

Exhibit A

Cascadia System Comparison

Future Improvements And Their Impact on Peninsula Consumers

A Single Tariff Rate UW200979 That Will Cause Harm to Peninsula Consumers

Rick Smith

Vicki Colburn

June 4, 2021

V1

Contents

Introduction.....	3
Cascadia System Comparison (Model A)	3
Assumptions Based on Planned Future Improvements (Model B)	4
Where Did We Get the Improvements Needed for Whidbey Island?.....	5
Where did the Peninsula’s Investments Come From?	6
Facts and Findings Based on the Contents of this Document	7
Whidbey Island Investments from the WSP.....	8
Peninsula Investments	8
Model A with its Original Assumptions	9
Model B Based on the WSP and DOH Asset Inventories	9
Does this represent all of the investments needed? No.	10
Example of Distribution Investments from the WSP.....	10
Supporting Detail for Whidbey Island	11
WB Waterworks.....	11
Sea View Water.....	13
Beachcomber H20.....	15
Cal Waterworks.....	16
TEL Company #1.....	18
TEL Company 3.....	20
TEL Company #4.....	21
TEL Company #5.....	22
TEL Company #6.....	23
TEL Company #10.....	24
TEL Company #11.....	25
Mutiny Bay Waterworks & All Systems.....	26
Investments Planned for the Peninsula	27
Investments For Estates and Monterra from the DOH	29
Asset Inventory for Estates	30
Asset Inventory Guidelines.....	31
Asset inventory for Monterra.....	32
Cascadia System Comparison Model Results	33
Future Projections Using Two Sets of Assumptions (Models C & D).....	34
Model (C): Replacing all assets on the Peninsula	34
Model (D): Maximum One Year Investment (to See the Results of the Model)	35
Facts and Findings Based on the Contents of this Document	36

Introduction

Greg Hammond, Lead Regulatory Analyst with the Washington UTC on UW200979, created an Excel model named Cascadia System Comparison. The goal of that model was to prove whether it is in the best interest of the two Peninsula water systems, Estates and Monterra, to have a separate tariff rate or be combined/consolidated with Cascadia's twelve water systems on Whidbey Island under one single tariff rate. As with any model, it is important to start with accurate underlying assumptions and input data.

An Excel model is a **spreadsheet that makes quantitative estimates or predictions based on a set of underlying assumptions**. Businesses often succeed or fail based on the accuracy of their predictions about the future. So how do we ensure that the underlying assumptions are correct? Should estimates be used when more accurate assumptions are available?

Cascadia System Comparison (Model A)

Mr. Hammond presented his Cascadia System Comparison model at the second virtual meeting with attendees from Cascadia, NW Natural, the UTC, the DOH, the AG's Public Council, Estates consumers and other interested parties. He created this model partly in response to our challenge to prove us right or wrong... that the single tariff rate theory was NOT in the best interest of Estates Peninsula consumers. The existing UTC rate case model was not designed to answer such a business question. The new model requires two assumptions. The original assumptions are:

- 1) That Cascadia will invest only \$500,000 in Whidbey Island systems in 2021;
- 2) That Cascadia will invest \$1,700,000 on the Estates water system in 2021.

We do not know the source of these assumptions. Mr. Hammond stated that the \$500,000 was an estimate. Despite our requests for the supporting detail for these assumptions, that detail has not been provided for either number. That \$1,700,000 investment assumption was *for Estates only*. Model A, including these "future" assumptions, was presented by the rate staff to the Commissioners and others. At the Commissioners open meeting, this investment of \$1,700,000 was referred to many times as though it were fact. The concern for this investment's impact on Estates consumers led the Commissioners to believe it would be best to be consolidated under one single tariff rate.

The following model is what Mr. Hammond presented. The model shows that the current per customer, additional per customer and total per customer are all lower for the Peninsula than they would be if combined. The future numbers show a higher "Avg per Customer after Future Improvements" for the Peninsula customers than either Island or combined. It also shows higher future rate increases for the Peninsula. These numbers were derived from the two assumptions above.

The model only produces accurate results if both assumptions are accurate.

Current				
		Peninsula	Island	Combined
Current Revenue (ignoring ancill.)	\$	188,676	\$ 421,462	\$ 610,138
GRC Additional Revenue	\$	103,682	\$ 221,848	\$ 325,530
Total Revenue	\$	292,358	\$ 643,310	\$ 935,668
Percent Increase		54.95%	52.64%	53.35%
Customer Count		661	1,113	1,774
Current Per Customer	\$	23.79	\$ 31.56	\$ 28.66
Additional Per Customer	\$	13.07	\$ 16.61	\$ 15.29
Total Per Customer	\$	36.86	\$ 48.17	\$ 43.95
Future				
Future Improvements (est.)	\$	1,700,000	\$ 500,000	\$ 2,200,000
Annual Depreciation	\$	50,490	\$ 14,850	\$ 65,340
Annual Return (9.45%)	\$	160,650	\$ 47,250	\$ 207,900
Total Future Rev. Req.	\$	503,498	\$ 705,410	\$ 1,208,908
Total Revenue Increase		72%	10%	29%
Avg. per Cust. after Future Improvements	\$	63.48	\$ 52.82	\$ 56.79
Future Rate Increase	\$	26.62	\$ 4.65	\$ 12.84

Model A

A model like this allows the designer to play “What if” with the model. If you change the data you enter into it, you get different results. Anyone who understands Excel well, will know what happens to those final two rows if you change the assumptions relating to future improvements.

Assumptions Based on Planned Future Improvements (Model B)

This document presents additional accurate assumptions that prove just the opposite of model A. **The Peninsula systems are far better off with their own tariff rate and should NOT be combined with Whidbey systems.** Our assumptions come from published sources. For Whidbey Island, the detailed investments come from Cascadia’s own 2020 Water System Plan (WSP). The WSP is a forward looking planning document. This document is a DOH requirement and to date, Cascadia has invested ~\$65,000 in its development. In the July 4, 2020 case study, it states: “Currently, Culley Lehman is in the process of a master plan that outlines upgrades over the next two to five years.” Thus, what is in the WSP is relative to this rate case and this document.

The assumption needed for the Peninsula systems comes from Jocelyne Gray, DOH SW Regional Engineer and her Asset Inventory forms for Estates and Monterra. In 2018, the DOH implemented a more in depth asset management discussion in the WSP. Similar asset inventories for the Whidbey Island systems can be found in Appendix O of the WSP. Ms. Gray stated “Asset inventories should be based on system records, operator knowledge of the system, sanitary survey results, and any enforcement issues. The draft asset inventories I did for Estates and Monterra were based on the previous sanitary surveys so they are incomplete snapshots of the systems.” DOH advises that both Estates and Monterra are due for sanitary inspections sometime this summer. At that time, a more up to date assessment of both systems will be available.

While the \$1,700,000 investment number used in Model A was just for the Estates system, our realistic numbers are for BOTH the Estates and Monterra systems. The source for the following investment numbers is provided on page 27 of this document.

Our two assumptions are:

- 1) That Cascadia planned to invest \$5,109,500 in Whidbey Island systems in 2021.
- 2) That Cascadia may invest only \$719,000 in the Peninsula Estates and Monterra systems in 2021.

When you apply these assumptions in Model B, you will find that it is NOT in the best interest of the Peninsula systems to be combined/consolidated with the Whidbey Island Systems under a single tariff rate. Compare the last two lines in yellow from Model B to Model A.

Current		Peninsula	Island	Combined
	Current Revenue (ignoring ancill.)	\$ 188,676	\$ 421,462	\$ 610,138
	GRC Additional Revenue	\$ 103,682	\$ 221,848	\$ 325,530
	Total Revenue	\$ 292,358	\$ 643,310	\$ 935,668
	Percent Increase	54.95%	52.64%	53.35%
	Customer Count	661	1,113	1,774
	Current Per Customer	\$ 23.79	\$ 31.56	\$ 28.66
	Additional Per Customer	\$ 13.07	\$ 16.61	\$ 15.29
	Total Per Customer	\$ 36.86	\$ 48.17	\$ 43.95
Future				
	Future Improvements (est.)	\$ 719,000	\$ 5,109,500	\$ 5,828,500
	Annual Depreciation	\$ 21,354	\$ 151,752	\$ 173,106
	Annual Return (9.45%)	\$ 67,946	\$ 482,848	\$ 550,793
	Total Future Rev. Req.	\$ 381,658	\$ 1,277,910	\$ 1,659,568
	Total Revenue Increase	31%	99%	77%
	Avg. per Cust. after Future Improvements	\$ 48.12	\$ 95.68	\$ 77.96
	Future Rate Increase	\$ 11.26	\$ 47.51	\$ 34.01

Model B

Where Did We Get the Improvements Needed for Whidbey Island?

The list of improvements for Whidbey Island came from Cascadia's Water System Plan (WSP). The UTC and DOH have a copy of the WSP and access to the data presented in this document. Perhaps someone should ask the rate staff why they chose not to use the contents of the forward looking WSP planning document in their model requiring future planned investments. **Replacing the estimated \$500,000 with \$5,109,500 reverses the results of that model.**

If anyone had read the 1,118-page WSP document, they too would have found table 3.25 that is included in this document. (Table 3.25 begins on page 66 of the WSP and continues through page 81.) The DOH has the WSP document as does the UTC, and of course, Cascadia. But most people outside of these organizations do not have the WSP document. One reason for this is that the file size

is 283 MB, which is too large to share by email. We asked Cascadia for the WSP but were told it was not ready for public review, and the DOH had the initial draft.

It was through the DOH's online document request program that we received a copy of the draft version from the NW Region DOH. We also received a copy of Jennifer Kropack's review of the WSP. Ms. Kropack is the Regional Planner-Island, NW Region, DOH. That review includes additional investments that need to be made on the Whidbey Island water systems. Those investments are not in this document because there were no estimated costs associated with those investments. The Del Bay system was not included in the WSP. The Peninsula's Estates and Monterra systems are not included in the WSP. Culley Lehman, Cascadia's General Manager, stated that the reason that the Estate system was not in the WSP was the WSP was already under development prior to the acquisition of the Estates system. An update to the initial draft WSP was due to the NW DOH on April 5th, 2021. When I last inquired on 5/25/21, it has yet to arrive.

Where did the Peninsula's Investments Come From?

To derive the assumptions needed for the Peninsula, we turned to the emails from Culley Lehman and the Asset Inventories provided by Jocelyne Gray, SW Regional Engineer for the DOH. **We included in our list, *any asset that was past its calculated remaining life – regardless of the fact that all of the assets are currently operating with no issues.*** Existing assets have a condition rating of 5 or below on a scale of 10. 10 requires replacement. This is explained on page 31 of this document.

When you change the assumptions that drive the Cascadia System Comparison model, you change the results. This document demonstrates that.

Facts and Findings Based on the Contents of this Document

1. With accurate assumptions, the Cascadia System Comparison model provides proof that it is **NOT** in the best interest of Peninsula consumers to be combined/consolidated under one tariff rate with Cascadia's twelve water systems on Whidbey Island.
 - a. If consolidated under one rate with the Whidbey Island systems and asked *to pay our part of **their** investments* we will be paying 62% more. (48.12-77.96) (see Model B)
 - b. If consolidated under one rate with the Whidbey Island systems, we will see a 202% **increase** in our future rate. (11.26-34.01) (see Model B)
2. Model A, as presented to the Commissioners, contains assumptions that to our knowledge, do not have any supporting details. We requested the supporting details more than once.
3. Assumptions for Model B presented in this document for Whidbey Island systems come from table 3.25 of Cascadia's own forward-looking planning document, the Water System Plan (WSP) of 2020.
4. Assumptions for Model B presented in this document for the two Peninsula systems come from the DOH's Asset Inventory forms.
5. If consolidated under one rate, Peninsula consumers will be paying for the improvements on Whidbey Island that have been planned for over three years. Yet not one person from the UTC, Cascadia, or NW Natural has mentioned these significant investments as detailed in the WSP. Those investments will drive additional rate increases.
6. If we replace ALL of the assets in the Estates and Monterra facilities for \$1,421,202, and invest \$5,109,500 in Whidbey Island in 2021, Model C shows it is **NOT** in our best interest of Peninsula consumers to be combined/consolidated under one tariff rate with Whidbey Island's twelve water systems.
7. The investment projection for Whidbey Island is \$10,143,000 over the next 9 years. If we replace ALL of the assets in the Estates and Monterra facilities for \$1,421,202, and invest \$10,143,000 in the Island systems in one year, Model D shows it is still **NOT** in the best interest of Peninsula consumers to be combined/consolidated under one rate with Whidbey Island's twelve water systems.
8. Not one model with the accurate assumptions derived from the WSP and the DOH Asset Inventories shows consolidation under a single tariff rate to be good for Peninsula consumers.
9. If all twelve water systems on Whidbey Island are combined with the two on the Peninsula, we will lose transparency to the supporting data we need to do comparisons such as this one.

Whidbey Island Investments from the WSP

	Cascadia WSP 2020	Immediate / Near Term	Medium Range 2022-2030	
1	W&B Waterworks	\$ 1,898,000	\$2,880,000	
2	Sea View Water	\$ 591,000	\$1,320,000	
3	Beachcomber	\$ 225,000		
4	Cal Waterworks	\$ 735,000	691500	
5	TEL Company 1	\$ 335,000	117000	
6	TEL Company 3	\$ 321,500	25000	
7	TEL Company 4	\$ 228,000		
8	TEL Company 5	\$ 174,000		
9	TEL Company 6	\$ 174,000		
10	TEL Company 10	\$ 224,000		
11	TEL Company 11	\$ 204,000		
		\$ 5,109,500	\$ 5,033,500	\$ 10,143,000
12	<i>Del Bay is not in WSP</i>			
13	<i>Estates is not in the WSP</i>			
14	<i>Monterra is not in the WSP</i>			

Supporting detail begins on page 11.

Peninsula Investments

Peninsula Water Systems

Estates	\$ 595,000
Monterra	\$ 124,000
	\$ 719,000

Supporting detail begins on page 27.

Model A with its Original Assumptions

How it was originally presented

Current	Peninsula		Island		Combined	
Current Revenue (ignoring ancill.)	\$	188,676	\$	421,462	\$	610,138
GRC Additional Revenue	\$	103,682	\$	221,848	\$	325,530
Total Revenue	\$	292,358	\$	643,310	\$	935,668
Percent Increase		54.95%		52.64%		53.35%
Customer Count		661		1,113		1,774
Current Per Customer	\$	23.79	\$	31.56	\$	28.66
Additional Per Customer	\$	13.07	\$	16.61	\$	15.29
Total Per Customer	\$	36.86	\$	48.17	\$	43.95
Future						
Future Improvements (est.)	\$	1,700,000	\$	500,000	\$	2,200,000
Annual Depreciation	\$	50,490	\$	14,850	\$	65,340
Annual Return (9.45%)	\$	160,650	\$	47,250	\$	207,900
Total Future Rev. Req.	\$	503,498	\$	705,410	\$	1,208,908
Total Revenue Increase		72%		10%		29%
Avg. per Cust. after Future Improvements	\$	63.48	\$	52.82	\$	56.79
Future Rate Increase	\$	26.62	\$	4.65	\$	12.84

Model A

Model B Based on the WSP and DOH Asset Inventories

Current	Peninsula		Island		Combined	
Current Revenue (ignoring ancill.)	\$	188,676	\$	421,462	\$	610,138
GRC Additional Revenue	\$	103,682	\$	221,848	\$	325,530
Total Revenue	\$	292,358	\$	643,310	\$	935,668
Percent Increase		54.95%		52.64%		53.35%
Customer Count		661		1,113		1,774
Current Per Customer	\$	23.79	\$	31.56	\$	28.66
Additional Per Customer	\$	13.07	\$	16.61	\$	15.29
Total Per Customer	\$	36.86	\$	48.17	\$	43.95
Future						
Future Improvements (est.)	\$	719,000	\$	5,109,500	\$	5,828,500
Annual Depreciation	\$	21,354	\$	151,752	\$	173,106
Annual Return (9.45%)	\$	67,946	\$	482,848	\$	550,793
Total Future Rev. Req.	\$	381,658	\$	1,277,910	\$	1,659,568
Total Revenue Increase		31%		99%		77%
Avg. per Cust. after Future Improvements	\$	48.12	\$	95.68	\$	77.96
Future Rate Increase	\$	11.26	\$	47.51	\$	34.01

Model B

Note the differences in the two bottom lines.

Does this represent all of the investments needed? No.

As you read through the following, please keep in mind that these totals are far from being the final investment numbers. We have learned through our conversations with the DOH that the distribution network (underground) is one of the most expensive investments in an aging water system. We have many miles of infrastructure on the Island in 12 systems. We have only a few miles here on the Peninsula. It would be nice to have the total lengths for comparison, but that is another project. All prices quoted for waterlines are low and outdated based on Mark Mazeski's comment below.

On 5/21/2021, Mark Mazeski, Regional Planner for SW DOH has stated "We are seeing a strong up-tick in cost with pipe and labor shortages, combined with strong demand for new construction. The City of Tumwater just turned in a WSP with 2020 figures. Their engineer estimates new 6" pipe installation runs \$250/ft and 8" at \$275/ft. This comes out to \$1,320,000/mile for 6" pipe and that was before the 2021 cost explosion hit."

Example of Distribution Investments from the WSP

W&B Waterworks #1 (the largest water system)

The distribution system is almost exclusively served by gravity which provides the pressure to meet the peak hour demand throughout the system. The majority of the system can also support the requisite fire flow demands of 500-gpm for residential neighborhoods in Island County. Some of the existing hydrants in the distribution system are located on water lines that are 4-inches or smaller. These hydrants are not able to supply the 500 gallons per minute required for domestic fire flow in Island County. These waterlines are older, are in need of replacement, and upsizing to meet current code requirements. The Capital Improvement Projects list has prioritizing the replacement of the water mains along Ebb Tide Lane and Bay Road out on the southwest end of the distribution system. The system has three pressure reducing valves installed to reduce the system pressures at the lower elevations in the service area. The three pressure reducing valves have exceeded their anticipated useful life and should be replaced in the near future.

(Comment: Estates lines are 8", 6" and 4". We have a few hydrants, but the residential areas in Blue Ribbon Farms POA are 4". We have identified areas for 4-6 additional fire hydrants including the entrance to the county park and Five Acre School.)

Supporting Detail for Whidbey Island

WB Waterworks

For WB Waterworks, we have \$1,898,000 for 1-9 below. They are all immediate to near term 2021 needs.

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

/BRF%20Files/2021/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Page view | Read aloud | Draw

W&B Waterworks 1				
#	Prioritization	Component	Component Description	Cost
1	Immediate (2020)	Distribution	Pressure Reducing Valve (PRV) Replacements – Three (3) PRVs on the distribution system need to be replaced as they are no long functioning properly.	\$60,000 \$20,000/each
2	Immediate (2020)	Distribution	Waterline Replacement – Replacement of watermains along Bay Road and Ebb Tide Lane. The increased line size will support fire flow requirements, replace old valves and hydrants, and install new meters to service connections along the replaced main.	\$150 - \$200 per foot of pipe (\$800,000)
3	Immediate (2021)	Distribution	Pumphouse Building with Booster Pump Station – Installation of a new building with sufficient size to install a filtration system, booster pumps, hydropneumatic tanks, and other appurtenances. Includes the design and installation of a booster pump station for the pressure distribution system.	\$125,000
4	Immediate (2021)	Treatment	Iron & Manganese Filtration Treatment System – Installation and design of a filtration system for the water system to oxidize and filter out Fe and Mn from source water. Perform testing and verification necessary to ensure performance of the new system.	\$125,000
5	Immediate (2021)	Storage	New storage reservoir – Installation of a new 200,000-gallon reservoir (size to be verified in design) to provide adequate storage for the distribution system. Project will include the necessary site piping (approx. 600-feet) to connect the reservoir to the pumphouse and distribution system.	\$400,000
6	Immediate/ Near Term (2021)	Distribution	Generators for Booster Pumps – A properly designed generator will be sized and installed to allow for functioning of the booster pumps a possible a well pump during power outages in the area.	\$10,000
7	Immediate/ Near Term (2021)	Source	The source meters on the system will be replaced.	\$8,000 \$2,000/meter
8	Immediate/ Near Term (2021)	Distribution	Water meters throughout the system will be replaced with remote read meters.	\$320,000 \$700/meter

W&B Waterworks 1 (continued)				
9	Near Term/ Medium Range (2021)	Distribution	Waterline Replacement – Repair and install a new crossing of the creek near the intersection of Lancaster Road and Wahl Road. Crossing will likely be accomplished by horizontal directional drilling and installation of fused HDPE water main.	\$50,000
10	Near Term/ Medium Range (2022-2025)	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$15,000
11	Near Term/ Medium Range (2025-2030)	Distribution	Waterline Replacement – Replacement of Watermains along Wahl Road towards Ebb Tide Lane. Wahl Road is the main trunk to provide service to the southwestern portions of the system. These main lines need replacement due to the age of the existing infrastructure and various sections that are inadequately sized for fire flow.	\$150 - \$200 per foot of pipe (\$1,350,000)
12	Near Term/ Medium Range (2025-2030)	Distribution	Waterline Replacement – Replacement of Watermains along Wahl Rd and Mutiny Bay Rd. Mutiny Bay Road is the main trunk to provide service to the northern portions of the system. These main lines need replacement due to the age of the existing infrastructure and various sections that are inadequately sized for fire flow.	\$150 - \$200 per foot of pipe (\$1,460,000)
13	Near Term/ Medium Range (2025-2030)	Source	New Water Well – The installation of a new water well along with the necessary permitting and obtain/transfer of water rights. Project will include the necessary piping to connect the new well to the reservoir(s)	\$50,000
14	Near Term/ Medium Range (2025-2030)	Distribution	Fire Hydrant Addition and Waterline Replacement – The replacement of aging water lines with the addition of Fire Hydrants in necessary locations in the distribution system. Following project number 2 above the system will again evaluate pipes and prioritize those areas of highest concern. This will likely start along Mutiny Bay Road.	\$150 - \$200 per foot of pipe
15	Near Term/ Medium Range (2025-2030)	Distribution	Combination Air Release and Air Vacuum valves to be installed every 2,000 to 2,500 feet along the main distribution line	\$5,000/each

In the near term/medium range (2022-2030), 10-15 above, we have another \$2,880,000.

Sea View Water

For Sea View Water, we have \$591,000 for 1-8 below. They are all intermediate to near term needs for 2021.

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

a-2/BRF%20Files/2021/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Page view | Read aloud | Draw | Highlight

Sea View Water, LLC.				
1	Immediate (2020)	Source	New Water Well – The installation of a new water well along with the necessary permitting and creation/transfer of water rights. Project will include the necessary piping to connect the new well to the distribution system	\$50,000
2	Immediate (2020)	Source	The source meters on the system will be replaced.	\$6,000 \$2,000/meter
3	Immediate (2020)	Source	Intertie – Sea View will enter into an agreement to formally create an intertie with the Whidbey West Water Association and provide an approved metered connection.	\$50,000
4	Immediate/ Near Term (2021)	Distribution	Pumphouse Building with Booster Pump Station – Installation of a new building with sufficient size to store the new/upgraded /filtration system, booster pumps, hydropneumatics tanks, and other appurtenances. Includes the design and installation of a booster pump station to maintain system pressures.	\$155,000
5	Immediate/ Near Term (2021)	Treatment	Iron & Manganese Filtration Treatment System – Installation and design of improvements to or replacement of the existing filtration system. Perform testing and verification necessary to ensure performance of the system.	\$80,000
6	Immediate/ Near Term (2021)	Storage	New storage reservoir – Installation of a new 60,000-gallon reservoir (size to be verified in design) to provide adequate storage for the system needs.	\$100,000
7	Immediate/ Near Term (2021/2022)	Distribution	Generators for Booster Pumps – A generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.	\$10,000
8	Immediate/ Near Term (ongoing)	Distribution	Water meters throughout the system will replaced with remote read meters.	\$140,000 \$700/meter
9	Immediate/ Near Term (2022 – 2025)	Distribution	Waterline Replacement – Installation of a new waterline from the reservoir along Fort Nugent Road West Beach Road .	\$150 - \$200 per foot of pipe (\$60,000)

Davido Consulting Group, Inc.

Page 68

**Cascadia Water
Unified Water System Plan**

August 2020


Sea View Water, LLC. (continued)				
10	Near Term/ Medium Range (2022 - 2025)	Distribution	Replacement of the waterline located in the easement along the south property line of lots 25 and 36-3 connecting Peacock Lane and Island View Rd.	\$150 - \$200 per foot of pipe (\$80,000)
11	Near Term/ Medium Range (2022 - 2025)	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$10,000
12	Near Term/ Medium Range (2022 - 2025)	Distribution	Waterline Replacement – The replacement of aging water lines with the addition of Fire Hydrants in necessary locations in the distribution system. Line sizing should be increased to meet the fire flow requirements of Island County. The water main replacement will need to occur throughout the distribution system.	\$150 - \$200 per foot of pipe (\$1,170,000)

In the near term, medium range from 2022-2025, 9-12 above, we have another \$1,320,000.

Beachcomber H2O

Beachcomber H2O 1-7 below (Immediate/Near Term)

\$225,000

 Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

20Files/2021/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

Page view | Read aloud | Draw

Cascadia Water **August 2020**
Unified Water System Plan

Beachcomber H ₂ O Company				
1	Immediate (2021)	Storage	New storage reservoir – Installation of a new 35,000-gallon reservoir (size to be verified in design) to provide adequate storage for the pressure portion of the distribution system.	\$75,000
2	Immediate/ Near Term (2021)	Distribution	Reservoir site piping improvements – Revised design and configuration of the piping at the reservoir sites to allow the pressure and gravity portions of the system to function jointly providing additional reliability and necessary redundancy in the distribution system.	\$10,000
3	Immediate (2025)	Distribution	Booster Pump Station – Installation of new booster pumps, hydropneumatics tanks, and other appurtenances for the distribution system. Includes the design of a booster pump station to maintain system pressures.	\$25,000
4	Immediate/ Near Term	Distribution	Generators for Booster Pumps – A properly designed generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.	\$10,000
5	Immediate/ Near Term	Source	The source meters on the system will be replaced in the immediate to medium range with new and accurate master-meters.	\$4,000 \$2,000/meter
6	Immediate/ Near Term	Distribution	Water meters throughout the system will be replaced from the immediate to medium range with remote read meters.	\$91,000 \$700/meter
7	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$10,000
8	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase. Water mains should be increased to 6” or 8” lines to provide adequate flow.	\$150 - \$200 per foot of pipe

Davido Consulting Group, Inc. Page 70

Cal Waterworks items 1-5 below (2021) Immediate/Near Term \$735,000

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

.20Files/2021/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Page view | Read aloud | Draw

Cascadia Water
Unified Water System Plan **August 2020**

Cal Waterworks				
1	Immediate (2020)	Distribution	Waterline Installation – Installing approximately 150-feet of 6” water main to close the loop in water main along East Harbor road between Beachwood Drive and Harbor Sands Lane.	\$150 - \$200 per foot of pipe (\$25,000)
2	Immediate/ Near Term (2020/2021)	Distribution	Pumphouse Building with Booster Pump Station – Installation of a new building with sufficient size to store the new treatment system, booster pumps, hydropneumatics tanks, and other appurtenances. Includes the design and installation of a booster pump station to maintain system pressures.	\$175,000
3	Immediate/ Near Term (2021)	Treatment	Manganese Filtration Treatment System – Installation and design of a filtration system for the water system to oxidize and filter out Mn from source water. Perform testing and verification necessary to ensure effectiveness of the treatment system.	\$60,000
4	Immediate/ Near Term (2021)	Storage	New storage reservoir – Installation of a new 60,000-gallon reservoir (size to be verified in design) to provide adequate storage for the distribution system.	\$100,000
5	Immediate/ Near Term (2021)	Distribution	Waterline Replacement – Installation of a new 8” line from the pumphouse north along East Harbor Road to the existing 6” water line installed between Harbor Sands Lane and Beachwood Drive. ensure proper functionality of the water system and to maintain service up to Goss Lake Acres.	\$150 - \$200 per foot of pipe (\$375,000)
6	Immediate/ Near Term (2022 – 2025)	Distribution	Waterline Replacement – Installation of a new line off the 8” line proposed in item 4 down both Harbor Sands Lane and Beachwood Drive. The new 6” waterline will loop this neighborhood providing better service and prepare the system to provide sufficient fire flow.	\$150 - \$200 per foot of pipe (\$550,000)
7	Immediate/ Near Term	Distribution	Generators for Booster Pumps – A generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.	\$10,000

Davido Consulting Group, Inc. Page 71

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

20Files/2021/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

Page view | Read aloud | Draw

Cascadia Water
Unified Water System Plan **August 2020**

Cal Waterworks (continued)				
8	Near Term/ Medium Term (2025)	Source	New Water Well – The installation of a new water well along with the necessary permitting and obtain/transfer of water rights. Project will include the necessary piping to connect the new well to the distribution system	\$50,000
9	Near Term/ Medium Term (2025)	Source	The source meters on the system will be replaced.	\$4,000 \$2,000/meter
9	Immediate/ Near Term	Distribution	Water meters throughout the system will be replaced with remote read meters.	\$70,000 \$700/meter
10	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$7,500
11	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase. Water mains should be increasing mains to 6” or 8” to provide adequate flow.	\$150 - \$200 per foot of pipe

Davido Consulting Group, Inc. Page 72

TEL Company #1

1-4 below

Intermediate/Near Term (2021)

\$335,000

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

.20Files/2021/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

— + ↺ ↻ | Page view | A Read aloud | ▾ Draw ▾

**Cascadia Water
Unified Water System Plan**

August 2020

TEL Company #1				
1	Immediate (2020)	Distribution	Electrical Panel and Generator – Installation of a new 200-amp electrical panel with generator connection to allow for the future improvements to the pumphouse. The generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area	\$15,000
2	Immediate/ Near Term (2021)	Distribution	Pumphouse Building with Booster Pump Station – Installation of a new building with sufficient size to store the new treatment system, booster pumps, hydropneumatics tanks, and other.	\$100,000
3	Immediate/ Near Term (2021)	Treatment	Arsenic and Manganese Treatment System – Installation and design of a filtration system to reduce concentration of arsenic from source water produced from Well #8. Treatment to also provide capacity to reduce the manganese concentration of water produced from Well #1. Includes testing and verification necessary to ensure effectiveness of the new system.	\$120,000
4	Immediate/ Near Term (2021)	Storage	New storage reservoir – Installation of a new 70,000-gallon reservoir (size to be verified in design) to provide adequate storage for the system.	\$100,000
5	Immediate/ Near Term (2022)	Source	New Water Well – The installation of a new water well along with the necessary permitting and obtain/transfer of water rights. Project will include the necessary piping to connect the new well to the distribution system. Well to replace well at pumphouse 1 but to be located near Well 2.	\$50,000
6	Near Term/ Medium Term	Source	The source meters on the system will be replaced.	\$4,000 \$2,000/meter
7	Near Term/ Medium Term	Distribution	Water meters throughout the system will gradually be replaced with remote read meters.	\$55,000 \$700/meter
8	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$8,000

Davido Consulting Group, Inc.

Page 73

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Page view | Read aloud | Draw | Highlight

Cascadia Water
Unified Water System Plan

August 2020

TEL Company #1 (continued)			
9	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase. Water mains diameter should be increasing to 6" or 8" to provide adequate flow.
			\$150 - \$200 per foot of pipe

TEL Company 3

Immediate/Near Term 1-6 below

\$321,500

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

Page view | Read aloud | Draw | Highlight

Page 74

Cascadia Water
Unified Water System Plan **August 2020**

TEL Company #3				
1	Immediate (2020)	Distribution	Electrical Panel and Generator – Installation of a 200 amp/3-phase electrical panel to allow for the future improvements to the pumphouse and distribution system. The panel should be designed to handle the addition of a generator. The generator will be sized to allow for functioning of the booster pumps during power outages in the area. The improvements will also require the addition of a new power pole to provide the necessary service capacity.	\$50,000
2	Immediate/ Near Term (2021)	Distribution	Pumphouse Building – Installation of a new building with sufficient size to store the new treatment system, booster pumps, hydropneumatics tanks, and other appurtenances.	\$125,000
3	Immediate/ Near Term (2022)	Treatment	Manganese Filtration Treatment System – Installation and design of a filtration system for the two wells on the water system. Perform testing and verification necessary to ensure performance of the new system.	\$75,000
4	Near Term/ Medium Range (2024/2025)	Distribution	Individual Pressure Reducing Valves – Install individual pressure reducing valves on the back end of the service connection. Ownership of PRVs will be transferred to each individual residence.	\$50,000 \$2,000/each
5	Immediate/ Near Term	Source	The source meters on the system will be replaced.	\$4,000 \$2,000/meter
6	Immediate/ Near Term	Distribution	Water meters throughout the system will gradually be replaced with remote/touch read meters.	\$17,500 \$700/meter
7	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$5,000
8	Medium Range	Distribution	Booster Pump Station – Installation of a new booster pump station, hydropneumatics tanks, and other appurtenances.	\$20,000
9	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase. Water mains should be increased to 6” or 8” diameter to provide adequate flow.	\$150 - \$200 per foot of pipe

Davido Consulting Group, Inc. Page 75

TEL Company #3

Near Term/Medium Range 7-9 above

\$25,000

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

Page view | Read aloud | Draw | Highlight

**Cascadia Water
Unified Water System Plan**

August 2020

TEL Company #4				
1	Immediate/ Near Term (2021)	Distribution	Pressure Tank Replacement – Installation of new pressure tank(s) in the water system to support future improvements (See Item 2)	\$15,000
2	Immediate/ Near Term (2022)	Distribution	Pumphouse Building with Booster Pump Station – Installation of a new building with sufficient size to store the new booster pumps, hydropneumatics tanks, and other appurtenances for the system. Includes the design and installation of a booster pump station to maintain system pressures.	\$115,000
3	Near Term/ Medium Range	Distribution / Storage	The system should be configured to incorporate a top fill line for the storage reservoir. The reservoir fill line can be configured with gate and check valves to make sure the water fills from the top providing better mixing and turnover of the stored water.	\$20,000
4	Near Term/ Medium Range	Distribution	Generators for Booster Pumps – A generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.	\$10,000
5	Immediate/ Near Term (2022)	Distribution	System Controls – Installation of new controls for the management of the distribution system. Includes well pumping controls and reservoir level transducers.	\$15,000
6	Immediate/ Near Term	Source	The source meter on the system will be replaced.	\$2,000/meter
7	Immediate/ Near Term	Distribution	Water meters throughout the system will gradually be replaced with remote/touch read meters.	\$21,000 \$700/meter
8	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$5,000
9	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase. Water mains should be increased to 6" diameter to provide adequate flow.	\$150 - \$200 per foot of pipe

TEL Company #5

Immediate / Near Term

1-6 below

\$174,000

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

/Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Page view | Read aloud | Draw | Highlight

Cascadia Water
Unified Water System Plan

August 2020

Table 3-26 Prioritized Potential Group B System Improvements Needs

TEL Company #5				
#	Prioritization	Component	Component Description	Cost
1	Immediate (2020)	Distribution/ Storage	Pumphouse Building / Booster Pump Station / Reservoir - Installation of a new building with sufficient size to store the new booster pumps, hydropneumatics tanks, 2,000-gallon reservoir, and other appurtenances for the n system.	\$150,000
2	Immediate/ Near Term	Distribution	Generators for Booster Pumps – A generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.	\$10,000
3	Immediate/ Near Term	Source	The source meter on the system will be replaced.	\$2,000
4	Immediate/ Near Term	Distribution	Water meters throughout the system will gradually be replaced with touch read meters.	\$7,000 \$700/meter
5	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$5,000
6	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase.	\$150 - \$200 per foot of pipe

Davido Consulting Group, Inc.

Page 77

TEL Company #6

Immediate / Near Term

1-6 below

\$174,000

Cascadia Water
Unified Water System Plan August 2020

TEL Company #6				
1	Immediate (2021)	Distribution/ Storage	Pumphouse Building / Booster Pump Station / Reservoir - Installation of a new building with sufficient size to store the new booster pumps, hydropneumatics tanks, 2,000-gallon reservoir, and other appurtenances for the distribution system.	\$150,000
2	Immediate/ Near Term	Distribution	Generators for Booster Pumps – A properly designed generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.	\$10,000
3	Immediate/ Near Term	Source	The source meter on the system will be replaced with a new and accurate master-meter.	\$2,000
4	Immediate/ Near Term	Distribution	An evaluation of all meters shall be performed. Water meters throughout the system will gradually be replaced with touch read meters.	\$7,000 \$700/meter
5	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$5,000
6	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase.	\$150 - \$200 per foot of pipe

Page 78

TEL Company #10 Immediate/Near Term (2021)

1-7 below

\$224,000

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Page view | Read aloud | Draw | Highlight

Cascadia Water
Unified Water System Plan **August 2020**

TEL Company #10				
1	Immediate/ Near Term (2021)	Distribution/ Storage	Pumphouse Building / Booster Pump Station / Reservoir - Installation of a new building with sufficient size to store the new booster pumps, hydropneumatics tanks, 5,000-gallon reservoir, other appurtenances for the distribution system, and a nitrate treatment system if constructed.	\$150,000
2	Immediate/ Near Term (2021)	Source/ Treatment	New Source or Nitrate Treatment – The existing source has elevated nitrate levels that should be evaluated to see if an alternative well location can be identified. If a new well site isn't viable, a new treatment system will need to be designed, installed, and verified.	\$50,000
3	Immediate/ Near Term	Distribution	Generators for Booster Pumps – A properly designed generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.	\$10,000
4	Immediate/ Near Term	Source	The source meter on the system will be replaced with a new and accurate master-meter.	\$2,000
5	Immediate/ Near Term	Distribution	An evaluation of all meters shall be performed. Water meters throughout the system will gradually be replaced from the immediate to medium range with touch read meters.	\$7,000 \$700/meter
6	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase.	\$150 - \$200 per foot of pipe
7	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.	\$5,000

Davido Consulting Group, Inc.

Page 79

TEL Company #11 Immediate/Near Term 1-7 Below \$204,000

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Initial_Submittal.pdf

— + ↺ ↻ | Page view | A Read aloud | ▾ Draw ▾ ▾ Highlight ▾

Cascadia Water **August 2020**
Unified Water System Plan

TEL Company #11			
1	Immediate	Distribution/ Storage	Pumphouse Building / Booster Pump Station / Reservoir - Installation of a new building with sufficient size to store the new treatment/filtration system, booster pumps, hydropneumatics tanks, 5,000-gallon reservoir, and other appurtenances for the distribution system.
2	Immediate/ Near Term	Treatment	Iron & Manganese Filtration Treatment System – Installation and design of a filtration system for the water system to oxidize and filter out Fe and Mn from source water. Perform testing and verification necessary to ensure performance of the new system.
3	Immediate/ Near Term	Distribution	Generators for Booster Pumps – A properly designed generator will be sized and installed to allow for functioning of the booster pumps during power outages in the area.
4	Immediate/ Near Term	Source	The source meter on the system will be replaced with a new and accurate master-meter.
5	Immediate/ Near Term	Distribution	An evaluation of all meters shall be performed. Water meters throughout the system will gradually be with touch read meters.
6	Medium Range/ Long Term	Distribution	Waterline Replacement – The distribution system infrastructure is aging, and water mains should be replaced in a timely manner as leaks increase.
7	Near Term/ Medium Range	Distribution	Create As-Built Record Drawings of the distribution system to allow for better planning and future maintenance of the system.

Davido Consulting Group, Inc. Page 80

Mutiny Bay Waterworks & All Systems

Mutiny Bay Waterworks	1-2 Below	Immediate (2020)	\$20,000
All Systems	1-2 Below	Immediate (2020)	\$100,000

Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Water%20Rates%202021/Cascadia/Cascadia_Water_NoID_I_20200814_Water_System_Plan_Intial_Submittal.pdf

Page view | Read aloud | Draw | Highlight

Davido Consulting Group, Inc.

Cascadia Water
Unified Water System Plan August 2020

Mutiny Bay Waterworks				
1	Immediate	Distribution	Transfer final two (2) connections to the W&B Waterworks 1 Group A water system.	---
2	Immediate	Source	Well Connection – Connect the existing well for Mutiny Bay Waterworks to the W&B Waterworks 1 distribution system as a backup source. The controls should be updated so that the well will pump will occasionally be turned on to prevent its motor from seizing up due to lack of use.	\$20,000

Table 3-27 Prioritized Potential for Universal Improvement Needs

All Systems				
#	Prioritization	Component	Component Description	Cost
1	Immediate (2020)	Distribution/ Controls	SCADA System– SCADA (Supervisory Control and Data Acquisition) system will be installed to allow a more consistent level of service for the Cascadia Water owned systems. The system will be initially configured to run pump signal relays, tank levels, and alarms for most of the Group A Water Systems. The system will be configured to allow expansion for future controls. Future improvement projects should allow for connection and communication with the SCADA system.	\$100,000
2	Immediate (2020)	Distribution	Remote Read Meters – The installation and replacement of service meters with remote read meters will be evaluated. This will allow for more efficient reading of meters and ensure more accurate measurements of water loss and leakage throughout the systems.	\$700 per Water Meter

Davido Consulting Group, Inc. Page 81

Investments Planned for the Peninsula

In the past, a number of Estates residents have asked for a list of the improvements for Estates and Monterra. The following two emails are examples of the responses we received from Cascadia. No dollar estimates were included:

Hi Rick,
Thanks for your email.

There are not two different plans – there is one Comprehensive Water System Plan (listed in the proposed rate case with the UTC). This Plan is currently being reviewed by the Dept of Health, Public Health, Dept of Ecology, and the UTC (rates and regulatory division, not the Consumer Protection division). This Plan was already under development prior to our acquisition of the Estates System, so while universal improvements proposed in the Plan will apply to Estates, we will be filing a separate addendum to include Estates-specific capital projects into the Plan. This was supposed to have occurred prior to the onset of COVID-19, which has significantly delayed the process.

Universal improvements proposed in the Plan include increasing the security at each well site (i.e. fencing, gates, etc). Other universal improvements are SCADA (system monitoring) and new Master Meters; these projects have already been installed. The current standby generator at Estates is only powerful enough to run one booster pump, and not adequate enough to run well pumps or additional booster pumps for fireflow. The standby generator projects for Estates is in the works, with the projected completion date of early spring, which is why it's already factored in to this rate case. The existing reservoirs at Estates are below ground, so we will also be proposing to install an above-ground reservoir, which is more suitable as a replacement to the existing underground reservoirs due to the fact that the underground reservoirs are more susceptible to leaking water out as well as contaminants getting in, and the inability to monitor either one based on the underground location. We're also looking into the potential of drilling a new well at Estates, due to the age of the existing wells.

Neither the Water System Plan or the Estates addendum are at the Customer Review stage. Before we can send you a copy, approval must be received from the regulatory agencies I listed above.

Please let me know if you have any other questions.
Thanks,
Culley

Culley Lehman
General Manager
360-661-7781
www.cascadiawater.com



From: Cascadia Water <info@cascadiawater.com>
Date: Tuesday, December 22, 2020 at 3:05 PM
To: J D <duersty@gmail.com>
Subject: RE: Notice clarification

Hi Josh,

Thanks for your email. Most of the improvements included on the notice (which I listed below) apply to Estates, with the exception of the new well at TEL 10. Your backup generator is not installed yet, but is in process and scheduled for early 2021 and therefore included in this rate case. We mentioned in the notice installing new equipment throughout several well sites, which includes Estates: a new well pump was installed within the last year after the existing pump failed. We also upgraded and repaired main line valves throughout the Estates system, and installed new master meters at Estates' well heads.

- Installing a new online billing system, which allows our customers to pay online, pay with credit/debit cards (as customers have requested), set up AutoPay (another important customer request), and view their account history.
- Increasing staff, which helps facilitate faster customer service responses, improved system maintenance and quicker system repairs.
- Installing a SCADA (telemetry) system, which allows our operators to view and monitor the water system in real time – which is critical to ensuring safe system operations.
- Installing new submersible pumps, booster pumps, pressure tanks, and control boxes throughout several well sites, helping to ensure reliable water is delivered to our customers.
- Installing standby generators at a majority of the systems, with the target of having 100% installation completed by spring 2021. The new generators minimize service disruptions due to power outages, often experienced by residents during the winter storm season. (The standby generator for Estates is in the works to be installed by spring 2021.)
- Completing our replacement of the master meters at the well sites for each of the systems. This allows us to more accurately track the water that is pumped throughout the system, which in effect helps prevent unnecessary leakage
- We also are exploring wireless read meters for a portion of the Estates water system, because flooding in the area makes meter reading nearly impossible for several months of the year

Please keep in mind that the rates proposed in the notice are just what we are requesting. We'll be going through an extensive 3-month long audit process where the UTC staff will validate usage history/financial data to determine rates that are fair and reasonable to apply among our customer base. They will then present their findings at the open meeting (March 25th) to the Commission, who will then approve, deny, or amend the rates that UTC staff has recommended.

Please let me know if you have any other questions, or if I can help clarify anything else.
Thanks,
Culley



Investments For Estates and Monterra from the DOH

We turned to two documents from Jocelyne Gray, SW Regional Engineer, DOH. They include lists of the current assets and their replacement costs for Estates and Monterra. While the condition rating/assessment did not show anything needing immediate replacement for either well system, we decided to *replace everything that has outlived its calculated remaining life...even if it was still working*. The total of those two numbers is for Greg Hammond's model.

Two items below noted with an *, are not in Ms. Gray's Asset Inventory. The Magnesium filtration was added to provide a solution to the Magnesium issue raised at the previous Commissioner's meeting. A larger more powerful generator was also added to the list.

The following list is for Estates with two wells:

1. Above ground reservoirs (200,000 gal W&B)	403,175
2. Magnesium filtration and treatment system*	60,000
3. Well 2 (new well)	25,000
4. Well pump 1	10,000
5. Well pump 2	10,000
6. Booster Pump 1, 5 hp, 100 gpm	1,000
7. Booster Pump 2, 5 hp, 100 gpm	1,000
8. Booster pump 3, 5 hp, 100 gpm	1,000
9. Fireflow pump, 10 hp, 250 gpm	3,000
10. Oilless air compressor for hydropneumatic tanks	200
11. Well 1 source meter	450
12. Well 2 source meter	450
13. Electrical Panel and Controls	20,000
14. Generator*	60,000
Total	\$ 595,275

The following list is for Monterra with two wells:

1. North well #2	\$25,000
2. South well #1	\$25,000
3. North well pump	\$10,000
4. South well pump	\$10,000
5. Fire pump 500 gpm	\$ 3,000
6. Source meter	\$ 1,000
7. Electrical controls and panel	\$20,000
8. New auto start generator (not on the list)	\$30,000
Total	\$ 124,000

Peninsula Water Systems

Estates	\$ 595,000
Monterra	\$ 124,000
	\$ 719,000

Asset Inventory for Estates

From Jocelyne Gray, SW Regional Engineer, DOH

Estates Inc, 08166		4/29/2021		Number of Units (Connections, ERUs etc.):		367	Total Equity:	\$168,753	Connection Fee:	\$460	Monthly Cost Per Unit to Reserves:		\$17.87		
											Annual \$\$ to Reserves:		\$78,699		
											Reserve Cash Applied:				
											Payments over 11 years:		\$865,402		
Current Year:	2021	Calculated Replacement Life					Calculated Equity						Replacement Cost		
Asset and Description RCAC V13	Install Date	Est. Effective Life	Condition Rating	Critical Number	Calc Remain Life	Original Cost	Book Value Original \$\$	Replacement Cost	Infl. Rate	Accum Loss of Value (Dep)	Debt and Grants	Equity	Cash Replace ?	Saving Acc't Interest	Future Cost
	Year	Years	1 to 10 Tab A	1 to 5 Tab A	Years	Cost \$	Value \$	Cost \$	%	Loss \$\$	Value \$	Value \$	X	%	Value \$
Well 1	1982	40	5	1	0.5	\$10,000	\$396	\$25,000	3.0%	\$24,688		\$313	x		\$25,372
Well 2	1972	40	7	2	0.00	\$10,000	\$0	\$25,000	3.0%	\$25,000		\$0	x		\$25,000
Well 1 Pump	1982	25	5	1	0.00	\$5,000	\$0	\$10,000	3.0%	\$10,000		\$0	x		\$10,000
Well 2 Pump	1983	25	7	2	0.00	\$5,000	\$0	\$10,000	3.0%	\$10,000		\$0	x		\$10,000
Tank 1, 30kgal	1972	60	5	4	5.5	\$30,000	\$11,705	\$60,000	3.0%	\$54,500		\$5,500	x		\$70,592
Tank 2, 150kgal	1981	60	5	1	10.0	\$150,000	\$81,551	\$300,000	3.0%	\$250,000		\$50,000	x		\$403,175
Small Hydropneumatic Tank, 940 gal	1982	40	2	4	1.0	\$2,000	\$150	\$9,300	3.0%	\$9,079		\$221	x		\$9,565
Large Hydropneumatic Tank, 1300	1982	40	2	3	1.0	\$2,000	\$150	\$11,000	3.0%	\$10,739		\$261	x		\$11,313
Booster Pump 1, 5 HP, 100 gpm	1982	25	2	1	0.00	\$500	\$0	\$1,000	3.0%	\$1,000		\$0	x		\$1,000
Booster Pump 2, 5 HP, 100 gpm	1982	25	2	1	0.00	\$500	\$0	\$1,000	3.0%	\$1,000		\$0	x		\$1,000
Booster Pump 3, 5 HP, 100 gpm	1982	25	2	2	0.00	\$500	\$0	\$1,000	3.0%	\$1,000		\$0	x		\$1,000
Fire Flow Pump, 10 HP, 250 gpm	1982	25	2	4	0.00	\$1,500	\$0	\$3,000	3.0%	\$3,000		\$0	x		\$3,000
Oilless air compressor for hydropneumatic tanks	1982	15	2	2	0.00	\$125	\$0	\$200	3.0%	\$200		\$0	x		\$200
4-inch PVC water mains (2000 linear feet)	1983	60	5	3	11.0	\$4,000	\$2,255	\$6,500	3.0%	\$5,308		\$1,192	x		\$8,998
6-inch PVC water mains (4000 linear feet)	1983	60	5	2	11.0	\$9,000	\$5,073	\$76,000	3.0%	\$62,067		\$13,933	x		\$105,202
Well 1 source meter	1990	15	2	4	0.00	\$250	\$0	\$450	3.0%	\$450		\$0	x		\$450
Well 2 source meter	1990	15	2	4	0.00	\$250	\$0	\$450	3.0%	\$450		\$0	x		\$450
367 Service meters 5/8"x3/4"	2014	15	1	4	8.0	\$45,625	\$29,927	\$182,500	3.0%	\$85,167		\$97,333	x		\$231,186
Electrical panel and controls	1972	25	2	1	0.00	\$15,000	\$0	\$20,000	3.0%	\$20,000		\$0	x		\$20,000
Generator	1982	25	3	4	0.00	\$20,000	\$0	\$60,000	3.0%	\$60,000		\$0	x		\$60,000
									3.0%						

Note: NONE of these items are ranked at condition level 10, which means replace. We chose to replace them ALL to get a high number to plug into Greg Hammond's model.

Asset Inventory Guidelines

A-1 Condition Assessment			
Condition Rating	Description	Maintenance Level	Condition Multiplier
1	Good/Expected Condition	Normal Preventive Maintenance (PM)	1
2			0.95
3			0.8
4	Minor Defects Only	Normal PM, Minor Contract Maintenance (CM)	0.7
5			0.5
6	Moderate Deterioration	Normal PM, Major CM	0.35
7			0.2
8			0.1
9	Significant Deterioration	Major repair, rehabilitate	0.05
10	Virtually Unserviceable	Rehab unlikely	0
	Unserviceable	Replace	
A-2 Critical Number			
Critical Number	Description		
1	The water system would essentially shut down if this component fails. This asset has no backup and is so important that an emergency plan must be in place as well as funding to replace it. Example: Single well pump failure; single reservoir failure; anything that could cause a violation of the Safe Drinking Water Act.		
2	This asset would have a serious impact on the water system if it failed, however, procedures could fix the problem within a reasonable time. Example: Two wells and primary wellpump fails; Electrical compents in panels fail: backflow assembly did not pass testing; key pipe failure that could be repaired; single chlorinator failure; pressure reducing valve failure.		
3	The condition of this asset causes continued unnecessary operational costs to your utility. Examples: deteriorating buildings, equipment and rolling stock; leaks in piping; old and worn-out electrical equipment.		
4	This asset's condition or failure may cause inconvenience to customers via reduced service, outages, or minor taste or odor complaints. Examples: excessive leaks, valves frozen partway closed, hydrants not working so flushing cannot be done; poor billing program.		
5	These assets have been in service for a long time and their condition may not be well known. Evaluation should take place and a determination made as to what may be needed.		

Asset inventory for Monterra

From Jocelyne Gray, SW Regional Engineer, DOH

Monterra, ID 55990		4/30/2021			Number of Units (Connections, ERUs etc.):		188	Total Equity:	\$106,787	Connection Fee:	\$568	Monthly Cost Per Unit to Reserves:		\$0.00	
											Annual \$\$ to Reserves:		\$0		
											Reserve Cash Applied:				
											Payments over 0 years:				
Current Year:	2021	Calculated Replacement Life					Calculated Equity						Replacement Cost		
Asset and Description RCAC V13	Install Date	Est. Effective Life	Condition Rating	Critical Number	Calc Remain Life	Original Cost	Book Value Original \$\$	Replacment Cost	Infl. Rate	Accum Loss of Value (Dep)	Debit and Grants	Equity	Cash Replace ?	Saving Acc't Interest	Future Cost
	Year	Years	1 to 10 Tab A	1 to 5 Tab A	Years	Cost \$	Value \$	Cost \$	%	Loss \$\$	Value \$	Value \$	X	%	Value \$
North Well - Well 2	1979	40	5	2	000	\$10,000	\$0	\$25,000		\$25,000		\$0			\$25,000
South Well - Well 1	1971	40	5	1	000	\$10,000	\$0	\$25,000		\$25,000		\$0			\$25,000
North Well Pump	1979	25	5	2	000	\$5,000	\$0	\$10,000		\$10,000		\$0			\$10,000
South Well Pump	1972	25	5	1	000	\$5,000	\$0	\$10,000		\$10,000		\$0			\$10,000
Storage Tank 75k gall	1984	60	5	4	11.5	\$75,000	\$14,375	\$150,000		\$121,250		\$28,750			\$150,000
Hydropneumatic Tanks, 750 gal each (2)	1984	40	2	3	2.9	\$1,800	\$128	\$8,500		\$7,894		\$606			\$8,500
Booster Pump 140 gpm	1984	40	2	1	2.9	\$500	\$36	\$1,000		\$929		\$71			\$1,000
Fire Pump 500 gpm	1984	25	2	4	000	\$1,500	\$0	\$3,000		\$3,000		\$0			\$3,000
Oilless air compressor for hydropneumatic tanks	2016	15	2	2	9.5	\$125	\$79	\$200		\$73		\$127			\$200
PVC Water Mains	1984	60	5	3	11.5	\$9,000	\$1,725	\$76,000		\$61,433		\$14,567			\$76,000
Source meter	1990	15	2	4	000	\$250	\$0	\$1,000		\$1,000		\$0			\$1,000
Service Meters 5/8"x3/4"	2016	15	1	4	10.0	\$2,500	\$1,667	\$94,000		\$31,333		\$62,667			\$94,000
Electrical controls and panel	1971	25	2	1	000	\$15,000	\$0	\$20,000		\$20,000		\$0			\$20,000

Note: NONE of these items are ranked at condition rating 10, which means replace. The highest is 5. Per the guidelines on P. 26, level 5 is moderate deterioration requiring preventive maintenance. For simplicity... all assets with a calculated remaining life of 0 were replaced purely to get a number to plug into Greg Hammond's model.

Cascadia System Comparison Model Results

Estimated Assumptions

Current		Peninsula	Island	Combined
Current Revenue (ignoring ancill.)	\$	188,676	\$ 421,462	\$ 610,138
GRC Additional Revenue	\$	103,682	\$ 221,848	\$ 325,530
Total Revenue	\$	292,358	\$ 643,310	\$ 935,668
Percent Increase		54.95%	52.64%	53.35%
Customer Count		661	1,113	1,774
Current Per Customer	\$	23.79	\$ 31.56	\$ 28.66
Additional Per Customer	\$	13.07	\$ 16.61	\$ 15.29
Total Per Customer	\$	36.86	\$ 48.17	\$ 43.95
Future				
Future Improvements (est.)	\$	1,700,000	\$ 500,000	\$ 2,200,000
Annual Depreciation	\$	50,490	\$ 14,850	\$ 65,340
Annual Return (9.45%)	\$	160,650	\$ 47,250	\$ 207,900
Total Future Rev. Req.	\$	503,498	\$ 705,410	\$ 1,208,908
Total Revenue Increase		72%	10%	29%
Avg. per Cust. after Future Improvements	\$	63.48	\$ 52.82	\$ 56.79
Future Rate Increase	\$	26.62	\$ 4.65	\$ 12.84

Model A

Accurate Assumptions Based on the WSP and DOH Asset Inventories

Current		Peninsula	Island	Combined
Current Revenue (ignoring ancill.)	\$	188,676	\$ 421,462	\$ 610,138
GRC Additional Revenue	\$	103,682	\$ 221,848	\$ 325,530
Total Revenue	\$	292,358	\$ 643,310	\$ 935,668
Percent Increase		54.95%	52.64%	53.35%
Customer Count		661	1,113	1,774
Current Per Customer	\$	23.79	\$ 31.56	\$ 28.66
Additional Per Customer	\$	13.07	\$ 16.61	\$ 15.29
Total Per Customer	\$	36.86	\$ 48.17	\$ 43.95
Future				
Future Improvements (est.)	\$	719,000	\$ 5,109,500	\$ 5,828,500
Annual Depreciation	\$	21,354	\$ 151,752	\$ 173,106
Annual Return (9.45%)	\$	67,946	\$ 482,848	\$ 550,793
Total Future Rev. Req.	\$	381,658	\$ 1,277,910	\$ 1,659,568
Total Revenue Increase		31%	99%	77%
Avg. per Cust. after Future Improvements	\$	48.12	\$ 95.68	\$ 77.96
Future Rate Increase	\$	11.26	\$ 47.51	\$ 34.01

Model B

Future Projections Using Two Sets of Assumptions (Models C & D)

The Water System Plan (WSP) contained medium range 2022-2030 investments totaling \$5,033,500. The total investment through 2030 was projected to be \$10,043,000. But Mr. Hammond's model was not designed to look forward 10 years. So for the last two comparisons, we used two sets of assumptions (C & D).

We utilized the projected investments in the WSP for Whidbey Island over the next 9 years.

To derive a number for the Peninsula, **all assets in both systems were replaced.**

Estates		Monterra	
Well 1	\$ 25,372	North Well - Well 2	\$ 25,000
Well 2	\$ 25,000	South Well - Well 1	\$ 25,000
Well 1 Pump	\$ 10,000	North Well Pump	\$ 10,000
Well 2 Pump	\$ 10,000	South Well Pump	\$ 10,000
Tank 1, 30kgal	\$ 70,592	Storage Tank 75k gall	\$ 150,000
Tank 2, 150kgal	\$ 403,175	Hydropneumatic Tanks, 750 gal each (2)	\$ 8,500
Small Hydropneumatic Tank, 940 gal	\$ 9,565	Booster Pump 140 gpm	\$ 1,000
Large Hydropneumatic Tank, 1300	\$ 11,313	Fire Pump 500 gpm	\$ 3,000
Booster Pump 1, 5 HP, 100 gpm	\$ 1,000	Oilless air compressor for hydropneumatic tanks	\$ 200
Booster Pump 2, 5 HP, 100 gpm	\$ 1,000	PVC Water Mains	\$ 76,000
Booster Pump 3, 5 HP, 100 gpm	\$ 1,000	Source meter	\$ 1,000
Fire Flow Pump, 10 HP, 250 gpm	\$ 3,000	Service Meters 5/8"x3/4"	\$ 94,000
Oilless air compressor for	\$ 200	Electrical controls and panel	\$ 20,000
4-inch PVC water mains (2000 linear	\$ 8,998		
6-inch PVC water mains (4000 linear	\$ 105,202		\$ 423,700
Well 1 source meter	\$ 450		
Well 2 source meter	\$ 450		
367 Service meters 5/8"x3/4"	\$ 231,186		
Electrical panel and controls	\$ 20,000	Estates	\$ 997,502
Generator	\$ 60,000	Monterra	\$ 423,700
	\$ 997,502	Total	\$ 1,421,202

Model (C): Replacing all assets on the Peninsula

Assumptions:

- 1) That Cascadia planned to invest \$5,109,500 in Whidbey Island systems in 2021.
- 2) That Cascadia replaced **all assets** in the Peninsula Estates and Monterra systems in 2021.

Current		Peninsula	Island	Combined
Current Revenue (ignoring ancill.)	\$	188,676	\$ 421,462	\$ 610,138
GRC Additional Revenue	\$	103,682	\$ 221,848	\$ 325,530
Total Revenue	\$	292,358	\$ 643,310	\$ 935,668
Percent Increase		54.95%	52.64%	53.35%
Customer Count		661	1,113	1,774
Current Per Customer	\$	23.79	\$ 31.56	\$ 28.66
Additional Per Customer	\$	13.07	\$ 16.61	\$ 15.29
Total Per Customer	\$	36.86	\$ 48.17	\$ 43.95
Future				
Future Improvements (est.)	\$	1,421,202	\$ 5,109,500	\$ 6,530,702
Annual Depreciation	\$	42,210	\$ 151,752	\$ 193,962
Annual Return (9.45%)	\$	134,304	\$ 482,848	\$ 617,151
Total Future Rev. Req.	\$	468,872	\$ 1,277,910	\$ 1,746,782
Total Revenue Increase		60%	99%	87%
Avg. per Cust. after Future Improvements	\$	59.11	\$ 95.68	\$ 82.05
Future Rate Increase	\$	22.25	\$ 47.51	\$ 38.10

Model C

Model (D): Maximum One Year Investment (to See the Results of the Model)

(the model does not allow the investment to be spread out over 10 years.)

Assumptions:

- 1) Although nearly impossible, Cascadia invests \$10,143,000 in Whidbey Island systems in 2021.
- 2) Just as unlikely, Cascadia invests \$1,421,202 in the Peninsula systems in 2021, replacing all assets.

Current		Peninsula	Island	Combined
	Current Revenue (ignoring ancill.)	\$ 188,676	\$ 421,462	\$ 610,138
	GRC Additional Revenue	\$ 103,682	\$ 221,848	\$ 325,530
	Total Revenue	\$ 292,358	\$ 643,310	\$ 935,668
	Percent Increase	54.95%	52.64%	53.35%
	Customer Count	661	1,113	1,774
	Current Per Customer	\$ 23.79	\$ 31.56	\$ 28.66
	Additional Per Customer	\$ 13.07	\$ 16.61	\$ 15.29
	Total Per Customer	\$ 36.86	\$ 48.17	\$ 43.95
Future				
	Future Improvements (est.)	\$ 1,421,202	\$ 10,143,000	\$ 11,564,202
	Annual Depreciation	\$ 42,210	\$ 301,247	\$ 343,457
	Annual Return (9.45%)	\$ 134,304	\$ 958,514	\$ 1,092,817
	Total Future Rev. Req.	\$ 468,872	\$ 1,903,071	\$ 2,371,942
	Total Revenue Increase	60%	196%	154%
	Avg. per Cust. after Future Improvements	\$ 59.11	\$ 142.49	\$ 111.42
	Future Rate Increase	\$ 22.25	\$ 94.32	\$ 67.47

Model D

Facts and Findings Based on the Contents of this Document

1. With accurate assumptions, the Cascadia System Comparison model provides proof that it is **NOT** in the best interest of Peninsula consumers to be combined/consolidated under one tariff rate with Cascadia's twelve water systems on Whidbey Island.
 - a. If consolidated under one rate with the Whidbey Island systems and asked *to pay our part of **their** investments* we will be paying 62% more. (48.12-77.96) (see Model B)
 - b. If consolidated under one rate with the Whidbey Island systems, we will see a 202% **increase** in our future rate. (11.26-34.01) (see Model B)
2. Model A, as presented to the Commissioners, contains assumptions that to our knowledge, do not have any supporting details. We requested the supporting details more than once.
3. Assumptions for Model B presented in this document for Whidbey Island systems come from table 3.25 of Cascadia's own forward-looking planning document, the Water System Plan (WSP) of 2020.
4. Assumptions for Model B presented in this document for the two Peninsula systems come from the DOH's Asset Inventory forms.
5. If consolidated under one rate, Peninsula consumers will be paying for the improvements on Whidbey Island that have been planned for over three years. Yet not one person from the UTC, Cascadia, or NW Natural has mentioned these significant investments as detailed in the WSP. Those investments will drive additional rate increases.
6. If we replace ALL of the assets in the Estates and Monterra facilities for \$1,421,202, and invest \$5,109,500 in Whidbey Island in 2021, Model C shows it is **NOT** in our best interest of Peninsula consumers to be combined/consolidated under one tariff rate with Whidbey Island's twelve water systems.
7. The investment projection for Whidbey Island is \$10,143,000 over the next 9 years. If we replace ALL of the assets in the Estates and Monterra facilities for \$1,421,202, and invest \$10,143,000 in the Island systems in one year, Model D shows it is still **NOT** in the best interest of Peninsula consumers to be combined/consolidated under one rate with Whidbey Island's twelve water systems.
8. Not one model with the accurate assumptions derived from the WSP and the DOH Asset Inventories shows consolidation under a single tariff rate to be good for Peninsula consumers.
9. If all twelve water systems on Whidbey Island are combined with the two on the Peninsula, we will lose transparency to the supporting data we need to do comparisons such as this one.