

**BEFORE THE WASHINGTON
UTILITIES & TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Complainant,

v.

CASCADIA WATER, LLC

Respondent.

DOCKET UW-240151

**RESPONSE TESTIMONY OF SCOTT DUREN
ON BEHALF OF THE
WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL
PUBLIC COUNSEL UNIT**

EXHIBIT SD-1CT

November 20, 2024

Shaded Information is Designated as Confidential per WAC 480-07-160

RESPONSE TESTIMONY OF SCOTT DUREN

DOCKET UW-240151

EXHIBIT SD-1CT

TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION & SUMMARY.....	1
II. ANALYSIS OF CASCADIA'S PROJECTS	3

RESPONSE TESTIMONY OF SCOTT DUREN

DOCKET UW-240151

EXHIBIT SD-1CT

EXHIBITS LIST

Exhibit SD-2- List of Documents

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

I. INTRODUCTION & SUMMARY

Q. Please state your name and business address.

A. My name is Scott Duren and my business address is 4640 S Macadam Ave., Suite 110, Portland, Oregon 97239.

Q. By whom are you employed and in what capacity?

A. I am a Vice President with Water Systems Consulting.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Public Counsel Unit of the Washington Attorney General's Office (Public Counsel).

Q. Please describe your professional qualifications.

A. I am a registered Professional Engineer in the State of Washington (License #52308) as well as Oregon and California. I have been a consulting engineer for over 22 years with a focus on planning and design of public water and wastewater systems in Washington, Oregon, California, and Florida. In my current role at Water Systems Consulting, Inc., I oversee the operations of our Pacific Northwest Region which currently consists of eight employees in our Portland, Oregon office and one employee in Seattle, Washington. I am currently the Engineer of Record and Project Manager on multiple ongoing water planning and improvement projects that include water system plans, storage reservoir improvements, booster pump station improvements, water transmission and distribution main replacements, water supply well rehabilitation and improvements, and groundwater treatment facility improvements.

1 **Q. What exhibits are you sponsoring in this proceeding?**

2 A. I am sponsoring Exhibit SD-2 (a list of reviewed documents).

3 **Q. Please describe the purpose of your testimony.**

4 A. My testimony provides a review of 14 projects submitted as part of a rate case by
5 Cascadia Water to justify a revenue requirement increase. My team and I have
6 reviewed information provided for each of the following projects:

Identifier	Project Title
Project #1	Waterline Replacement & Consolidation for Del Bay System
Project #2	Distribution System Loop at Beechwood Drive for CAL Waterworks System
Project #3	Reservoir Replacement & Booster Pump Improvements for CAL Waterworks System
Project #4	Watermain Replacement & Mutiny Lane Pressure Reducing Valve for W&B Waterworks #1 System
Project #5	Mutiny Bay Road Pressure Reducing Valve Replacement for W&B Waterworks #1 System
Project #6	Disinfection System for Rolf Bruun System
Project #7	Reservoir, Booster Pumps & Manganese Treatment for Estates System
Project #8	Reservoir, Pumphouse, Treatment and Water Main Replacement for W&B Waterworks #1 System
Project #9	Source Development for Sea View System
Project #10	Disinfection System for Diamond Point System
Project #11	Chlorination System for Agate West System
Project #12	Generators for Multiple Systems
Project #13	SCADA Remote Monitoring System for Multiple Systems
Project #14	Coordinated Water System Plan for Multiple Systems

7 **Q. Please describe the nature of your review of each project.**

8 A. A description of each project was developed based on a review of documents
9 provided by Public Counsel. These documents included testimony, system

1 planning documents, and other relevant materials. My team and I have reviewed
2 each project to provide an opinion as to whether the scope, timing, and nature of
3 the improvements associated with each project were reasonable when compared
4 against the requirements included in the Washington State Department of Health
5 (DOH) Water System Design Manual and were consistent with industry practices
6 for water systems of similar size.

7 **II. ANALYSIS OF CASCADIA'S PROJECTS**

8 **Q. Were any of the projects determined to be unreasonable or inconsistent with**
9 **industry practices?**

10 A. There were several projects included in the rate case that may include components
11 that are not necessarily required per the Washington State DOH Water System
12 Design Manual under current conditions. For projects #3, #8, and #12, additional
13 information is necessary to determine the intent and priority of each component.
14 Based on the documentation provided so far, however, Cascadia has failed to
15 demonstrate that these projects were necessary for the provision of safe and
16 reliable service given the overall cost impact of Cascadia's water system
17 improvements.

18 **Q. When upgrading water systems, it is best practice to identify and prioritize**
19 **improvements?**

20 A. It is a best practice to provide prioritized recommendations for capital
21 improvements as part of a water system plan, particularly for systems that require
22 more improvements than the current enterprise fund can pay for without either
23 raising rates or securing outside funding. Some utilities prefer to develop a capital

1 improvement plan that assigns specific projects and the respective costs to each
2 fiscal year over the planning period covered by the system plan. Others prefer to
3 assign projects to “buckets” such as short, medium, and long term or time
4 intervals such as Years 1–5, Years 6–10, etc. In the last three years there have
5 been significant and somewhat unpredictable increases in costs for water system
6 equipment such as generators, ductile iron pipe fittings, and large isolation valves.
7 To allow more flexibility, we have seen a more recent trend towards assigning
8 individual projects a prioritization score based on weighted criteria that is
9 important to the water system, giving the utility the ability to defensibly defer
10 lower-priority projects as necessary to avoid spikes in capital spending that causes
11 financial issues

12 **Q. If a water system decides to implement a medium-or long-term priority**
13 **before planned, what level of documentation would reasonable water system**
14 **management create to justify acceleration of priorities?**

15 A. The level of documentation to justify acceleration typically increases in relation to
16 the financial consequences. Accelerating a capital improvement project to take
17 advantage of an opportunity to reduce construction costs might require very little
18 documentation if it will result in overall cost savings without creating a short-term
19 burden on financing. A common example would be installing a replacement water
20 main ahead of schedule to take advantage of savings associated with completing
21 the work during a road improvement project to minimize pavement repair costs.
22 Accelerating the timing of a project often means that another project must be
23 delayed, so a typical level of documentation would include a clear statement of

1 the benefits and trade-offs associated with the acceleration.

2 Another common example for acceleration of priorities is when the risk
3 profile for a project changes. A buried pipe could be exposed for a routine
4 connection only to find unexpected corrosion that indicates a much higher risk of
5 failure, potential damages caused by a pipe main break, and higher costs due to
6 emergency repair conditions as compared to a planned repair. Accelerating a
7 project is often justified by showing the benefits in terms of reducing risk
8 exposure.

9 When accelerating a project will require a significant rate increase, I
10 would typically expect documentation presented in a meeting that is open to the
11 public that makes a business case for why the additional expenditure is in the best
12 interest of the utility and its stated goals and levels of service.

13 **Q. Are budgetary concerns typical in water system planning?**

14 A. Yes. Unfortunately, nearly ever water utility is facing budgetary challenges in the
15 face of aging infrastructure, increasing costs, security threats, and new
16 regulations. A balanced approach to raising rates and prioritizing investments is a
17 characteristic of Effective Utility Management. Overspending can be just as
18 damaging as underspending. Many utilities that do not raise rates for long periods
19 of time and defer maintenance investments in their systems are put in a position
20 where a sharp increase in spending are necessary to meet the minimum levels of
21 service and severe rate increases, or taking on long-term debt, is required to fund
22 the improvements.

1 **Q. How does a water system balance budgetary constraints with maintaining**
2 **reliable and safe access to water?**

3 A. A well prepared water system plan is a key component to balancing budgetary
4 constraints with meeting water system goals for reliable, safe, and affordable
5 water for all customers. A well-prepared plan includes a financial analysis to
6 predict large expenditures many years in advance, allowing utilities to gradually
7 raise rates and “pay as you go”. A plan can also identify strategic investments or
8 opportunities that require investment, sometimes requiring taking on external
9 debt, but which can be justified in terms of long-term savings or achievement of
10 other significant goals. Engagement and involvement of ratepayers can be a key
11 component for communicating the needs for investment so that customers
12 understand what they are getting in exchange for increased rates.

13 **Q. What kind of documentation would water system management be expected**
14 **to generate if reliable and safe access to water justified breaking budgetary**
15 **constraints?**

16 A. A financial analysis is commonly generated if short-term budgetary constraints
17 must be exceeded. The financial analysis would be expected to show how a short-
18 term investment will result in long-term savings, efficiencies, or increased
19 revenues that eventually will “pay back” the cost. If a rate increase is needed to
20 increase a level of service, such as improved water quality or reliability that goes
21 beyond minimum local, state, or federal requirements, communications to
22 ratepayers is often necessary so that the benefits that will be realized from the
23 investment are well understood and supported.

1 **Q. Are you able to determine, based on the information provided, whether**
2 **Cascadia engaged in cost-benefit analysis to justify rapid expansion and its**
3 **corresponding impact on rates?**

4 A. No. There is not enough information provided to determine if the costs and
5 benefits related to the timing of project implementation was considered. It does
6 appear that most projects considered in the Unified System Plan included a
7 comparison of alternatives before deciding on the preferred solution, and that
8 project prioritization and timing were considered. Some projects appear to have
9 been accelerated from the stated prioritization and timing in the Unified System
10 Plan, but there is no explanation as to why. Without an explanation for why
11 certain medium-term projects had to be accelerated, Cascadia Water has failed to
12 demonstrate why these projects were necessary now for access to safe and reliable
13 water.

14 **Q. Turning now to specific projects, please describe what is included in Project**
15 **#3.**

16 A. Project #3 included a Reservoir Replacement and Booster Pump Improvements
17 for the CAL Waterworks system. The project included demolishing an existing
18 41,000-gallon water storage reservoir constructed in 1960 with a new 79,000-
19 gallon reinforced concrete reservoir and demolishing an existing pumphouse
20 constructed in 1980 with a new reinforced concrete pumphouse and two new
21 booster pumps. The project also included improvements to the water distribution
22 system including new water mains ranging in diameter from 2- to 8-inch and
23 associated isolation valves, fire hydrants, services, and blowoff assemblies. The

1 Unified Water System Plan estimated the project cost at \$ [REDACTED] however, the
2 majority of the project was completed [REDACTED] at a cost of \$ [REDACTED].

3 **Q. What specific questions arose regarding the justification for the project?**

4 A. There are two specific questions related to Project #3:

5 1. Justification for Reservoir Size. The Unified Water System Plan calls
6 for an increase in water storage reservoir size to 60,000 gallons,
7 however, the new reservoir is described as 79,000 gallons. An
8 explanation of the increase in size beyond what was recommended in
9 the Unified Water System Plan is necessary to understand if the
10 increase is justified based on existing and future conditions.

11 2. Justification for Booster Pump Upsizing. The Unified Water System
12 Plan indicates that adding a loop to the distribution system, which is
13 the work included in Project #2, would sufficiently address pressure
14 deficiencies in the distribution system. Although that project was
15 completed, the booster pumps were also increased in size with the
16 lower zone pumps increasing from [REDACTED] and the
17 upper zone pumps increasing from [REDACTED]. Additional
18 information to indicate the sizing criteria of the booster pumps is
19 necessary to determine if the upsizing was justified following the
20 looping of the distribution system and given the number of
21 connections within the system.

22 **Q. Without documentation explaining the size of the upsizing of the reservoir**
23 **and the upsizing of the booster pumps, has Cascadia established that these**

1 **improvements were reasonably necessary?**

2 A. No. The documentation in the Unified System Plan does establish the need for a
3 reservoir replacement, but it does not justify the size of the reservoir installed.
4 The need for the upsized booster pumps is not established.

5 **Q. Describe what is included in Project #8.**

6 A. Project #8 included the installation of a new concrete storage reservoir, an
7 iron/manganese/arsenic treatment system, a pumphouse to house the treatment
8 system, and replacement of existing water mains. The new concrete storage
9 reservoir replaced two existing concrete storage reservoirs that had been identified
10 as contributing to excessive water losses in the system as well as to provide
11 adequate capacity to the current number of connections. [REDACTED]

12 [REDACTED].

13 **Q. What specific questions arose regarding the justification for the project?**

14 A. An itemized scope of improvements was not provided for the project, yet there
15 was an increase in cost from an estimated budget of \$ [REDACTED] in the Unified
16 Water System Plan to the construction contract value of [REDACTED]. Based upon
17 the descriptions, it appears that some of the items that were included in the
18 construction scope included lower priority improvements identified in the Unified
19 Water System Plan. [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]. A detailed

23 description of each of the project components, including itemized construction

1 costs and a justification for why each element was necessary, would be helpful in
2 the review of this project.

3 **Q. Given that the [REDACTED]**
4 **[REDACTED], what kind of**
5 **documentation would you expect to see for adding a booster pump or other**
6 **pressurization equipment?**

7 A. It could be that during the design of the project it was determined that
8 pressurization would still be necessary for some services. I would expect that this
9 would likely be documented in a preliminary design report or in communications
10 between the project designer and Cascadia Water. The hydraulic requirements for
11 the pump would likely be documented within project drawings and/or technical
12 specifications.

13 **Q. Without documentation and itemized construction costs, it is possible to**
14 **determine if these improvements were necessary?**

15 A. No. The project justification described in the Unified System Plan does not
16 provide enough detail regarding the various project elements and the construction
17 contract does not provide enough detail to determine if cost increases were due to
18 an expanded scope of the project or increases in material and equipment costs that
19 were not foreseen at the time of the system plan development.

20 **Q. Describe what is included in Project #12.**

21 A. Standby generators were purchased and installed at each water system source that
22 relies on electrical power. The generators purchased ranged in costs from \$ [REDACTED]
23 to \$ [REDACTED] each, varying in accordance with the required size and electrical

1 requirements for each location. Generators were purchased for the following
2 locations:

- 3 • Island Lake
- 4 • Diamond Cove
- 5 • Lynch Cove
- 6 • Discovery Bay
- 7 • Monterra
- 8 • Estates
- 9 • TEL 6
- 10 • Bacus
- 11 • Cedarhearth
- 12 • Lake Alyson
- 13 • Silver Lake
- 14 • TEL 1
- 15 • TEL 3
- 16 • Unidentified 20-kilowatt generators (total of 2)
- 17 • TEL 11

18 **Q. What specific questions arose regarding the justification for the project?**

19 A. Including standby generators at sources of supply, particularly groundwater wells,
20 has become an industry standard in the Pacific Northwest, particularly as the
21 seismic vulnerabilities of the region have been identified and the need for resilient
22 infrastructure in the aftermath of a natural disaster has become better understood.
23 There are two questions that arose from the review of this project.

24 First, although generators are recommended in the DOH Water System
25 Design Manual for reducing the required standby storage volume for systems with
26 two or more sources, it is not clear if the installation of generators within the
27 systems that meet this description (W&B Waterworks, Sea View, CAL
28 Waterworks, TEL 1/3/4, and Silver Lake) will be able to take advantage of the
29 resulting reduction in standby storage volume required. In particular, it is not clear
30 if the new storage volume provided through reservoir replacements in the CAL

1 and W&B Waterworks system took advantage of the standby storage volume
2 reduction allowed with the addition of generators.

3 Second, generators were installed across the system, but there is
4 insufficient information to gauge the priority and vulnerability of each system.
5 Identification of the individual water source capacity associated with each
6 generator and relative to the total system demands would be helpful in assessing
7 the justification for installation of all of the generators within this rate case, as
8 opposed to potential phased implementation over time based on priority.

9 **Q. Would it have been possible, consistent with safety, to have developed a**
10 **phased implementation plan for adding generators to mitigate rate shock?**

11 A. Some of the wells have been in operation for many years without standby
12 generators, and the DOH WS Design Manual does not mandate generators for all
13 sources, so it does seem that a phased implementation plan could have been
14 developed to mitigate rate shock.

15 **Q. Based on the information you currently have, are you able to determine**
16 **whether installation of generators across the system is a necessity?**

17 A. No. In general, the addition of generators can be a good investment to improve the
18 reliability and resiliency of a water system, but it is not likely a necessity.

19 **Q. You have concluded that at least three projects have insufficient**
20 **documentation to demonstrate that the projects were necessary. If provided**
21 **additional information, is it possible that your opinion may change?**

22 A. Yes, it is possible that with additional information our opinion could change.

1 **Q. Does that conclude your testimony?**

2 **A. Yes, it does.**