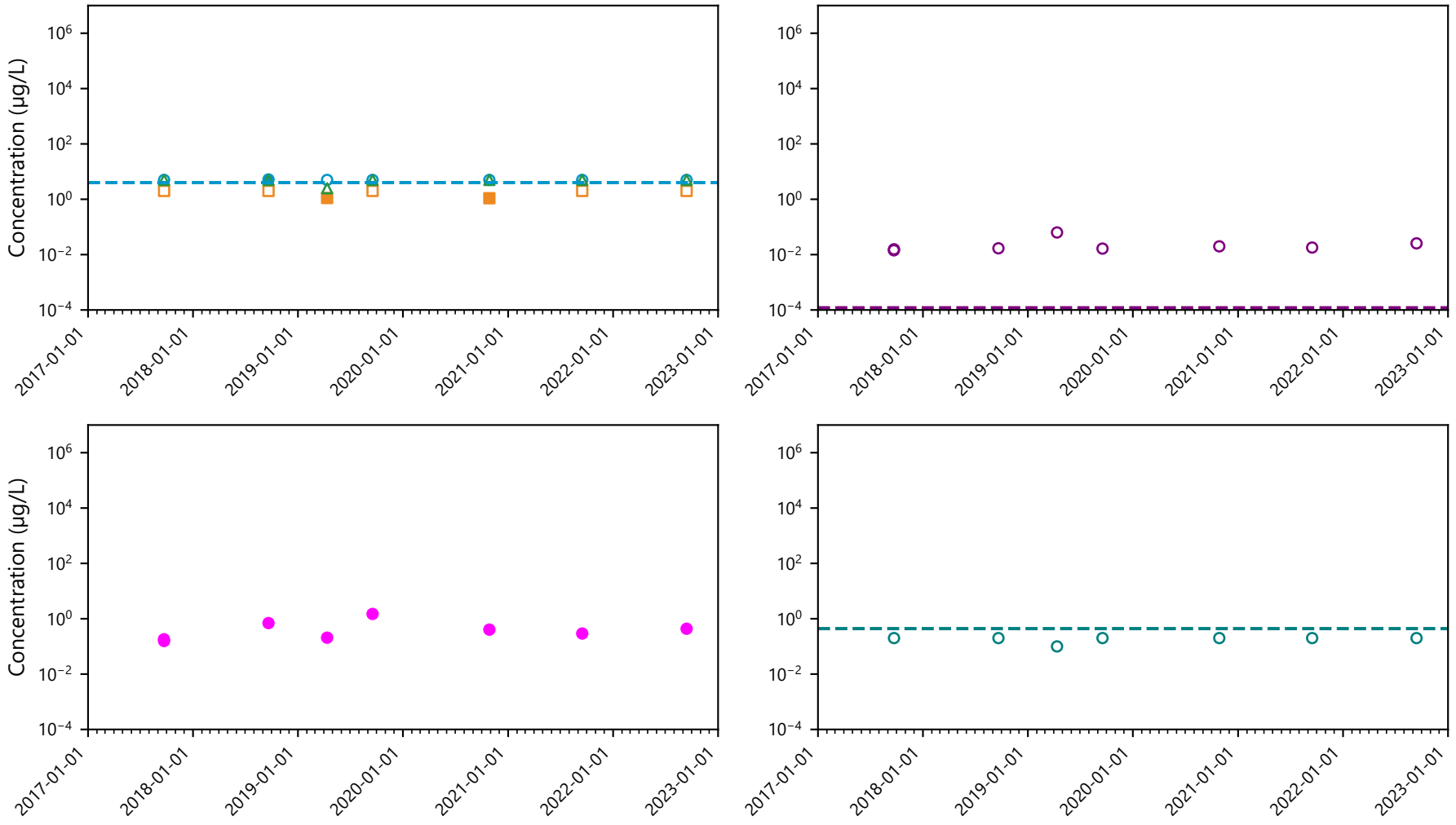
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.77
Monitoring Wells and Piezometers: WS-17-52
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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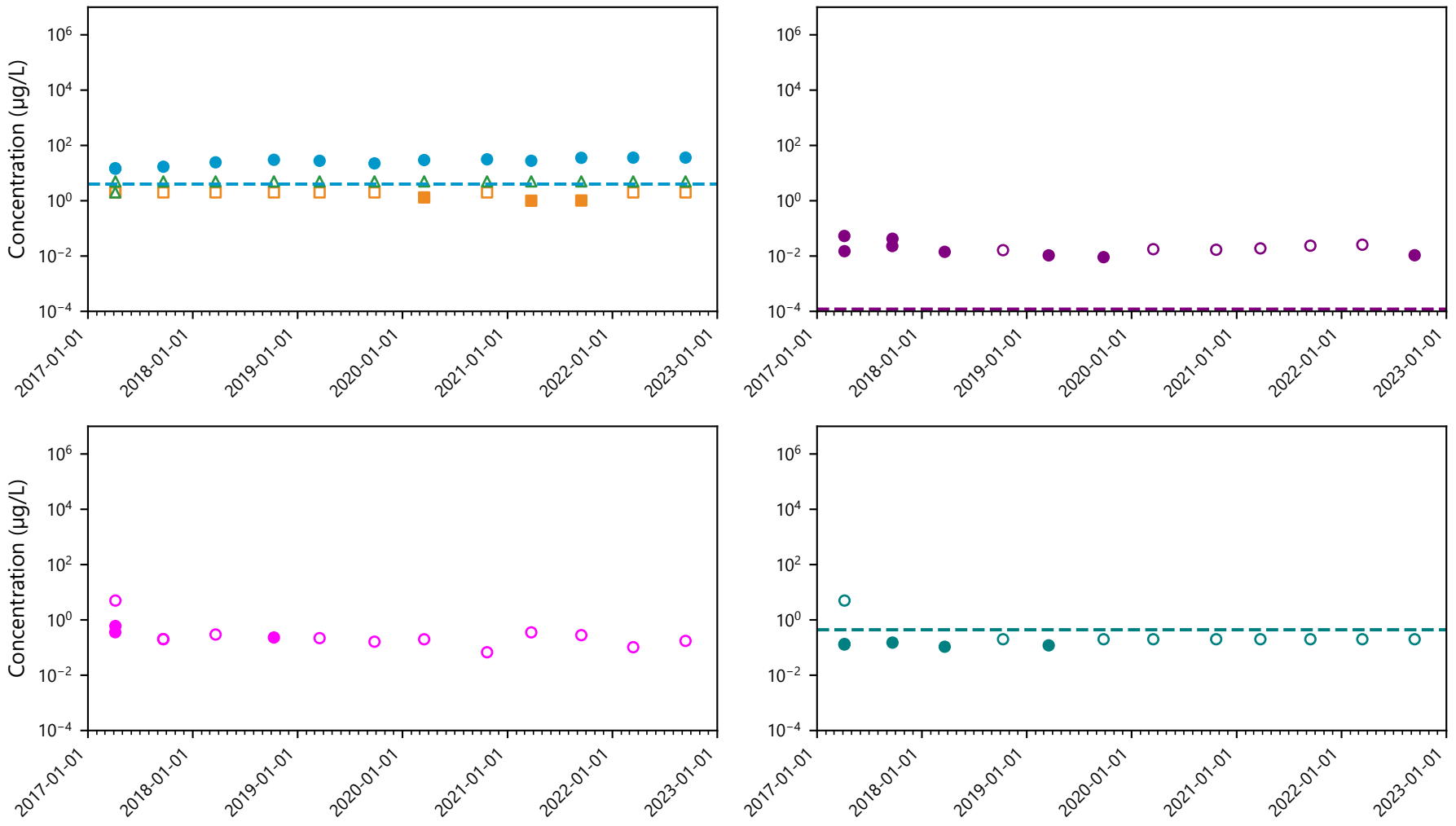
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.78
Monitoring Wells and Piezometers: WS-17-94
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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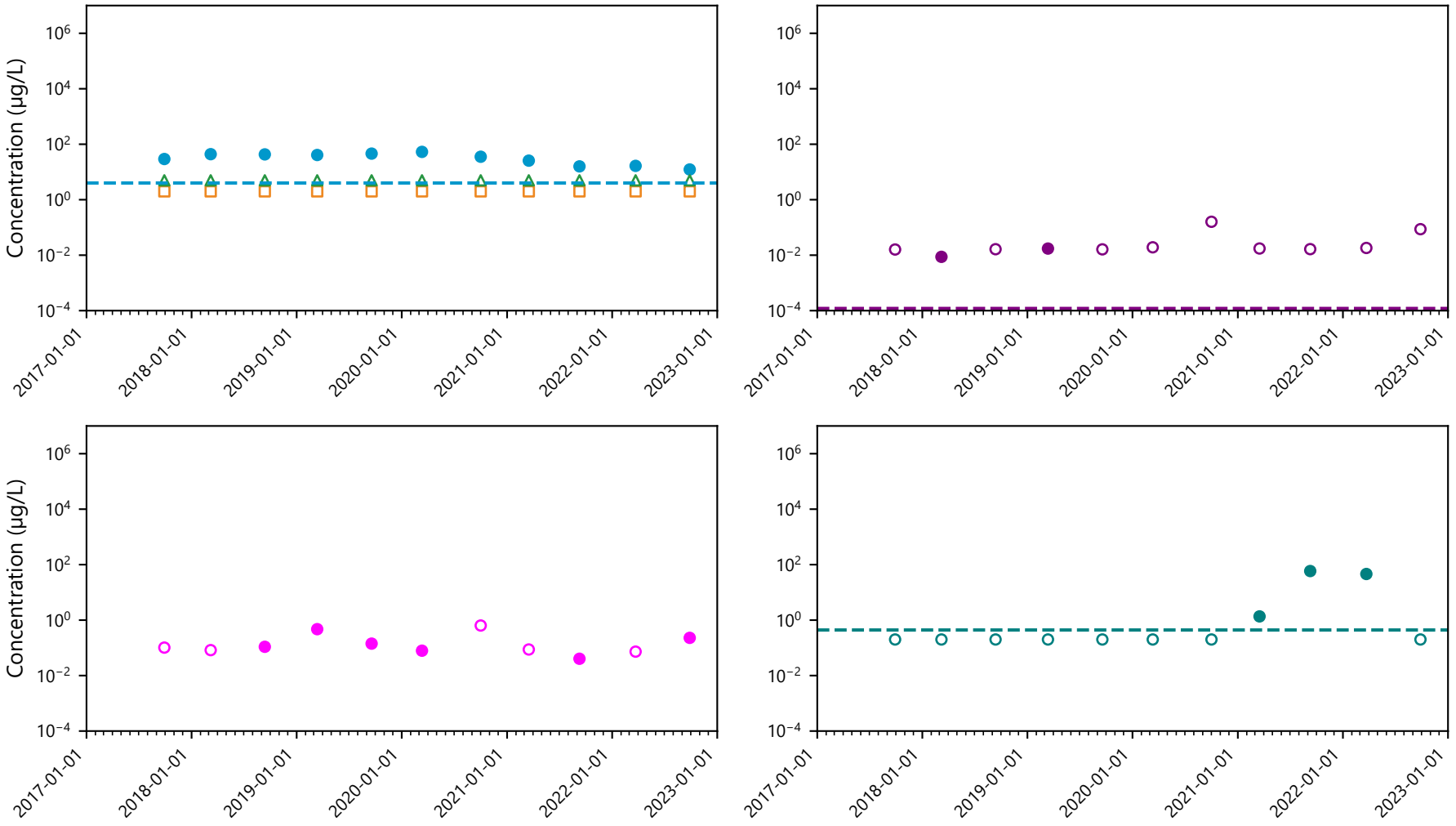
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.79
Monitoring Wells and Piezometers: WS-47-183
2022 HC&C System Annual Report
Gasco OU



Notes:
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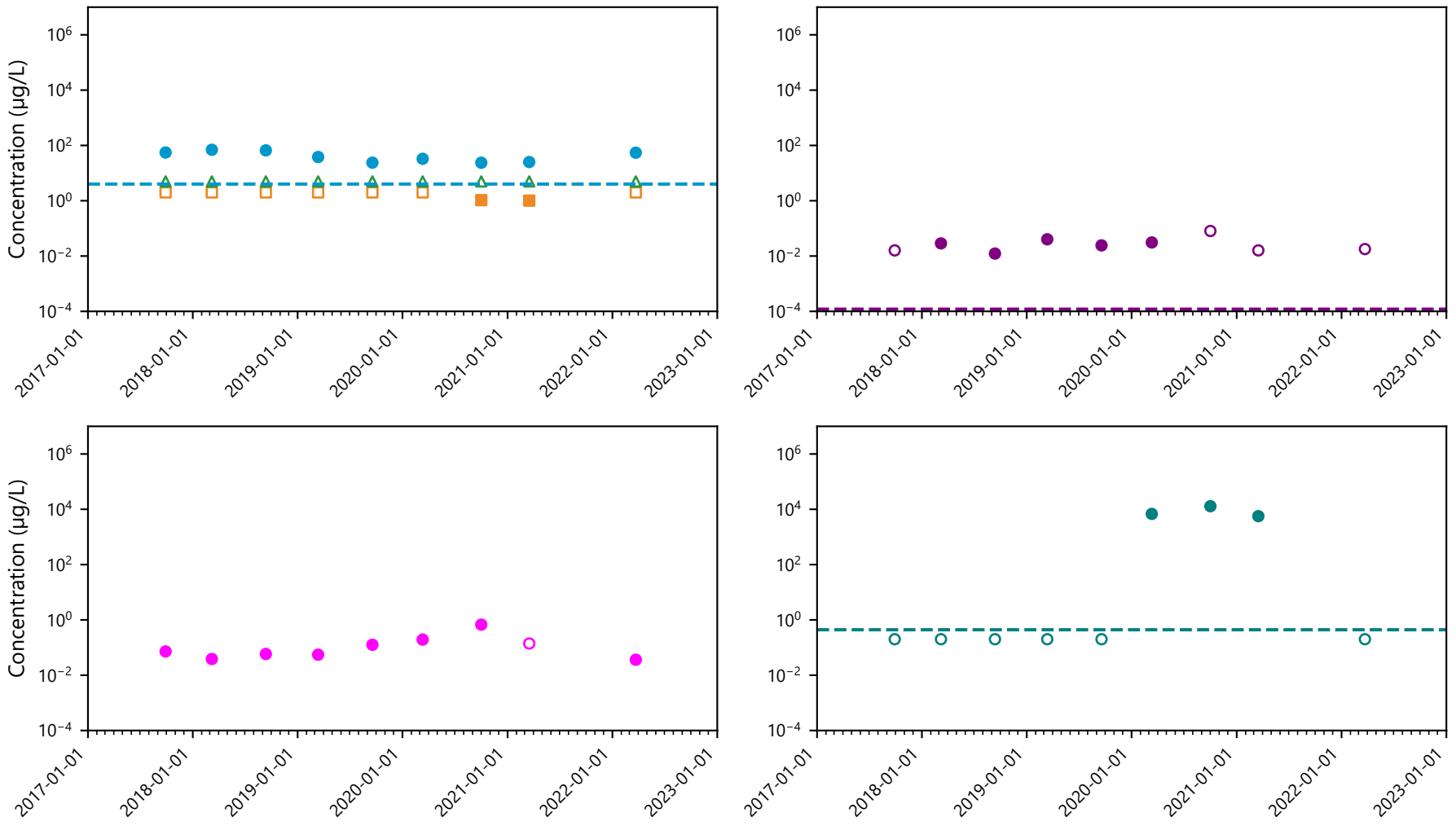
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.80
Monitoring Wells and Piezometers: PZ5-20
2022 HC&C System Annual Report
Gasco OU



Notes:
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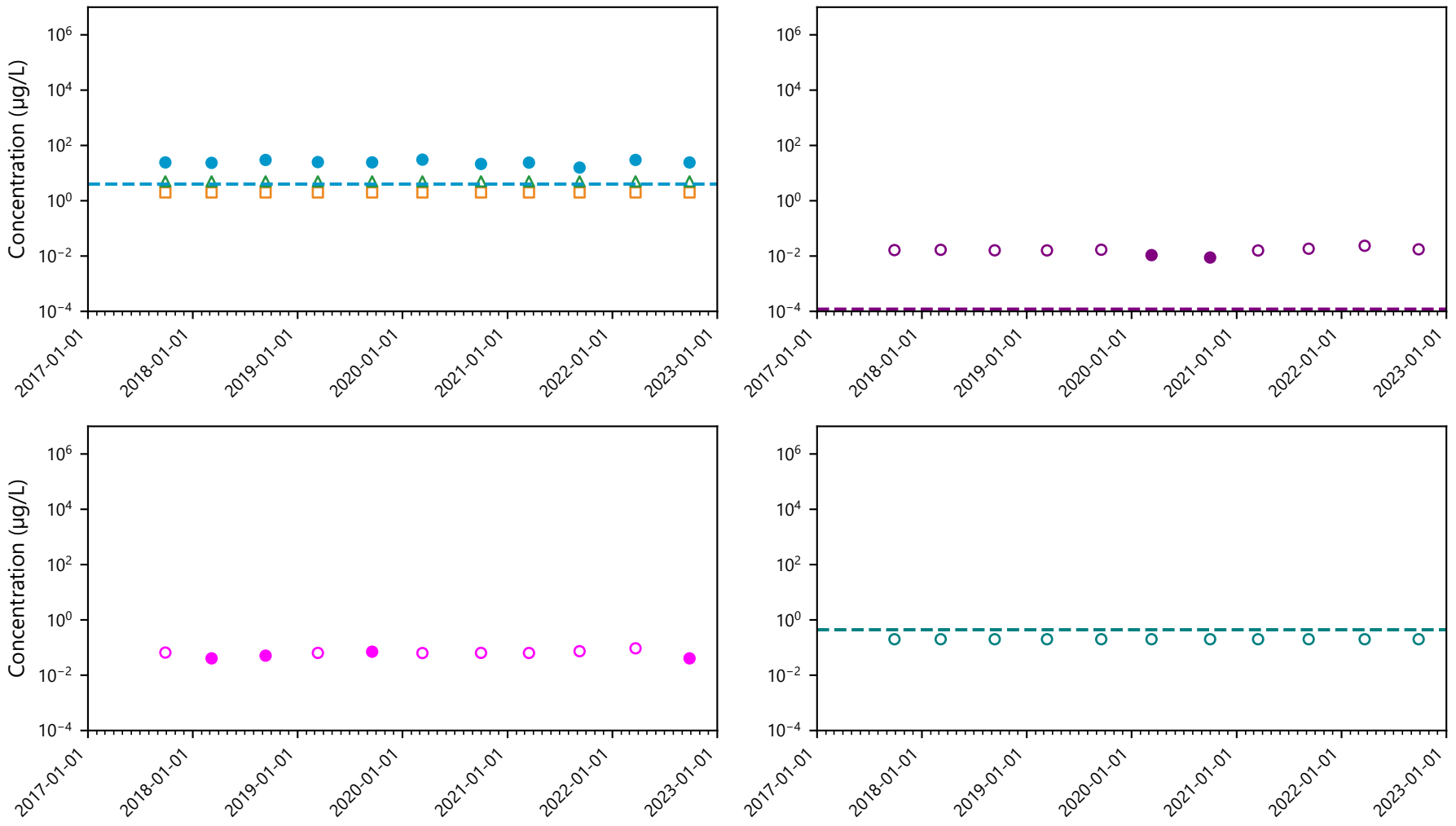
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.81
Monitoring Wells and Piezometers: PZ5-5
2022 HC&C System Annual Report
Gasco OU



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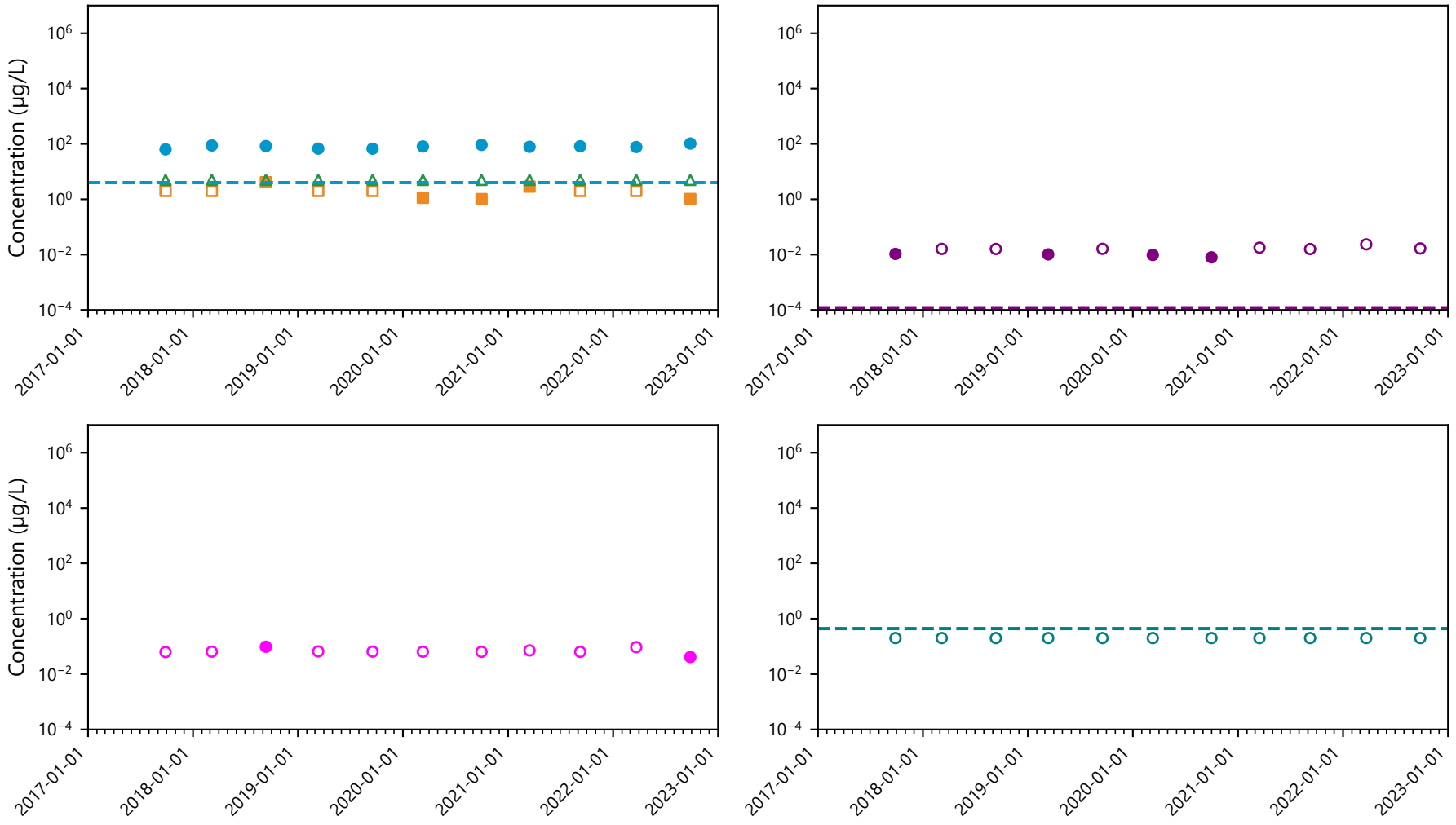
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.82
Monitoring Wells and Piezometers: PZ5-55
2022 HC&C System Annual Report
Gasco OU



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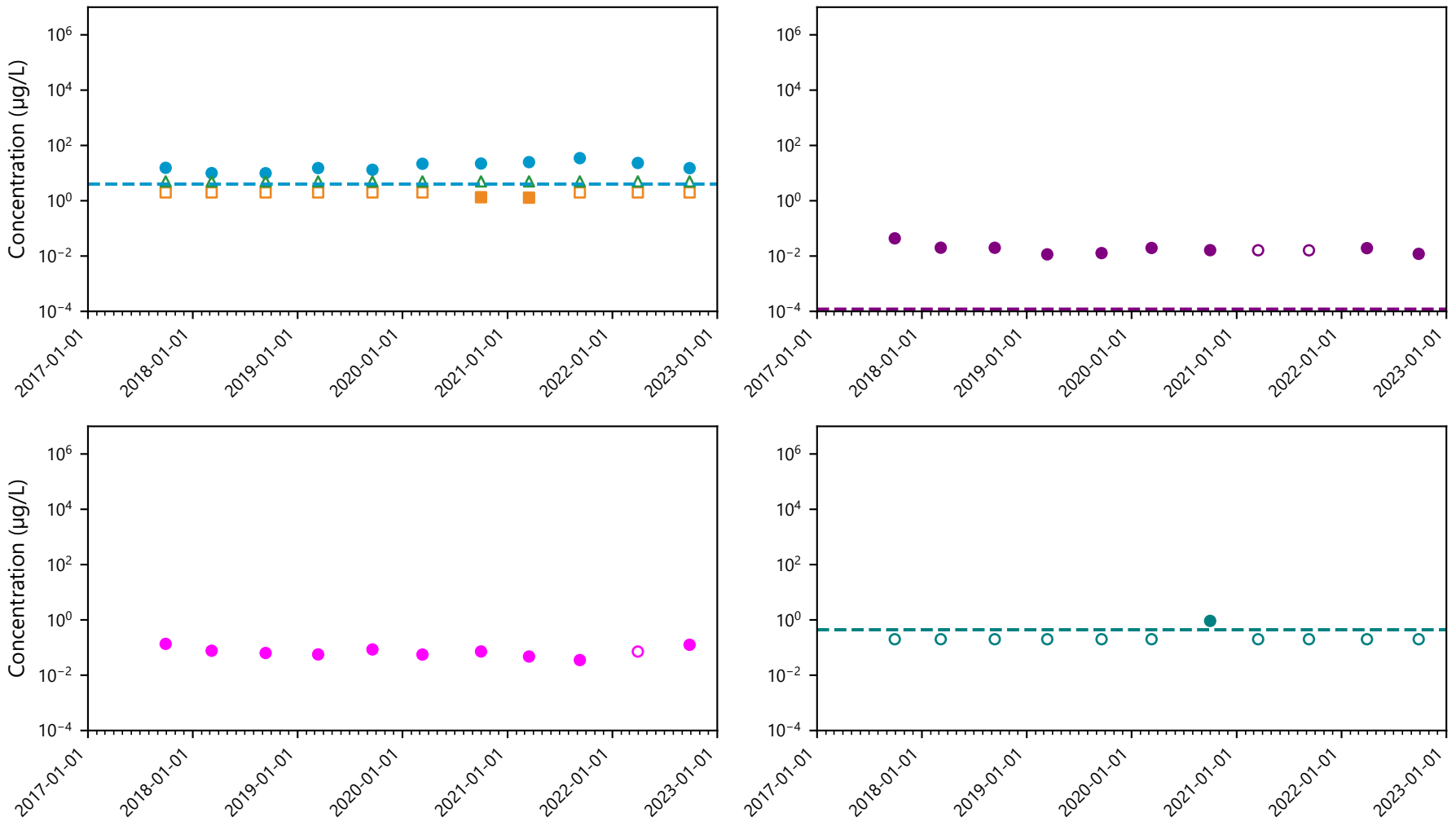
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.83
Monitoring Wells and Piezometers: PZ5-85
2022 HC&C System Annual Report
Gasco OU



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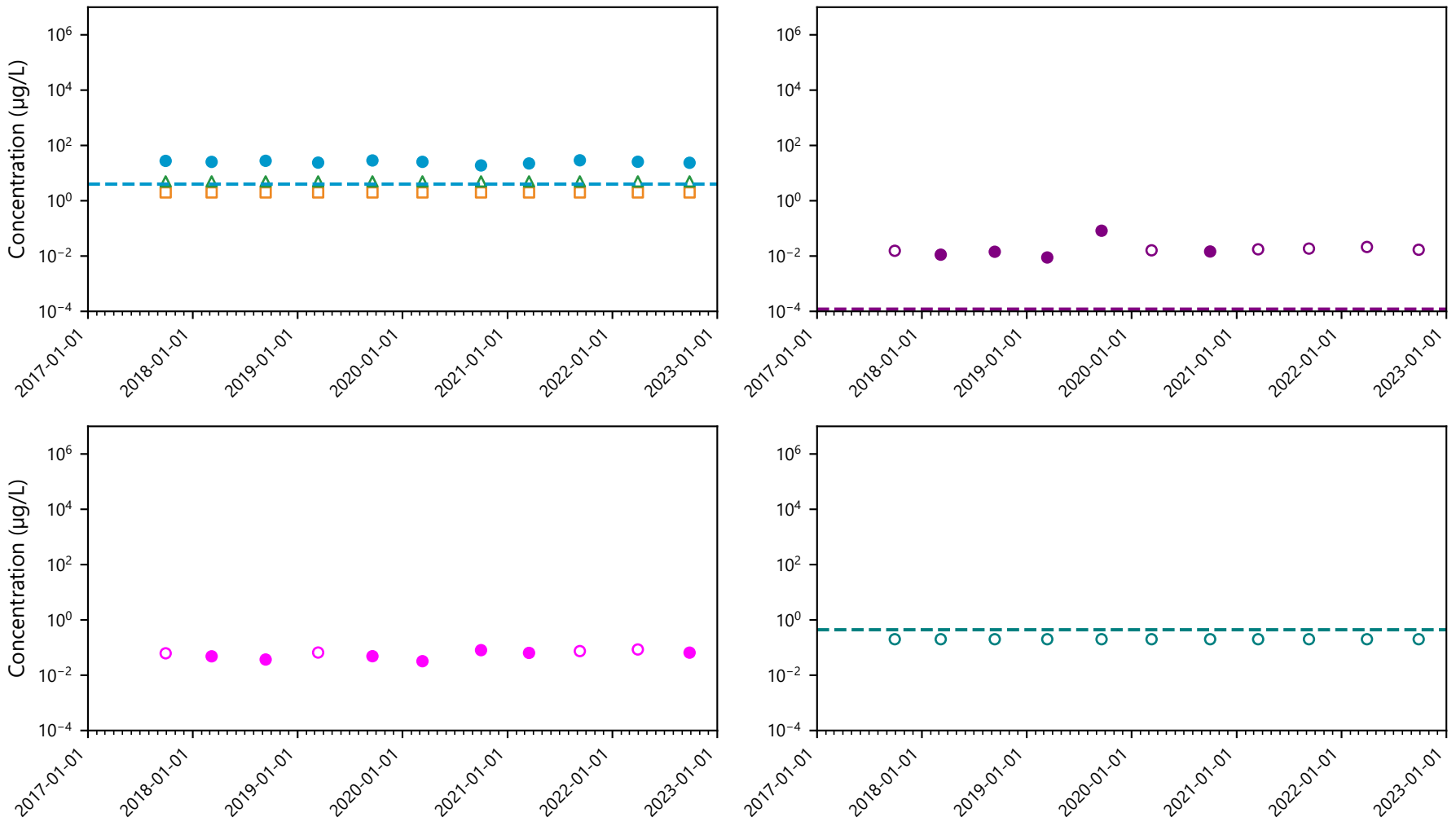
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.84
Monitoring Wells and Piezometers: PZ6-115
2022 HC&C System Annual Report
Gasco OU



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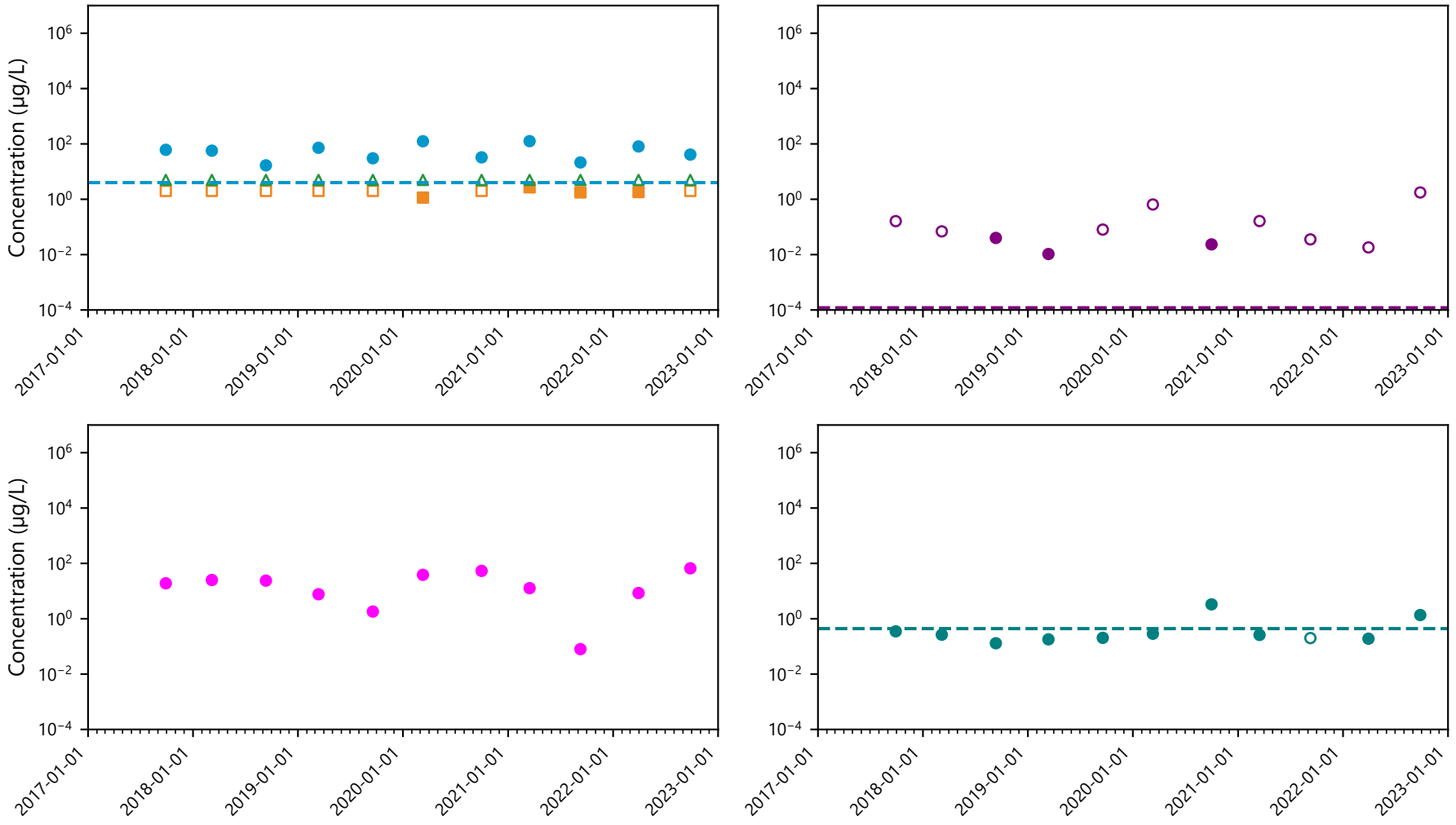
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.85
Monitoring Wells and Piezometers: PZ6-150
2022 HC&C System Annual Report
Gasco OU



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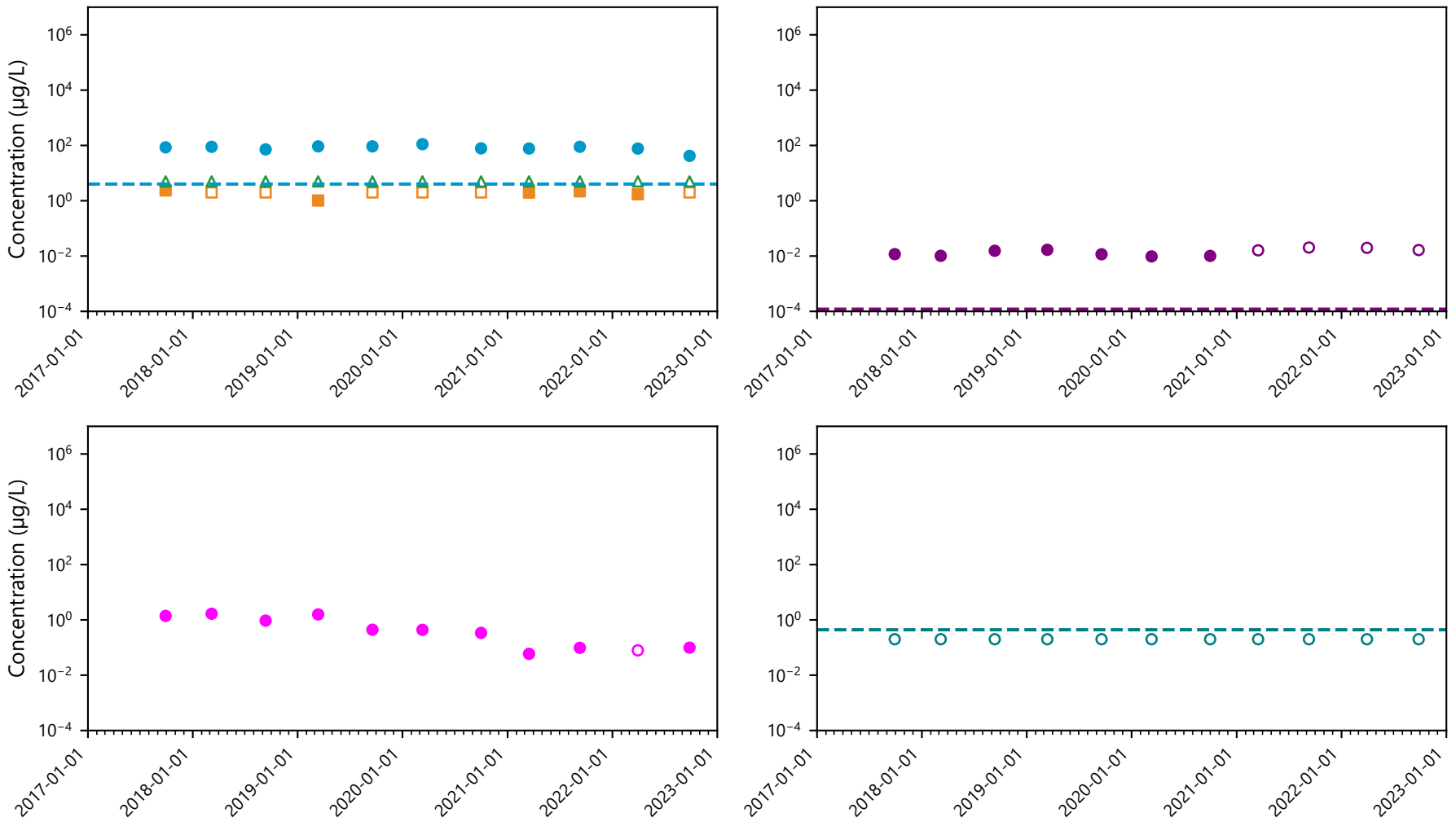
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.86
Monitoring Wells and Piezometers: PZ6-5
2022 HC&C System Annual Report
Gasco OU



Notes:
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CUL= Cleanup Level

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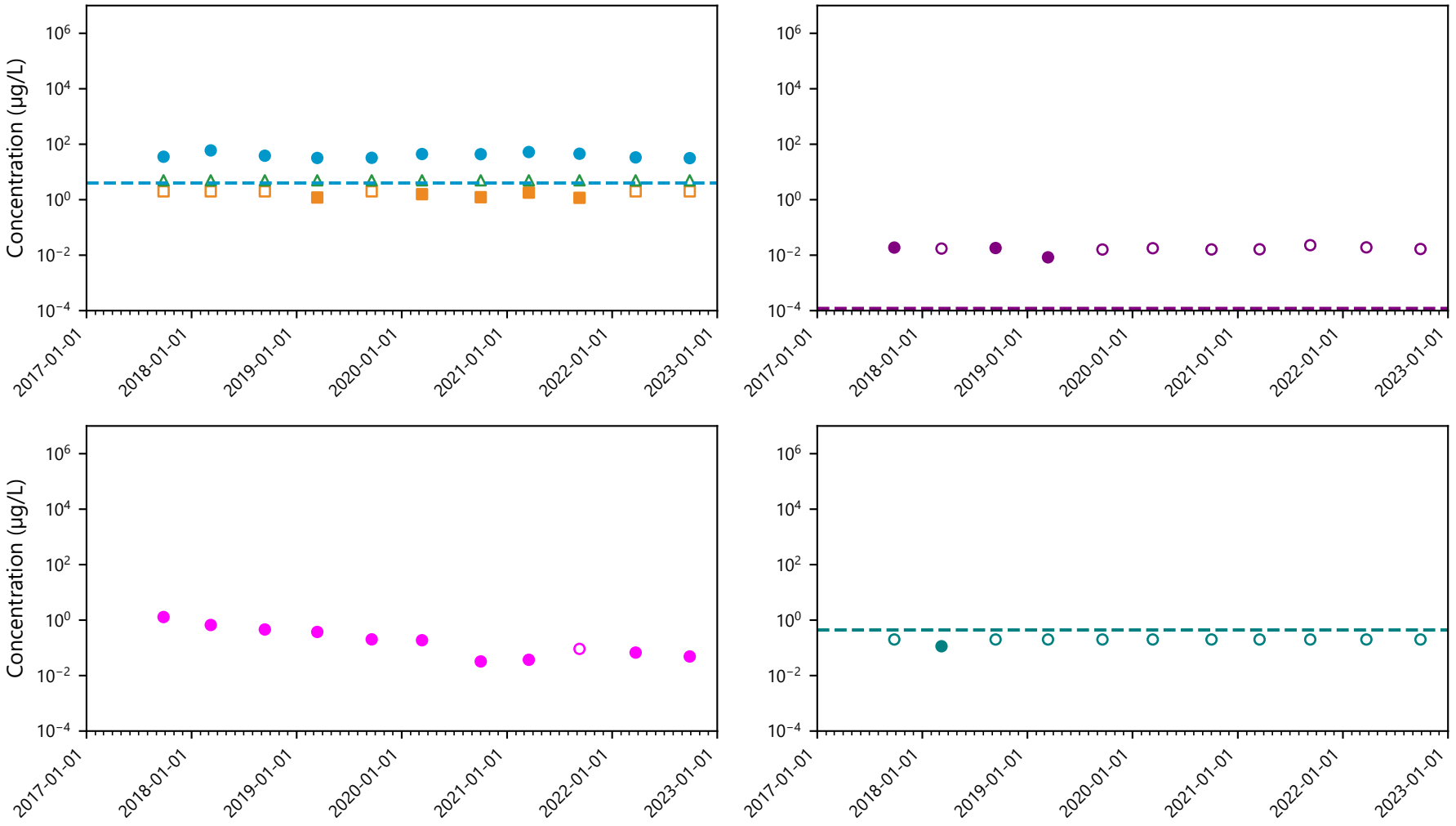
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.87
Monitoring Wells and Piezometers: PZ6-50
2022 HC&C System Annual Report
Gasco OU



Notes:
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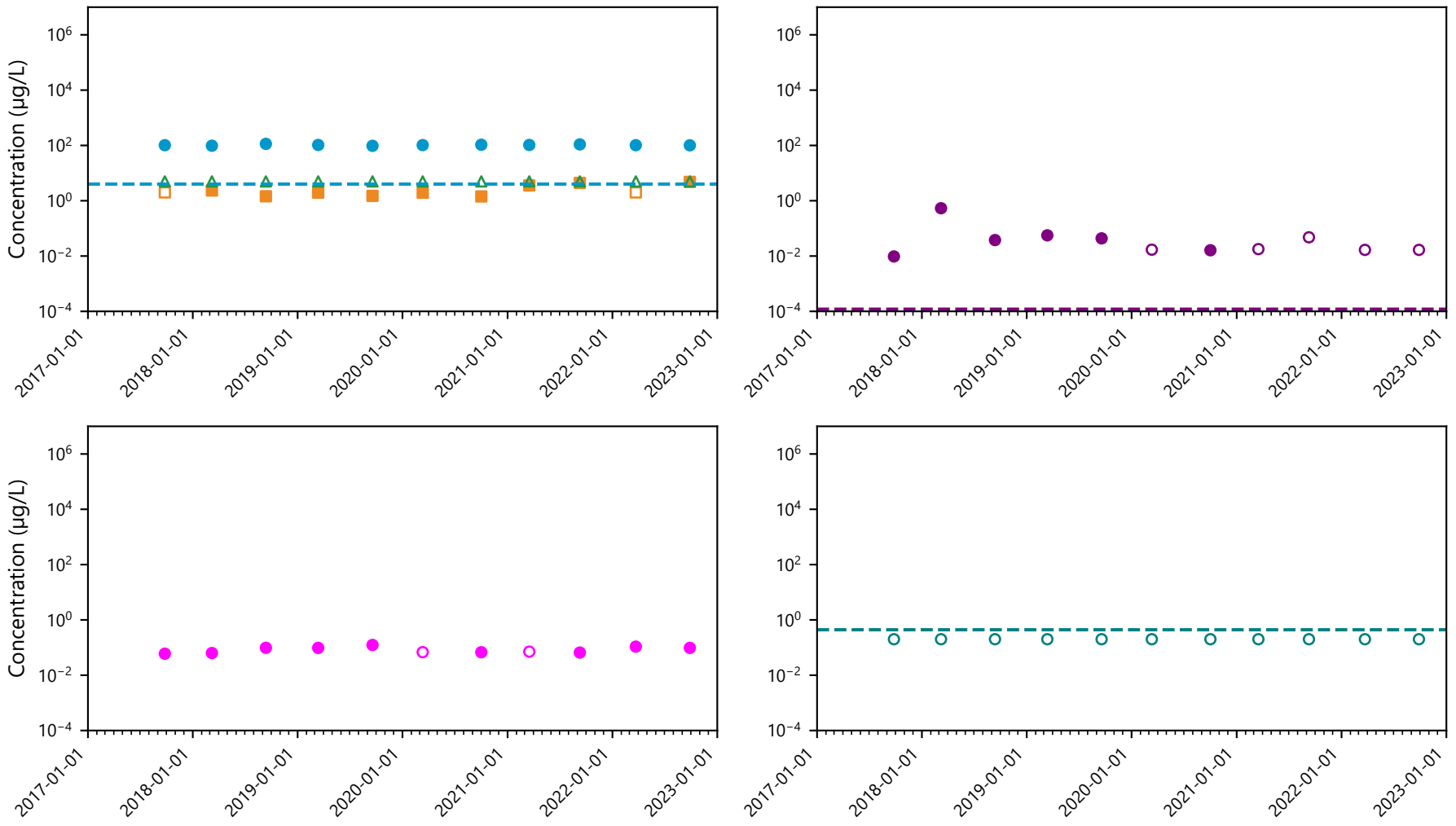
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.88
Monitoring Wells and Piezometers: PZ7-100
2022 HC&C System Annual Report
Gasco OU



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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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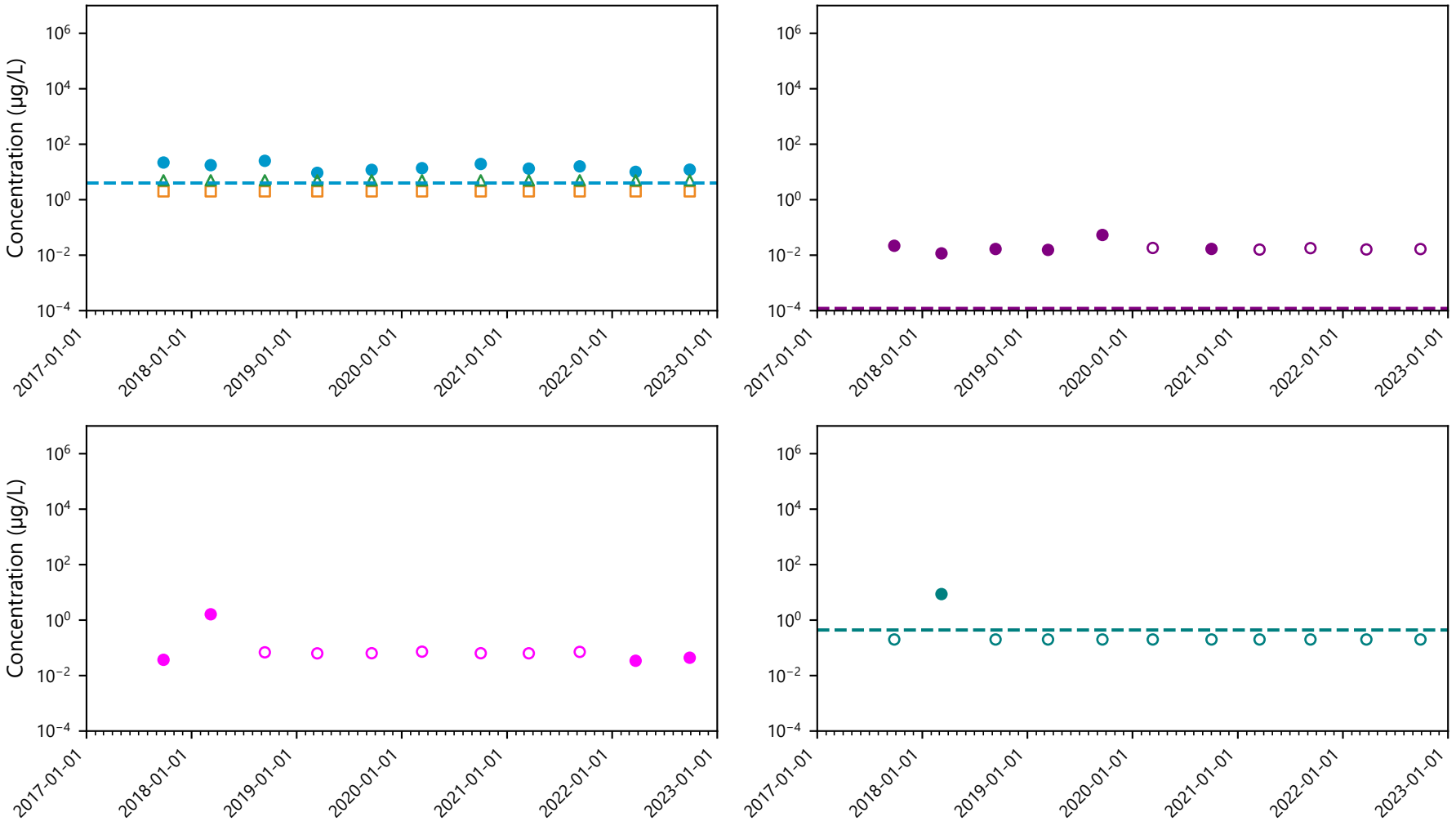
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.89
Monitoring Wells and Piezometers: PZ7-150
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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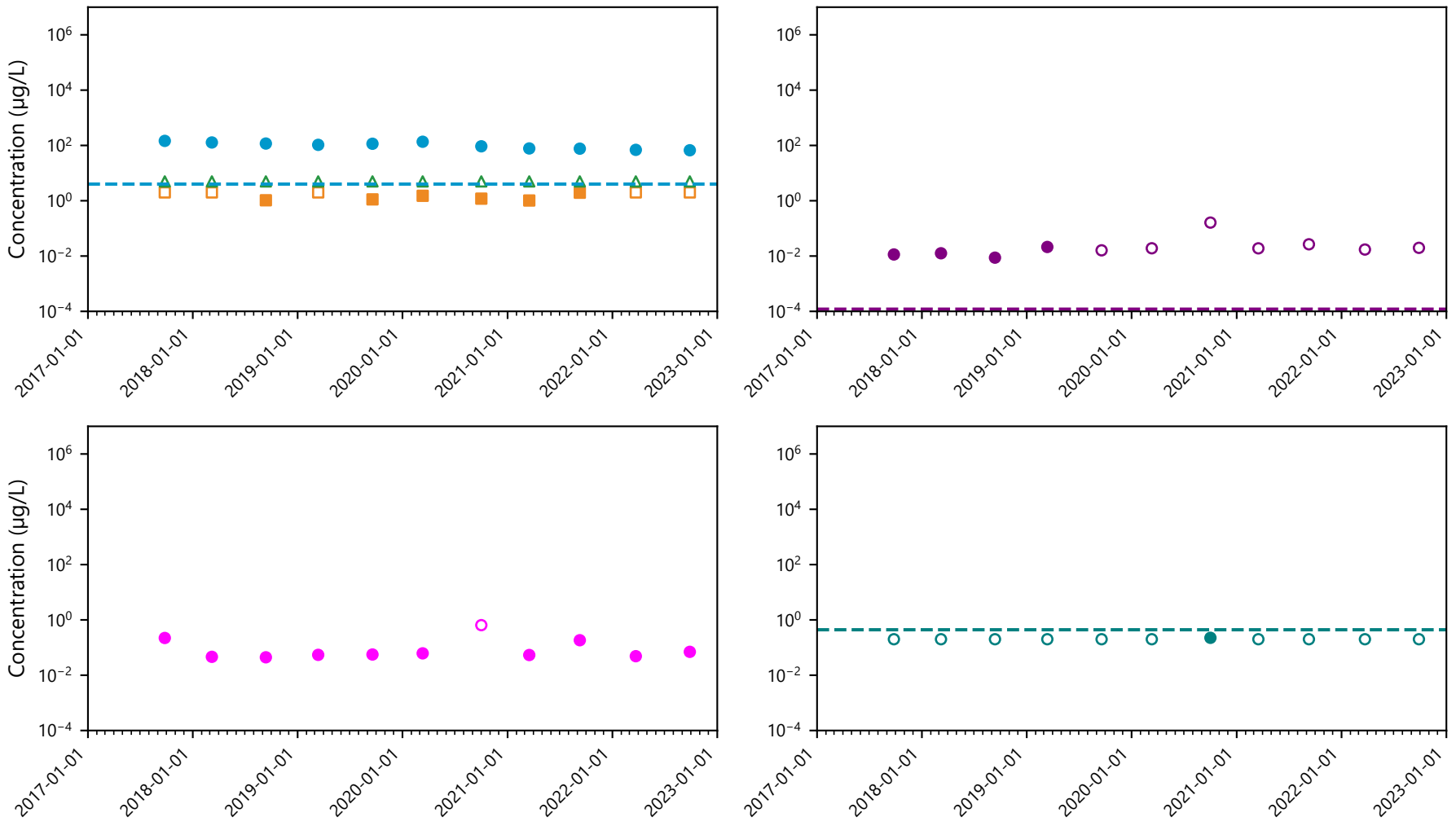
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.90
Monitoring Wells and Piezometers: PZ7-5
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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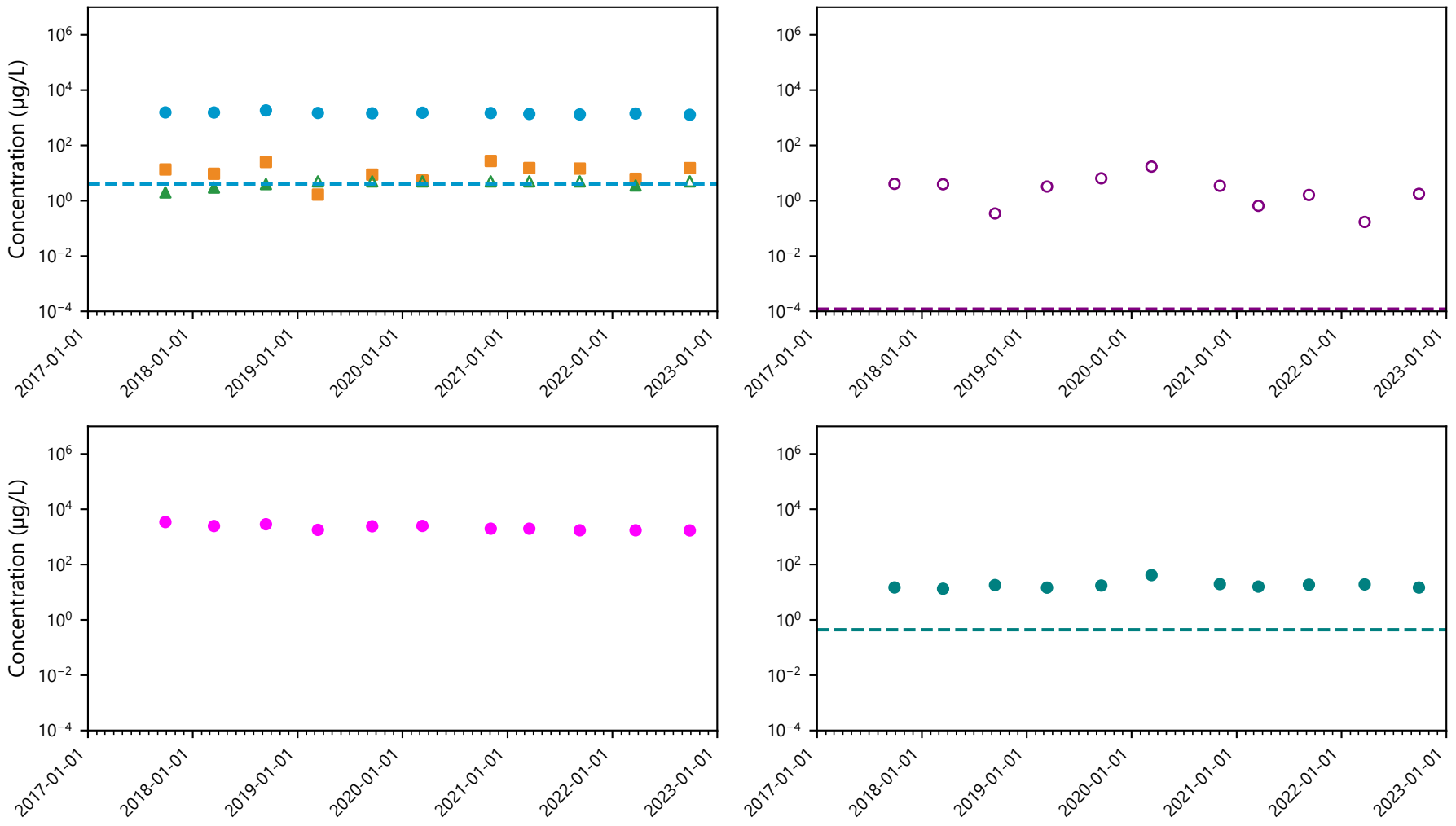
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.91
Monitoring Wells and Piezometers: PZ7-50
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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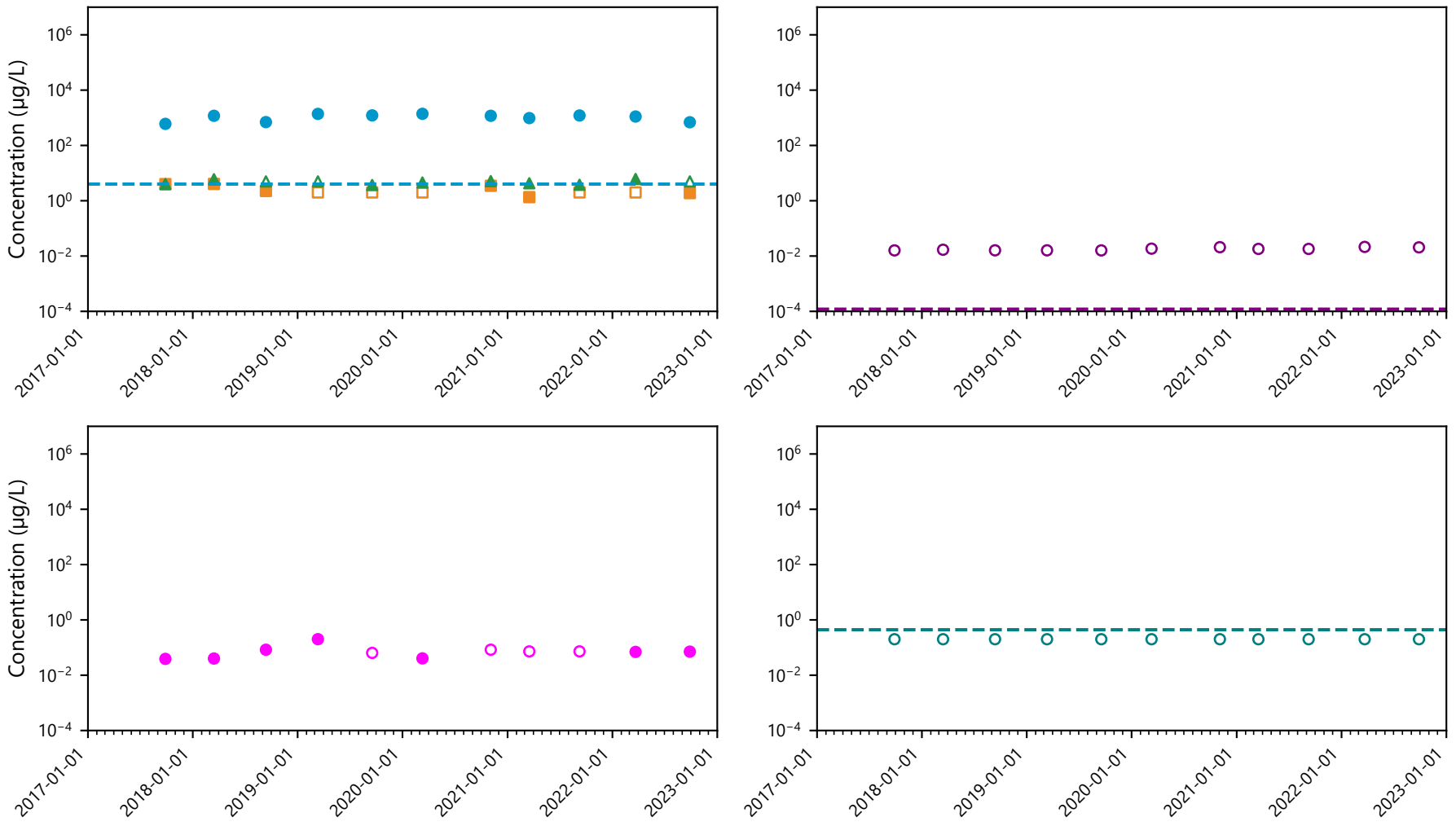
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.92
Monitoring Wells and Piezometers: PZ8-5
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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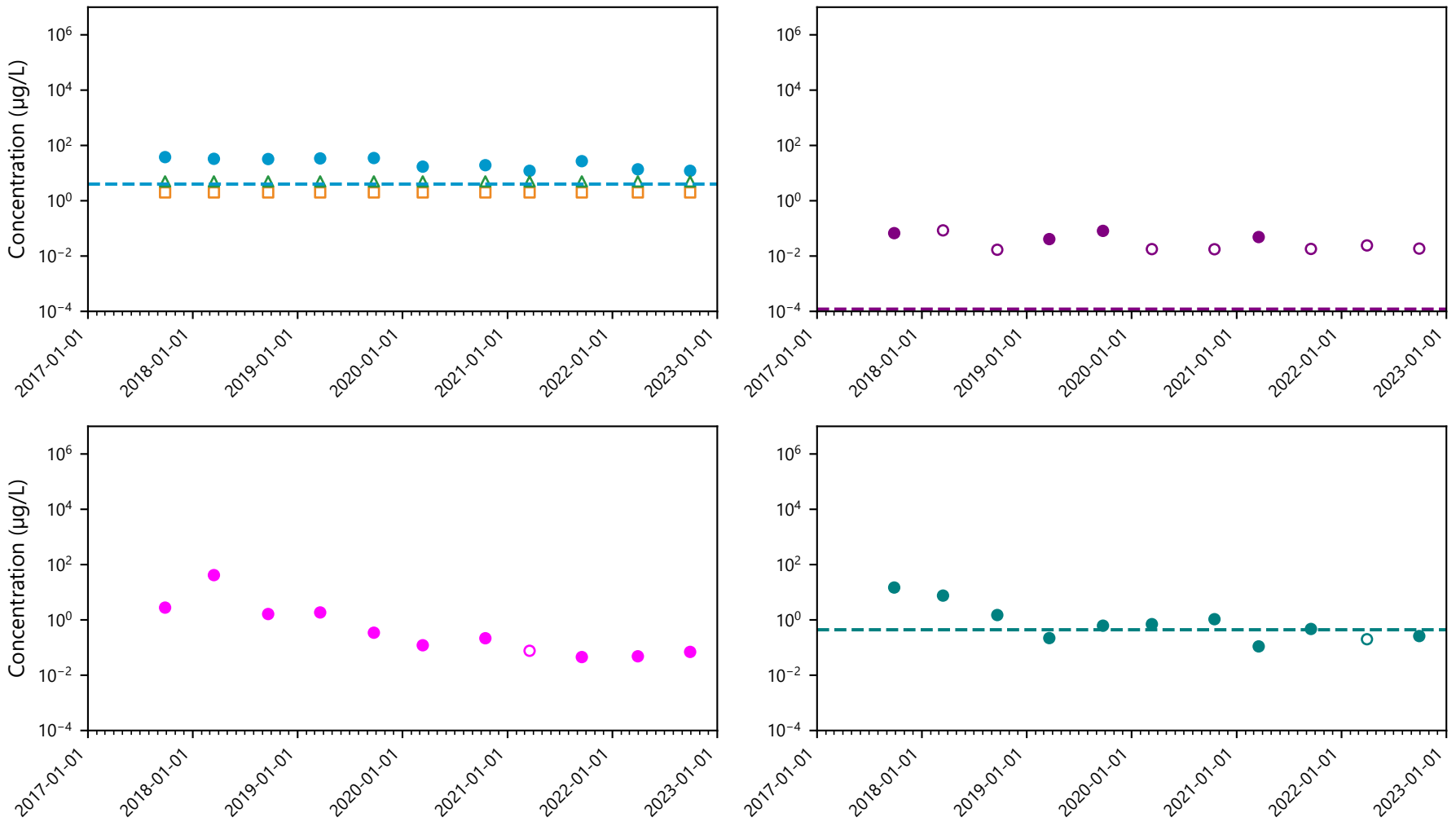
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.93
Monitoring Wells and Piezometers: PZ8-50
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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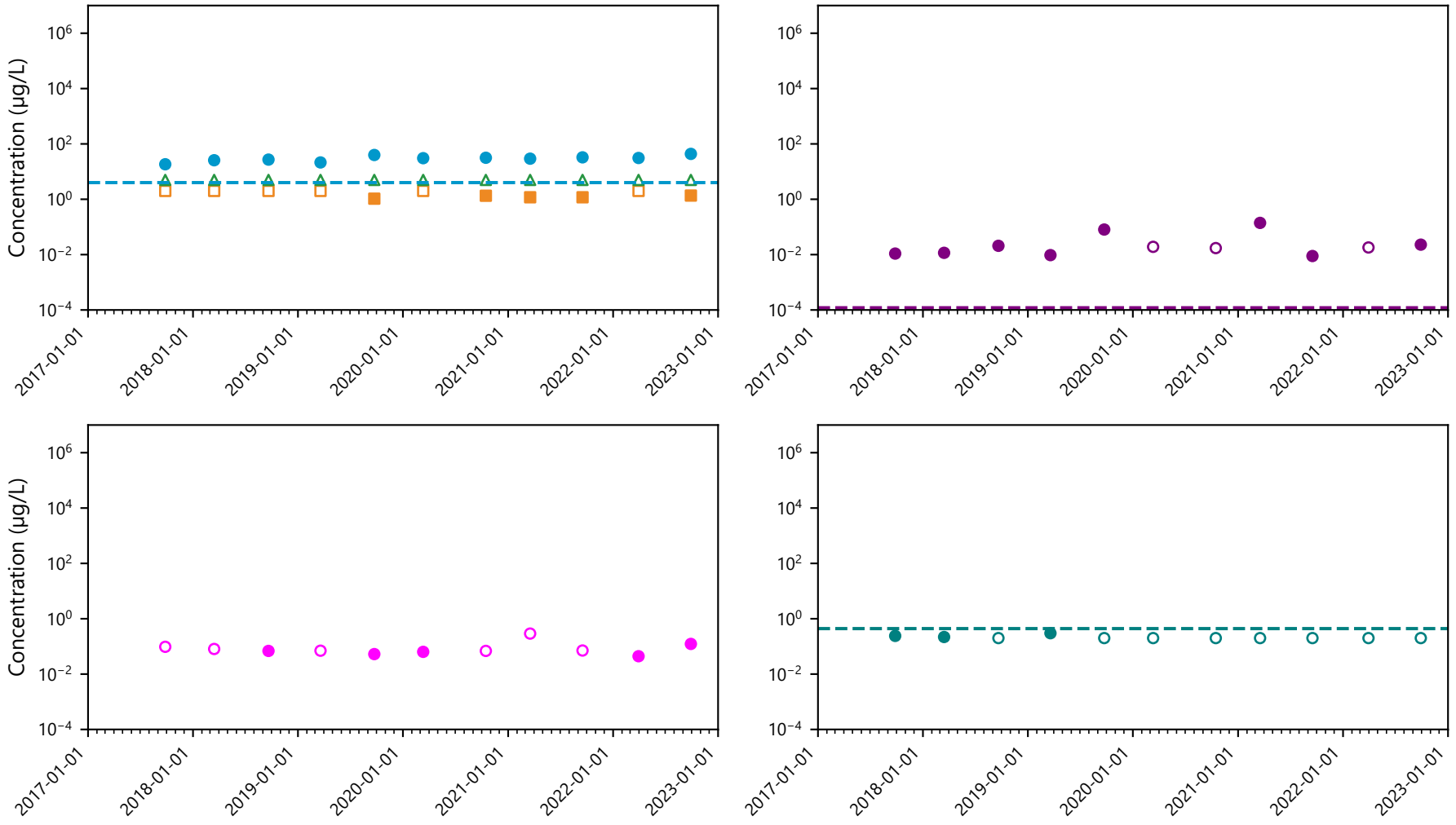
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.94
Monitoring Wells and Piezometers: PZ9-110
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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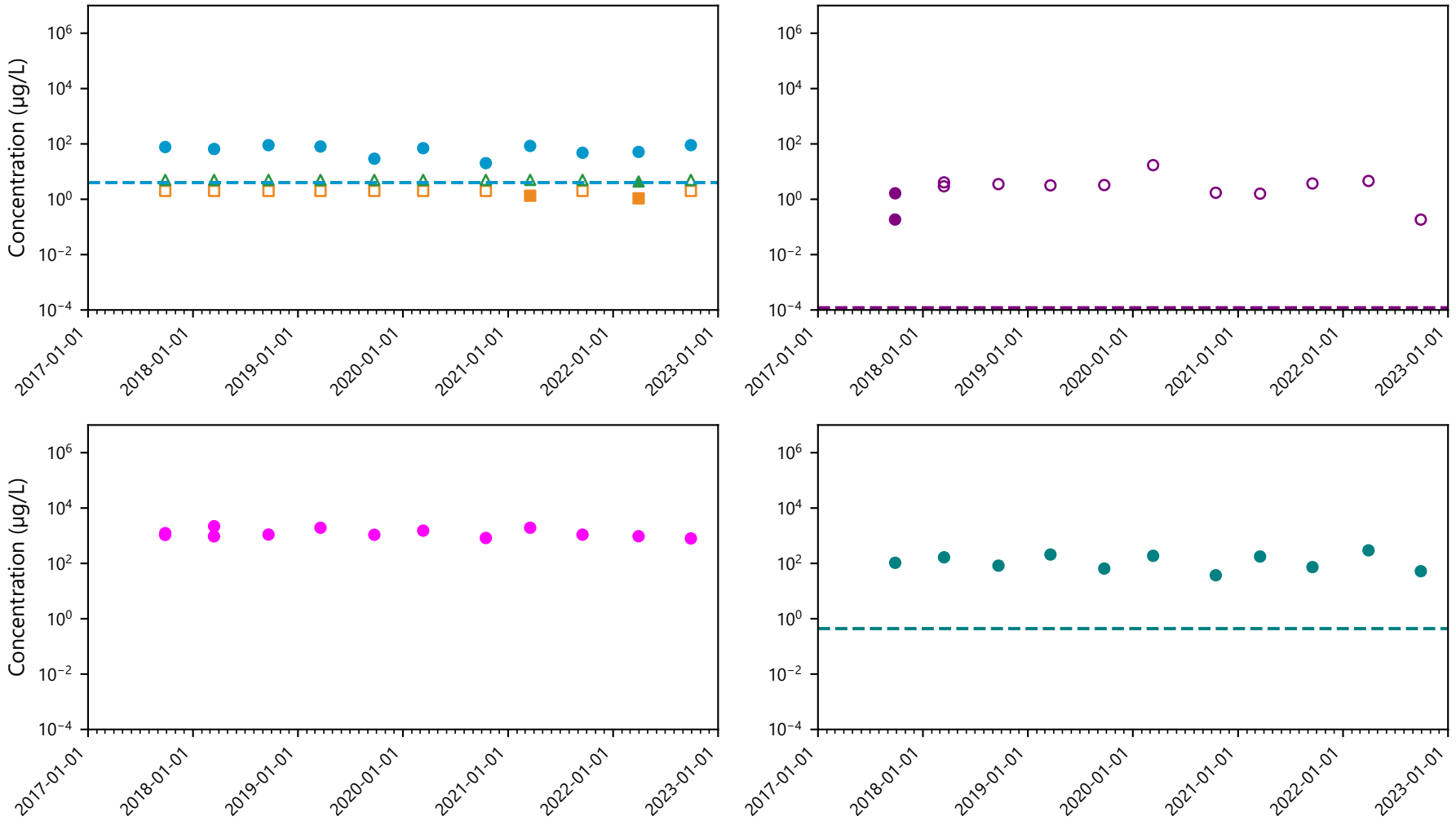
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.95
Monitoring Wells and Piezometers: PZ9-150
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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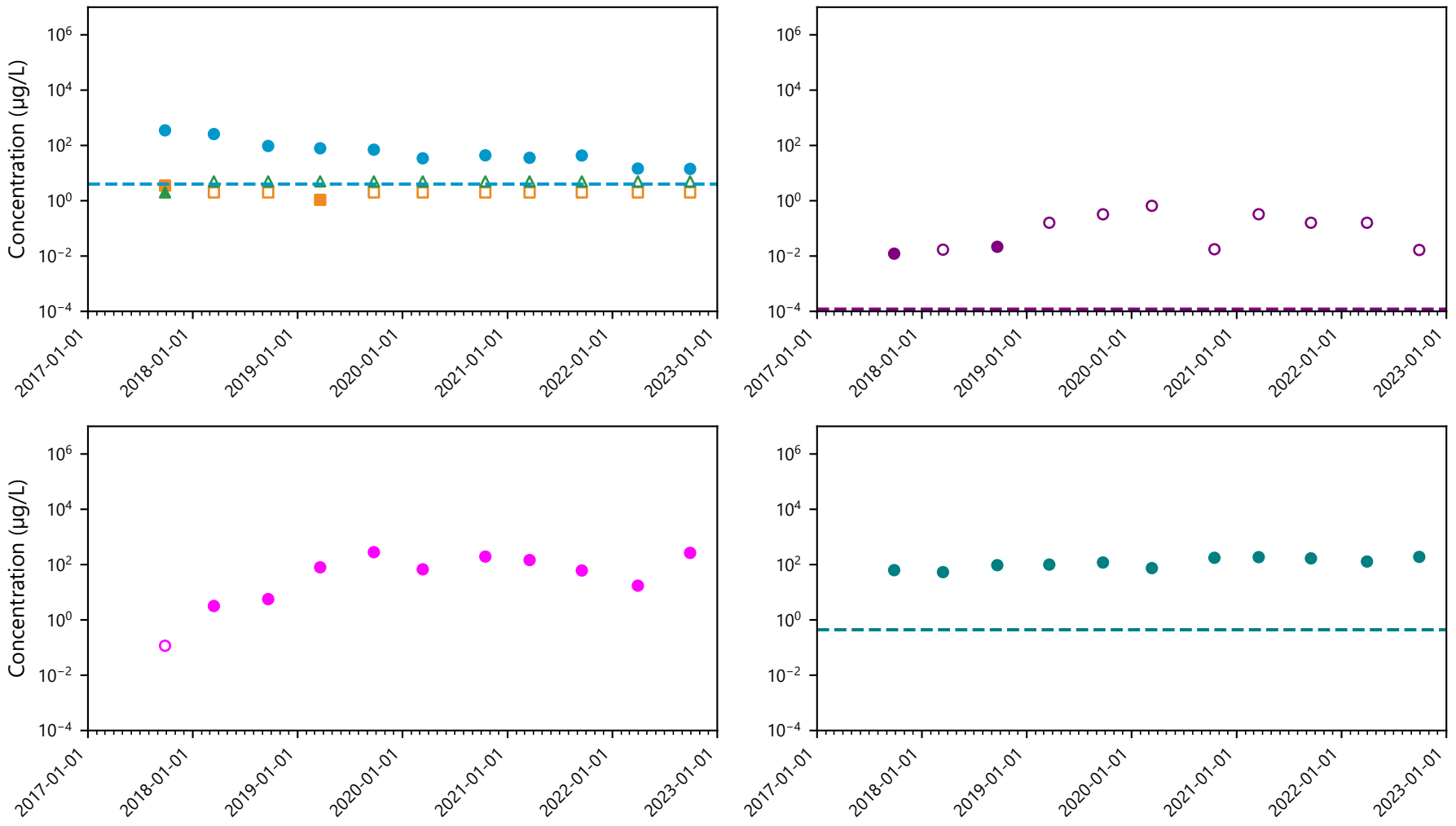
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.96
Monitoring Wells and Piezometers: PZ9-5
2022 HC&C System Annual Report
Gasco OU



Notes:
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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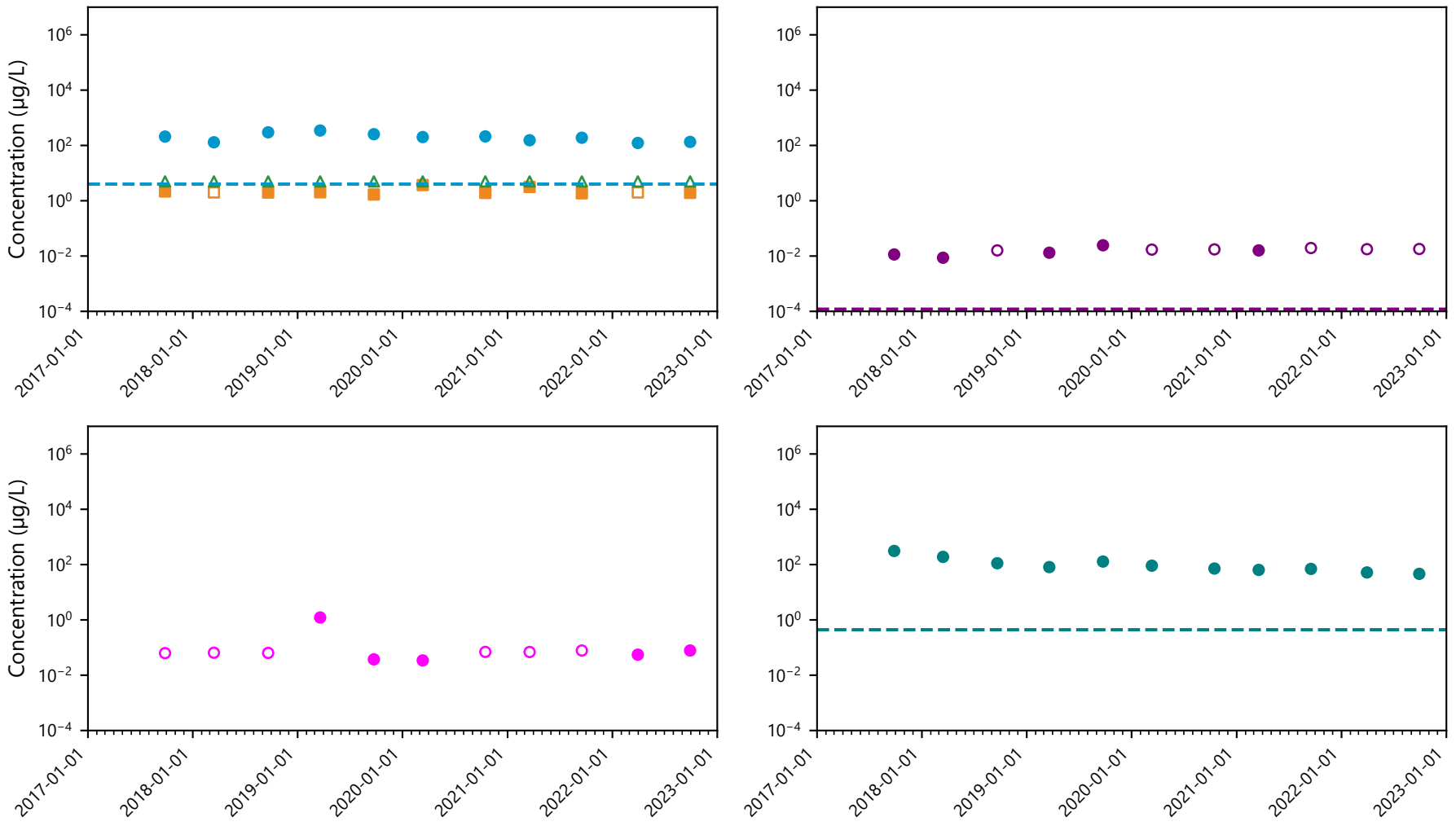
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.97
Monitoring Wells and Piezometers: PZ9-50
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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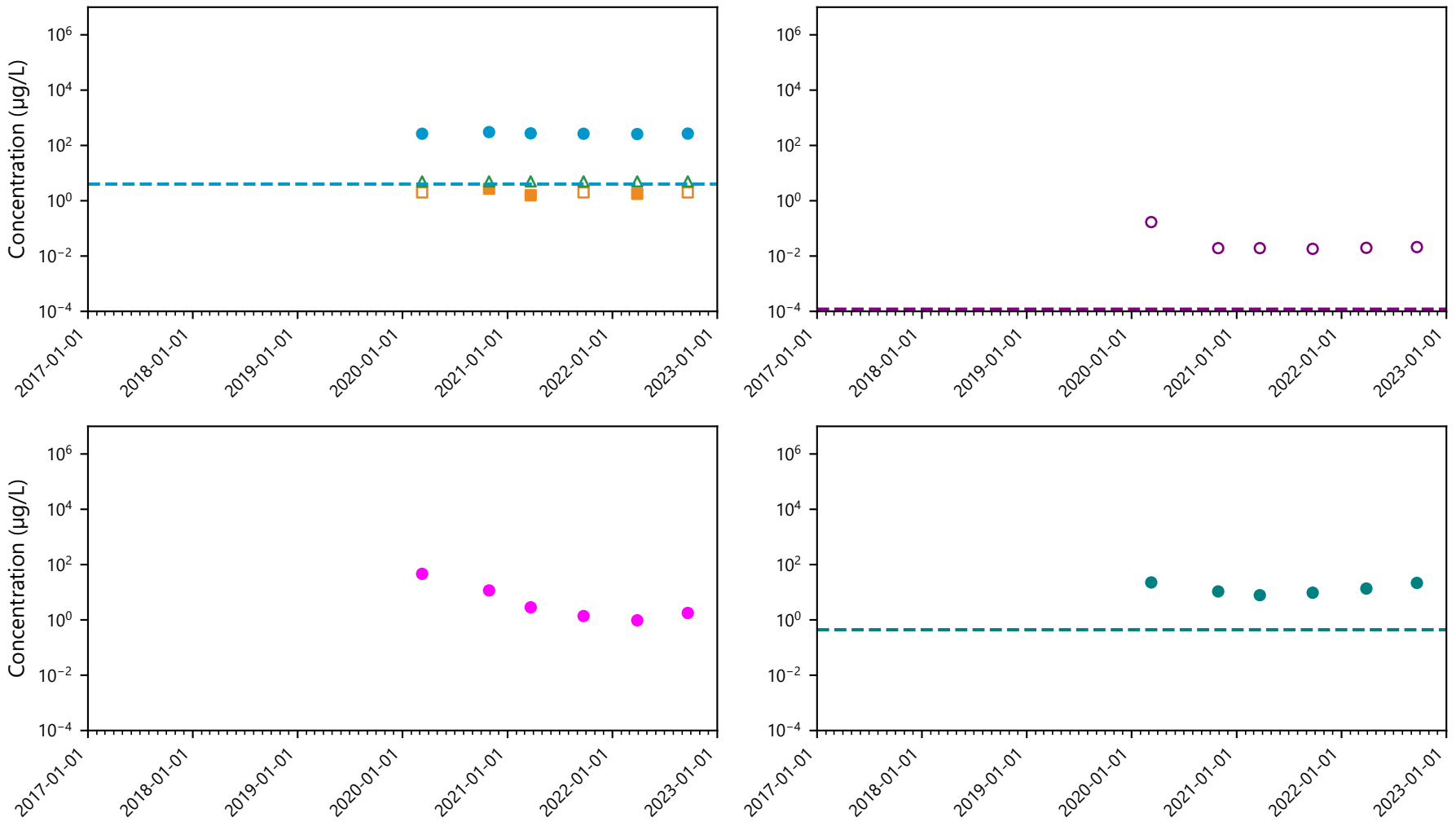
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.a.98
Monitoring Wells and Piezometers: PZ9-75
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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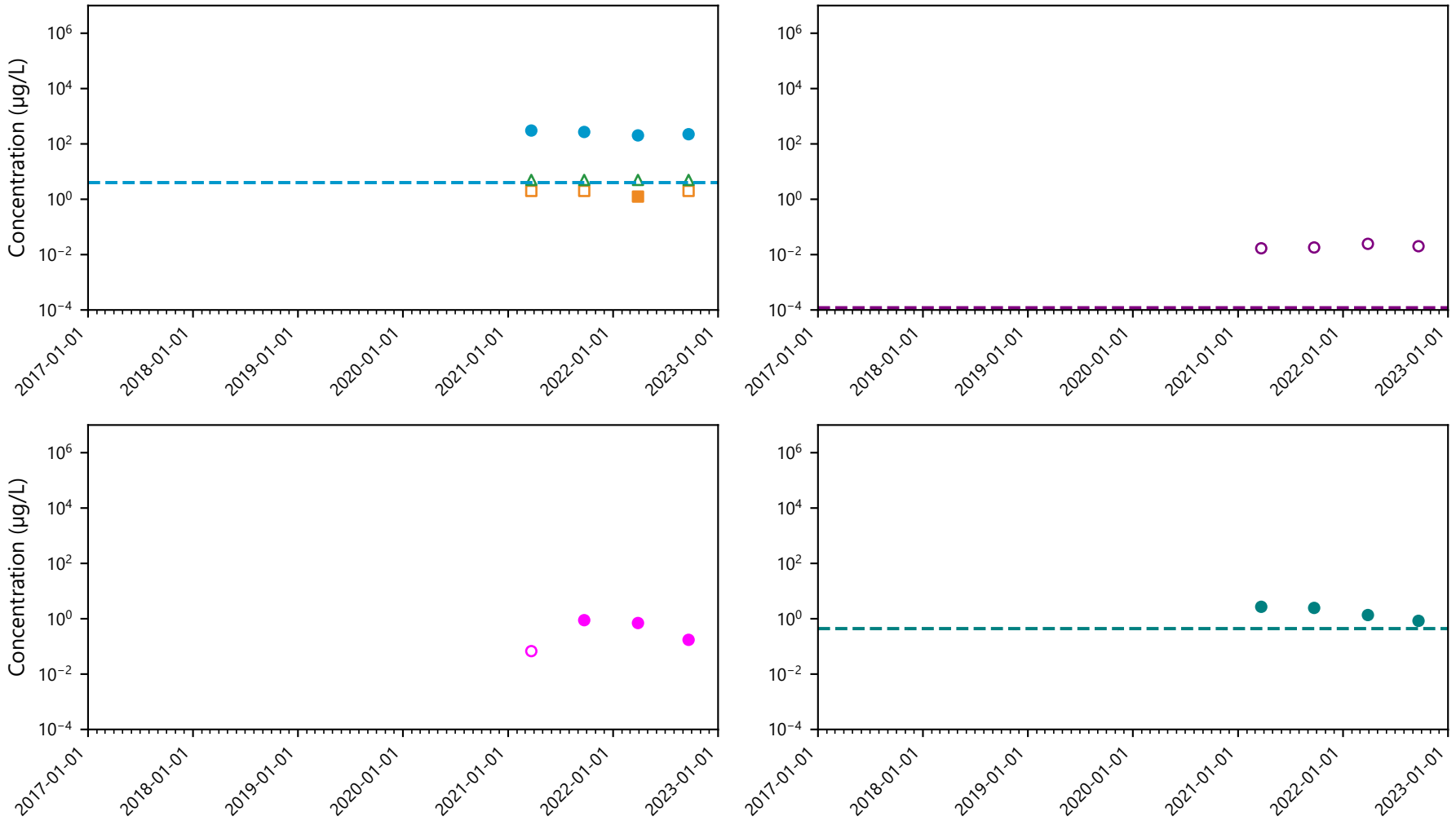
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.99
Pumping Wells: PW-01Lb
2022 HC&C System Annual Report
Gasco OU



Notes:
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CUL= Cleanup Level

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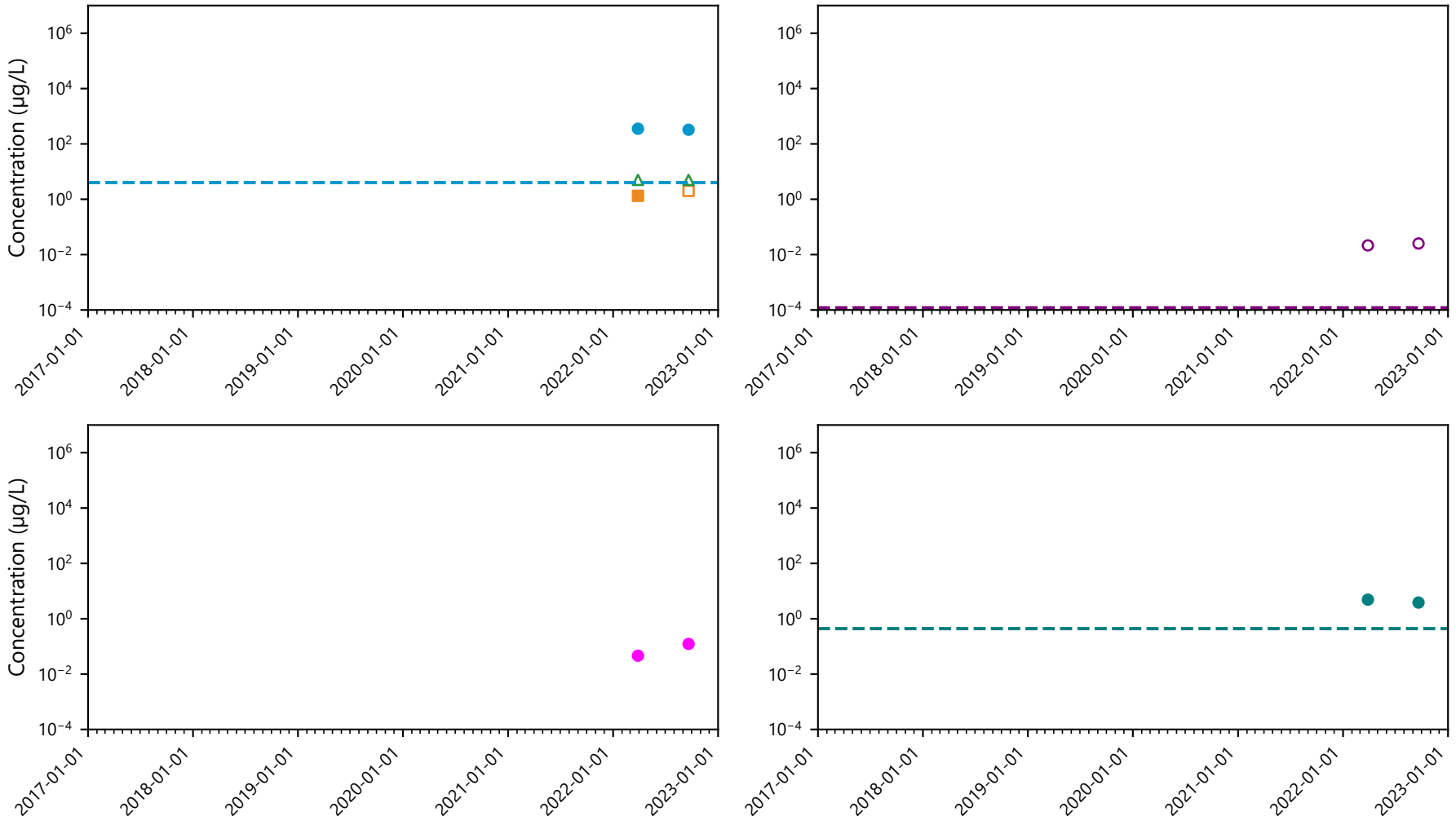
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.100
Pumping Wells: PW-01U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
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CUL= Cleanup Level

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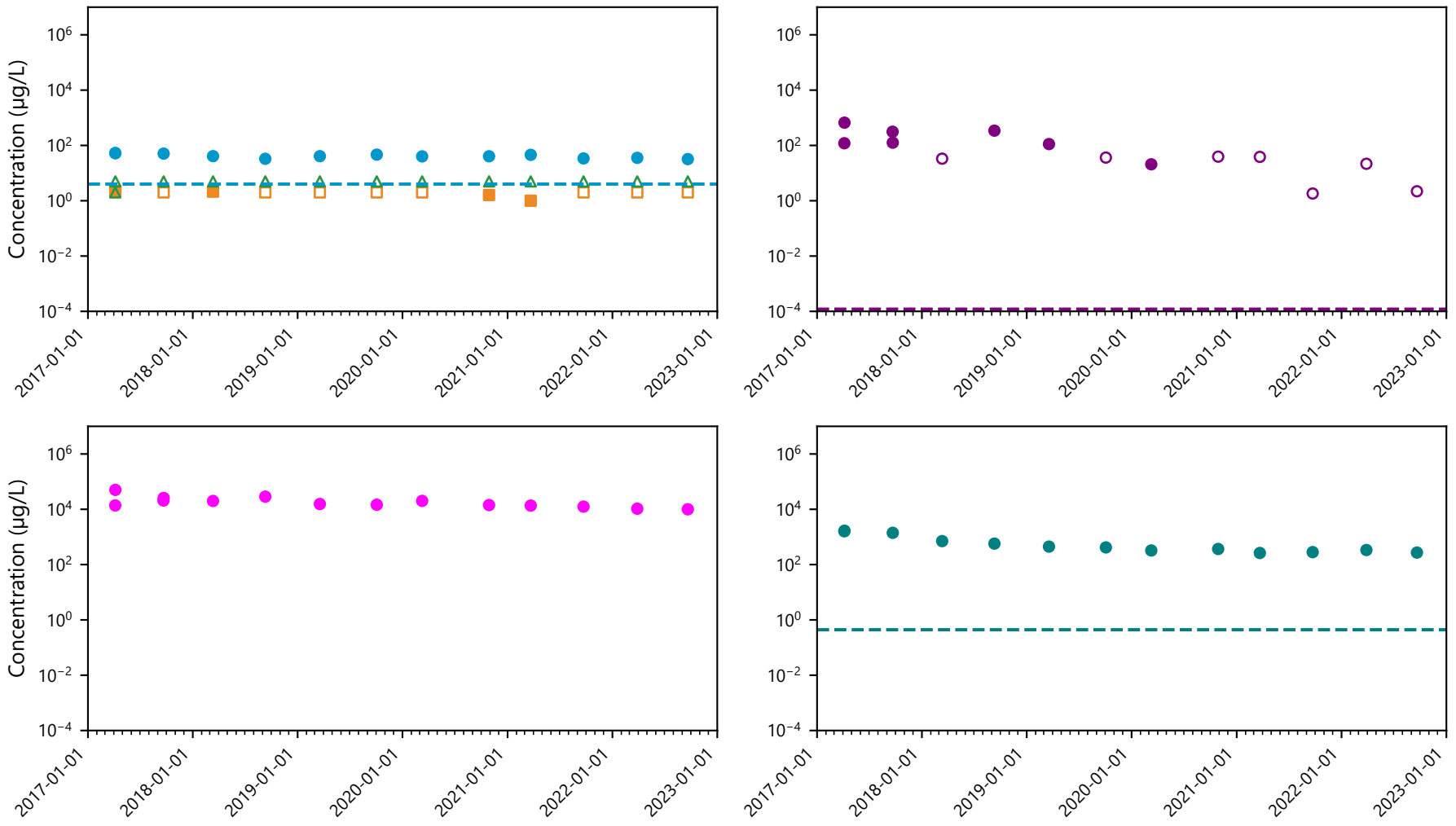
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.101
Pumping Wells: PW-01Uc
2022 HC&C System Annual Report
Gasco OU



Notes:
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CUL= Cleanup Level

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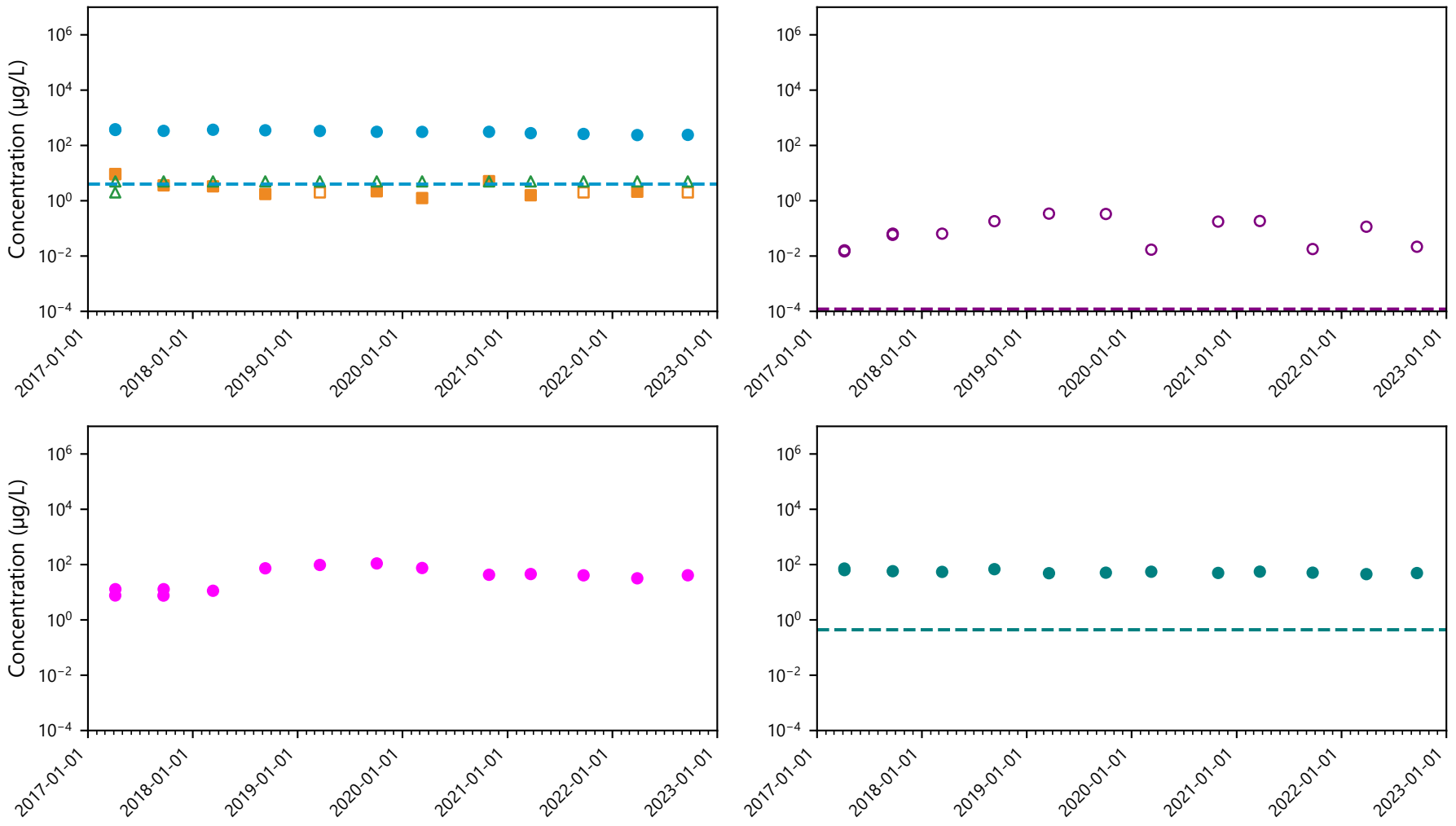
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.102
Pumping Wells: PW-02L
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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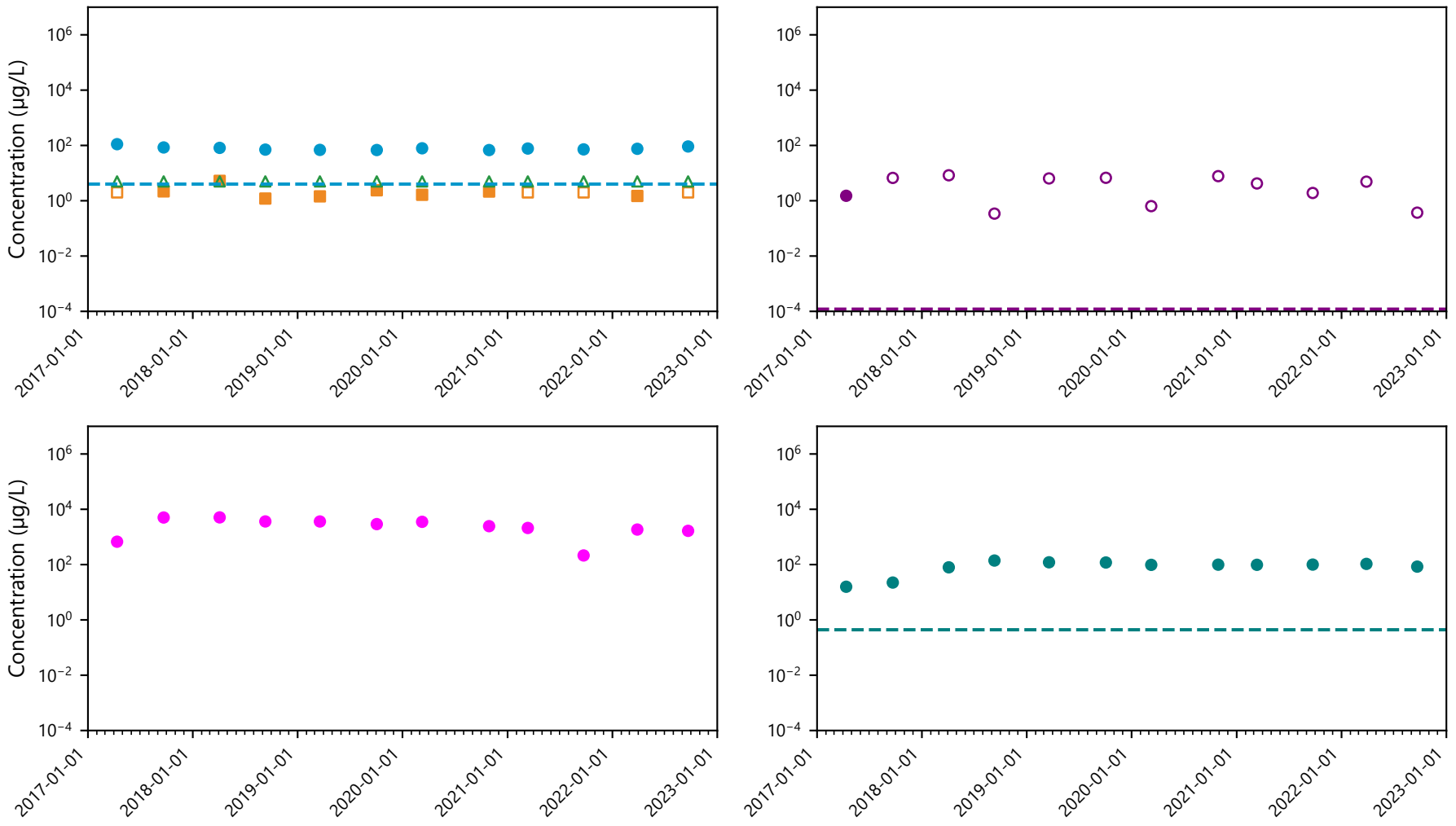
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.103
Pumping Wells: PW-02U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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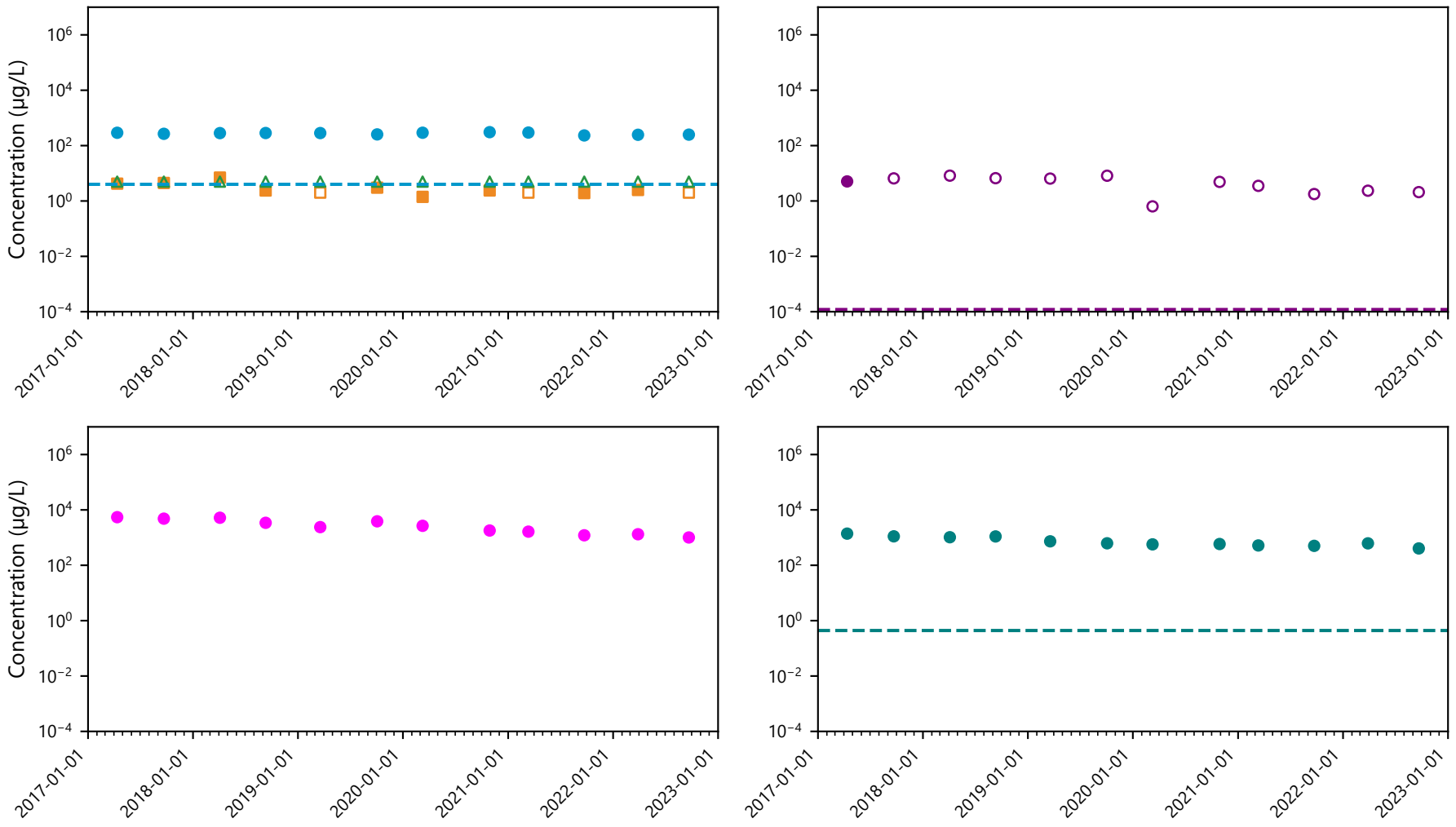
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.104
Pumping Wells: PW-03-118
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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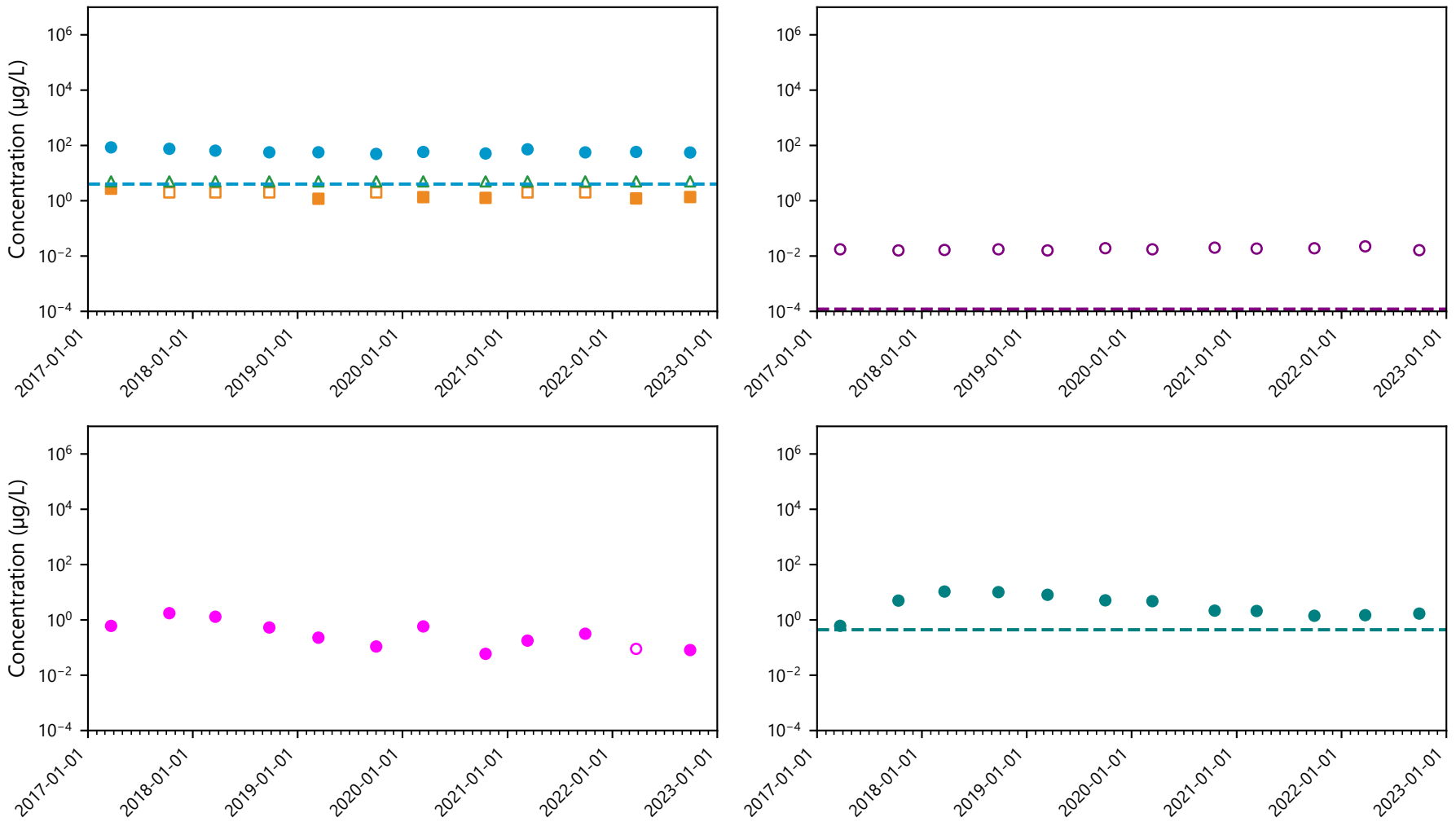
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.105
Pumping Wells: PW-03U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
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CUL= Cleanup Level

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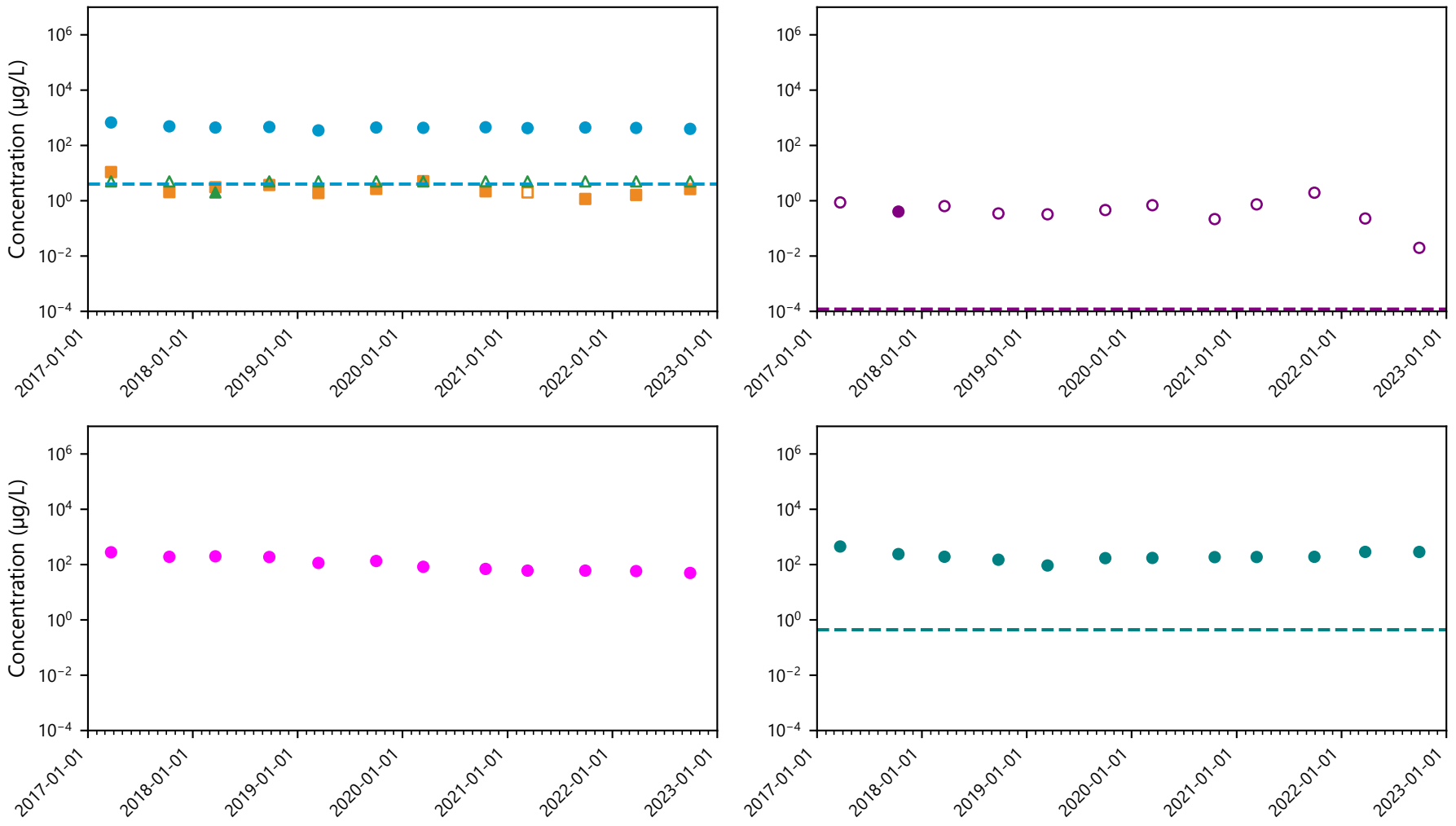
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.106
Pumping Wells: PW-04L
2022 HC&C System Annual Report
Gasco OU



Notes:
1. Data includes total and dissolved fractions. Rejected samples excluded. Field duplicates excluded. Open symbol denotes non-detects.
2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
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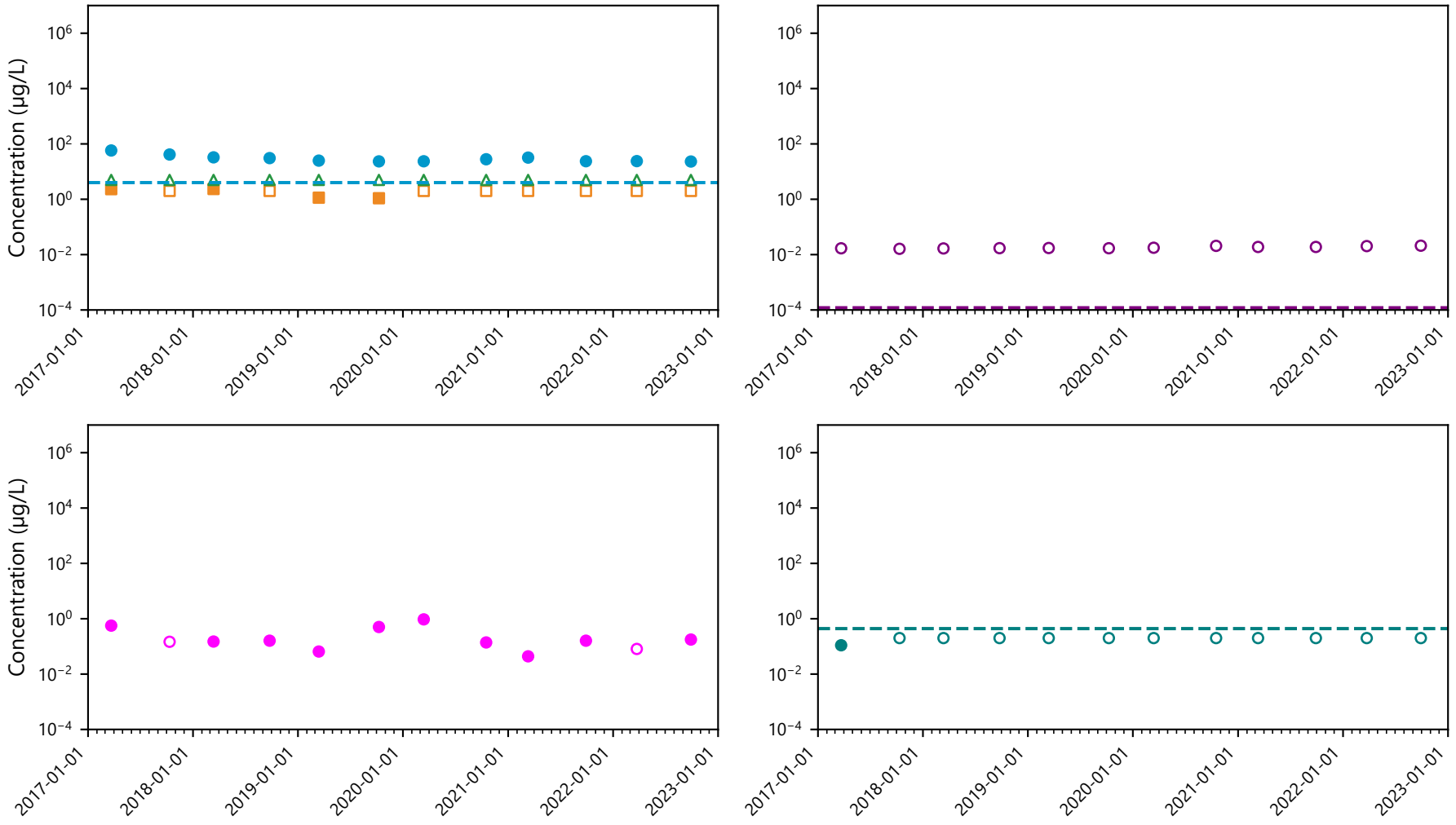
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.107
Pumping Wells: PW-04U
2022 HC&C System Annual Report
Gasco OU



Notes:
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2. Only wells sampled in 2022 are shown.
3. Dashed lines represent groundwater CULs documented in Table 17 of the Portland Harbor Superfund Site Record of Decision. There is no groundwater CUL for Naphthalene.
µg/L= micrograms per liter
RL= reporting limit
CUL= Cleanup Level

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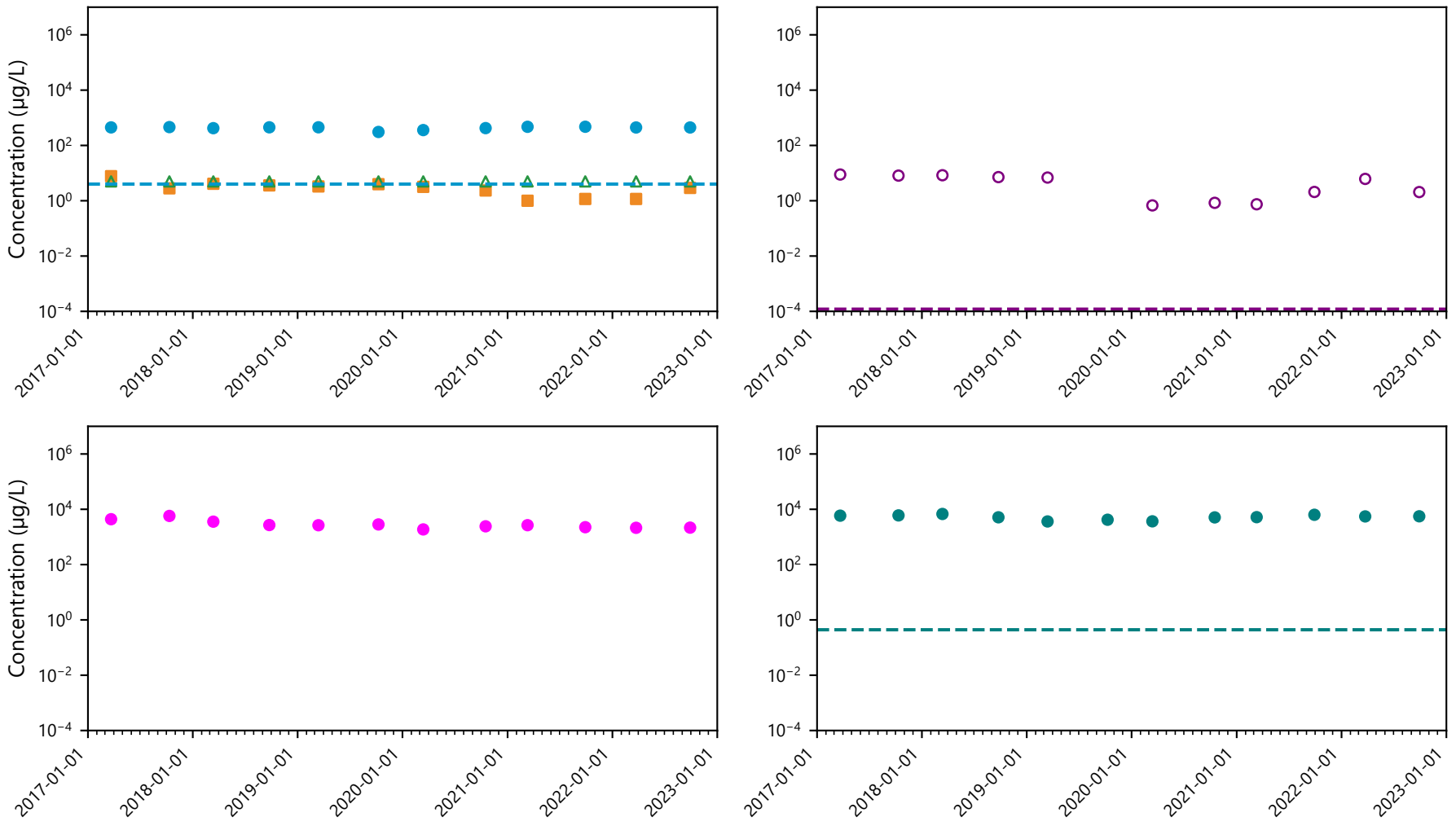
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.108
Pumping Wells: PW-05L
2022 HC&C System Annual Report
Gasco OU



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ANCHOR QEA

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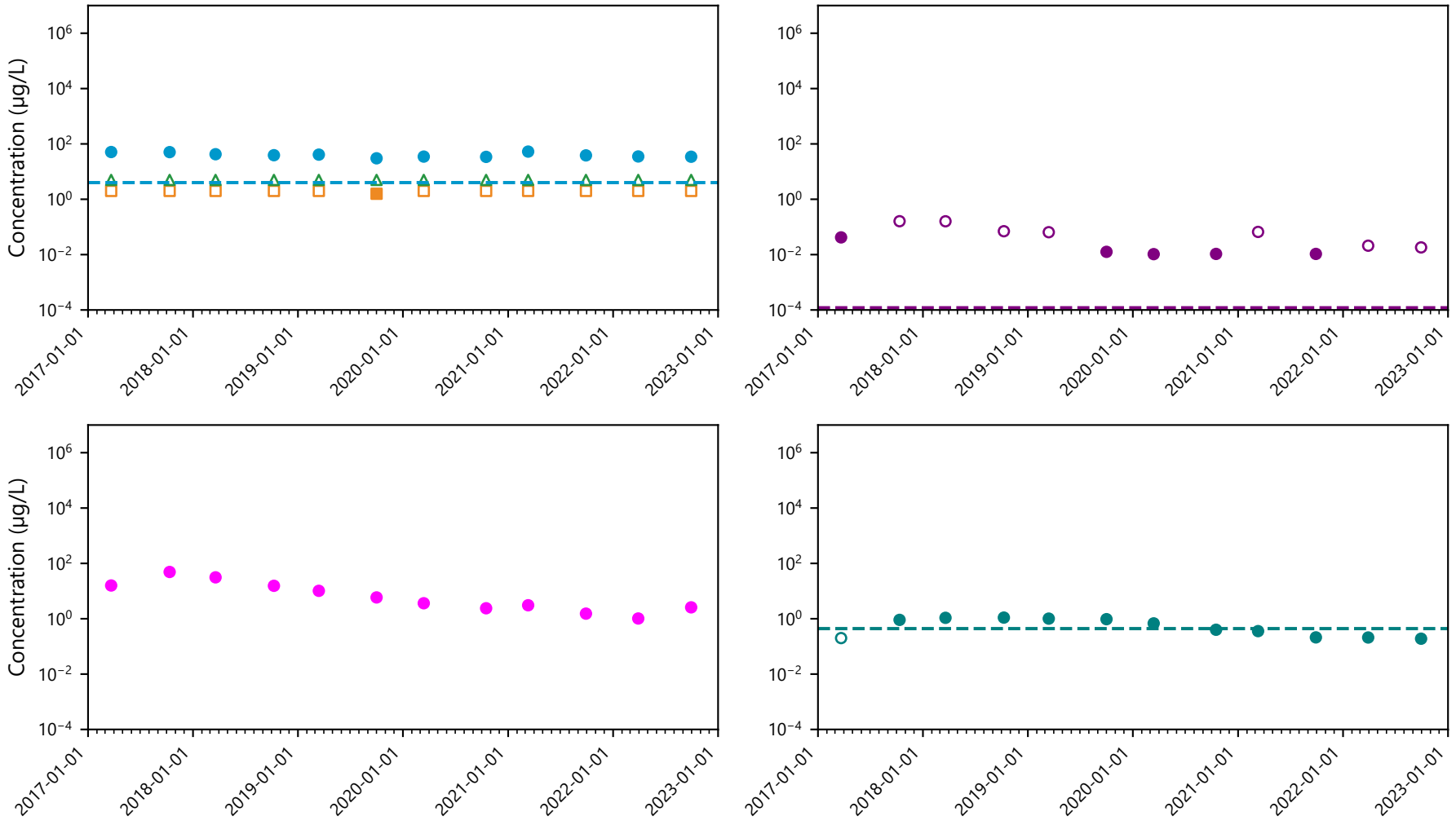
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.109
Pumping Wells: PW-05U
2022 HC&C System Annual Report
Gasco OU



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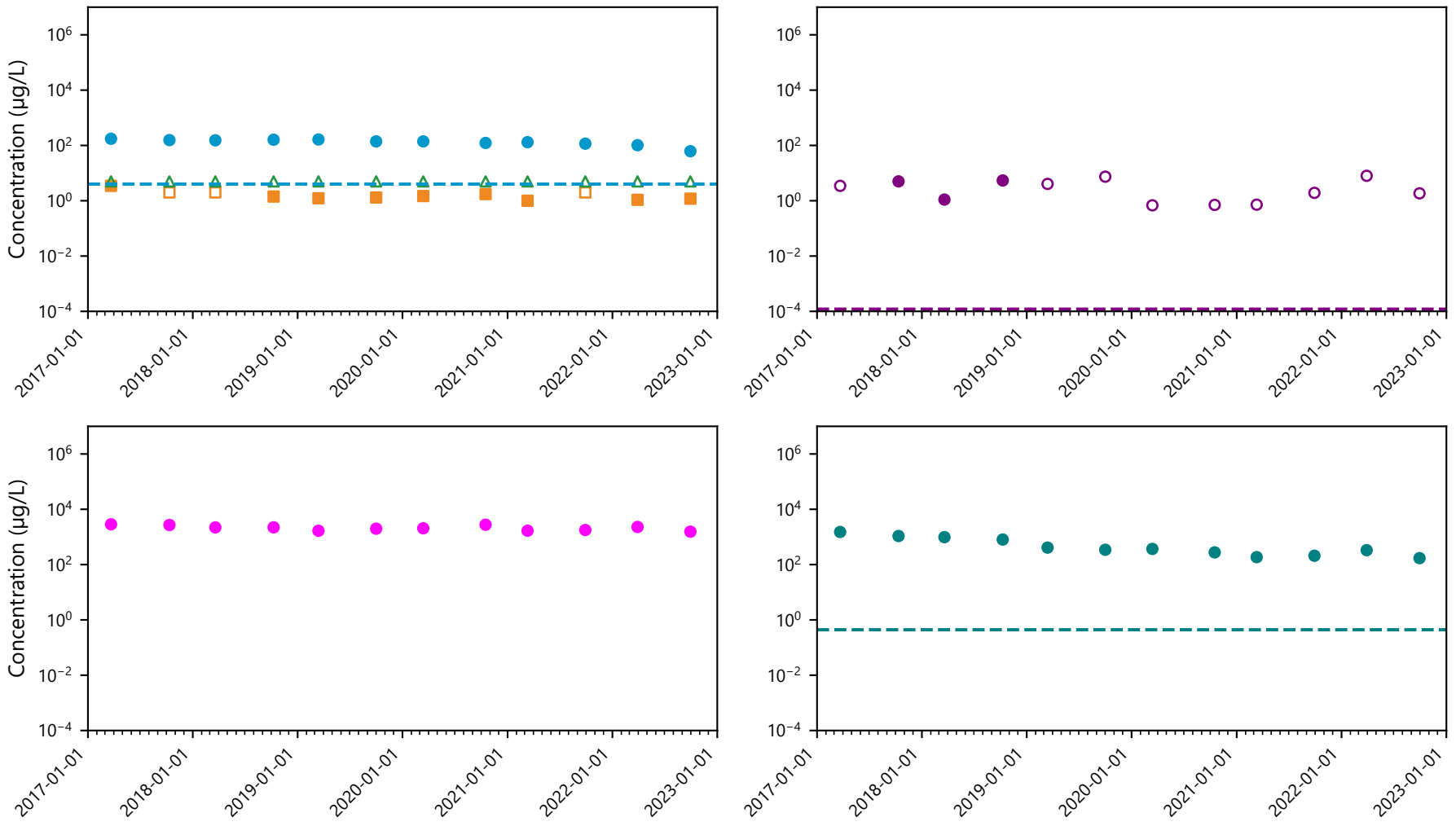
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.110
Pumping Wells: PW-06L
2022 HC&C System Annual Report
Gasco OU



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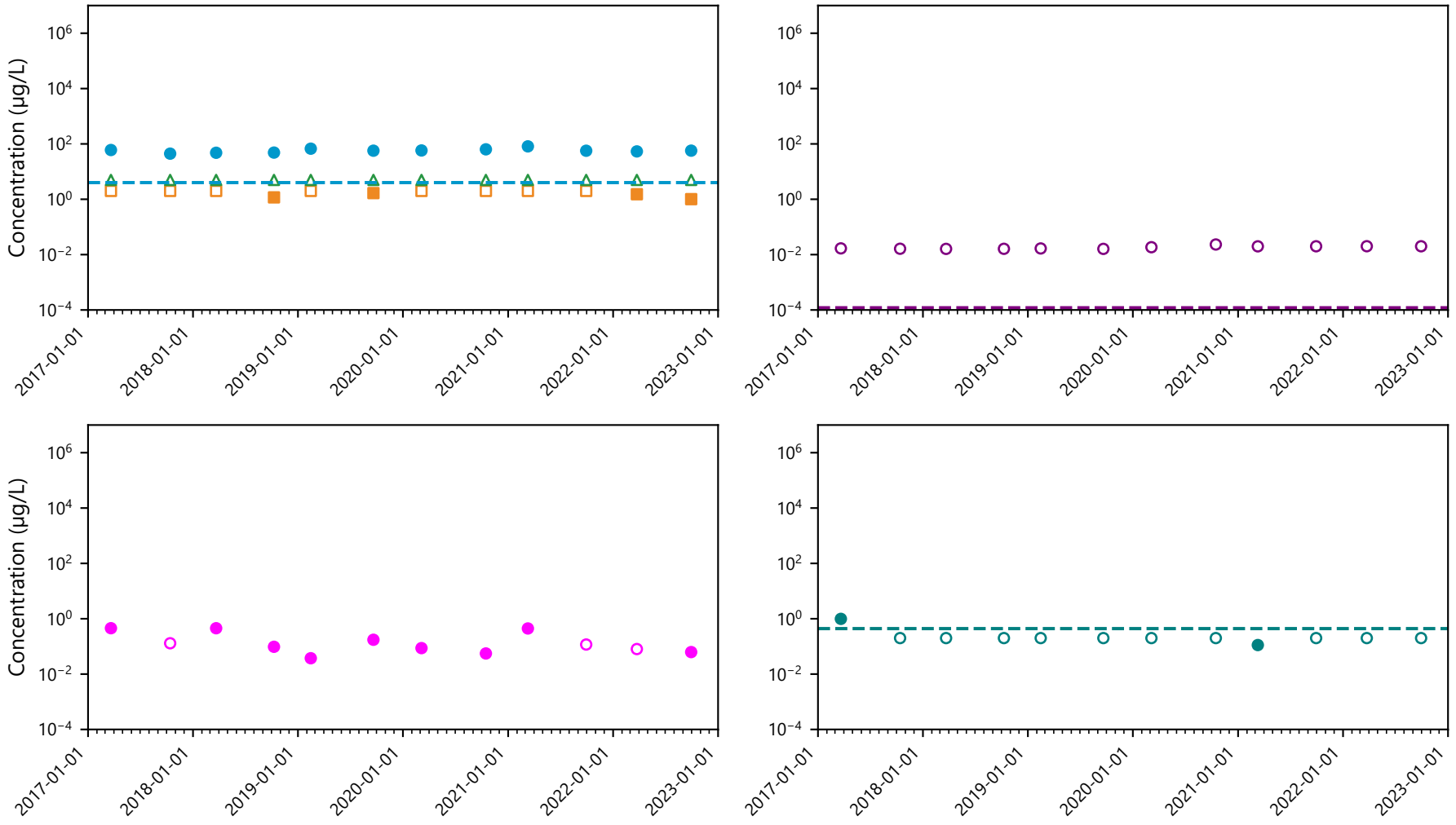
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.111
Pumping Wells: PW-06U
2022 HC&C System Annual Report
Gasco OU



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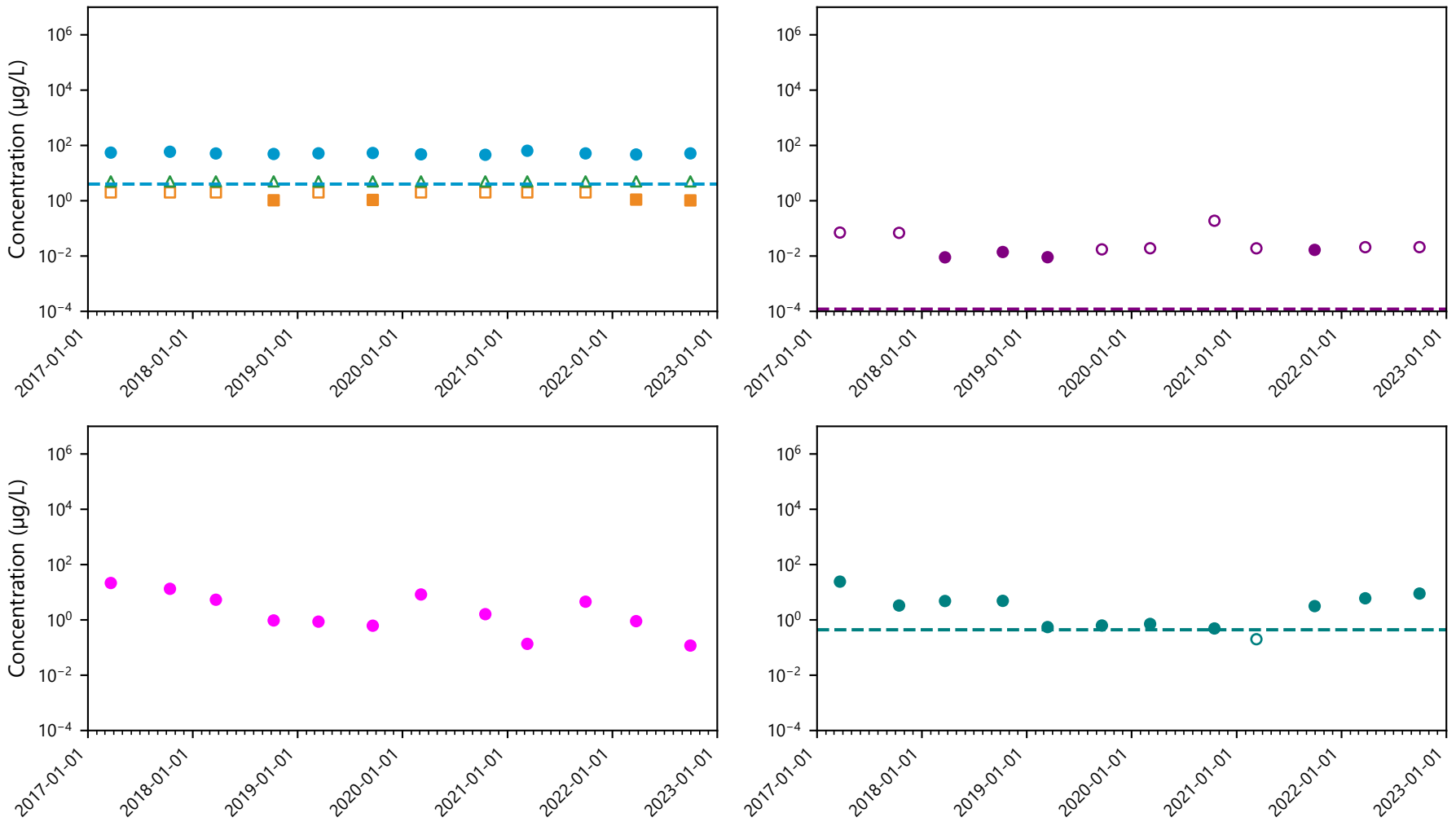
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.112
Pumping Wells: PW-07-93
2022 HC&C System Annual Report
Gasco OU



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RL= reporting limit
CUL= Cleanup Level

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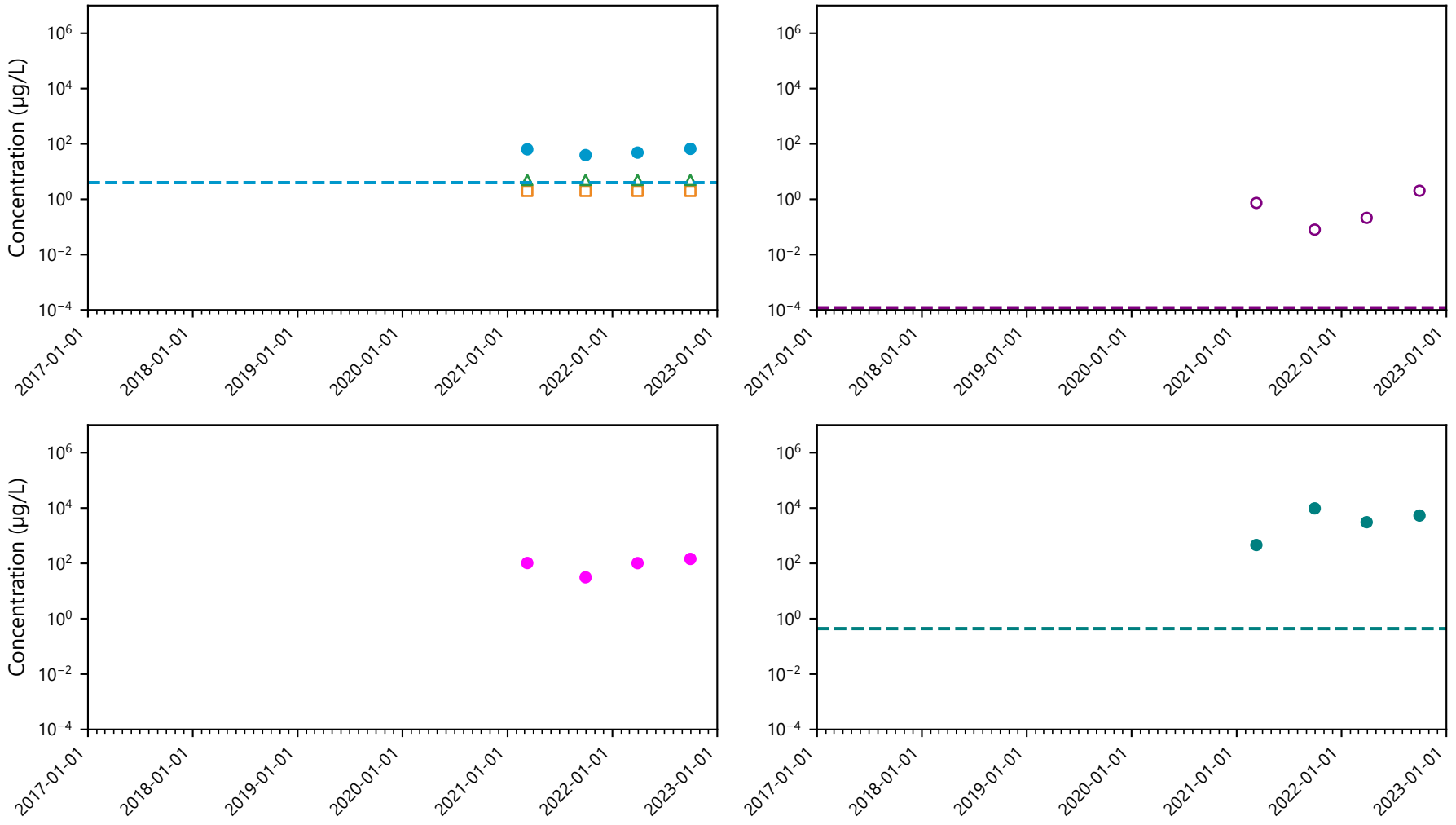
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.113
Pumping Wells: PW-08-68
2022 HC&C System Annual Report
Gasco OU



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CUL= Cleanup Level

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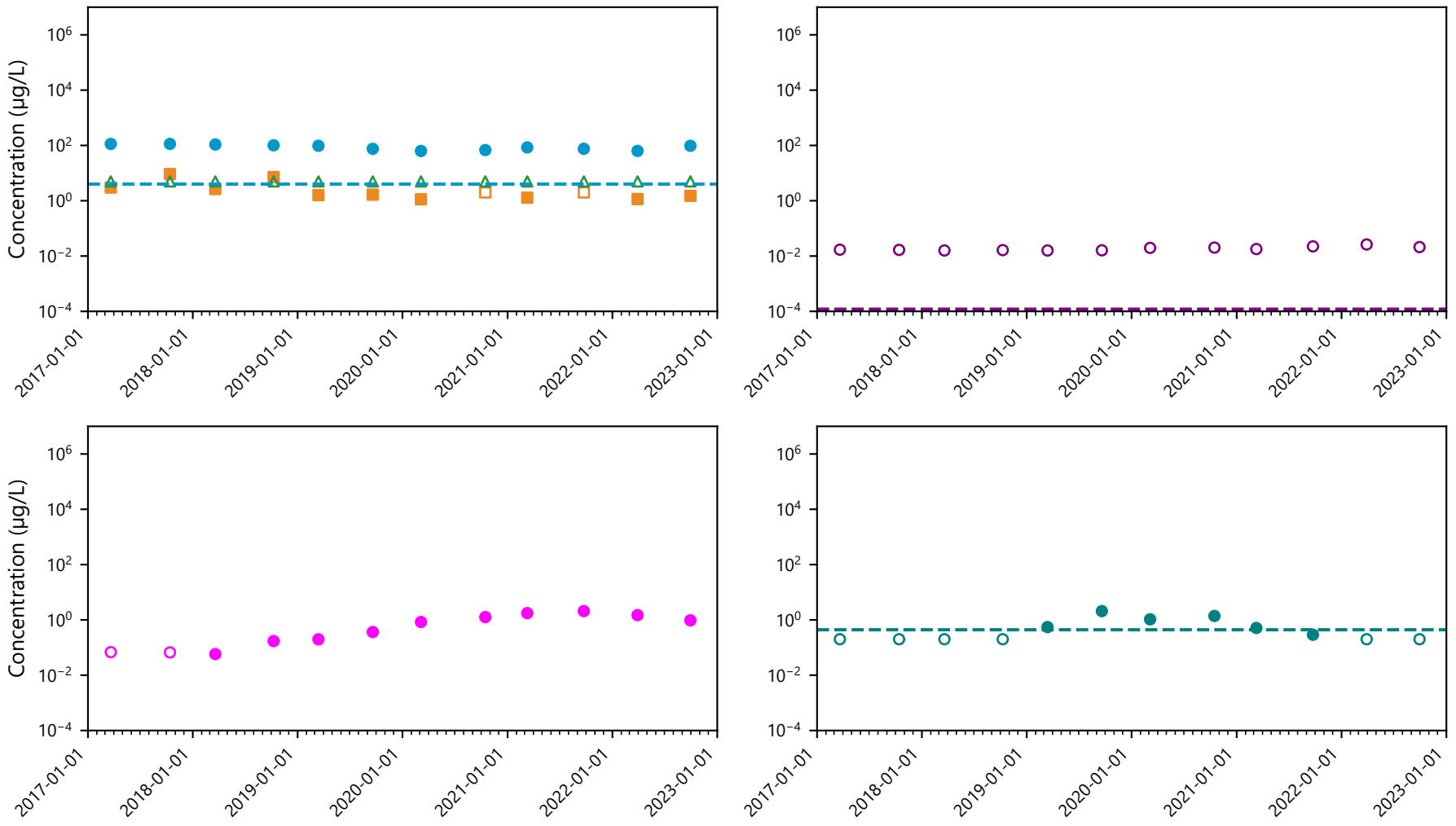
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.114
Pumping Wells: PW-08Ub
2022 HC&C System Annual Report
Gasco OU



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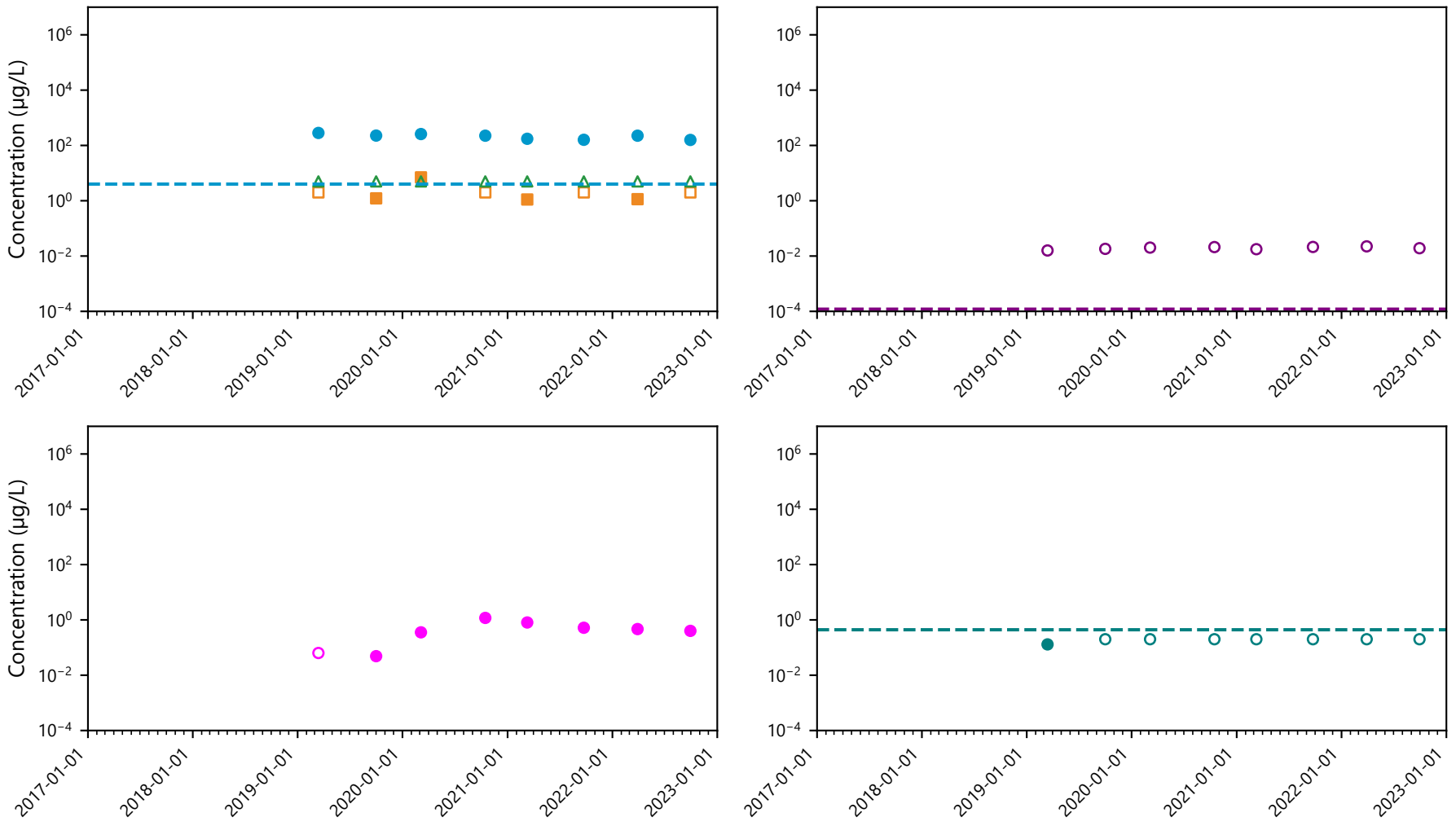
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.115
Pumping Wells: PW-09-92
2022 HC&C System Annual Report
Gasco OU



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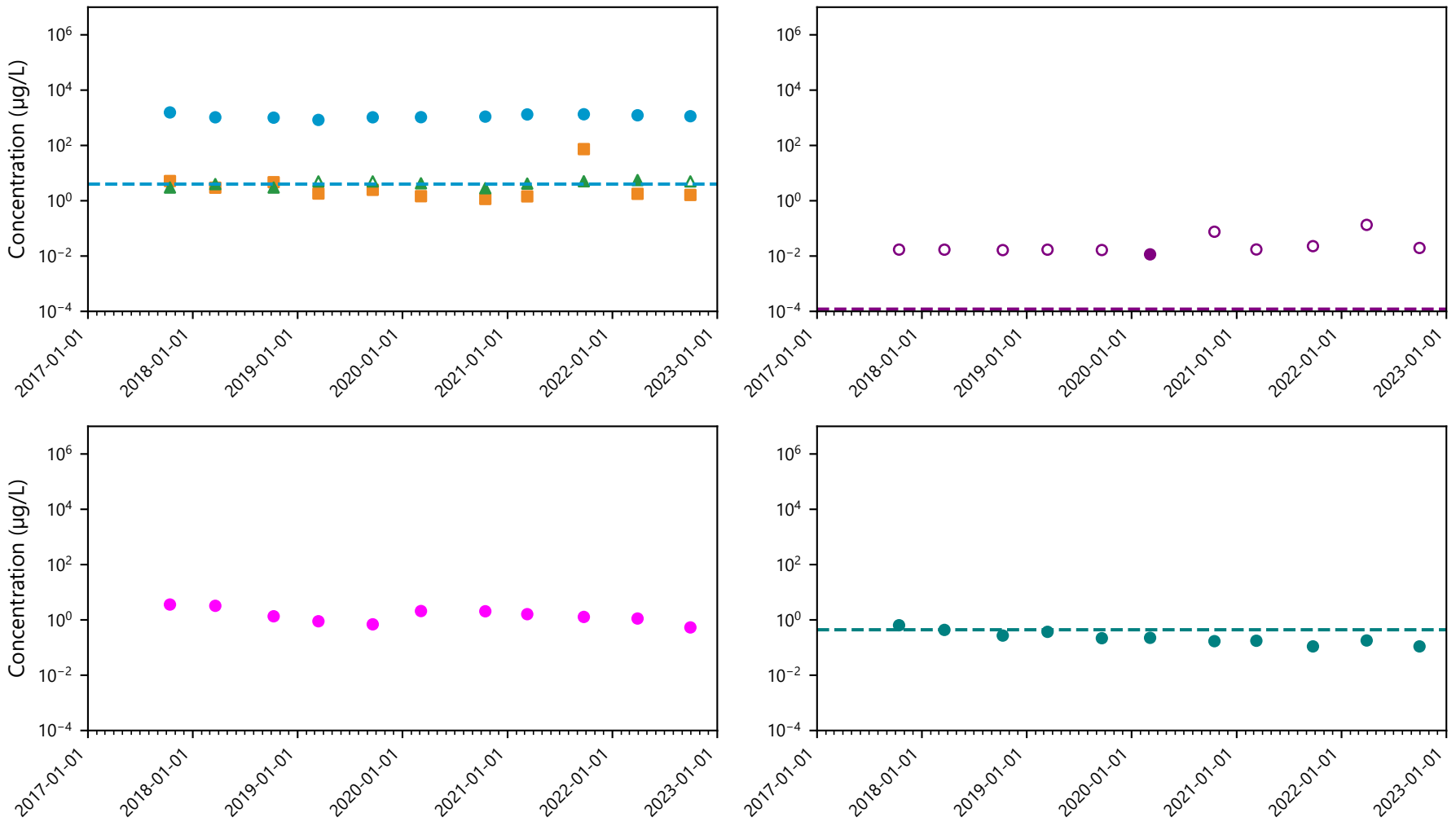
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.116
Pumping Wells: PW-10Lb
2022 HC&C System Annual Report
Gasco OU



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ANCHOR QEA

- Cyanide
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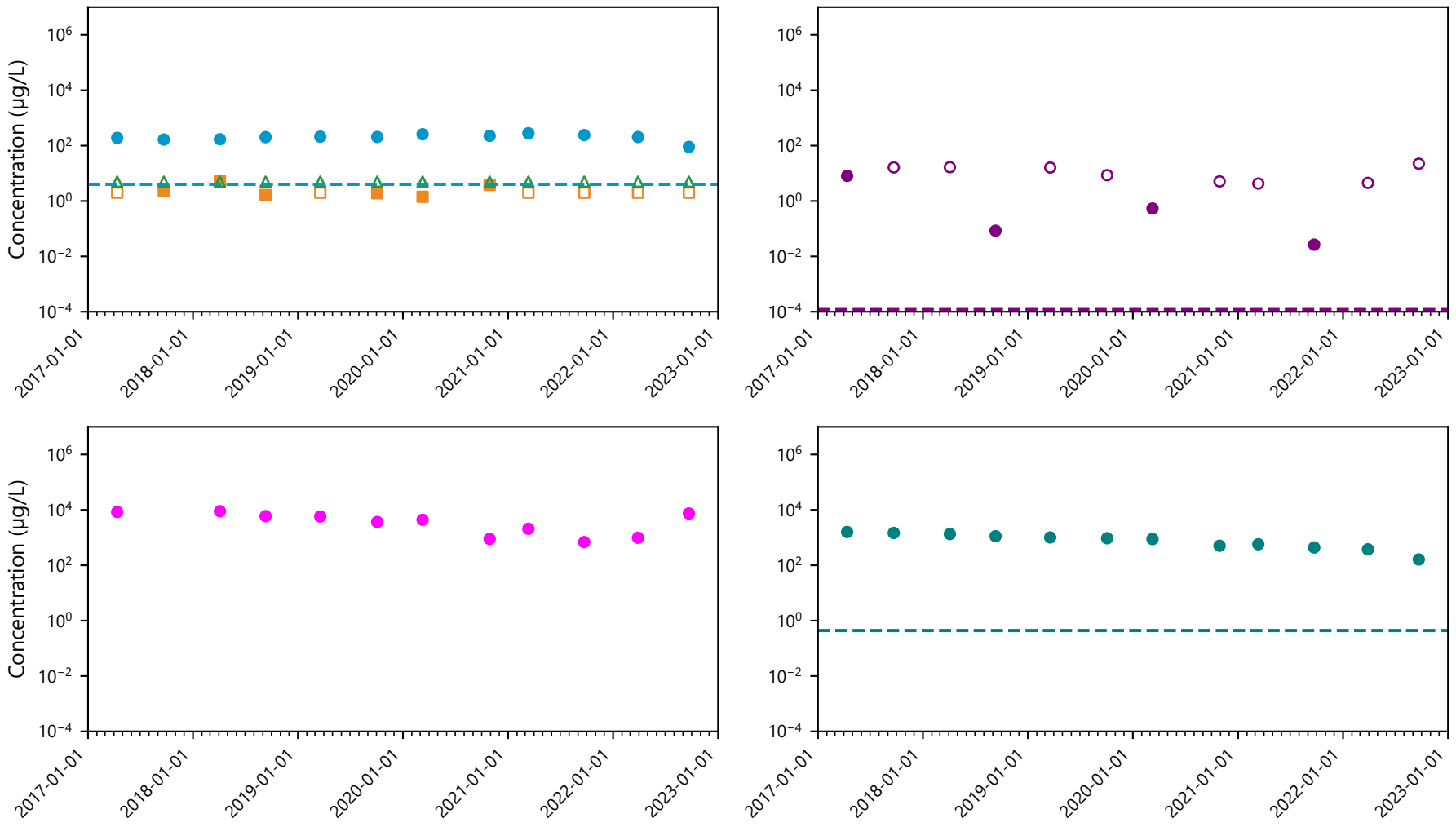
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.117
Pumping Wells: PW-10U
2022 HC&C System Annual Report
Gasco OU



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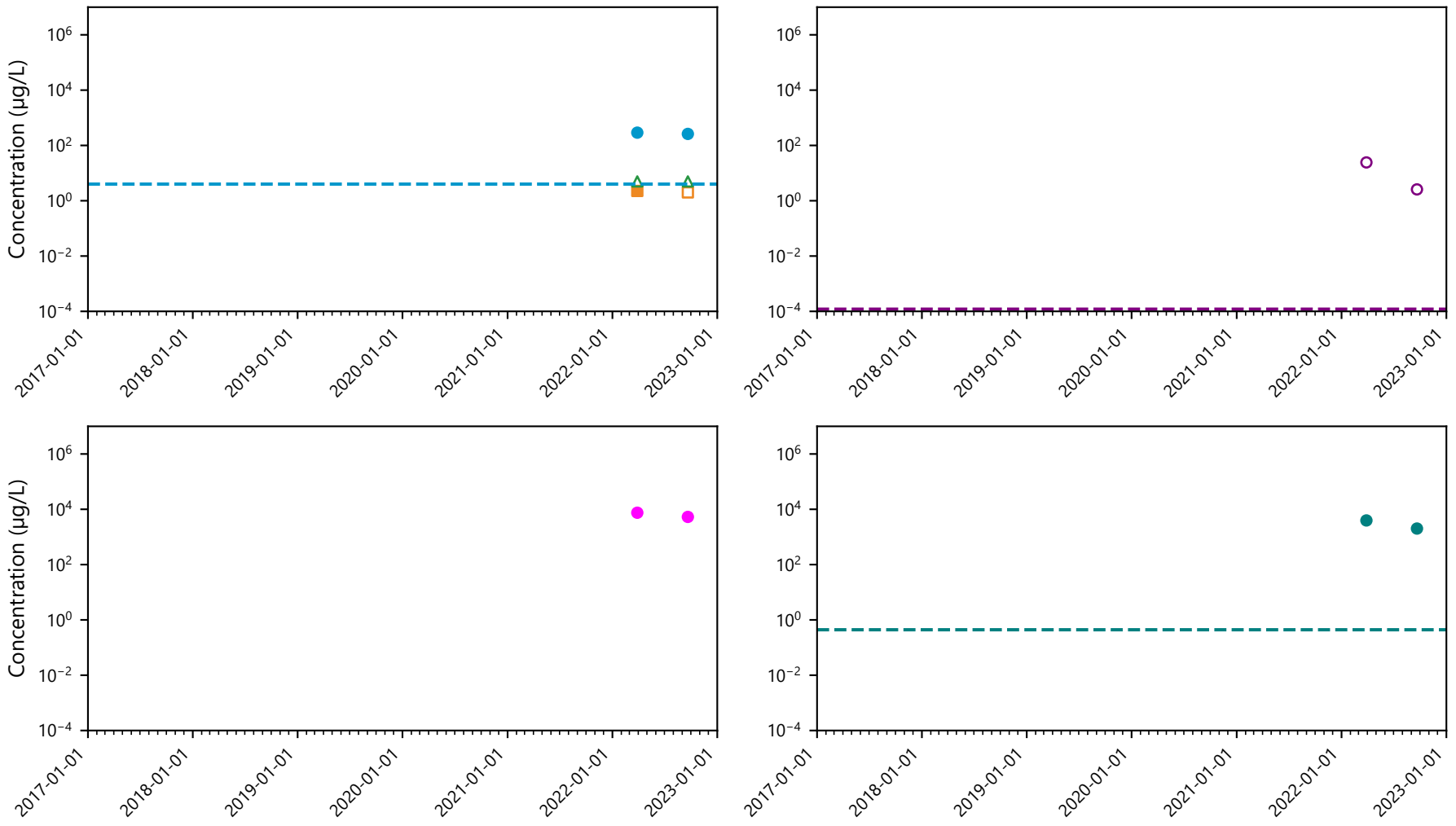
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.118
Pumping Wells: PW-11U
2022 HC&C System Annual Report
Gasco OU



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ANCHOR QEA

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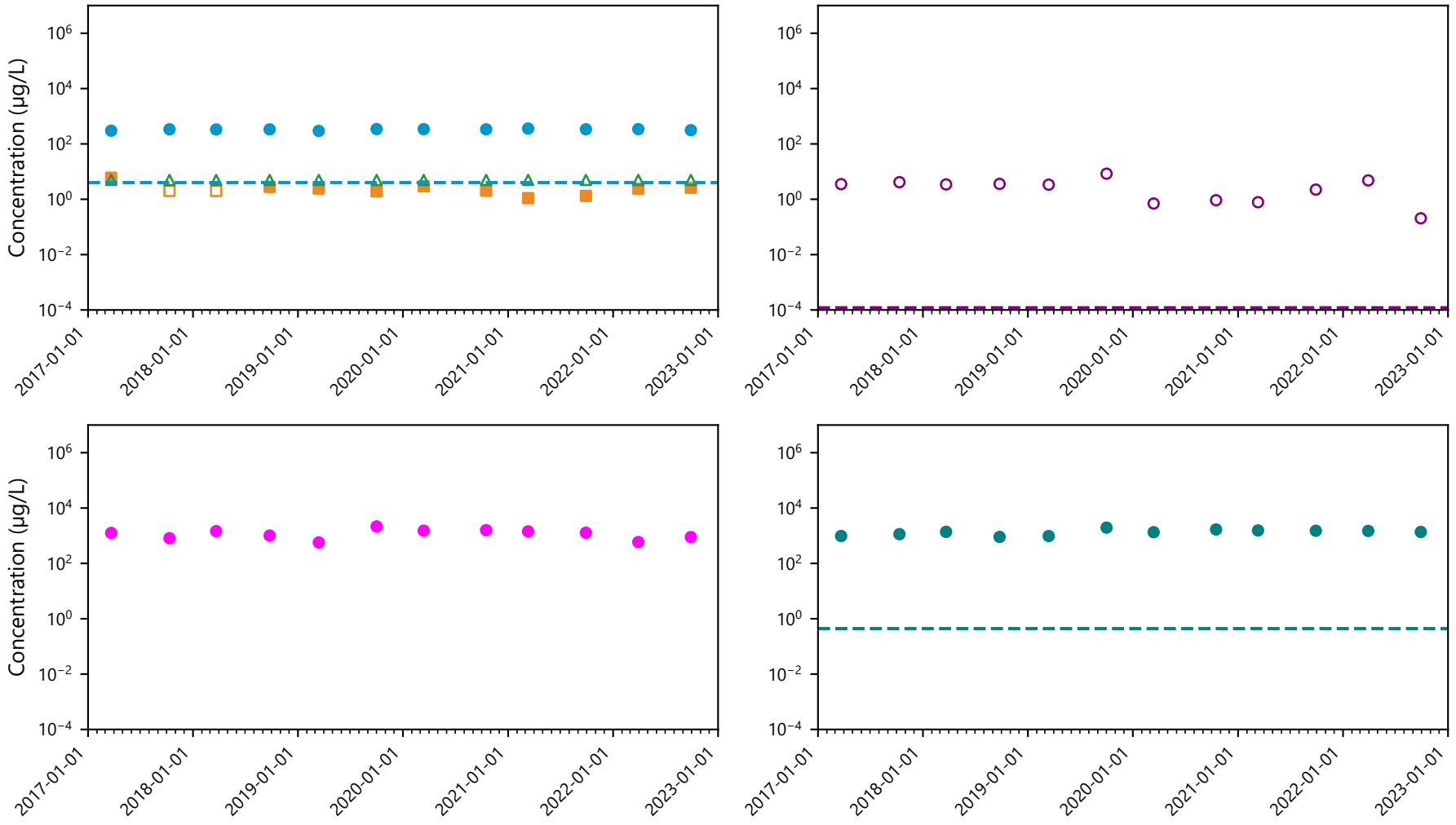
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.119
Pumping Wells: PW-11Ub
2022 HC&C System Annual Report
Gasco OU



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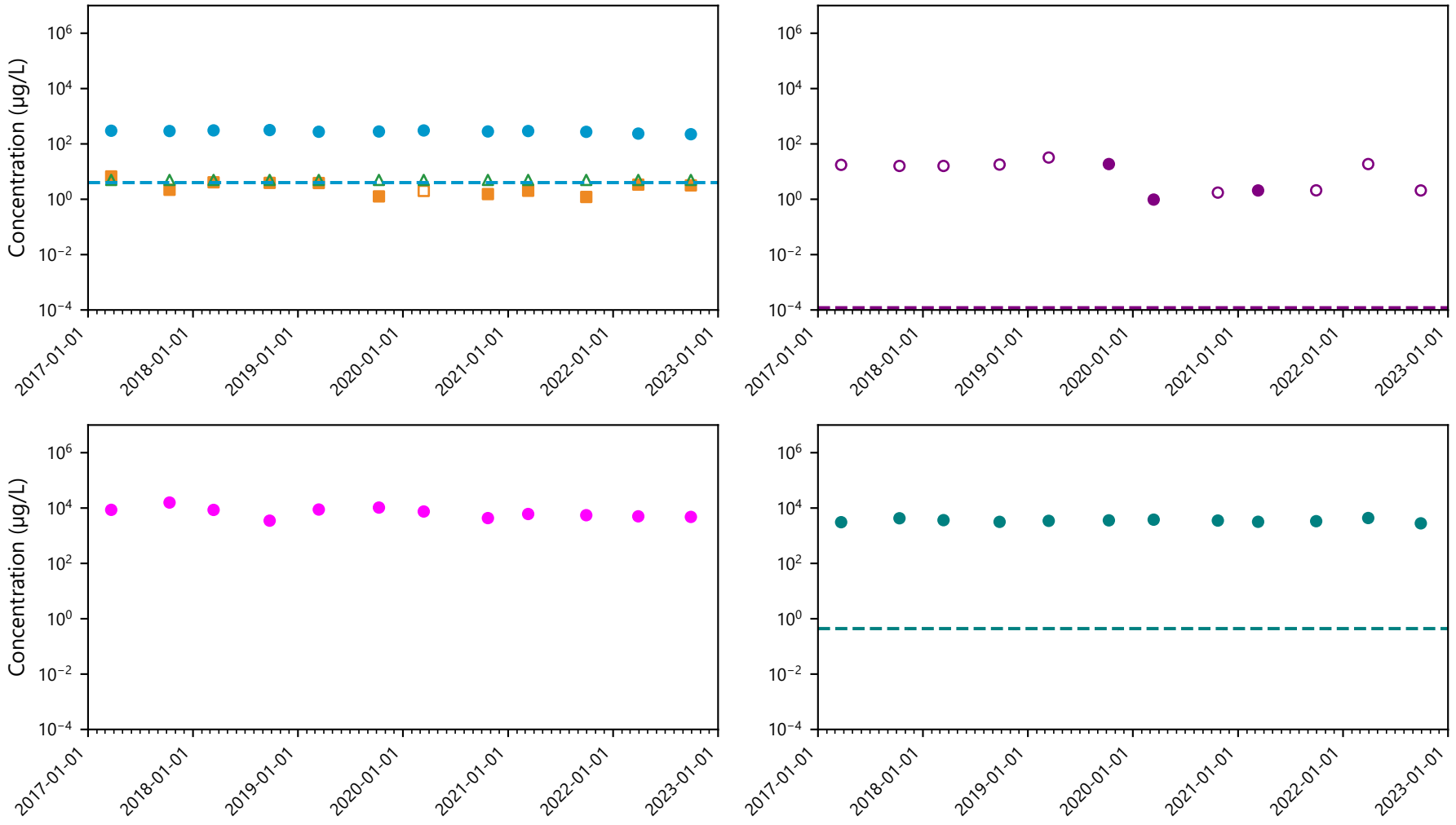
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.120
Pumping Wells: PW-12U
2022 HC&C System Annual Report
Gasco OU



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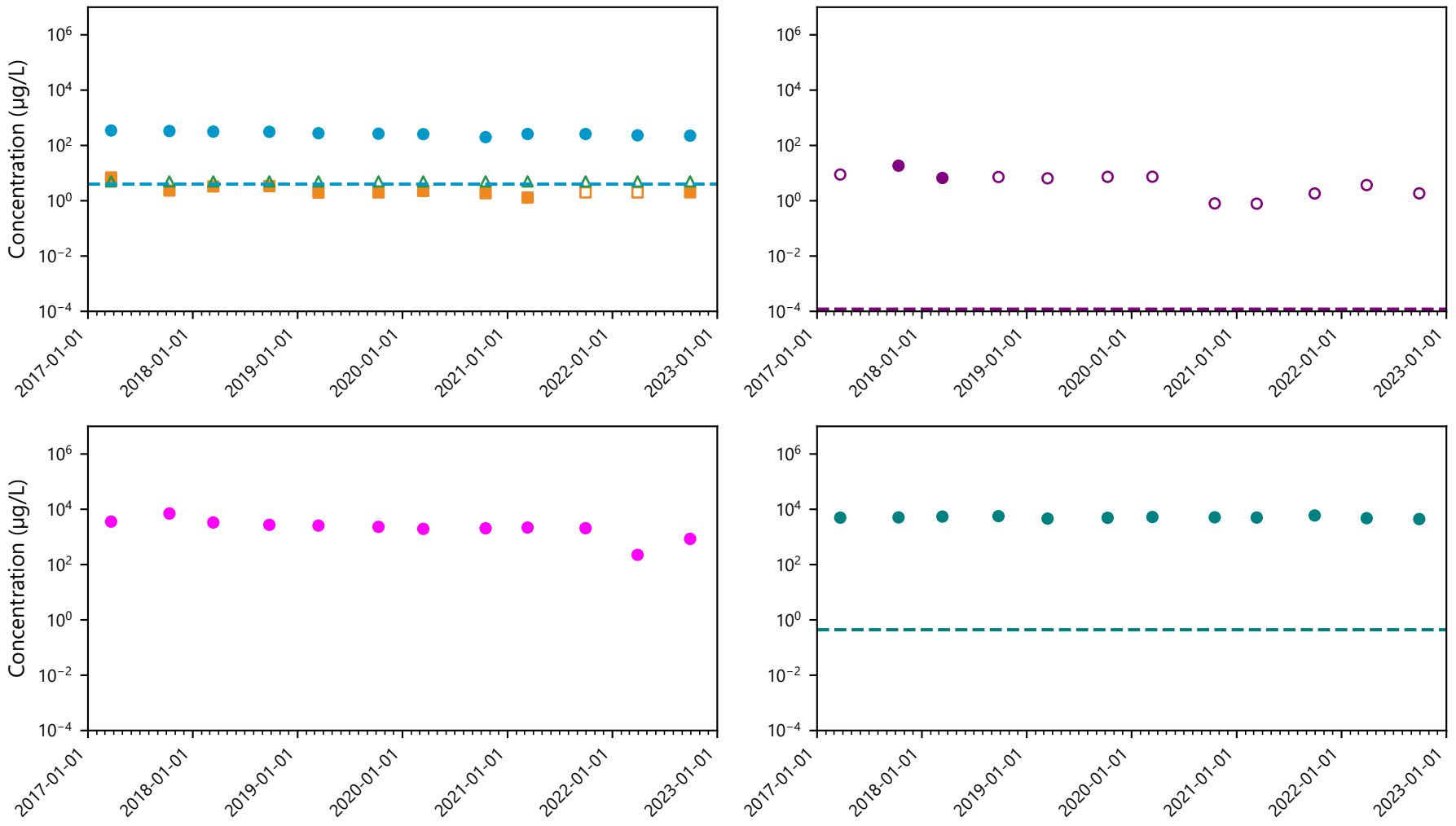
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.121
Pumping Wells: PW-13U
2022 HC&C System Annual Report
Gasco OU



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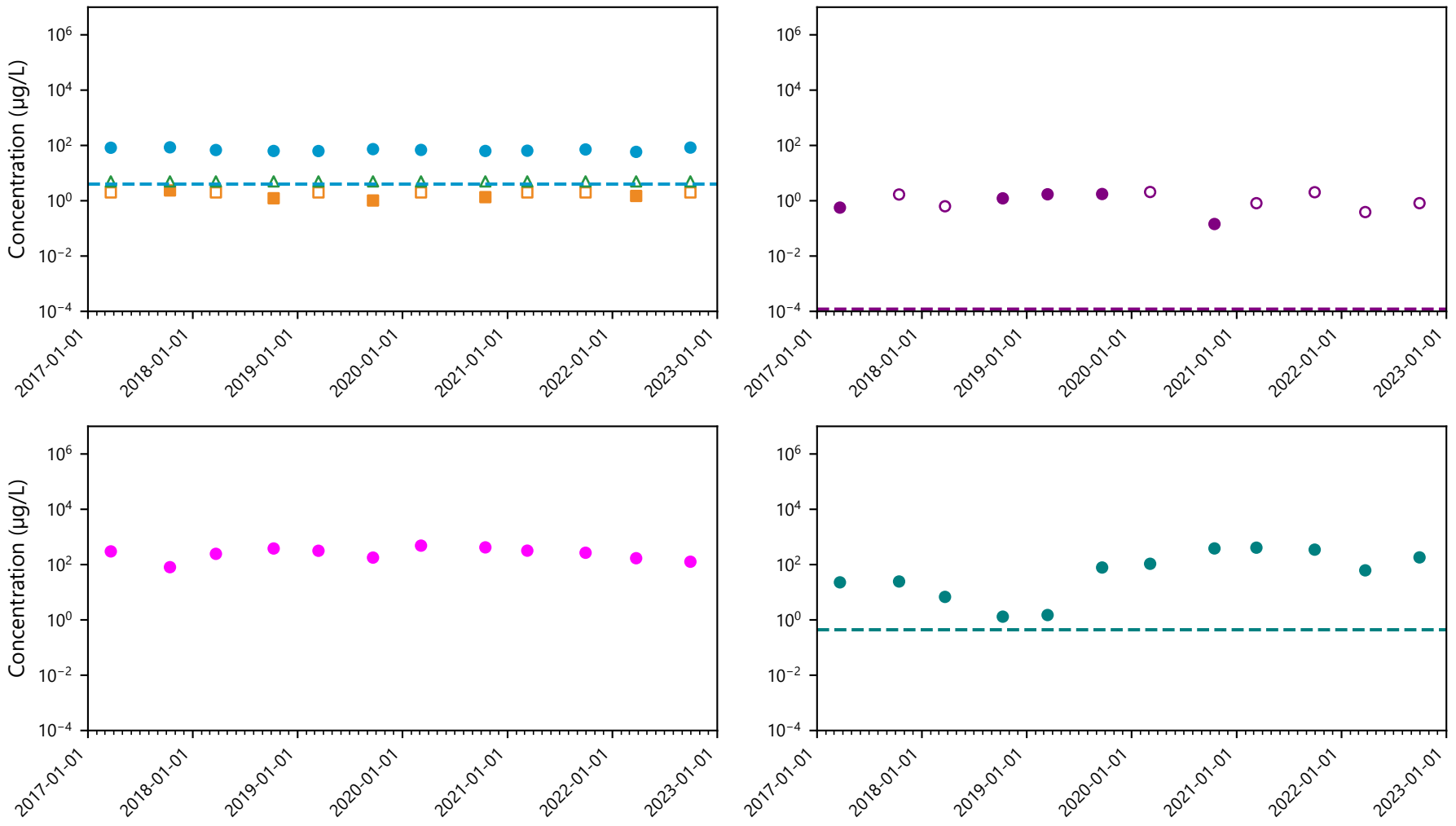
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.122
Pumping Wells: PW-14U
2022 HC&C System Annual Report
Gasco OU



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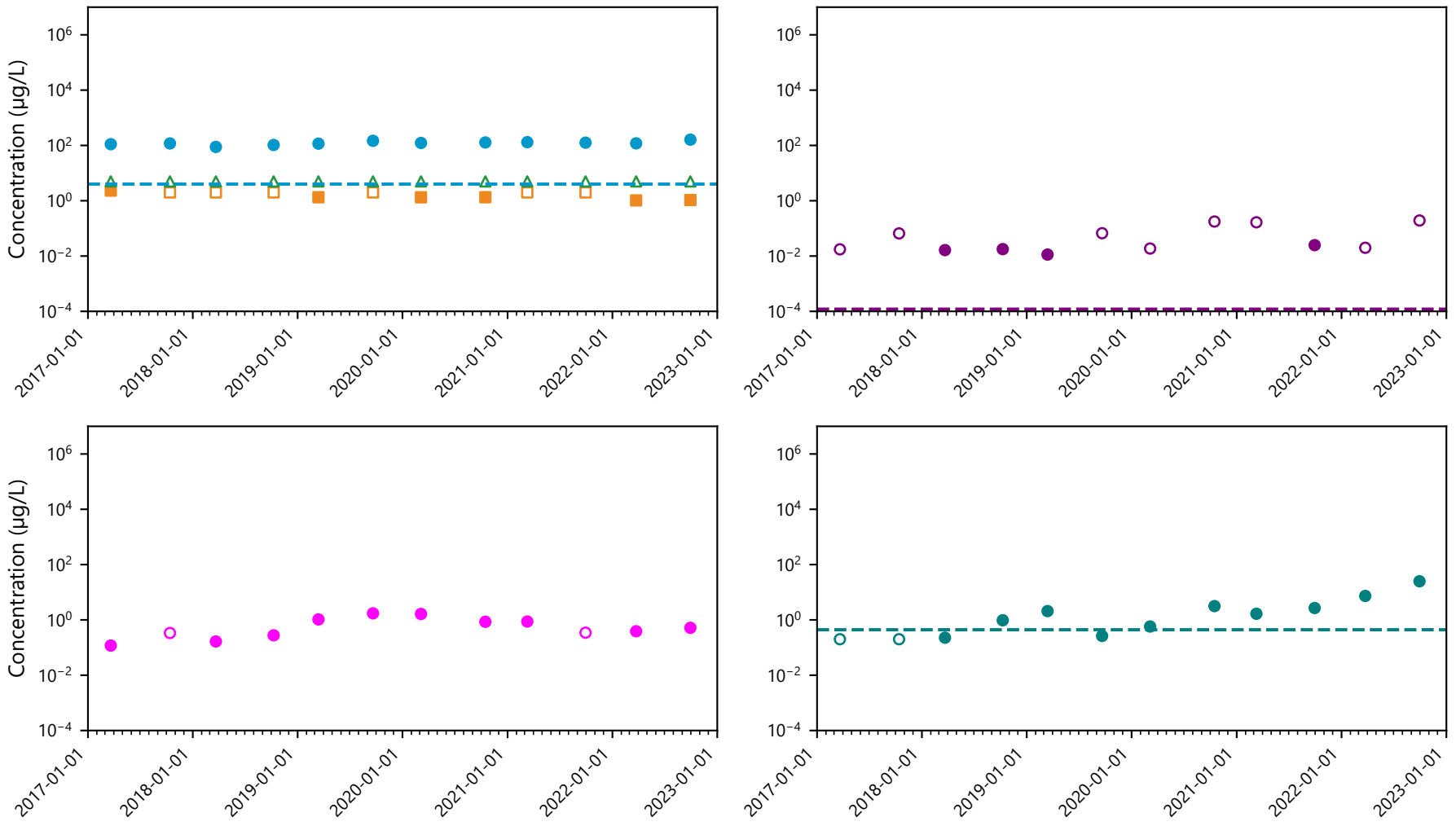
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.123
Pumping Wells: PW-15U
2022 HC&C System Annual Report
Gasco OU



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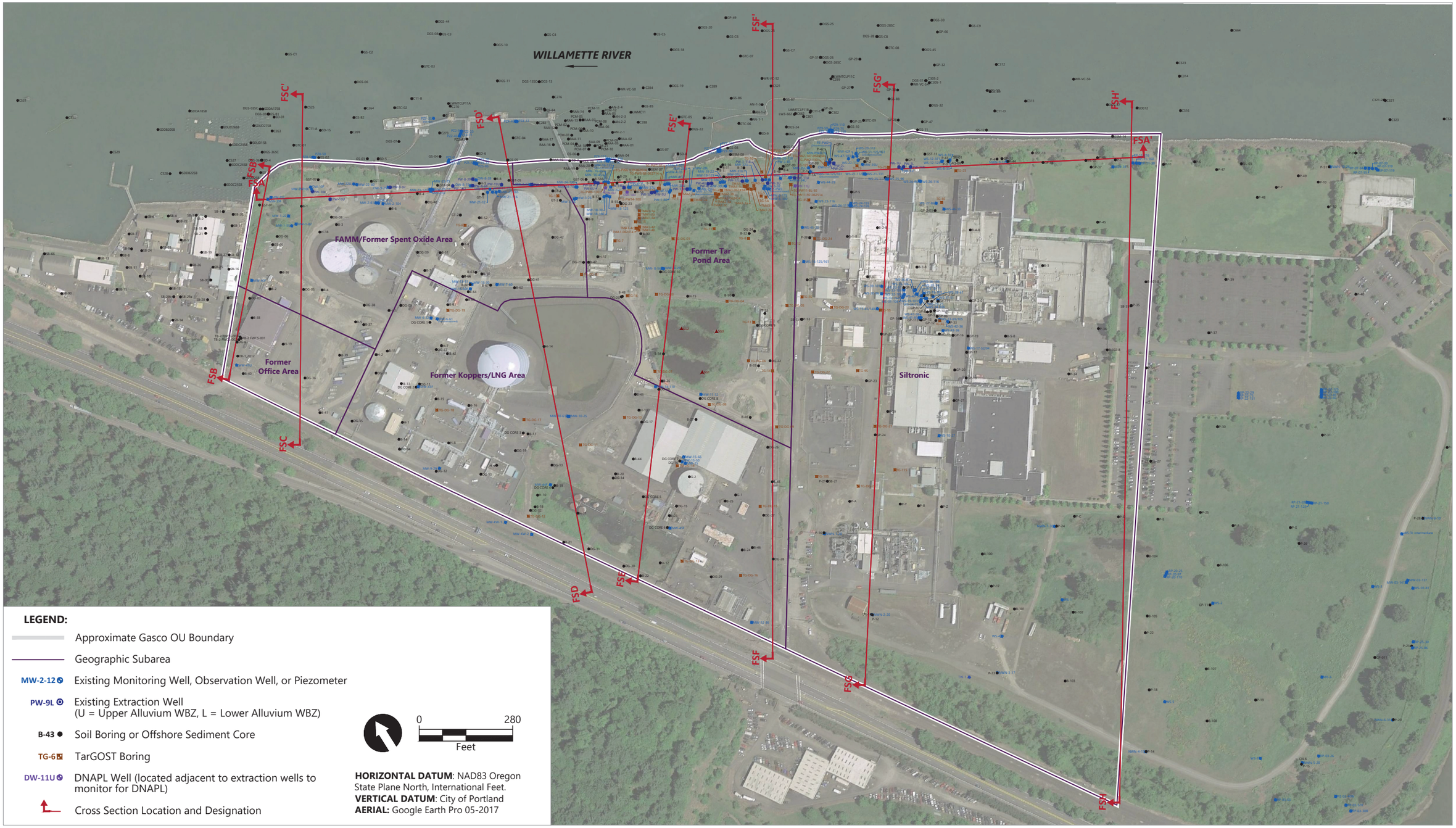
ANCHOR QEA

- Cyanide
- Cyanide, available
- Cyanide, free
- Benzo(a)pyrene
- Naphthalene
- Benzene
- Cyanide CUL
- Benzo(a)pyrene CUL
- Benzene CUL

C.4.b.124
Pumping Wells: PW-16U
2022 HC&C System Annual Report
Gasco OU

Appendix D
Geologic Cross Sections



LEGEND:

- Approximate Gasco OU Boundary
- Geographic Subarea
- MW-2-12 — Existing Monitoring Well, Observation Well, or Piezometer
- PW-9L — Existing Extraction Well (U = Upper Alluvium WBZ, L = Lower Alluvium WBZ)
- B-43 — Soil Boring or Offshore Sediment Core
- TG-6 — TarGOST Boring
- DW-11U — DNAPL Well (located adjacent to extraction wells to monitor for DNAPL)
- Cross Section Location and Designation

0 280 Feet

HORIZONTAL DATUM: NAD83 Oregon State Plane North, International Feet.
VERTICAL DATUM: City of Portland
AERIAL: Google Earth Pro 05-2017

Publish Date: 2018/11/20 8:43 AM | User: hmerrick
Filepath: K:\Projects\0029-NW Natural Gas Co\Gasco Site Remedy\Gasco OU IFS\0029-RP-016 (XSEC MAP 2018).dwg 3-3a

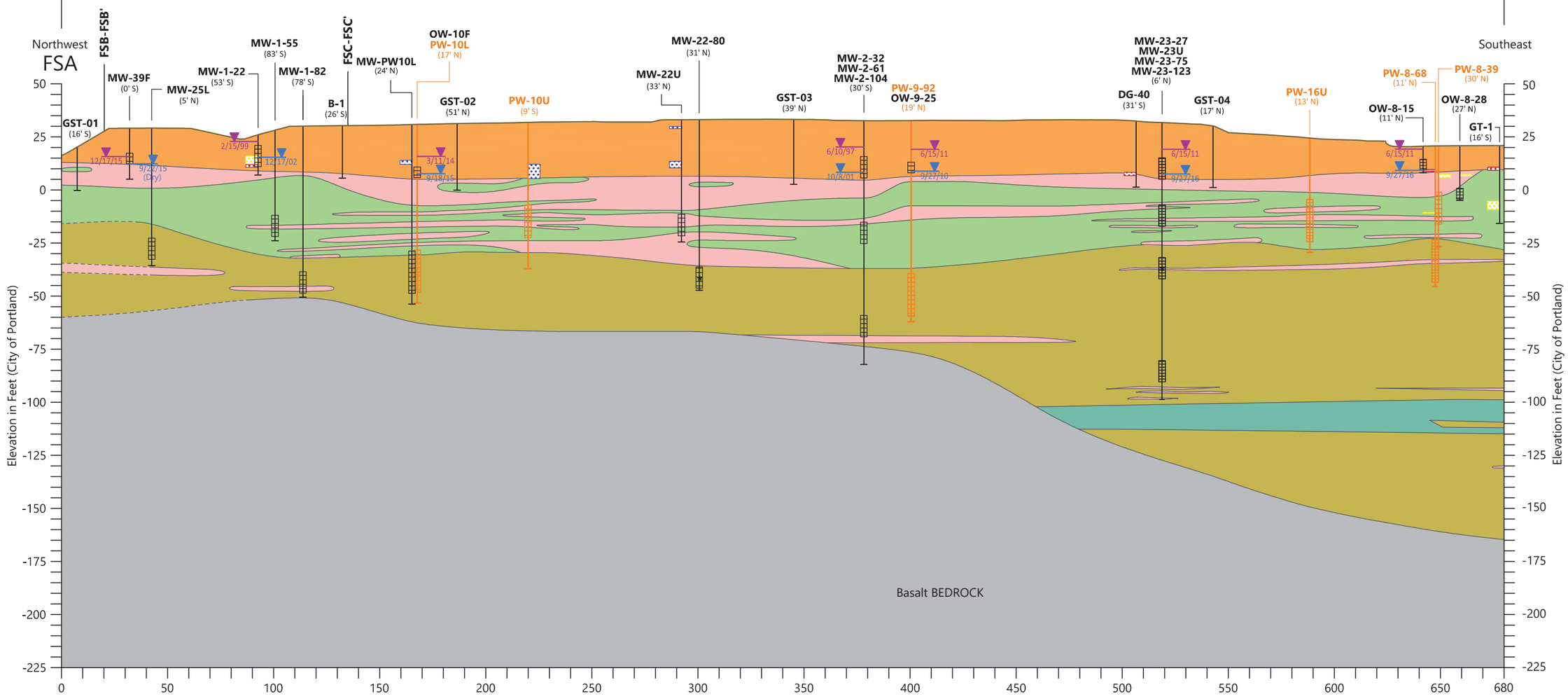
ANCHOR QEA

Figure 3-3a
Monitoring Well and Cross Section Location Map
Interim Feasibility Study
Gasco OU

Sheet 1 | Viewing Northeast | Sheet 1

FAMM/Former Spent Oxide Area

Northwest FSA | Southeast



Horizontal Distance in Feet
No Vertical Exaggeration

0 50 Feet

LEGEND:

- **Fill WBZ** – Fill composed of gravel, silt, sand, metal, brick, and concrete debris
- **Upper Alluvium WBZ** – Primarily fine- to-medium-grained SAND and SILTY-SAND interbedded with thin silt and sandy-silt layers
- Primarily SILT and SANDY-SILT interbedded with thin sand and silty-sand layers
- **Lower Alluvium WBZ** – Primarily medium-grained SAND with generally less than 5% fines
- Alluvial GRAVEL, sandy gravel, gravelly sand, and gravelly silt
- **Aquitard** – Primarily SILT and SANDY-SILT interbedded with thin sand and silty-sand layers
- Basalt Bedrock
- Existing Ground Surface
- Geologic Contact (dashed where inferred)
- 7/15/16 Highest Recorded Fill WBZ Groundwater Elevation, 1995-2016
- 7/15/16 Lowest Recorded Fill WBZ Groundwater Elevation, 1995-2016
- Existing Extraction Well
- Existing Well or Piezometer
- **P-46** (4.6' N) — Boring ID; Offset Distance in Feet
- Oil or Mixed Oil and Tar within a Soil Matrix
- Solid Tar or Tar Mixed within a Soil Matrix
- Soil Matrix Containing Sheen
- Well Screen

NOTES:

1. Residual and potentially mobile oil are not differentiated on this figure.
2. Inferred WBZ and Basalt unit contacts interpolated from geologic unit structural maps created for the site hydrogeologic model.
3. Groundwater elevations from the flood of 1996 were omitted as an extreme event.
4. Zones containing MGP residuals depicted on this figure are highly generalized. Within the depicted zones, the distribution of MGP materials is highly heterogenous and discontinuous in three dimensions within the stratigraphy and soil matrix.

* Control well

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Figure 3-3b
Cross Section FSA-FSA' – Sheet 1 of 4

Interim Feasibility Study
Gasco OU

Sheet 2

Viewing Northeast

Sheet 2

FAMM/Former Spent Oxide Area

Former Tar Pond Area

Northwest

Southeast

MW-21-12 (11' N)
MW-21U (2' N)
MW-21-75 (11' N)
B-8 (28' N)
MW-21-116 (12' N)
MW-21-165 (10' S)
PW-15U (10' N)
GST-05 (22' N)
FSD-FSD'
OW-7-17
PW-7-93 (6' N)
6/15/11
12/30/14
9/21/15
TG-1 (11' S)
MW-24-70
MW-24-130 (8' S)
GST-06 (13' N)
B-1 (26.5' N)
PW-6L (4' S)
PW-6U (5' S)
TG-PW6-130 (5' S)
DW-6U (14.6' S)
B-57 (46' S)
6/15/11
7/15/16
MW-16-45
MW-16-65
MW-18-30
MW-18-125
MW-18-180 1 (23' S)
MW-26U (18' S)
TG-2 (55' S)
B-59 (2' S)
TG-PW6-130-062614 (5' S)
B-29 (15' N)
B-5 (14' N)
TG-PW14-100 (31' S)
PW-14U (17' S)
MW-27U
MW-27L (17' S)
DW-14U (30' S)
B-58 (31' S)
GSM-07 (34' N)
MW-37U (20' S)
B-53 (4' N)
PW-5L (36' S)
TG-PW5-85 (25' S)
PW-5U (38' S)
B-2 (7' N)
3/13/14
10/7/15
9/21/15
OW-5F (31' S)
6/10/97
MW-4-35
MW-4-57
MW-4-101 (1' S)
PW-1-80 (48' S)
MW-38U (31' S)
TG-3 (37' S)
B-6 (12' N)
FSE-FSE'
MW-17-79 (Decommissioned) (22.5' S)
MW-28U
MW-28L (30' S)
PW-13U (30' S)
MW-29U (30' S)
PW-4U (17' S)
PW-4L (16' S)

Basalt BEDROCK

Elevation in Feet (City of Portland)

50 25 0 -25 -50 -75 -100 -125 -150 -175 -200 -225

680 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1370

Horizontal Distance in Feet
No Vertical Exaggeration

0 50
Feet

LEGEND:

- **Fill WBZ** – Fill composed of gravel, silt, sand, metal, brick, and concrete debris
- **Upper Alluvium WBZ** – Primarily fine- to-medium-grained SAND and SILTY-SAND interbedded with thin silt and sandy-silt layers
- Primarily SILT and SANDY-SILT interbedded with thin sand and silty-sand layers
- **Lower Alluvium WBZ** – Primarily medium-grained SAND with generally less than 5% fines
- Alluvial GRAVEL, sandy gravel, gravelly sand, and gravelly silt
- **Aquitard** – Primarily SILT and SANDY-SILT interbedded with thin sand and silty-sand layers
- Basalt Bedrock
- Existing Ground Surface
- Geologic Contact (dashed where inferred)
- 7/15/16 Highest Recorded Fill WBZ Groundwater Elevation, 1995-2016
- 7/15/16 Lowest Recorded Fill WBZ Groundwater Elevation, 1995-2016
- Existing Extraction Well
- Existing Well or Piezometer
- P-46 — Boring ID
- (4.6' N) — Offset Distance in Feet
- Oil or Mixed Oil and Tar within a Soil Matrix
- Solid Tar or Tar Mixed within a Soil Matrix
- Soil Matrix Containing Sheen
- Well Screen

NOTES:

1. Residual and potentially mobile oil are not differentiated on this figure.
2. Inferred WBZ and Basalt unit contacts interpolated from geologic unit structural maps created for the site hydrogeologic model.
3. Groundwater elevations from the flood of 1996 were omitted as an extreme event.
4. Zones containing MGP residuals depicted on this figure are highly generalized. Within the depicted zones, the distribution of MGP materials is highly heterogenous and discontinuous in three dimensions within the stratigraphy and soil matrix.

* Control well

★ Not used for geologic interpretation

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Figure 3-3b
Cross Section FSA-FSA' – Sheet 2 of 4

Interim Feasibility Study
Gasco OU

Sheet 3

Viewing Northeast

Sheet 3

Former Tar Pond Area

Siltronic GSA

Northwest

Southeast

MW-30U (27' S)
MW-19-22
MW-19-125
MW-19-180 (11' S)
GSM-08 (67' N)
PW-12U (14' S)
TMA3-3b (5' S)
MW-31U
MW-31L (14' N)
B-7 (33' N)
TMA3-3c (10' S)
TMA3-3a (13' S)
TMA3-2a (18' S)
TMA3-1a (8' S)
TMA3-1b (16' S)
MW-32U (14' S)
TG-5 (59' S)
PW-3-118 (13' S)
TG-10 (14' N)
PW-3U (28' S)
PW-3-85 (15' S)
FSF-FSF'
B-4B (23' N)
MW-5-32
MW-5-100
MW-20-120
MW-5-175
TG-PW3-140 (13' S)
MW-33U (12' S)
GST-09 (24' N)
MW-34U
MW-34L (11' S)
PW-11U (12' S)
DW-11U (36' S)
GP-99 (19' N)
TG-12S (24,5' N)
WS-14-125/161 (13,5' N) (Decommissioned)
MW-35U (16' N)
WS-23-116 (86' S)
OW-2F (24' N)
MW-PW2L (29' N)
TG-PW2-130 (23' N)
WS-44-29 (29' S)
P-42 (26' N)
PW-2U (25' N)
GP-4 (37' N)
PW-2L (25' N)
WS-47-183 (37'N)
WS-22-112 (31' N)
WS-20-112
WS-11-125/161 (Decommissioned)
TG-1S (44' N)
MW-42F (42'N)
MW-36U (27' N)
P-2 (26' N)
WS-21-112
WS-21-131 (11' S)
WS-25-96
WS-25-111 (29' S)
GP-6 (24' S)
TG-7S (6' N)
FSG-FSG'
PW-1U (5' N)
OW-1F (4' S)
PW-1L (5' N)
GP-7 (25' N)
PW-1Ub (4' N)
WS-26-86
WS-26-116 (14' S)
GST-11 (40' N)
WS-12-125
WS-12-161 (12.5' N)

6/15/16
9/27/16
3/13/15
6/22/15
3/17/14
9/21/15
12/18/15
9/26/16
3/17/14
9/21/15

Benzene = 0.27 ug/L (2015)
Naphthalene = 0.64 ug/L (2015)
Benzene = 2.58 ug/L (2019)
Naphthalene = 0.46 ug/L (2019)
Benzene = 53.3 ug/L (2021)
Naphthalene = 43.2 ug/L (2021)
Benzene = 5130 ug/L (2021)
Naphthalene = 12950 ug/L (2021)
Benzene = 8.87 ug/L (2016)
Naphthalene = ND (2016)
Benzene = 112 ug/L (2012)
Naphthalene = 1.1 ug/L (2012)
Benzene = 5.30 ug/L (2020)
Naphthalene = 0.65 ug/L (2020)
Benzene = 5.26 ug/L (2016)
Naphthalene = ND (2016)
Benzene = 1715 ug/L (2015)
Naphthalene = 5680 ug/L (2015)
Benzene = 2940 ug/L (2015)
Naphthalene = 7470 ug/L (2015)
Benzene = 0.8 ug/L (2015)
Naphthalene = 2.33ug/L (2015)
Benzene = 2115 ug/L (2016)
Naphthalene = 20720 ug/L (2016)
Benzene = 21.18 ug/L (2015)
Naphthalene = ND (2015)
Benzene = 35.5 ug/L (2016)
Naphthalene = 2.26 ug/L (2016)
Benzene = 422 ug/L (2016)
Naphthalene = 6440 ug/L (2016)
Benzene = 23.78 ug/L (2020)
Naphthalene = 12.55 ug/L (2020)
Benzene = 0.52 ug/L (2021)
Naphthalene = ND (2021)
Benzene = 272.5 ug/L (2021)
Naphthalene = 13050 ug/L (2021)
Benzene = ND ug/L (2021)
Naphthalene = ND ug/L (2021)

Basalt BEDROCK

Elevation in Feet (City of Portland)

50 25 0 -25 -50 -75 -100 -125 -150 -175 -200 -225

1370 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000 2050 2060

Horizontal Distance in Feet
No Vertical Exaggeration

0 50
Feet

LEGEND:

- **Fill WBZ** – Fill composed of gravel, silt, sand, metal, brick, and concrete debris
- **Upper Alluvium WBZ** – Primarily fine- to-medium-grained SAND and SILTY-SAND interbedded with thin silt and sandy-silt layers
- Primarily SILT and SANDY-SILT interbedded with thin sand and silty-sand layers
- **Lower Alluvium WBZ** – Primarily medium-grained SAND with generally less than 5% fines
- Alluvial GRAVEL, sandy gravel, gravelly sand, and gravelly silt
- **Aquitard** – Primarily SILT and SANDY-SILT interbedded with thin sand and silty-sand layers
- Basalt Bedrock
- Existing Ground Surface
- Geologic Contact (dashed where inferred)
- 7/15/16 Highest Recorded Fill WBZ Groundwater Elevation, 1995-2016
- 7/15/16 Lowest Recorded Fill WBZ Groundwater Elevation, 1995-2016

P-46 — Boring ID
(4.6' N) — Offset Distance in Feet

Existing Extraction Well
Existing Well or Piezometer

- Oil or Mixed Oil and Tar within a Soil Matrix
- Solid Tar or Tar Mixed within a Soil Matrix
- Soil Matrix Containing Sheen
- Well Screen

NOTES:

1. Residual and potentially mobile oil are not differentiated on this figure.
2. Inferred WBZ and Basalt unit contacts interpolated from geologic unit structural maps created for the site hydrogeologic model.
3. Groundwater elevations from the flood of 1996 were omitted as an extreme event.
4. Zones containing MGP residuals depicted on this figure are highly generalized. Within the depicted zones, the distribution of MGP materials is highly heterogenous and discontinuous in three dimensions within the stratigraphy and soil matrix.

* Control well
★ Not used for geologic interpretation

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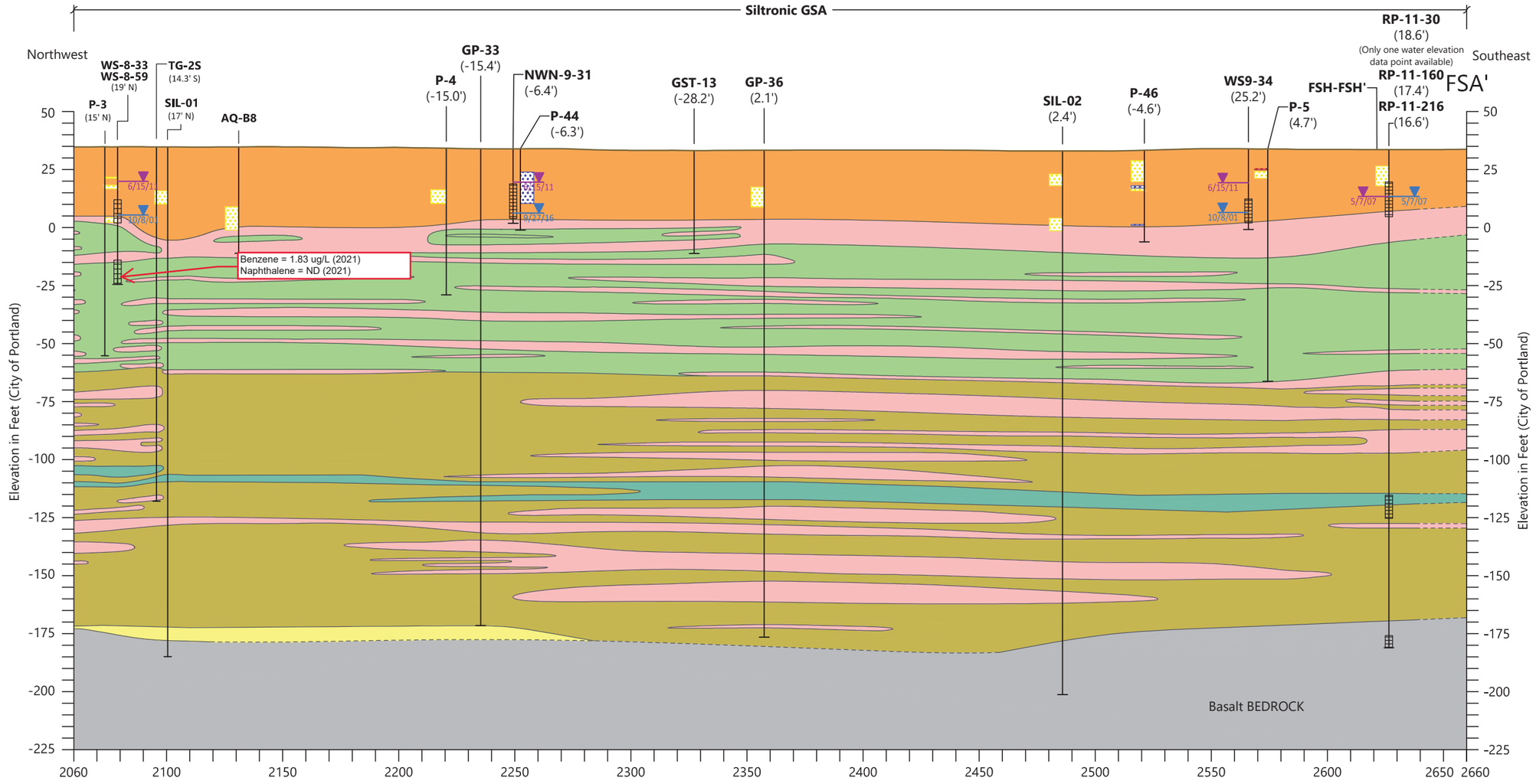
Figure 3-3b
Cross Section FSA-FSA' – Sheet 3 of 4
Interim Feasibility Study
Gasco OU

Viewing Northeast

Sheet 4



Horizontal Distance in Feet
No Vertical Exaggeration

0 50
Feet

LEGEND:

- **Fill WBZ** – Fill composed of gravel, silt, sand, metal, brick, and concrete debris
- **Upper Alluvium WBZ** – Primarily fine- to-medium-grained SAND and SILTY-SAND interbedded with thin silt and sandy-silt layers
- Primarily SILT and SANDY-SILT interbedded with thin sand and silty-sand layers
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- Basalt Bedrock
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- 7/15/16 Highest Recorded Fill WBZ Groundwater Elevation, 1995-2016
- 7/15/16 Lowest Recorded Fill WBZ Groundwater Elevation, 1995-2016
- Existing Extraction Well
- Existing Well or Piezometer
- **P-46** (4.6' N) — Boring ID — Offset Distance in Feet
- Oil or Mixed Oil and Tar within a Soil Matrix
- Solid Tar or Tar Mixed within a Soil Matrix
- Soil Matrix Containing Sheen
- Well Screen

NOTES:

1. Residual and potentially mobile oil are not differentiated on this figure.
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3. Groundwater elevations from the flood of 1996 were omitted as an extreme event.
4. Zones containing MGP residuals depicted on this figure are highly generalized. Within the depicted zones, the distribution of MGP materials is highly heterogenous and discontinuous in three dimensions within the stratigraphy and soil matrix.

* Control well
★ Not used for geologic interpretation

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Figure 3-3b
Cross Section FSA-FSA' – Sheet 4 of 4

Interim Feasibility Study
Gasco OU