



# Board Briefing Book

January 2024

Water for today...  
and tomorrow



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# OVERVIEW OF CASCADE

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## I. BOARD OF DIRECTORS

**Dave Hamilton**  
Councilmember,  
Bellevue



**Penny Sweet**  
Councilmember,  
Kirkland



**Mary Lou Pauly**  
Mayor,  
Issaquah



**Angela Birney**  
Mayor,  
Redmond



**Lloyd Warren**  
Commissioner,  
Sammamish Plateau Water



**Jon Ault**  
President,  
Skyway Water & Sewer District



**Thomas McLeod**  
Mayor,  
Tukwila

### Alternate Board Members

**John Stokes**, Bellevue  
**Russell Joe**, Issaquah  
**Jon Pascal**, Kirkland  
**Angie Nuevacamina**, Redmond

**Ryika Hooshangi**, Sammamish Plateau Water  
**C. Gary Schulz**, Skyway Water & Sewer District  
**Dennis Martinez**, Tukwila

## II. GOVERNANCE STRUCTURE

### Board of Directors

Cascade Water Alliance (Cascade) is governed by a **Board of Directors** consisting of representatives appointed by resolution from each member's legislative authority. Members may similarly appoint Alternate Board members. Board members and Alternate Board members must be elected officials.

The Board appoints officers at its annual meeting, held in February. Officers serve for two years until the next annual meeting in an even-numbered year. The Officers constitute the **Executive Committee** of the Board and are responsible for oversight of emergencies and emerging issues, personnel matters, and other issues as assigned by the Board. The Executive Committee meets on an as-needed basis.

The Board meets monthly to review issues and take action on Cascade matters. A majority (representing members both by number and by demand shares) of Board members (or Alternates) constitutes a quorum for the transaction of any business at any Board meeting, such as:

- Changes to Cascade's Code
- Adoption of budget and rates and transfers between the operating and capital budgets
- Creating or eliminating positions
- Policy changes to the Human Resources Policies and Procedures Manual
- Real property sales and transfers
- Expenses and loans greater than \$50,000 and sponsorships greater than \$1,000
- Adoption of policy positions to guide Cascade's activities and advocacy

Voting is primarily by "dual majority" voting, which means that two calculations occur for each vote (the exceptions are certain actions are required to have a "65% dual majority" vote). Dual majority approval occurs on the basis of a simple majority of all members (one vote per member), together with a simple majority of all members based each member's weighted vote. The weighted vote is determined by a member's demand share, which is essentially the current share of water being used by the member.

### Standing Committees

The three standing committees each meet monthly. Committee chairs and members are appointed by the Board at its annual meeting in February.

1. The **Public Affairs Committee** considers and makes recommendations to the Board on matters relating to general outreach, public information and communication programs, community outreach and relationships, public relations, intergovernmental affairs, state and federal affairs, and membership.
2. The **Resource Management Committee** considers and makes recommendations to the Board on matters relating to planning and development of water supply resources, operations and maintenance, water quality, and water conservation.
3. The **Finance and Management Committee** is responsible for the ongoing oversight of the administrative, business systems, and other management and financial affairs of Cascade. It also considers and makes recommendations to the Board on matters relating to the oversight of the financial affairs of Cascade, including to ensure an outside audit is conducted annually.

### III. 2024 PRIORITY ISSUES

The items below are several of Cascade's priorities in 2024 that will be brought before the Board for Board action, discussion, and/or information sharing.

- **Water Supply Contract Negotiations.** In June 2021, the Board directed Cascade to pursue supply contracts with Seattle and Tacoma as a means to defer construction of the Lake Tapps Reservoir as a source of drinking water. Both wholesale providers have proposed terms that would cost-effectively defer developing the reservoir. In 2024, the Board will continue to receive briefings and will provide direction to staff on which path to pursue.
- **Sumner White River Restoration Project.** In 2023 Cascade continued to negotiate with Sumner on the agreements necessary to implement the Sumner White River Restoration project. (Earlier in the year, BNSF terminated its portion of the joint project.) At the end of the year, Cascade presented its final offer to Sumner for fair compensation in exchange for use of Cascade's facilities. The Board will receive additional briefings in 2024 and likely take action by mid-year.
- **Headworks Intake Modification project.** In 2018, the US Army Corps of Engineers began construction of a new trap-and-haul facility – the Mud Mountain Dam Fish Passage Project – the largest facility of its kind in the US. The third and final phase of this project is scheduled to start in fall 2024. It includes Cascade's Headworks Intake Modifications project which will improve how water is diverted from the White River to the Lake Tapps Reservoir.
- **Transmission and Supply Plan.** Once the Board provides direction to Cascade on whether to pursue a contract extension with Seattle or a new supply contract with Tacoma, staff will resume work on the Transmission and Supply Plan (TSP). The TSP is Cascade's water system plan which is updated every ten years and will include an updated long-term demand forecast, conservation potential assessment, and information on potential climate changes impacts on water supply and demand.
- **Climate Change Impacts Analysis.** By mid-year, Cascade's consultants will complete their analyses of the impacts that climate change may have on the White River-Lake Tapps Reservoir system. The analyses will identify a variety of possible climate change impacts, including changes in glacial melt, temperature, precipitation, instream flows, recreational levels reliability, and firm yield.
- **Drinking Water Quality Management Plan.** In 2024, Cascade's consultants will complete a plan that identifies the highest priority and most cost-effective strategies and actions to protect the Lake Tapps Reservoir's water quality for future municipal use. The consultant will apply the Board-approved *Drinking Water Quality Policy Framework* to each recommendation, to ensure their recommendations meet the Board's criteria.
- **2025-2026 Rates and Budget.** Staff will develop the biennial budget and rate proposals for the Board's review and consideration. The Board typically adopts the budget and rate increases in July or September.

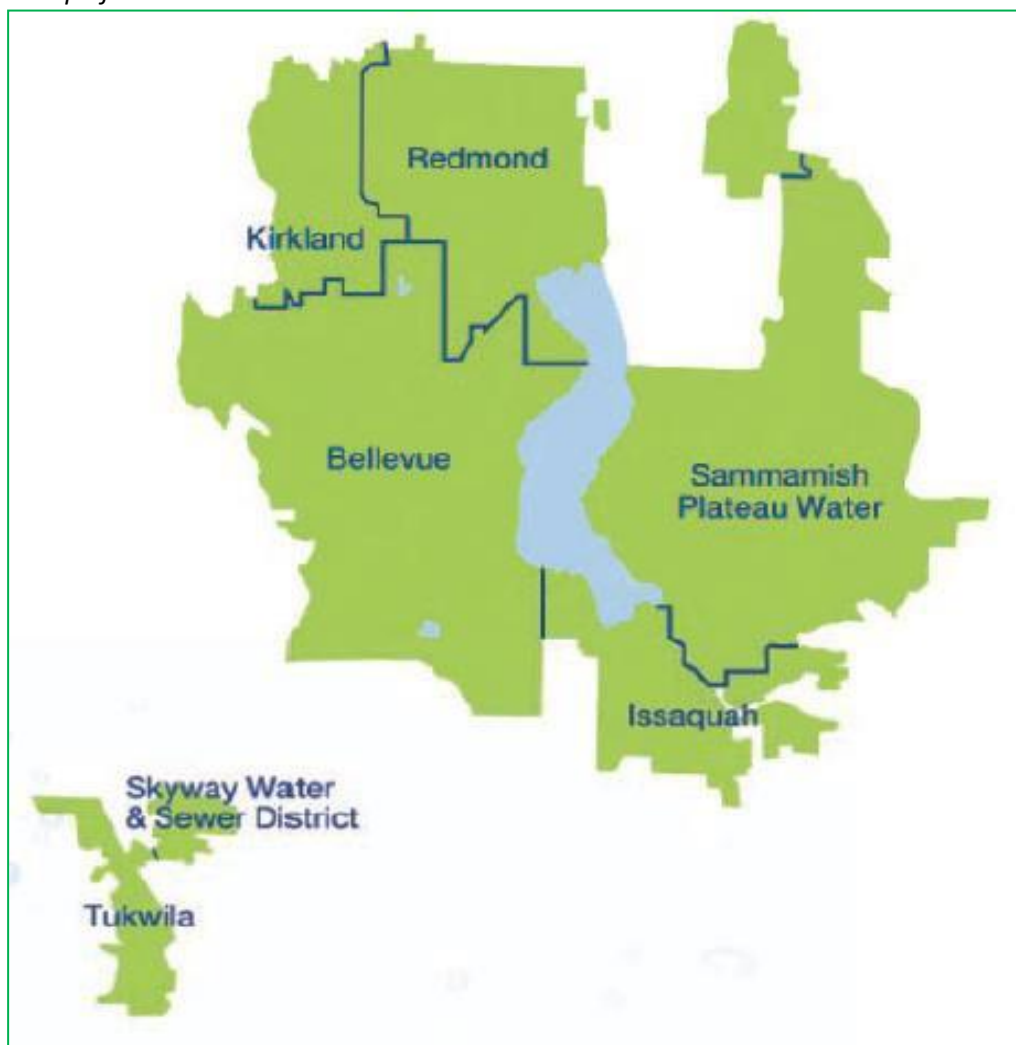
## IV. MEMBER AGENCIES

Cascade is a municipal corporation comprised of five member cities and two water and sewer districts<sup>1</sup>. Cascade was established in 1999 to ensure safe, clean, reliable water supply for its members. Today Cascade provides water to 380,000 people and more than 20,000 businesses in a cost-effective and environmentally responsible manner.

Cascade members:

- Bellevue
- Issaquah
- Kirkland
- Redmond
- Sammamish Plateau Water and Sewer District
- Skyway Water & Sewer District
- Tukwila

*Map of Cascade's Service Area*



<sup>1</sup> Covington was an original member in 1999 but withdrew from Cascade in 2012.

## V. CASCADE'S HISTORY AT A GLANCE

In 1999, several cities and water districts in the eastside of King County joined together to create Cascade via an interlocal contract. The interlocal contract was amended in 2004 and superseded by a Joint Municipal Utilities Services Agreement (JMUSA) in 2012, at which time Cascade became a municipal corporation. Cascade's primary mission was to acquire water to meet the current and future demand of its members and it was given the responsibility to:

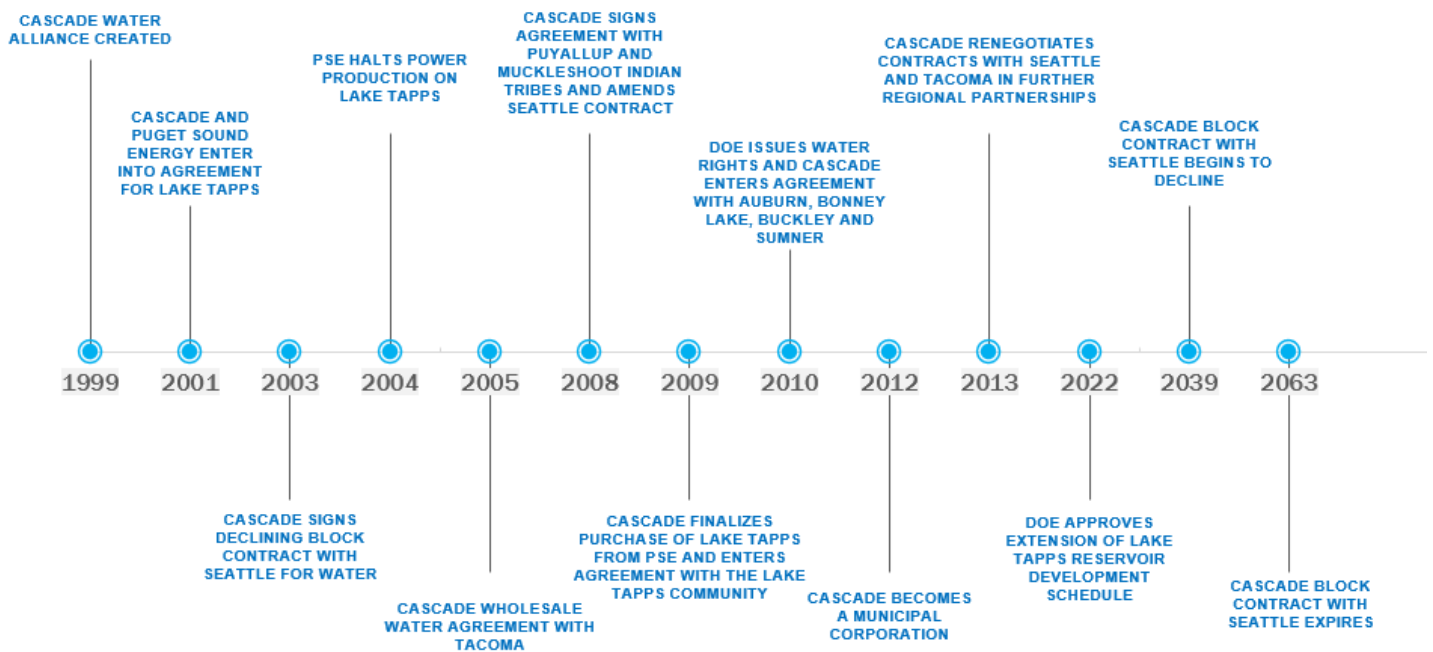
- Purchase wholesale water from other regional suppliers
- Coordinate conservation and supply management
- Acquire, construct, and manage water supply infrastructure
- Foster regional water planning that provides adequate water for both people and fish

Four main sources of water supply are described in Cascade's 2012 water system plan, which is entitled the Transmission and Supply Plan (TSP):

- The block contract with Seattle
- Purchase of water from Tacoma
- Development of the Lake Tapps Reservoir as a municipal water supply source
- Independent water supplies

Cascade's water supply plan also heavily relies on cost-effective conservation efforts to reduce regional demand and the development of new water sources. More details about Cascade's past and present management of its water supply and key agreements are provided later in this document.

A summarized chronology of Cascade's history is shown below.



## VI. CASCADE MODEL

The “Cascade model” is a set of principles that guide the organization. Many of these principles date back to Cascade’s creation in 1999 while others were added later.

1. Creates a voice and vote on the future of water supply for Cascade members in order to control their own destiny.
2. Ensures long-term certainty of sufficient water supply while maintaining flexibility to choose the best source of that supply in the future.
3. Provides fair treatment of all members. There should be no geographic advantage or disadvantage, based on proximity to the water supply source.
4. Equitable voting structure for all members whether large or small. This resulted in the development of a dual majority voting system.
5. Growth pays for growth. This resulted in the development of the Regional Capital Facilities Charge (RCFC) for new development.
6. Financial strength, stability, and transparency.
7. No perverse incentives for members on the utilization of Cascade water. There should be open access to the Cascade water supply.
8. A municipal corporation in statute with the ability to have the flexibility of utilizing both city and/or special district authorities.
9. Open to new members with a fair and equitable entry price.
10. A staff which is lean, flexible (in order to be adaptable to changing and diverse work assignments) and with compensation comparable with Seattle and other large utilities to enable the recruitment and retention of the most competitive regional and/or national talent.
11. A regional leader in issues the Board determines are priorities and an entity that Seattle, Tacoma, Everett, and other utilities and jurisdictions would look to provide leadership and direction.
12. Member staff engagement in the decisions to be presented to the Board with final action made by Board members.



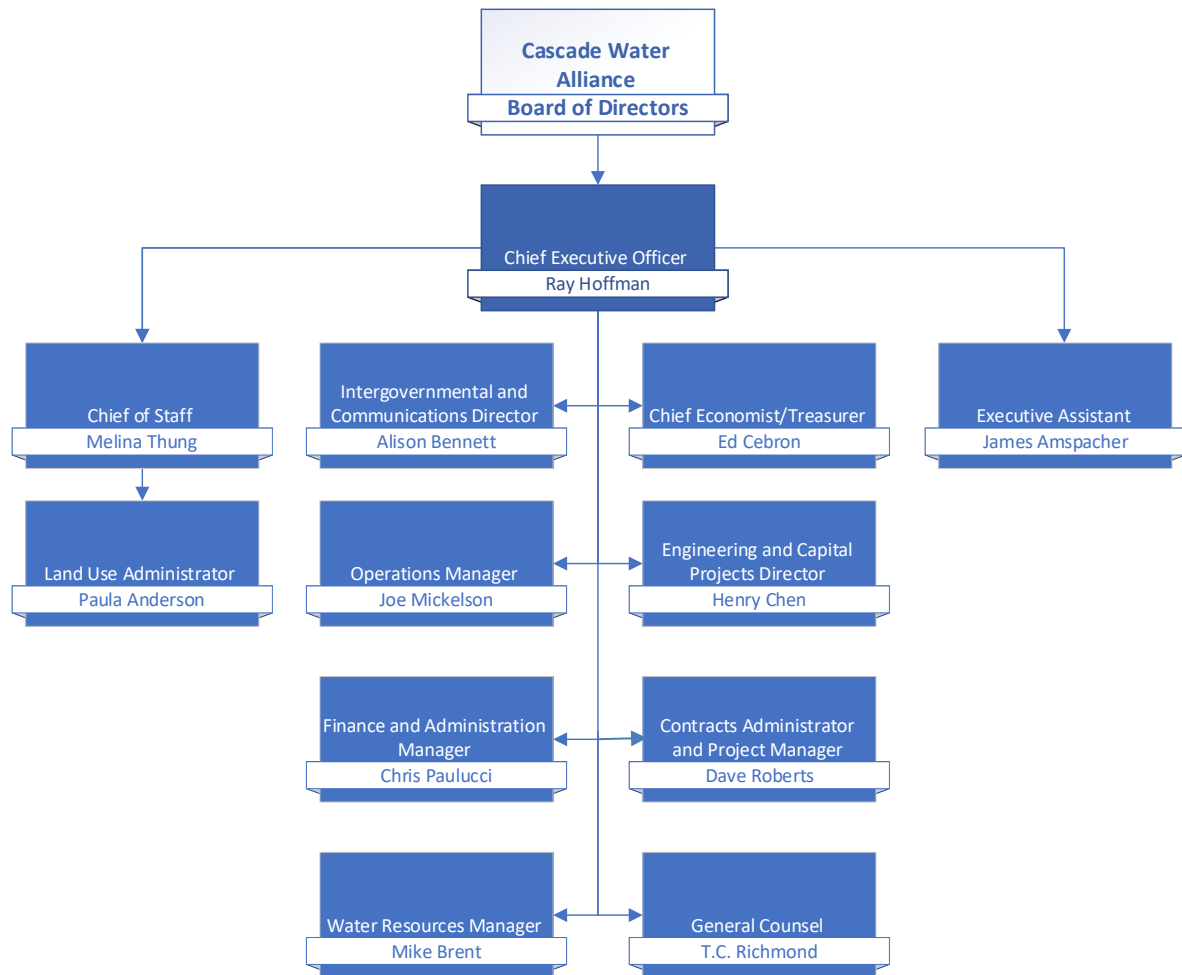
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# CASCADE'S WORK

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## I. CASCADE STAFF

The Cascade model calls for a lean and flexible staffing structure. As such, Cascade currently has 12.0 permanent employees, or 10.8 full-time-equivalent (FTEs) positions, which is lower than the authorized 12.0 FTEs. Three employees currently work less than full-time.



To help sustain its low staffing levels, Cascade contracts out certain aspects of its work that are typically housed internally in other utilities:

- In December 2011, the Board authorized Cascade to execute a five-year agreement with **Veolia Water**, with the option of two five-year terms, to provide operations and maintenance (O&M) services for the entire White River-Lake Tapps Reservoir system. In 2021, the Board approved the second five-year term to expire at the end of 2026. Veolia's staff of eight provides an entire suite of O&M services and 24/7 coverage.
- Currently, the Bellevue-Issaquah Pipeline (BIP) is the only infrastructure Cascade owns that is used to deliver municipal water supply. Cascade contracts out the operation and maintenance of the BIP to the **Bellevue and Sammamish Plateau Water**. Bellevue maintains about 1.1 miles of the BIP and Sammamish Plateau Water maintains about 5.9 miles.
- **VanNess Feldman** (VNF) is Cascade's general legal counsel. VNF provides Cascade with advice on a variety of legal matters, including but not limited to water rights, contract negotiations, procurement, legislation, regulations, property management, permitting, and dispute resolution. VNF attorneys also assist individual member agencies as needed.
- **TeamLogicIT** has provided IT support for Cascade for the last four years for both the Bellevue office and White River-Lake Tapps Reservoir facilities. They provide a host of services including, but not limited to, managed IT services, cloud back-ups, cybersecurity and compliance, software and hardware upgrades, and equipment replacement.

## II. CASCADE’S MAIN BODIES OF WORK

As described in the *Overview of Cascade*, Cascade purchased the Lake Tapps Reservoir from PSE in 2009 as a future source of municipal drinking water, providing its members with supply certainty and flexibility. Part of Cascade’s current work directly supports future construction of the municipal supply, such as the Water Supply Development Fund and contract negotiations. However, the bulk of Cascade’s current work focuses on effectively managing its assets, finances, and stakeholder and partner relationships to uphold Cascade’s water right permits, other regulatory requirements, and agreements until the time comes to develop the Lake Tapps Reservoir for municipal use or secure other sources for long-term water supply.

Program	2022 Budget	2023 Budget	2024 Budget
Administration	\$3,858,337	\$3,915,869	\$3,808,870
Conservation	\$839,874	\$798,115	\$805,754
Operations	\$5,682,685	\$6,158,568	\$6,434,135
Debt Service	\$9,779,981	\$9,199,941	\$10,795,666
Water Payments	\$22,730,886	\$23,969,287	\$24,402,498
Capital Improvement (CIP)	\$9,135,463	\$10,519,972	\$13,431,872
<b>TOTAL BUDGET</b>	<b>\$52,027,226</b>	<b>\$54,561,752</b>	<b>\$59,678,795</b>

Using Cascade’s budget above, the following table provides a high level summary of the main bodies of work Cascade staff performs.

ADMINISTRATION	
Administration, Finance and Economics	<ul style="list-style-type: none"> <li>Financial management – rates, budgeting, accounting, audits, insurance</li> <li>Economic analysis</li> <li>Personnel and payroll management</li> </ul>
Intergovernmental and Communications	<ul style="list-style-type: none"> <li>Lake Tapps and member communications and outreach</li> <li>Legislative and stakeholder outreach</li> <li>Media, advertising, social media</li> </ul>
Planning	<ul style="list-style-type: none"> <li>Long-term planning – negotiations, Strategic Plan, Transmission &amp; Supply Plan</li> <li>Program planning – climate change, drinking water quality, resiliency</li> </ul>
CONSERVATION	
	<ul style="list-style-type: none"> <li>Water education for youth and adults</li> <li>Community engagement</li> <li>Irrigation efficiency and other programs to enable people to reduce water use</li> </ul>
OPERATIONS & CAPITAL IMPROVEMENT	
	<ul style="list-style-type: none"> <li>Water right permits and agreements – management of lake levels, minimum instream flows, ramping rates, and maximum diversion rates</li> <li>Operation, maintenance and capital improvement of the White River-Lake Tapps Reservoir assets and infrastructure</li> <li>White River-Lake Tapps water quality management and protection</li> <li>Operations and maintenance of the Bellevue-Issaquah Pipeline (BIP)</li> <li>Property management – licenses, easements, development issues, etc.</li> </ul>

### III. WATER SUPPLY MANAGEMENT – PAST AND PRESENT

Cascade’s mission is to provide safe, clean and reliable water to its members in a cost-effective and environmentally responsible way. This section describes Cascade’s management of water supply in the past and present.

#### A. Cascade’s Past

##### Cascade’s First Decade: Securing Water Supply

Cascade Water Alliance was created April 1, 1999, with members Bellevue, Kirkland, Issaquah, Redmond, Tukwila, Sammamish Plateau Water and Sewer District, Skyway Water & Sewer District, and Covington Water District<sup>1</sup> as a watershed management partnership. The cities and districts formed Cascade to ensure a voice and a vote in future water decisions. This followed indications from the Seattle that suburban utilities might not receive future water supplies or would be required to bear the full cost of any new water supply development.

Cascade’s number one mission was to acquire water to meet the current and future demand of its members. The demand forecast in Cascade’s first Transmission and Supply Plan (TSP) in 2004 used a method of combining the demands provided by individual members. Like other water utilities in the region, over the course of time these demand estimates proved to be greater than actual demand.

The initial demand estimate led to a series of decisions to acquire long-term supply:

- Seattle Contract – In 2003, Cascade signed a “take or pay” declining block agreement with Seattle for 30.3 MGD of water through 2024. The take-or-pay aspect meant Cascade paid Seattle regardless of the amount of water used. In 2008 the agreement was amended to add another 3 MGD from 2009-2017 and an additional 2 MGD from 2018-2023.
- Tacoma Contract – In 2005, Cascade signed an agreement with Tacoma which included a progressive take-or-pay for 4 MGD of permanent supply and 6 MGD of temporary supply.
- Bellevue-Issaquah Pipeline – In 2004, Cascade purchased the Bellevue-Issaquah Pipeline (BIP) to deliver water to Issaquah and Sammamish Plateau.
- White River-Lake Tapps Reservoir – In 2009 Cascade purchased the White River-Lake Tapps Reservoir system from PSE as the key element of Cascade’s long-term water supply portfolio. As a potential source of municipal water, this not only provided an insurance policy for future needs but also allowed Cascade members to be a part of future regional water supply decisions.

Early in its negotiations with PSE, Cascade and Pierce County signed a memorandum of understanding agreeing to work together to maintain the Reservoir’s value as a

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<sup>1</sup> Covington withdrew from Cascade in 2012.

recreational, economic and environmental asset. This included managing land use, water quality, lake levels, recreational activities, and safety. Although this MOU is not binding, the intent is for the Lake Tapps Reservoir to be maintained as a public recreational asset regardless of whether and when it is developed as a source of municipal supply.

Several stakeholder groups raised concerns and opposition to Cascade's intended use of the Lake Tapps Reservoir. To resolve these concerns, Cascade worked collaboratively with stakeholders and entered into a series of agreements, key conditions of which were included in the water right permits issued to Cascade. (One-page summaries of the agreements below and other key agreements are in the next section of this document.)

- Muckleshoot and Puyallup Tribes – The *White River Management Agreement* ensured protection of fish, enhanced habitat, municipal water supply and recreation in the White River-Lake Tapps Reservoir system through the establishment of the White River minimum flow and diversion requirements. In addition, settlement agreements with each of the Tribes enabled Cascade and the Tribes to avoid litigation over claims.
- Homeowners – The *Lake Tapps Community Agreement* required Cascade to maintain lake levels at a certain range for recreational use, with exceptions for operational needs and weather conditions. Cascade agreed to keep lake levels in a range from elevation 541.5 to 543 feet from April 15 through September 30 for 30 years, or until the use of the Lake Tapps Reservoir for municipal water supply starts, whichever is later.
- The Four Cities – Auburn, Bonney Lake, Buckley, and Sumner were concerned that Cascade's eventual use of the Lake Tapps Reservoir for municipal water supply would impact their water supply. The *Four Cities Agreement* gave the cities options for water supply to help them meet their water needs. To purchase Regional Reserved Water, the cities must exercise the option by 2030.
- Lake Tapps Reservoir Water Right Permits – In 2010, the Washington State Department of Ecology (Ecology) issued Cascade water right permits to develop the Lake Tapps Reservoir for municipal drinking water. The 2010 permits required Cascade to begin construction by 2040 and provide full use by 2060. In 2022, Ecology granted Cascade an extension of its development schedule as follows:
  - December 31, 2065 – begin construction
  - 15 years after start of construction – complete construction
  - December 31, 2085 – full use of the water supply

Cascade also made a permanent donation of 684,571 acre-feet of water to the State's Trust Water Rights Program. An additional 154,751 acre-feet of water was donated on a temporary basis through 2033. The Trust keeps water in the White River for the benefit of fish, wildlife and the natural environment without impacting lake levels or instream flows.

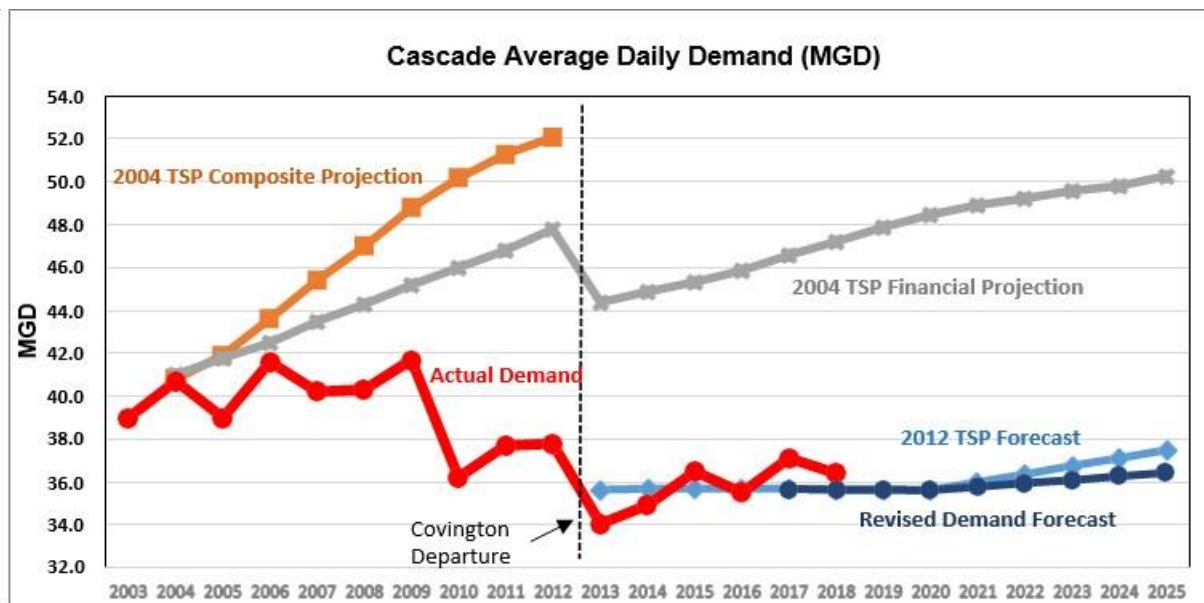
Another component of Cascade’s supply portfolio is members’ independent supplies. Members are required to have their water system and independent supply audited by Cascade for: (1) determining Cascade’s supply obligation to that member; (2) recognizing when the member has lost independent supply; and (3) allocating credits against the member’s RCFC for its independent supply. Independent supply production is relied on when planning future supplies, including the Lake Tapps Reservoir. The audits help determine when that source may be needed. The most recent audits were completed in 2022.

### Cascade’s Second Decade: Stewardship

The purchase of Lake Tapps Reservoir provided certainty of future water supply with a flexible supply portfolio. With its options for long-term water supply now secured, Cascade moved into a period of focusing on stewardship of its finances, infrastructure and other assets.

In 2011, the Washington Legislature passed the Joint Municipal Utilities Services Act. Cascade developed and promoted the legislation in support of improved regional governance. The Act authorized the formation of municipal corporations to perform water, wastewater, and stormwater services. Municipal corporations could be composed of individual counties, cities, towns, and special purpose districts that collectively could more effectively and efficiently serve their customers. In 2012 Cascade’s Board adopted the Joint Municipal Utilities Services Agreement (JMUSA) and converted Cascade from a watershed management partnership to a municipal corporation. Cascade became the State’s first joint municipal utility services authority.

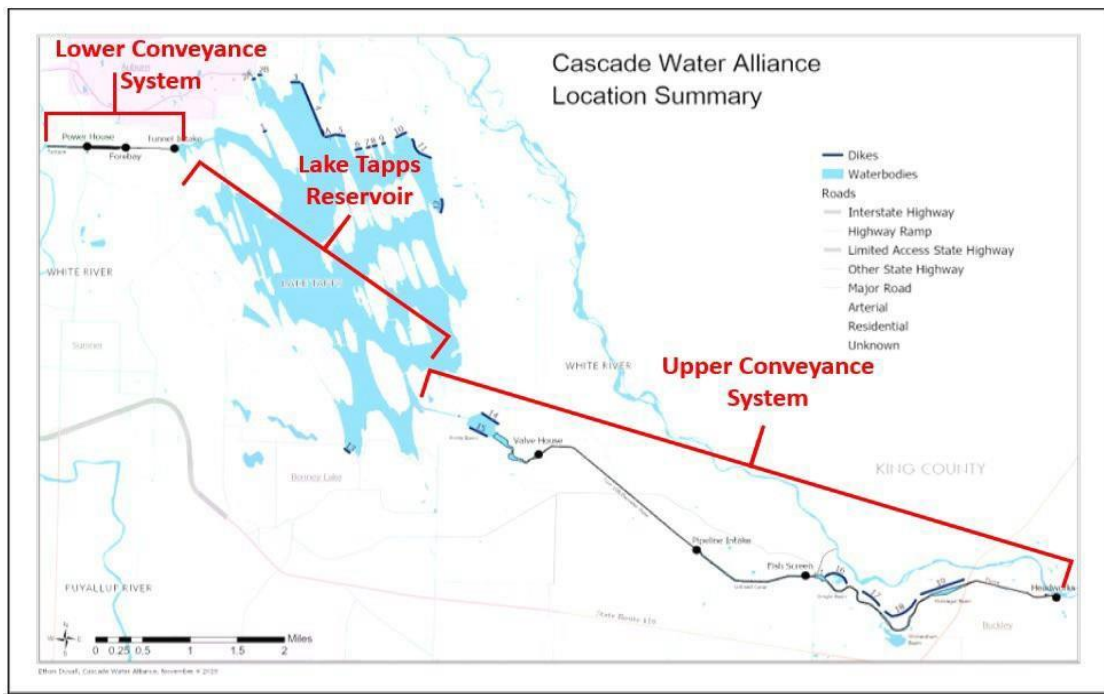
*Demand and Water Contracts.* In 2012 Cascade completed its second TSP as required by State law. The new TSP incorporated a more realistic demand forecast based on analysis conducted in 2009. The forecast applied detailed demographic data, used the regional Growth Management Plan population and employment forecasts from the Puget Sound Regional Council, and included conservation assumptions as a basis for projecting water demand. The graphic below provides a comparison of the 2004 and 2012 TSP demand forecasts.



The new demand information, coupled with the acquisition of the Lake Tapps Reservoir, allowed Cascade to successfully renegotiate its contracts with Seattle and Tacoma. The amended contracts resulted in significant monetary savings for Cascade.

- **Tacoma Contract Amendment** – The 2012 amended agreement reduced Cascade’s payments, allowed the resale of purchased capacity, and provided supply availability of 8 MGD through 2042. Per the amended agreement, Cascade sold some extra capacity to Auburn and Bonney Lake. However, the window for marketing any extra capacity has now closed. Payments to Tacoma will continue until 2042 with a major decline after 2029. The payment reductions, plus the resale of water, resulted in \$30M in savings.
- **Seattle Contract Amendment** – The 2013 amendment extended the supply term of the agreement by 15 years until 2039 and enabled further extensions. It also eliminated the second step of the supplemental supply, capping Cascade’s supply at 33.3 MGD. In 2040, the contract supply begins to decline, and in 2064, the contract expires unless it is extended. The savings amounted to \$60M.

**Infrastructure Investments.** During Cascade’s second decade, it invested \$25M-\$30M to restore the integrity of the White River-Lake Tapps Reservoir system. The assets Cascade purchased from PSE were more than 100 years old and in need of major repair or replacement. Their original use was hydroelectric power production, requiring Cascade to upgrade the assets and modify operations. In 2014-2015, Cascade lowered the Lake Tapps Reservoir from the recreational level of 541.5 feet elevation to around 500 feet to allow crews to safely walk inside the pipes and complete a condition assessment. The assessment resulted in a list of capital improvements ranked in order of urgency, from “Immediate” to “Future Needs”. A number of the projects Cascade completed during this time, such as replacing the timber flume, reduced the risk of imminent failure.



*Programmatic Investments.* In addition to investing in its assets and infrastructure, Cascade has also implemented several programs to maintain its operating agreements and protect the Lake Tapps Reservoir for future municipal use:

- Water efficiency is a critical part of Cascade’s water management strategy. It makes the best use of existing water supplies before developing the Reservoir and reduces future demand. Since 2004, Cascade has developed a robust water efficiency program, which includes rebates, retrofits, and technical expertise to achieve significant savings. Additionally, Cascade has implemented several education and empowerment programs that help students and community members better understand the value of water and the role they can play in conserving and protecting the resource.
- Cascade and the U.S. Geological Survey (USGS) have had a joint agreement since 2010 for USGS to operate and maintain 11 gauges that monitor minimum flows and ramping rates as required by Cascade’s water rights permit and the White River Management Agreement.
- Cascade’s water quality activities in the Lake Tapps Reservoir helps ensure that when water is taken for municipal drinking water supply, it will be treated to meet or exceed all federal, state, and local standards. One example is the TappsWise Program, a partnership with the Tacoma Pierce County Health Department to provide outreach to homeowners regarding the importance of maintaining septic tanks and practicing natural yard care. Another is Cascade’s annual milfoil treatment program. Milfoil is a non-native and invasive aquatic plant, and although it is a non-regulated weed in Pierce County, Cascade manages milfoil to keep the Reservoir clean and healthy.

## **B. Cascade’s Present**

Today Cascade is in a continued period of stewardship while actively planning for its long-term future.

*Infrastructure and Programmatic Investments.* Cascade continues to keep the White River-Lake Tapps Reservoir system functioning to meet regulatory requirements and operating agreements while preparing for future municipal water use. Over the next decade, Cascade has planned roughly \$30M in capital and maintenance projects to protect existing assets from failure. These include the following projects:

- The Headworks Intake Modifications project is the third phase of the U.S. Army Corps of Engineers’ Mud Mountain Dam Fish Passage Facility project and will improve how water is diverted from the White River to the Lake Tapps Reservoir and will reduce sediment and debris diversion.
- Several valve replacement projects are expected in the upcoming years: 1) a 60-inch energy dissipating cone valve in the outlet structure allows flow to transition from two 10-foot pressurized pipes to an open canal that leads to the Lake Tapps Reservoir; and 2) a relief valve in the Powerhouse enables water to be released to the tailrace and then back to the White River.



- Two dikes are scheduled for major improvements in the next few years to improve seismic resiliency and reduce seepage.

Cascade also continues to invest in its drinking water quality and water efficiency programs as well as other resource management activities.

- A two-year water quality monitoring and sampling program of the flowline and reservoir was completed in 2022 and indicates the reservoir is healthy but at risk of degradation. Cascade is now developing a Water Quality Management Plan to identify the highest priority, cost-effective measures to protect the reservoir’s drinking water quality.
- The water efficiency program continues to benefit thousands of residents, businesses, schools, and public agencies through a variety of education and outreach activities, training, and replacement of old fixtures and equipment.
- In 2022, Cascade installed solar panels on the roof of the Powerhouse, the first Cascade facility to use renewable energy. Since green energy production is likely to be required when Cascade begins construction of a future water treatment plant, the Powerhouse project will help inform how best to include solar energy generation in the plant.

*Regional Partnerships.* Because the White River-Lake Tapps Reservoir system has multiple uses for multiple stakeholders in the region, Cascade has actively managed the system to meet a variety of public interests. Efforts include collaborating on other agencies’ projects, such as the Sumner White River Restoration project. The project site intersects with Cascade’s tailrace and involves the transfer of some Cascade property to Sumner. However, it will not impact Cascade’s ability to provide future municipal water.

*Financial Stewardship.* The development of the Lake Tapps Reservoir for municipal supply will impose substantial challenges both in terms of executing a major capital program and bearing the cost of development and operation of that source of supply. The costs to design and construct transmission pipelines, a water treatment plant, pumps, and other assets are estimated to be about \$2 billion. To help address these challenges, Cascade has implemented several financial strategies.

- Regional Capital Facilities Charges (RCFCs) are charges for new or expanded water connections and its revenues are used to repay debt and fund capital projects. Cascade’s 2024 RCFC is \$7,454 per equivalent residential unit, of which a large part is based on developing the Lake Tapps Reservoir. All RCFC revenues are currently dedicated to the capital construction program.
- In 2023 and 2024, the adopted average rate increases to members are 2.2% per year, well below the rate of inflation. However, in order to fund development of the Lake Tapps Reservoir, Cascade’s long-range financial forecast calls for rate increases that are significantly higher than current rates. These higher rates increases are needed to build up the cash required to meet Cascade’s debt-financing fiscal policy of 80% debt to 20% equity.

- In 2021 the Board adopted the Water Supply Development Fund (WSDF) as a key part of the water supply financial plan. The WSDF defines a policy structure for cash accumulation to help pay for development of Lake Tapps Reservoir. This is needed because rate increases alone will be insufficient to meet Cascade’s 80%/20% debt-financing policy. Contributions to the WSDF come from one-time and recurring sources such as underspending the annual operating budget, higher than budgeted RCFC revenues, and savings from bond refunding.

Members have the option to leave Cascade. Doing so requires providing Cascade with the member’s allocable share of costs, such as bond and contract obligations and fixed operating costs. The allocable share of costs is determined by the Board. In 2012 Covington Water District exercised this option and paid roughly \$6M in departure fees. The table below provides a summary (as of 2020) of the buyout amount for each member using a comparable method. However, the actual buy-out amounts will be based on the Board’s policy direction at such time.

<b>Projected 2020- 2100 Member Payments (Present Value Summary @ 5.75%)</b>			
<b>Member</b>	<b>Member Charges Excluding RCFCs</b>	<b>RCFCs</b>	<b>Total</b>
Bellevue	\$339,792,081	\$17,521,665	\$357,313,747
Issaquah	\$42,561,826	\$10,125,855	\$52,687,681
Kirkland	\$94,540,371	\$9,113,270	\$103,653,641
Redmond	\$125,068,161	\$13,997,294	\$139,065,455
Sammamish Plateau Water	\$37,931,783	\$17,521,665	\$55,453,448
Skyway WSD	\$7,181,540	\$253,146	\$7,434,686
Tukwila	\$41,199,197	\$759,439	\$41,958,636
<b>Total</b>	<b>\$688,274,959</b>	<b>\$69,292,334</b>	<b>\$757,567,294</b>

*Supply, Demand, Water Right Permits and Water Contracts.* Cascade is at a crucial juncture in planning for the future water supply needs of its members. Demand and supply forecasts have changed significantly since Cascade was issued its water right permits in 2010 and since it developed its demand forecast for the 2012 TSP. This has led Cascade to pause and evaluate alternative scenarios for development of the Lake Tapps Reservoir.

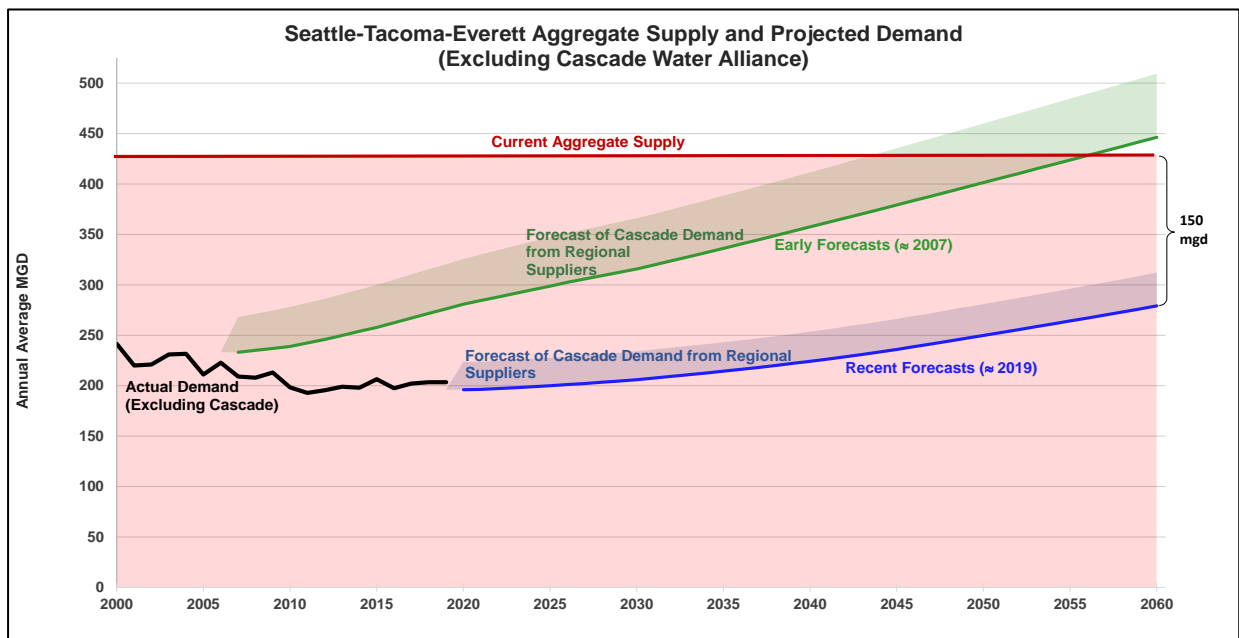
As noted earlier, the new development schedule in Cascade’s water right permits requires construction of the Lake Tapps Reservoir to start no later than December 31, 2065. This is a 25-year extension of the prior date of December 31, 2040. Analysis of current conditions shows that regional supplies, if made available to Cascade, remain sufficient to defer construction of the reservoir well beyond 2040. The table below shows Cascade’s current demand forecast compared to the forecast in Ecology’s report when it initially issued Cascade its permits in 2010.

### Comparison of Cascade Demand Forecasts (Average Day Demand in MGD)

Year	2010 Ecology Report	Current Forecast
2010	41	32.2*
2020	44	34.7*
2030	49	37.7
2040	54	39.2
2050	60	40.9
2060	69	42.6

\*Actual demand

In addition to the updated demand forecast, the most current three-county central Puget Sound water system plan forecasts show a continued abundance of supply in 2060 (see figure below). Since its formation, Cascade has had a strategy of using available regional wholesale supply contracts to “bridge” Cascade’s demand requirements until the Lake Tapps Reservoir is brought on line. Continuing with this strategy, Cascade has been negotiating with Seattle to extend its water supply contract and negotiating a new supply contract with Tacoma. Both wholesale providers’ proposals would enable Cascade to cost-effective defer development of the Lake Reservoir. In 2024, Cascade will seek the Board’s direction on which proposal to accept.



Supply and demand forecasts based on projections in Seattle’s, Tacoma’s, and Everett’s current water supply plans.

## IV. KEY AGREEMENTS

The table below provides an at-a-glance look at 11 of Cascade’s key agreements with respect to water supply. One-page summaries of each agreement follows.

Agreement	Primary Objective	Implications for Future Decisions Regarding Lake Tapps Reservoir
<b>A. Joint Municipal Utility Services Agreement (JMUSA)</b>	Establishes Cascade as a joint municipal utility services authority and a municipal corporation of the State to improve its ability to exercise essential government functions on behalf of its members.	As long as Cascade provides water to its members, regardless of the source of supply, JMUSA lays out Cascade’s operating and financial parameters.
<b>B. Water Right Permits Summary</b>	Allows Cascade to develop the Lake Tapps Reservoir for municipal water supply.	After the water right permits were initially issued in 2010, circumstances and planning assumptions changed. Current and forecasted conditions indicate there will be an abundance of supply in the central Puget Sound region through 2060. Given this, Cascade requested and Ecology approved a 25-year extension of the development schedule for Lake Tapps Reservoir. The current schedule requires construction to start by December 31, 2065 and full use by December 31, 2085.
<b>C. White River Management Agreement (WRMA) with the Puyallup and Muckleshoot Tribes</b>	Settled disputes with the Muckleshoot Indian Tribe (MIT) and Puyallup Tribe of Indians (PTI) and gained their support for the water right applications. Establishes flow regime of minimum instream flows and associated activities such as flow monitoring, gauging, fall drawdown and spring refill plans, etc.	Cascade needs to continue to meet minimum instream flows, water quality requirements and other conditions in the Agreement as long as it is diverting water from the White River.
<b>D. Muckleshoot Tribe Settlement Agreement</b>	Settled disputes with the MIT to gain their support for water right applications and funds for past costs, capital projects and operations, thereby avoiding litigation over claims.	After 2057, Cascade may need to provide further mitigation funding for continuing project impacts on aquatic resources of the White River. This cost has not been included in financial planning to date.
<b>E. Puyallup Tribe Settlement Agreement</b>	Settled disputes with the PTI to gain their support for water right applications and funds for past costs, capital projects and operations, thereby avoiding litigation over claims.	After 2046, Cascade may need to provide further mitigation funding for continuing project impacts on aquatic resources of the White River. This cost has not been included in financial planning to date.

Agreement	Primary Objective	Implications for Future Decisions Regarding Lake Tapps Reservoir
<b>F. Four Cities Agreement</b>	Provides the Four Cities (Auburn, Bonney Lake, Buckley, and Sumner) with options to help them meet their water supply needs and provide assurance that there is a venue to address potential negative impacts from Cascade’s supply operations.	The purchase of Regional Reserved Water or tailrace water by one or more of the Four Cities should not negatively impact Cascade from a future water supply standpoint and could generate positive financial benefits for Cascade.
<b>G. Lake Tapps Community Agreement</b>	Settled disputes regarding the Lake Tapps Community’s opposition to Cascade’s water right applications. Resulted in the Community supporting the water right applications in return for Cascade’s commitment to maintain the reservoir at recreational lake levels or “Normal Full Pool” (541.5’ to 543’ elevation) from April 15 through September 30.	<p>Cascade needs to continue to maintain recreational lake levels from April 15 through September 30 pre- and post-development of Lake Tapps Reservoir as a source of drinking water supply.</p> <p>If Cascade chooses to sell all or part of its Lake Tapps Reservoir assets, Lake Tapps Community has the right of first offer.</p>
<b>H. Pierce County Water Supply and Recreation MOU</b>	Establishes a cooperative working relationship between Cascade and Pierce County regarding management of the Lake Tapps Reservoir as a public water supply project and a recreational facility.	Although this MOU is not binding, the intent is for Lake Tapps Reservoir to be maintained as a public recreational asset regardless of whether and when it is developed as a source of municipal supply.
<b>I. Seattle Water Sale Agreement</b>	Provides for the purchase of a combined Base and Supplemental block of water from Seattle through 2063, with the total supply beginning to decline in 2040.	If Cascade can negotiate a cost-effective contract extension with Seattle, and one that is more competitive than other options, it will be able to defer development of the Lake Tapps Reservoir.
<b>J. Tacoma Water Sale Agreement</b>	Provides Cascade with up to 8.0 MGD of water through 2042 with lower payments than were stipulated in the original 2005 Agreement. Also allows for the sale of extra capacity to the Four Cities.	If Cascade were to take delivery of water from Tacoma as a bridge prior to developing the Lake Tapps Reservoir as a source of water supply, it would first need to complete construction of the Tacoma-Cascade Pipeline (TCP) and other infrastructure. Once Lake Tapps Reservoir is developed, the TCP will continue to be used to deliver Lake Tapps municipal supply to members.
<b>K. Membership Audit Acceptance Agreements</b>	Requires an audit of each member’s water system and independent supply for: (1) determining Cascade’s supply obligation to that member; (2) recognizing when the member has lost independent supply; and (3) allocating credits against the member’s RCFC for its independent supply.	Member independent supply production is relied on when planning future supplies, including the Lake Tapps Reservoir. This Agreement helps determine when that source may be needed.

## A. Joint Municipal Utility Services Agreement (JMUSA)

**Parties to the Agreement:** Cascade and current member agencies  
**Agreement Date:** March 28, 2012  
**Expiration Date:** n/a

### *Primary Objective Of Agreement*

Establishes Cascade as a joint municipal utility services authority and a municipal corporation of the State to improve its ability to exercise essential government functions on behalf of its members.

### *Background*

Cascade was originally formed in 1999 as a non-profit corporation and watershed management partnership under the Interlocal Cooperative Act (RCW 39.34). This designation proved to be challenging for Cascade, limiting its legal authority regarding interlocal agreements, property transfers, procurement, funding, and other basic, essential government functions.

In 2011 the Washington Legislature passed ESHB 1332, the Joint Municipal Utilities Service Act. Cascade developed and promoted the legislation in support of improved regional governance. The Act established a more effective interlocal mechanism for cooperation among local government utilities that provide water, wastewater, stormwater and/or flood control services. It authorized cities, towns, counties, and special purpose districts voluntarily to form an intergovernmental municipal corporation to provide services to those local utilities and their customers.

On March 28, 2012, the Board adopted Resolution No. 2012-06 by 65% dual majority vote to convert Cascade to a joint municipal utility services authority and a municipal corporation of the State. The Board also approved an amendment to the Interlocal Agreement to execute the Joint Municipal Utility Services Agreement (JMUSA). On April 25, 2012, the Board adopted Resolution No. 2012-07 to complete Cascade's conversion to a joint municipal utility services authority by amending the Cascade Code to be consistent with JMUSA.

### *Key Features Of Agreement*

- Provides powers to exercise a host of essential government functions that were limited to Cascade when it was a watershed management partnership.
- Defines how new members may join Cascade and how existing members can withdraw.
- Defines the organizational structure of the Board, including voting, officers and committees.
- Describes how Cascade issues RCFCs and rates and the step-up provision for payment defaults.
- Provides a supply commitment to each member.
- Requires Board approval for new independent supplies.
- Requires Cascade to implement a conservation program that members need to participate in.
- Calls for Cascade to respond to water shortages and manage water quality.
- Describes how Cascade can disincorporate.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

As long as Cascade provides water to members, regardless of the source of supply, JMUSA lays out Cascade's operating and financial parameters.

## B. Water Right Permits

**Parties to the Permit:** Cascade and Department of Ecology (Ecology)

**Permit Date:** December 10, 2010

**Expiration Date:** Cascade must inform Ecology if construction has not started by December 31, 2065

### *Primary Objective*

Allows Cascade to develop the Lake Tapps Reservoir for municipal water supply.

### *Background*

The demand forecast in Cascade's 2004 Transmission and Supply Plan led to a series of decisions to acquire long-term supply. In 2009 Cascade purchased the White River-Lake Tapps Reservoir system from PSE as the key element of Cascade's long-term water supply portfolio. In 2010, Ecology approved Cascade's applications (including a change to the purpose of use of the former PSE water rights claim, No. CS2-160822CL) and issued a set of permits to use the Lake Tapps Reservoir for municipal drinking water. Lake Tapps Reservoir is permitted to provide Cascade a permanent supply of up to 54,300 acre-feet per year (75 cfs or 48.4 MGD<sup>2</sup>). Ecology issued the final water right permits in four parts, described below. In 2022, Ecology extended Cascade's development schedule by 25 years.

### *Four Parts To Water Rights Permit*

1. ***Diversion from the White River for municipal purposes (S2-29920(A))***. Establishes timing for development of Lake Tapps Reservoir as follows: construction to begin by the end of 2065 and completed within 15 years of the start of construction, and water to be in full use by the end of 2085. The permit also includes 22 conditions, including requirements defined in other agreements:
  - Agreements with the Tribes – establishes minimum instream flow, maximum diversion rates, releases into the tailrace, ramping rates and streamflow monitoring.
  - Agreement with Lake Tapps Community – establishes recreational lake levels.
2. ***Storage in Lake Tapps Reservoir for municipal purposes (R2-29935)***. Acknowledges that storage in the Reservoir has begun under the former PSE claim and requires that municipal water must be put to full use by the end of 2060.
3. ***Withdrawal from Lake Tapps Reservoir for municipal use (S2-29934P)***. Establishes timing for withdrawal from the Reservoir for municipal use; same timing as in the diversion permit above.
4. ***Regional Reserved Water Program (S2-29920(B))***. Allocates certain White River flows for any of the Four Cities (Auburn, Bonney Lake, Buckley, and Sumner) to use in mitigating impacts of a water right application(s), which must be approved by Ecology by December 31, 2030 (no extension). This part of the permit is consistent with the Four Cities Agreement.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

After the water right permits were initially issued in 2010, circumstances and planning assumptions changed. Current and forecasted conditions indicate there will be an abundance of supply in the central Puget Sound region through 2060. Given this, Cascade requested and Ecology approved a 25-year extension of the development schedule for the Lake Tapps Reservoir.

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<sup>2</sup>Over the past five years, Cascade's average use has been about 27.6 MGD, excluding independent supply.

## C. White River Management Agreement (WRMA)

**Parties to the Agreement:** Cascade, the Muckleshoot Indian Tribe (MIT) and the Puyallup Tribe of Indians (PTI)  
**Agreement Date:** August 6, 2008  
**Expiration Date:** The Agreement will continue as long as Cascade or successor diverts water from the White River. It can be terminated upon written agreement by all parties and approved by resolution or ordinance or upon permanent cessation of diversions from the White River into the Lake Tapps Reservoir and surrender of the water rights authorizing the diversion.

### *Primary Objective Of Agreement*

Settled disputes with the Muckleshoot Indian Tribe and Puyallup Tribe of Indians and gained their support for the water right applications. Establishes flow regime of minimum instream flows and associated activities such as flow monitoring, gauging, fall drawdown and spring refill plans, etc.

### *Background*

After PSE applied for water rights to allow municipal use of the waters of the Lake Tapps Reservoir, several stakeholders groups, including the MIT and the PTI, raised concerns over use of the Reservoir as a municipal drinking water supply. The Tribes were particularly concerned about the proposed diversion of water from the White River into the Lake Tapps Reservoir. As a means to gain the Tribes' support for the water right applications, Cascade, as the future owner, entered into this Agreement. In 2009, Cascade became the successor-in-interest to PSE. This Agreement settled disputes and was necessary for the issuance of Cascade's water right permits.

### *Key Features Of Agreement*

- Establishes minimum flows for various time periods during the year, diversion rates, ramping rates, and pool elevation.
- Requires flow monitoring, including the streamflow at the Buckley Gauge and diversion from the White River into the Lake Tapps Reservoir.
- Requires Cascade funding of the USGS to operate and maintain gauging equipment, telemetry, and data production.
- Requires development and implementation of a Project Maintenance Plan that includes:
  - Maintaining and assessing the effectiveness of the fish screens;
  - Preventing exotic or predatory species from entering the White River from Lake Tapps;
  - Trapping sediment to prevent sediment and nutrients from entering Lake Tapps; and
  - Maintaining the rock chutes and other facilities.
- Requires a plan for refilling Lake Tapps in the spring and drawing down the water in the fall.
- Calls for a tailrace study to identify and address water quality and fisheries concerns and a tailrace plan to implement the study's recommendations.
- Calls for Cascade to transfer excess water<sup>3</sup> to the State Water Trust to provide instream flows in the river.
- Calls for protecting, monitoring, and improving water quality.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

Cascade needs to continue to meet minimum instream flows, water quality requirements, and other conditions in the Agreement as long as it is diverting water from the White River.

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<sup>3</sup> Excess water is a portion of the perfected hydropower water right obtained from PSE in excess of the amount of water permitted to be diverted into the Lake Tapps Reservoir.



## D. Muckleshoot Tribe Settlement Agreement

**Parties to the Agreement:** Cascade and the Muckleshoot Indian Tribe (MIT)

**Agreement Date:** August 6, 2008

**Expiration Date:** The Agreement will continue as long as Cascade or any successor diverts water from the White River. It can be terminated upon written agreement by both parties and approved by resolution or ordinance by the MIT and Cascade, or upon permanent cessation of diversions from the White River into the Lake Tapps Reservoir and surrender of the water rights authorizing the diversion.

### *Primary Objective Of Agreement*

Settled disputes with the MIT to gain their support for water right applications and funds for past costs, capital projects and operations, thereby avoiding litigation over claims.

### *Background*

After PSE applied for water rights to allow municipal use of the waters of the Lake Tapps Reservoir, several stakeholders groups, including the MIT, raised concerns over Cascade's use of the Reservoir as a municipal drinking water supply. The MIT was particularly concerned about the proposed diversion of water from the White River into the Lake Tapps Reservoir. As a means to gain the Tribe's support for the water right applications, Cascade, as the future owner, entered into this Agreement in addition to the three-party White River Management Agreement. These agreements enabled Cascade and the MIT to avoid litigation over claims between the two parties and were necessary for the issuance of Cascade's water right permits.

### *Key Features Of Agreement*

- Makes two settlement payments to the MIT for a total of \$6.8M. \$6.2M of the total amount grants Cascade the right to divert 72,400 acre feet of water annually from the White River and the Lake Tapps Reservoir for municipal water supply purposes.
- Starting in 2057, calls for a reevaluation of the impact of Cascade's municipal water supply project on the White River's aquatic resources and an agreement in further mitigation funding beyond 2060.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

After 2057, Cascade may need to provide further mitigation funding to compensate for continuing project impacts on aquatic resources of the White River. This cost has not been included in financial planning to date.

## E. Puyallup Tribe Settlement Agreement

**Parties to the Agreement:** Cascade and the Puyallup Tribe of Indians (PTI)

**Agreement Date:** August 6, 2008

**Expiration Date:** Parties must meet by December 31, 2046 to discuss renewal of the Agreement. If the Agreement is not renewed by January 1, 2051 the Agreement expires and neither party can assert their respective rights or entitlements.

### *Primary Objective Of Agreement*

Settled disputes with the PTI to gain their support for water right applications and funds for past costs, capital projects, and operations, thereby avoiding litigation over claims.

### *Background*

After PSE applied for water rights to allow municipal use of the waters of the Lake Tapps Reservoir, several stakeholders groups, including the PTI, raised concerns over Cascade's use of the Reservoir as a municipal drinking water supply. The PTI was particularly concerned about the proposed diversion of water from the White River into the Lake Tapps Reservoir. As a means to gain the Tribe's support for the water right applications, Cascade, as the future owner, entered into this Agreement in addition to the three-party White River Management Agreement. These agreements enabled Cascade and the PTI to avoid litigation over claims between the two parties and were necessary for the issuance of Cascade's water right permits.

### *Key Features Of Agreement*

- Makes three settlement payments to the PTI for a total of \$14.5M:
  - \$1.5M for past costs;
  - \$6.0M to fund capital projects to restore, protect and enhance fishery resources, fishery habitat and water quality in the lower White River and in the Puyallup River; and
  - \$7.0M to fund operations.
- Commits the PTI to support Cascade's water rights.
- Commits the PTI to release all claims against Cascade.
- Calls for Cascade and PTI to initiate good faith negotiations on the terms and conditions for a subsequent agreement, starting no later than December 31, 2046.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

After 2046, Cascade may need to provide further mitigation funding to compensate for continuing project impacts on aquatic resources of the White River. This cost has not been included in financial planning to date.

## F. Four Cities Agreement

**Parties to the Agreement:** Cascade, Auburn, Bonney Lake, Buckley, and Sumner

**Agreement Date:** February 5, 2010

**Expiration Date:** 2060 unless terminated earlier; can be extended by written agreement.

### *Primary Objective Of Agreement*

Provides the Four Cities with options to help them meet their water supply needs and provide assurance that there is a venue to address potential negative impacts from Cascade's supply operations.

### *Background*

After Cascade purchased the White River-Lake Tapps Reservoir system in 2009, several stakeholders groups, including the Four Cities, raised concerns over Cascade's use of the Reservoir as a municipal drinking water supply. Auburn, Bonney Lake, Buckley, and Sumner were concerned that Cascade's eventual use of Lake Tapps Reservoir for municipal water supply could impact their water supply. As a means to gain the Four Cities' support for the water right applications, Cascade and the Four Cities entered this Agreement.

### *Key Features Of Agreement*

- Establishes the Lake Tapps Municipal Advisory Group comprised of the mayors of each of the Four Cities and three Cascade Board members. This group deals with issues affecting the Four Cities and is intended to meet twice each year.
- Provides for remedies if Cascade's water supply operations has negative impacts to the water supplies of any of the Four Cities.
- Provides an opportunity for the Four Cities to purchase Tacoma wholesale water through 2026. *[Due to revised Tacoma Agreement, this option converted into a reduced cost offer that expired on March 1, 2018.]*
- Provides an opportunity for the Four Cities to purchase Regional Reserved Water through 2030:
  - The total amount is 7 cfs annual average and 10 cfs peak;
  - This can be used to assist the Four Cities to apply for water rights;
  - Price is \$744,000 per cfs (0.65 MGD); and
  - Water would not be diverted into the Lake Tapps Reservoir but would flow in the White River for potential mitigation use by any of the Four Cities.
- Provides an opportunity to purchase tailrace water from Cascade if available and subject to negotiations.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

The purchase of Regional Reserved Water or Tailrace water by one or more of the Four Cities should not negatively impact Cascade from a future water supply standpoint and could generate positive financial benefits for Cascade<sup>4</sup>.

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<sup>4</sup>Cascade is in discussion with Sumner to purchase approximately 1 cfs of Regional Reserved Water for water rights mitigation.

## G. Lake Tapps Community Agreement

**Parties to the Agreement:** Cascade and the Lake Tapps Community (comprised of Friends of Lake Tapps, Lake Tapps Community Council, Church Lake Maintenance Co., Driftwood Point Association, Inlet Island Maintenance Company, Snag Island Maintenance Association, Tacoma Point Improvement Club, Tapps Island Association, and West Tapps Maintenance Co.)

**Agreement Date:** May 13, 2009

**Expiration Date:** Agreement remains in effect unless terminated by mutual agreement.

### *Primary Objective Of Agreement*

Settled disputes regarding the Lake Tapps Community's opposition Cascade's water right applications. Resulted in the Community supporting the water right applications in return for Cascade's commitment to maintain the reservoir at recreational lake levels or "Normal Full Pool" (541.5' to 543' elevation) from April 15 through September 30.

### *Background*

After PSE applied for water rights in to allow municipal use of the waters of the Lake Tapps Reservoir, several stakeholders groups, including the Lake Tapps Community, raised concerns over use of the Reservoir as a municipal drinking water supply. Lake Tapps Community's main concern was maintaining recreational lake levels. PSE and the Community entered into an agreement in 2004. As a means to gain the Community's support for the water right applications, Cascade, as the future owner, entered into a similar agreement in 2008. In 2009, Cascade became the successor-in-interest to PSE. Upon addressing this and other concerns, the key conditions in this Agreement were included in Cascade's water right permits issued in 2010.

### *Key Features Of Agreement*

- Requires recreational lake levels from April 15 through September 30, with some exceptions.
- Calls for making reasonable efforts to maintain Normal Full Pool through October 31.
- Sets water priorities as: 1) meeting Minimum Instream Flows (MIF); 2) maintaining recreational lake levels; and 3) providing for municipal water supply.
- Requires a Lake Management Team and annual meetings.
- Calls for a comprehensive review of the Agreement to be conducted no later than 2030. Either Cascade or the Lake Tapps Community may propose modifications to the Agreement, and changes require mutual agreement.
- Requires controlling milfoil to the extent required by law or to meet Cascade's operational goals.
- Requires monitoring stream flows, lake levels and water quality.
- Allows Cascade to transfer the Project assets and terminate the Agreement after providing the Lake Tapps Community the right to acquire assets on "terms and conditions that are fair and reasonable".
- Damages paid due to breach of the Agreement (primarily not maintaining recreational lake levels) will not exceed \$100,000 per occurrence and \$1,000,000 in aggregate.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

Cascade needs to continue to maintain recreational lake levels from April 15 through September 30 pre- and post-development of Lake Tapps Reservoir as a source of drinking water supply, with some exceptions. If Cascade chooses to sell all or part of its Lake Tapps Reservoir assets, Lake Tapps Community has the right of first offer.

## H. Pierce County Water Supply And Recreation MOU

**Parties to the Agreement:** Cascade Board Chair and Pierce County Executive  
**Agreement Date:** August 2, 2005  
**Expiration Date:** N/A

### *Primary Objective Of Agreement*

Establishes a cooperative working relationship between Cascade and Pierce County regarding management of the Lake Tapps Reservoir as a public water supply project and a recreational facility.

### *Background*

This MOU was signed while Cascade was negotiating the purchase of the White River-Lake Tapps system from PSE with the intent to develop the Reservoir into a future water supply. Cascade and Pierce County agreed to work together to maintain the Reservoir's value as a recreational, economic, and environmental asset. This included managing land use, water quality, lake levels, recreational activities, and safety. This MOU is not binding.

### *Key Features Of Agreement*

- Pierce County efforts include:
  - Protecting and enhancing water quality by:
    - Minimizing discharges through regulating stormwater, on-site wastewater systems and other point and non-point sources;
    - Minimizing and eliminating the adverse effects of non-point discharges from future development and redevelopment by encouraging best management practices (BMPs); and
    - Completing and implementing the White River Basin Plan focused on maintaining and enhancing water quality.
  - Completing and implementing the Lake Tapps Boat Management Plan.
- Cascade efforts include:
  - Operating Lake Tapps as a public water supply reservoir and for recreation;
  - Entering into an agreement with the Lake Tapps Community regarding reservoir operations;
  - Developing and implementing BMPs to maintain and potentially enhance water quality; and
  - Developing a Lake Management Advisory Team to address water quality, recreational lake levels, and boating and recreational safety.
- If Cascade is unable to develop a public water supply project, Cascade and Pierce County will work cooperatively to transfer ownership to an entity that will preserve the lake for public recreational benefit.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

Although this MOU is not binding, the intent is for Lake Tapps Reservoir to be maintained as a public recreational asset regardless of whether and when it is developed as a source of municipal supply.

## I. Seattle Water Sale Agreement

**Parties to the Agreement:** Cascade and Seattle  
**Agreement Date:** July 15, 2013  
**Expiration Date:** December 31, 2063

### Primary Objective Of Agreement

Provides for the purchase of a combined Base and Supplemental block of water from Seattle through 2063, with the total supply beginning to decline in 2040.

### Background

In 2004 Cascade entered into a 50-year agreement with Seattle which included a take-or-pay declining block for 30.3 MGD of water through 2024. In 2008 the agreement was amended to add another 3.0 MGD from 2009-2017 and an additional 2.0 MGD from 2018-2023. Subsequently, regional supply and demand forecasts indicated demand was growing more slowly than previously forecast over the next 50 years, providing an opportunity to amend and extend the contract. The July 15, 2013 extension allowed Cascade to defer development of the Lake Tapps Reservoir and provided Seattle with additional revenue.

### Key Features Of Agreement

- Provides Cascade with a take-or-pay Base and Supplemental Block of water, with a termination date of December 31, 2044 for the Supplemental Block.
- Allows Cascade to purchase up to 5.3 MGD starting 2064 for members that cannot be served economically by other means.
- Provides increased amounts of water during the peak season and peak month.
- Reduces Cascade's block proportionally if Seattle's Firm Yield is reduced.
- Allows Cascade or Seattle to request consideration to further extend the supply commitment, beginning January 2020 and each January at five-year intervals.

Year	Size of Block (in MGD)		
	Base	Supplemental	Total
2004-2023	30.3	3	33.3
2024-2029	29.3	4	33.3
2030-2034	26.8	6.5	33.3
2035-2039	24.3	9	33.3
2040	24.3	7	31.3
2041	24.3	5	29.3
2042	24.3	3	27.3
2043	24.3	2	26.3
2044	24.3	1	25.3
2045	24.3	0	24.3
2046	23.3	0	23.3
2047-2063	1 less than prior year	0	1 less than prior year
2064	5.3	0	5.3

### Implications For Future Decisions Regarding Lake Tapps Reservoir

If Cascade can negotiate a contract extension with Seattle, and one that is more competitive than other options, it will be able to defer development of the Lake Tapps Reservoir.

## J. Tacoma Water Sale Agreement

**Parties to the Agreement:** Cascade and Tacoma

**Agreement Date:** December 31, 2012

**Expiration Date:** December 31, 2042

### *Primary Objective Of Agreement*

Provides Cascade with up to 8.0 MGD of water through 2042 with lower payments than were stipulated in the original 2005 agreement. Also allows for the sale of extra capacity to the Four Cities.

### *Background*

Cascade originally entered into an agreement on October 13, 2005 with Tacoma which included a progressive take-or-pay for 4.0 MGD of permanent supply and 6.0 MGD of temporary supply. Subsequently, regional supply and demand forecasts indicated Cascade had sufficient water supply for the next 50 years without taking delivery of water from Tacoma. The 2012 amended agreement enabled Cascade to reduce its payments and receive a new capacity commitment of 8.0 MGD through 2042. It also allowed Cascade to sell extra capacity to Auburn, Bonney Lake, Buckley, and Sumner to satisfy its obligations in the Four Cities Agreement. *(Note: Both Auburn and Bonney Lake bought Tacoma supply through this feature.)*

### *Key Features Of Agreement*

- Restructures Cascade's payment schedule to Tacoma. Provides for a significant decline after 2029, from \$6.86M to \$1M and ends payments in 2042. Payments are required irrespective of Cascade's use of Tacoma water.
- Allows Cascade to request all or a portion of 8.0 MGD from Tacoma to serve members' retail customers or other direct use by members. Does not allow for the water to be resold or wheeled by Cascade or members without Tacoma's written consent. *(Note: Cascade has not taken any delivery of water from Tacoma to date.)*
- Requires Cascade to be responsible for the design, engineering, permitting, and construction of infrastructure necessary to interconnect and take delivery of water from Tacoma.
- Allows for the sale of wholesale water to the Four Cities until December 31, 2017. *(Note: Auburn and Bonney Lake both purchased some wholesale water.)*

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

If Cascade were to take delivery of water from Tacoma as a bridge prior to developing the Lake Tapps Reservoir as a source of water supply, it would first need to complete construction of the Tacoma-Cascade Pipeline (TCP) and other infrastructure. Once Lake Tapps Reservoir is developed, the TCP will continue to be used to deliver Lake Tapps municipal supply to members.

## K. Membership Audit Acceptance Agreements

**Parties to the Agreements:** Cascade and each member individually (separate agreements for each member)

**Agreement Dates:**

- May 23, 2008: Bellevue, Issaquah, Kirkland, Redmond, Sammamish Plateau Water District, Tukwila
- April 9, 2019: Skyway Water & Sewer District

**Expiration Dates:** N/A

### *Primary Objective Of Agreements*

Requires an audit of each member's water system and independent supply for: (1) determining Cascade's supply obligation to that member; (2) recognizing when the member has lost independent supply; and (3) allocating credits against the member's RCFC for its independent supply.

### *Background*

Cascade members are required to have their water system and independent supply audited by Cascade. Prior to adoption of the JMUSA, this requirement was articulated in Article V, Section 5.2.2 of the Amended and Restated Interlocal Contract, dated December 15, 2004. Today, this requirement is codified in Section 3.2 of the JMUSA, and the authority to carry out audits of a member's independent supply is stated in Section 5.2.B.

In 2022 Cascade completed audits of Issaquah's, Redmond's, Sammamish Plateau Water's, and Skyway Water and Sewer District's independent supplies, which showed all four members are generally in a good position to meet future production requirements.

### *Key Features Of Agreements*

- States that the audit will accurately identify and quantify members' independent supply for the purpose of establishing Cascade's supply commitment to members.
- Reaffirms wheeling arrangements.
- Describes expectations regarding points of delivery.
- Describes the awarding of RCFC credits. *(Note: This is no longer relevant for existing agreements as all credits were repurchased by Cascade in 2012.)*
- Describes administering, enforcing, and waiving production requirements.

### *Implications For Future Decisions Regarding Lake Tapps Reservoir*

Member independent supply production is relied on when planning future supplies, including the Lake Tapps Reservoir. This Agreement helps determine when that source may be needed.



# FINANCIALS

## I. FINANCIALS IN BRIEF

### Budget Summary

Program	2022 Adopted Budget	2023 Adopted Budget	2024 Adopted Budget
Administration	\$3,858,337	\$3,915,869	\$3,808,870
Conservation	\$839,874	\$798,115	\$805,754
Operations	\$5,682,685	\$6,158,568	\$6,434,135
Debt Service	\$9,779,981	\$9,199,941	\$10,795,666
Water Payments	\$22,730,886	\$23,969,287	\$24,402,498
<b>Total Operations &amp; Maintenance (O&amp;M)</b>	<b>\$42,891,763</b>	<b>\$44,041,780</b>	<b>\$46,246,923</b>
Capital Improvement (CIP)	\$9,135,463	\$10,519,972	\$13,431,872
<b>TOTAL BUDGET</b>	<b>\$52,027,226</b>	<b>\$54,561,752</b>	<b>\$59,678,795</b>

### Revenue Summary

Revenue Source	2022 Estimated Revenue	2023 Estimated Revenue	2024 Estimated Revenue
Administrative Dues	\$3,741,337	\$3,776,170	\$3,706,551
Conservation Charges	\$744,873	\$793,621	\$800,515
Demand Share Charges	\$39,106,467	\$39,981,924	\$41,024,787
Regional Capital Facilities Charge (RCFC)	\$7,110,364	\$9,561,469	\$9,890,512
Other	\$1,222,146	\$1,624,410	\$1,746,870
<b>TOTAL REVENUE</b>	<b>\$51,925,187</b>	<b>\$55,737,594</b>	<b>\$57,169,235</b>

Note: Due to rate smoothing, reserve requirements, interfund transfers, and prior year adjustments, revenue in any year will not exactly match the budget.

### Appropriation Authority by Fund

Fund	2023 Appropriation Authority	2024 Appropriation Authority
Operating	\$52,431,642	\$54,246,578
Water Supply Development	\$9,398,647	\$11,370,104
Rate Stabilization	\$2,181,498	\$2,290,715
Construction	\$26,125,333	\$24,298,926
Bond	\$22,502,171	\$23,170,942
<b>Total</b>	<b>\$112,639,291</b>	<b>\$115,377,264</b>

## II. BUDGET

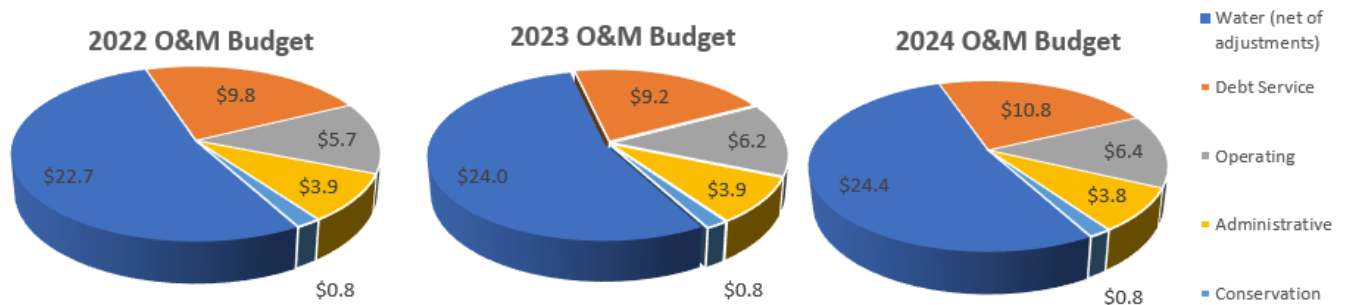
### A. Operations & Maintenance (O&M) Budget

A summary of Cascade’s 2022, 2023 and 2024 adopted O&M budgets are shown below.

Program	2022 Budget	2023 Budget	2024 Budget	% Change '22 to '23	% Change '23 to '24
Water Payments	\$22,730,886	\$23,969,287	\$24,402,498	5.45%	1.81%
Debt Service	\$9,779,981	\$9,199,941	\$10,795,666	-5.93%	17.34%
Operating	\$5,682,685	\$6,158,568	\$6,434,135	8.37%	4.47%
Administrative	\$3,858,337	\$3,915,869	\$3,808,870	1.49%	-2.73%
Conservation	\$839,874	\$798,115	\$805,754	-4.97%	0.96%
<b>Total O&amp;M Budget</b>	<b>\$42,891,763</b>	<b>\$44,041,780</b>	<b>\$46,246,923</b>	<b>2.68%</b>	<b>5.01%</b>

O&M budget program descriptions:

- **Administration.** General overhead cost and includes activities related to finance, economics, communications, inter-governmental relations, and planning. Administrative dues are imposed on members, such as office rent, salaries and benefits, legal, etc. There is a cap (9%) on the administrative dues that Cascade charges its members.
- **Conservation.** Expenses related to Cascade’s water efficiency program.
- **Debt Service.** The amount necessary to make principal and interest payments.
- **Operations.** Charges necessary to operate Cascade’s operations including those related to the White River-Lake Tapps Reservoir system and the Bellevue Issaquah Pipeline (BIP).
- **Water Contracts.** The cost of water paid to Seattle for the declining block contract.

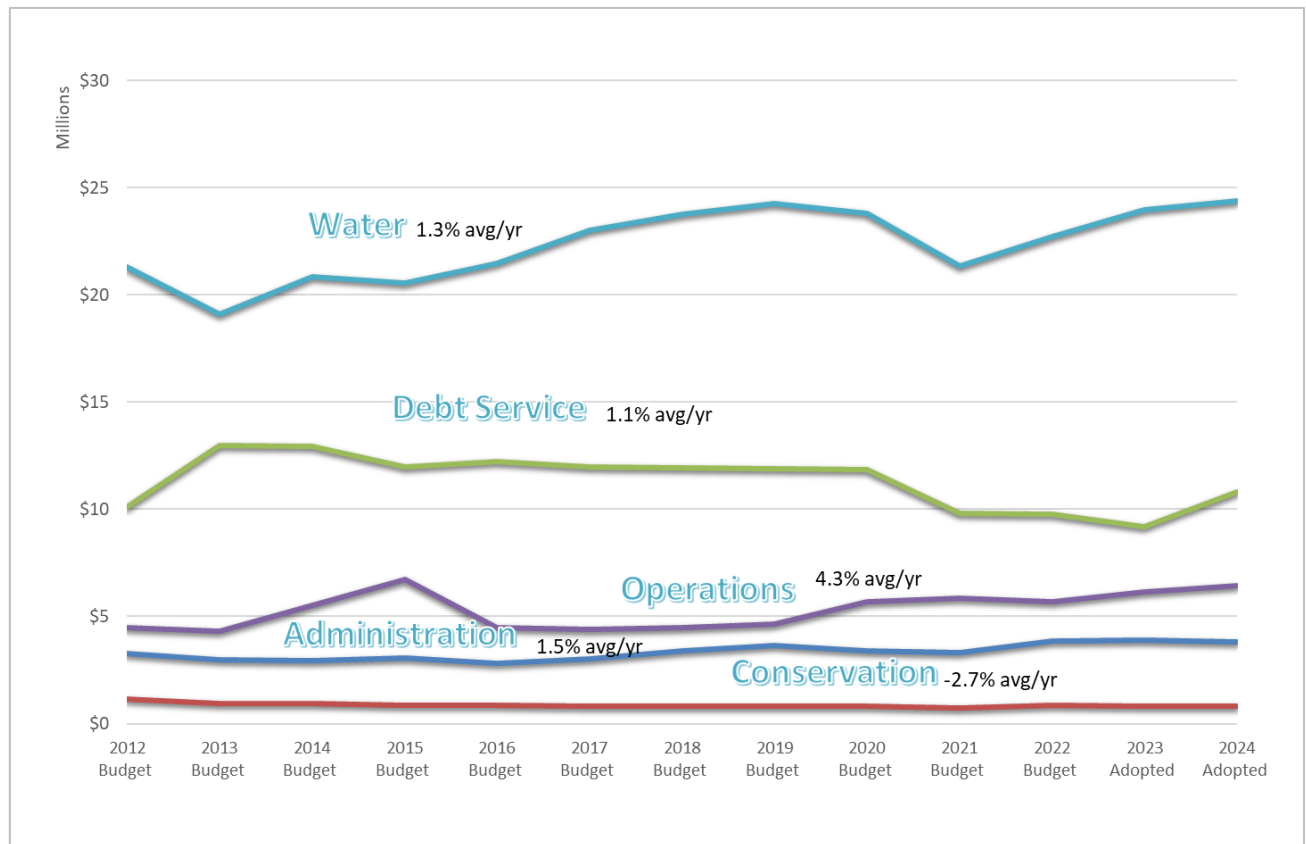


Cascade’s total O&M budget increased by 2.68% in 2023 relative to 2022, driven primarily by changes in the Seattle water and operations costs. Conservation costs decreased slightly in 2023 and 2024. This is a result of programmatic efficiencies that have no negative impact on service levels.

Wages in the 2023-2024 budget increased largely due to high inflation which pushed the cost-of-living adjustment (COLA) to 9.5% in 2023 and 4.5% in 2024. Other increases include a move to a new office in 2023, increases in Lake Tapps Operator costs due to inflation, and planned condition assessments.

Debt services expenditures decreased in 2023 and then increased in 2024. The decrease in 2023 is a result of the Bond refunding in 2019 and 2020. The 2024 increase is a one-time blip in the debt repayment schedule that resulted from the refunding.

The chart below shows the O&M budget trends from 2012-2024. It graphically represents the large impact Seattle water costs and debt service have had on Cascade’s overall O&M budget. It also shows Administration and Conservation costs remaining relatively flat over time. Operations peaked in 2015 when Cascade performed a significant number of repair projects and sediment removal.

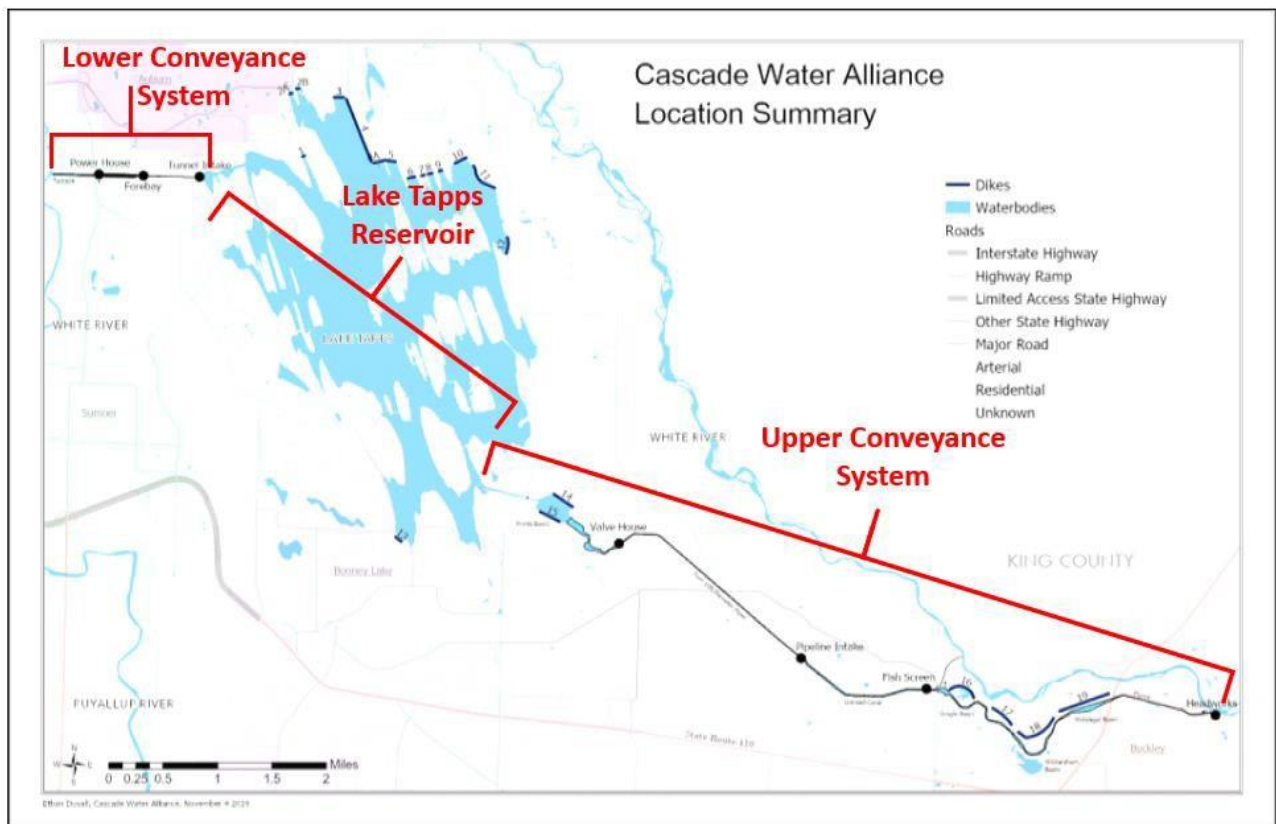


## B. Capital Improvement Program (CIP) Budget

A summary of Cascade’s adopted 2023-2028 CIP budgets is shown below.

Project Group	2023	2024	2025	2026	2027	2028
Upper Conveyance	\$3,425,000	\$275,000	\$50,000	\$50,000	\$500,000	\$2,000,000
Lower Conveyance	\$0	\$1,000,000	\$2,500,000	\$3,000,000	\$1,500,000	\$100,000
Lake Tapps Reservoir	\$100,000	\$0	\$0	\$1,200,000	\$600,000	\$0
SCADA and Security	\$50,000	\$0	\$0	\$0	\$0	\$0
Facilities	\$200,000	\$200,000	\$0	\$0	\$100,000	\$100,000
Equipment	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Bellevue-Issaquah Pipeline	\$50,000	\$130,000	\$550,000	\$550,000	\$0	\$0
IT Infrastructure	\$25,000	\$35,000	\$25,000	\$35,000	\$25,000	\$35,000
<b>Subtotal - Projects</b>	<b>\$3,925,000</b>	<b>\$1,715,000</b>	<b>\$3,200,000</b>	<b>\$4,910,000</b>	<b>\$2,800,000</b>	<b>\$2,310,000</b>
Capital Risk	\$500,000	\$500,000	\$500,000	\$600,000	\$600,000	\$600,000
Tacoma Agreement	\$6,094,972	\$6,216,872	\$6,341,209	\$6,468,033	\$6,597,394	\$6,729,342
Seattle Agreement	\$0	\$5,000,000	\$0	\$0	\$0	\$0
<b>Grand Total</b>	<b>\$10,519,972</b>	<b>\$13,431,872</b>	<b>\$10,041,209</b>	<b>\$11,978,033</b>	<b>\$9,997,394</b>	<b>\$9,639,342</b>

The CIP is associated with replacing and improving assets in, and purchasing equipment for, the White River-Lake Tapps Reservoir system. Although Cascade will not develop the Reservoir as a source of drinking water for some time, it continues to invest in the system to keep it functioning and to meet regulatory requirements and agreements. Many of the assets purchased from PSE are more than 100 years old. Below is a map of the White River-Lake Tapps Reservoir system.



CIP program and select project descriptions:

- **Upper Conveyance.** Projects needed in the upper conveyance part of the system. In 2024, the largest project is the Headworks Intake Modifications project. This is Phase 3 of the US Army Corps of Engineers' Mud Mountain Dam Fish Passage Project to improve how water is diverted from the White River to Lake Tapps and to reduce sediment in the flowline.
- **Lower Conveyance.** Projects to improve critical assets in the lower conveyance portion of the White River-Lake Tapps Reservoir system, such as the Powerhouse valves, the Forebay facility, and the Penstocks. A value analysis study needs to be conducted to prioritize the projects.
- **Lake Tapps Reservoir.** Projects needed in the Lake Tapps Reservoir. In 2024 Cascade will continue design work for improvements to Dikes 9 and 10 to reduce the risk for seepage and seismic failure. However, construction will be deferred until 2026 or later when more funding capacity is available.
- **SCADA and Security.** In early 2023 Cascade completed the Supervisory Control and Data Acquisition System (SCADA) and Security Improvements Project.
- **Facilities.** Projects to improve Cascade's facilities throughout the White River – Lake Tapps Reservoir Project, such as trespassing mitigation measures.
- **Equipment.** Annual placeholder amounts for the purchase of equipment – both new and replacement equipment – that are necessary to operate and maintain the White River – Lake Tapps Reservoir system.
- **IT Infrastructure.** Placeholders for the purchase of equipment necessary for a reliable information technology (IT) system, ensuring that sensitive data is protected and Cascade can continue to run smoothly.
- **Meters and Bellevue-Issaquah Pipeline (BIP):** Placeholders for: 1) the purchase of existing meters that Cascade or other agencies own but Cascade is responsible for the cost of the replacement; 2) the transfer of meter ownership from a member to Cascade; and 3) protect in-place or relocate a section of the Bellevue-Issaquah Pipeline for work associated with a Washington Department of Transportation (WSDOT) culvert replacement project.
- **Capital Risk:** The contingency line provides a reserve for unforeseen and/or emergency needs that are likely to occur with the 100-plus-year-old infrastructure that Cascade purchased from PSE. These funds will only be spent if they are needed.
- **Seattle Agreement:** The Seattle Agreement provides Cascade with 33.3 MGD of water through 2039 to serve members' retail customers. Under the Agreement, Cascade makes three capacity reservation payments, the last of which is due in 2024.
- **Tacoma Agreement:** The Tacoma Agreement provides Cascade with up to 8.0 MGD of water through 2042. This program reflects the annual payments to Tacoma. In 2030 the payment decreases to \$1M.

## II. RATES AND REVENUE

### A. Adopted Estimated Revenue

The 2023-2024 adopted estimated revenues, excluding bond debt proceeds, are as outlined below and are compared to 2020 projected revenue.

Revenue Sources	2022 Projected	2023 Estimate	2024 Estimate	% Change from 2022 to 2023	% Change from 2023 to 2024
Administrative charges to members	\$3,741,337	\$3,776,170	\$3,706,551	0.93%	-1.84%
Conservation charges to members	\$744,873	\$793,621	\$800,515	6.54%	0.87%
Demand share charges to members	\$39,106,467	\$39,981,923	\$41,024,787	2.24%	2.61%
Regional Capital Facilities Charges (RCFC)	\$7,110,364	\$9,561,469	\$9,890,512	34.47%	3.44%
Interest earnings	\$341,816	\$609,605	\$729,965	78.34%	19.74%
Other	\$949,805	\$944,805	\$944,805	-0.53%	0.00%
<b>Total</b>	<b>\$51,994,662</b>	<b>\$55,667,593</b>	<b>\$57,097,136</b>	<b>7.06%</b>	<b>2.57%</b>

*Note: This table was created in late 2022 and has not been updated to show 2022 actual revenue.*

Revenue sources description:

- **Administrative Dues.** Charges based on total member connections as measured in Cascade Equivalent Residential Units (CERUs) to recover administrative costs, including management and administrative personnel costs, office rent, financial, legal, and other general costs.
- **Conservation Dues.** Charges based on CERUs to recover Cascade’s water efficiency program costs, including program management, educational and outreach programs, conservation investments, and other conservation costs.
- **Demand Share Charges.** Charges based on total member demand shares to recover capacity-related costs, including debt service, direct capital funding, additions to capital reserves, and O&M costs. Included in this charge are portions of wholesale payments to Seattle and/or others.
- **Regional Capital Facilities Charges (RCFCs).** Charges for new water connections (also known as connection charges or system development charges). RCFCs are based on a pro rata share of Cascade’s CIP costs, and revenues are used to repay debt and fund capital projects.
- **Interest Earnings.** Earnings on investments in King County’s investment pool. Cascade has been able to increase interest revenue by participating in King County’s Pool Plus option, a pool of longer-term maturities that Cascade invests in using Bond reserves. Cascade is planning to use the Pool Plus option for the Water Supply Development Fund cash as well.
- **Other.** Other revenue consists of rental and license income and payments from the Auburn for water from the sale of Tacoma water system development charges.

Net charges to members (Administrative dues, Conservation dues, and Demand Share charges) increased by 2.2% in 2023 and 2024. RCFC revenues are expected to rebound, and interest revenue is projected to increase as Cascade earns a higher rate of interest investing in longer-term maturities.

## B. Member Charges and Rates

**Member Charges.** The 2022, 2023, and 2024 adopted member charges (excluding RCFCs) are shown in the tables below. Administrative dues are assessed against each member for 2023 and 2024 at the rates of \$21.45 and \$20.93 per CERU, respectively, multiplied by 100% of each member's CERUs. The demand share charge for 2023 and 2024 is \$399,819 and \$410,248, respectively, per demand share percentage. The conservation program charge for 2023 and 2024 is \$4.51 and \$4.52, respectively, per CERU.

2022 Member Charges (Per 2022 Budget)	Administrative Dues	Conservation Charges	Demand Share Charges	Total
Bellevue	\$1,483,288	\$295,312	\$20,580,180	\$22,358,780
Issaquah	\$330,018	\$65,704	\$1,738,960	\$2,134,682
Issaquah - Temporary Water	\$0	\$0	\$0	\$0
Kirkland	\$433,427	\$86,292	\$5,478,039	\$5,997,758
Redmond - City	\$709,707	\$141,298	\$6,932,311	\$7,783,316
Redmond - Novelty Hill	\$0	\$0	\$0	\$0
Sammamish Plateau Water	\$521,316	\$103,790	\$1,362,345	\$1,987,451
Skyway Water & Sewer District	\$83,438	\$16,612	\$425,914	\$525,964
Tukwila	\$180,143	\$35,865	\$2,588,718	\$2,804,726
<b>Total</b>	<b>\$3,741,337</b>	<b>\$744,873</b>	<b>\$39,106,467</b>	<b>\$43,592,677</b>

2023 Member Charges	Administrative Dues	Conservation Charges	Demand Share Charges	2020 True-up	Total	Increase Over 2022 Charges With 2022 True-up
City of Bellevue	\$1,499,443	\$315,132	\$21,237,988	\$50,549	\$23,074,525	3.20%
Issaquah	\$336,325	\$70,684	\$1,801,664	(\$13,131)	\$2,209,275	3.49%
Issaquah Temporary	\$0	\$0	\$0	\$0	\$0	n/a
City of Kirkland	\$435,995	\$91,631	\$5,897,824	\$66,991	\$6,492,441	8.25%
Redmond - City	\$621,148	\$130,544	\$5,384,478	(\$104,976)	\$6,031,194	-5.14%
Redmond - Novelty Hill	\$95,563	\$20,084	\$1,260,275	(\$23,539)	\$1,352,383	n/a
Sammamish Plateau Water	\$523,569	\$110,036	\$1,389,768	\$48,118	\$2,086,345	4.98%
Skyway Water & Sewer District	\$83,392	\$17,526	\$439,289	\$2,103	\$542,310	3.11%
City of Tukwila	\$180,735	\$37,984	\$2,570,637	(\$26,113)	\$2,763,243	-1.48%
<b>Total</b>	<b>\$3,776,170</b>	<b>\$793,621</b>	<b>\$39,981,923</b>	<b>\$0</b>	<b>\$44,551,715</b>	<b>2.20%</b>

2024 Member Charges	Administrative Dues	Conservation Charges	Demand Share Charges	2020 True-up	Total	Increase Over 2023 Charges With 2022 True-up
City of Bellevue	\$1,468,720	\$317,204	\$21,764,885	\$50,549	\$23,601,358	2.28%
Issaquah	\$331,609	\$71,619	\$1,911,006	(\$13,131)	\$2,301,103	4.16%
Issaquah Temporary	\$0	\$0	\$52,232	\$0	\$52,232	n/a
City of Kirkland	\$428,889	\$92,628	\$6,047,052	\$66,991	\$6,635,560	2.20%
Redmond - City	\$610,021	\$131,748	\$5,435,113	(\$104,976)	\$6,071,906	0.68%
Redmond - Novelty Hill	\$93,481	\$20,189	\$1,295,065	(\$23,539)	\$1,385,196	2.43%
Sammamish Plateau Water	\$515,619	\$111,360	\$1,497,957	\$48,118	\$2,173,054	4.16%
Skyway Water & Sewer District	\$81,497	\$17,601	\$441,952	\$2,103	\$543,153	0.16%
City of Tukwila	\$176,715	\$38,166	\$2,579,525	(\$26,113)	\$2,768,293	0.18%
<b>Total</b>	<b>\$3,706,551</b>	<b>\$800,515</b>	<b>\$41,024,787</b>	<b>\$0</b>	<b>\$45,531,854</b>	<b>2.20%</b>

Administrative dues are based on budgeted administrative costs, and actual CERU counts, as of January 1 of each year. There is a contractual limit of 9% of total revenue requirements for Administrative dues. Administrative dues as a percent of all charges (except RCFC) are shown below.

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
8.20%	8.70%	8.50%	8.30%	8.80%	8.70%	7.90%	8.00%	7.87%	8.45%	8.48%	8.14%

**Member Rates.** Adopted and projected member rate increases for 2009-2028 are shown in the table below. From 2009 through 2011, Cascade experienced lower-than-anticipated growth due to the housing market crisis. This led to a needed increase in member rates to make up the difference in revenue dedicated to debt service. Subsequently, Cascade made a policy change that moved a higher percentage of RCFC to capital expenditures and made member rate increases less dependent on RCFC revenue. This resulted in an increase in the stability of member rates and an improvement in member equity.

Member Rate Increases	2009-2010	2011-2012	2013	2014	2015-2016	2017-2018	2019	2020	2021-2022	2023-2024 Adopted	2025-2028 Estimated
Adopted	7.50%	6.00%	3.75%	3.00%	2.75%	3.00%	4.50%	3.00%	2.20%	2.20%	
Projected											3.00%

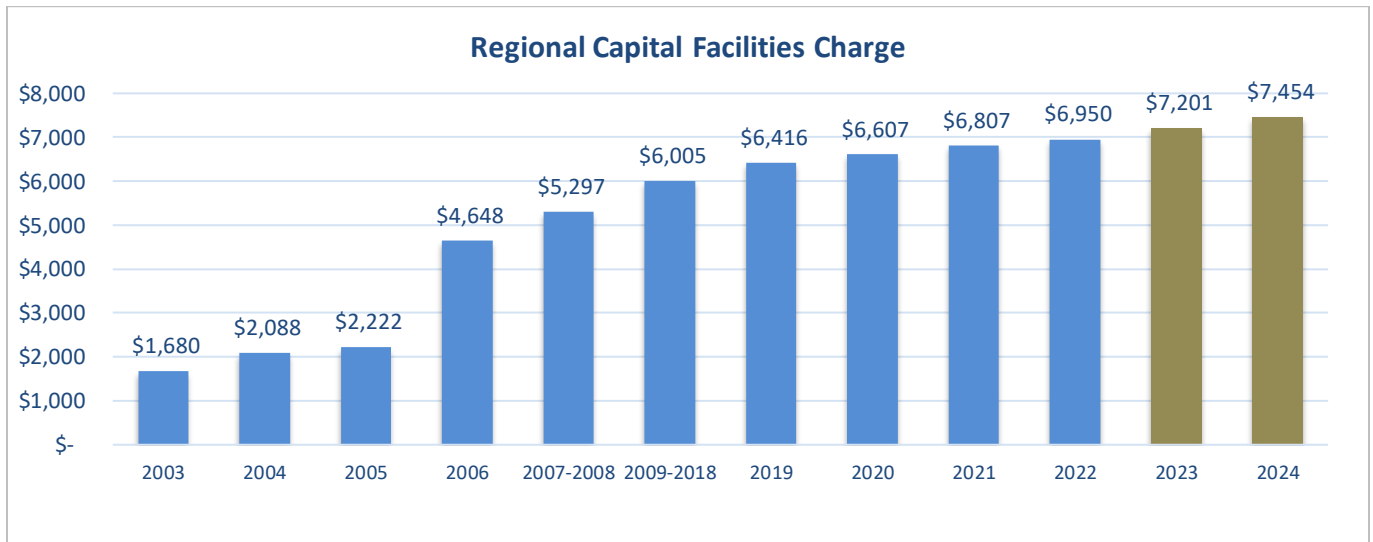
Cascade member rates have different impacts on members’ retail rates to their customers. Rate impacts for members are dependent upon the members’ level of independent supply. Below are the projected impacts of the annual 2.2% increase on members’ retail rates, shown as cost per single family residential on a monthly bill. These are only estimates since the actual bill impact to members’ customers exclude additional local charges that members need to recover, such as taxes.

Monthly Increase per Single Family Residential 2023/2024 2.2% Annual Increase	2023	2024
<b>Total Cascade Members</b>	<b>\$0.45</b>	<b>\$0.46</b>
Bellevue	\$0.95	\$0.52
Issaquah	\$0.21	\$0.58
Issaquah - Temporary Water	\$0.00	\$0.27
Kirkland	\$2.28	\$0.04
Redmond - City	(\$1.31)	\$0.84
Redmond - Novelty Hill	(\$1.31)	\$0.61
Sammamish Plateau Water	\$0.45	(\$0.05)
Skyway Water & Sewer District	\$0.39	(\$0.07)
Tukwila	(\$0.67)	\$0.56



## C. Regional Capital Facilities Charges

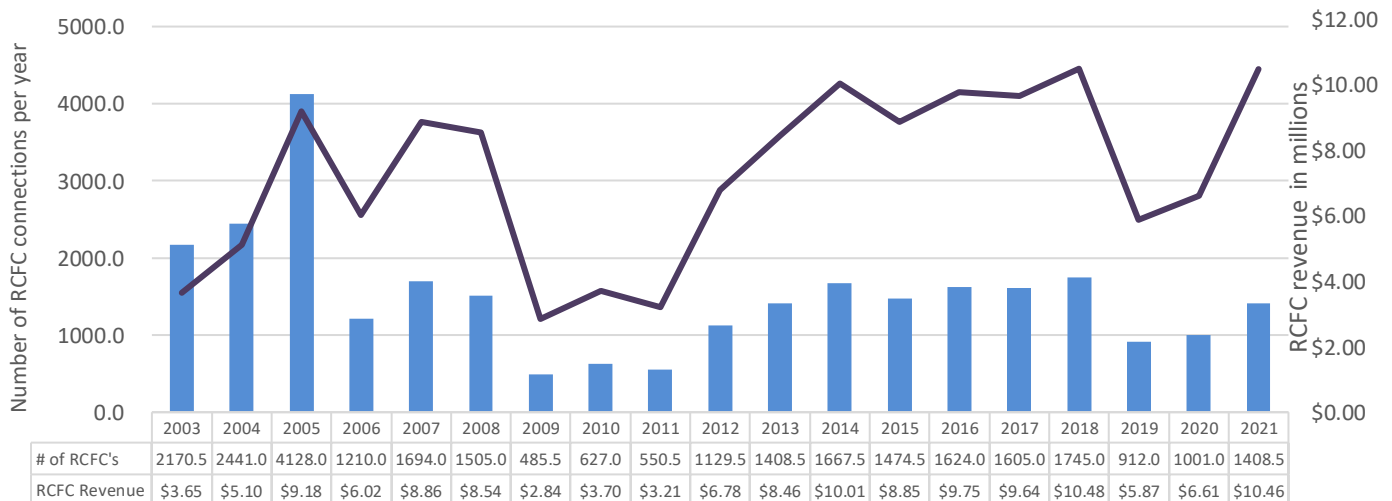
Regional capital facilities charges (RCFCs) are charges for new water connections and are based on a pro rata share of Cascade’s CIP costs. RCFC revenues are used to repay debt and to fund capital projects. The methodology for calculating the RCFC was adopted by the Board and is codified as Chapter 5.24 of the Cascade Water Alliance Code. The chart below shows the change in RCFC rates from 2003 to 2024.



During the 2023-2024 budget development process, Cascade analyzed its capital projects requirements and rate structure and developed RCFC rates for the current biennium. For the 2023-2024 budget 100% of the RCFC revenue is committed to capital expenditures.

RCFC charges increased to \$7,201 per CERU in 2023 and to \$7,454 per CERU in 2024. The RCFC charge is based on existing and future infrastructure divided by the customer base. Future water supply infrastructure is the primary driver of the RCFC rate increases. RCFC rates were updated to improve equity, increase growth revenue to reduce the burden on rates, create more robust funding for the CIP, recognize increasing construction costs and remain consistent with longer-term trends.

Below is a graph showing actual number of RCFCs and revenue from 2003 to 2021.



### III. LONG-RANGE FINANCIAL FORECAST

Cascade’s rate model projects rates up to 80 years in the future. The forecast is used to guide future strategic plans and decisions. A long-range future forecast is essential to Cascade because the future development of Lake Tapps for water supply will take a decade and about \$2 billion, while supply contract extensions defer capital outlays. Therefore, being able to properly time the construction of Lake Tapps to minimize the impact on customers is key. The bulk of Cascade’s O&M budget is purchased water from Seattle. The long-range forecast projects a general inflation of 3%, a construction cost inflation of 3.5% and stable rate trends. Below is a snapshot of the long-range forecast through 2032.

#### Summary of Key Variables & Outcomes

Key Variables	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
General Inflation (CPI)	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Construction Cost Inflation	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Fund Interest Earnings Rate	1.00%	1.25%	1.50%	1.75%	2.00%	2.25%	2.50%	2.75%	3.00%	3.00%
Long-Term Debt Interest Rate	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Assumed Term of Long-Term Debt	30 Years	30 Years	30 Years	30 Years	30 Years	30 Years	30 Years	30 Years	30 Years	30 Years
System Reinvestment Funding:										
Target Funding Level (% of Asset Value)	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Amount Funded	\$ 1,096,264	\$ 1,163,299	\$ 1,213,380	\$ 1,273,145	\$ 1,323,007	\$ 1,371,078	\$ 1,423,066	\$ 1,447,084	\$ 1,471,111	\$ 1,496,686

#### Operating Expense Summary

Purchased Water	\$ 23,969,286	\$ 24,402,498	\$ 24,905,415	\$ 25,648,897	\$ 26,418,364	\$ 27,210,915	\$ 28,027,242	\$ 29,747,791	\$ 30,640,225	\$ 31,559,432
Penalties	-	-	-	-	-	-	-	-	-	-
Other O&M	6,097,162	6,370,749	6,518,096	6,758,728	6,915,049	7,170,334	7,336,175	7,607,007	7,782,948	8,070,274
Administrative Expenses	3,716,171	3,646,551	3,681,015	3,868,626	3,905,189	4,104,225	4,143,015	4,354,173	4,395,324	4,619,342
Conservation Expenses	793,622	800,515	824,530	849,266	874,744	900,987	928,016	955,857	984,532	1,014,068
Capitalizable Expenses	-	-	-	-	-	-	-	-	-	-
<b>Total Operating Expenses</b>	<b>\$ 34,576,241</b>	<b>\$ 35,220,313</b>	<b>\$ 35,929,057</b>	<b>\$ 37,125,517</b>	<b>\$ 38,113,346</b>	<b>\$ 39,386,461</b>	<b>\$ 40,434,449</b>	<b>\$ 42,664,828</b>	<b>\$ 43,803,030</b>	<b>\$ 45,263,116</b>

#### Capital Funding Summary

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Capital Improvement Program:										
Total Capital Expenditures	\$ 12,044,972	\$ 13,406,872	\$ 10,016,209	\$ 11,953,033	\$ 9,972,394	\$ 9,614,342	\$ 10,397,586	\$ 4,803,628	\$ 4,805,342	\$ 5,114,942
Capital Funding Strategy:										
Capital Reserves (Including RFCs)	\$ 12,044,972	\$ 13,345,115	\$ 10,016,209	\$ 10,522,590	\$ 9,538,514	\$ 9,614,342	\$ 10,397,586	\$ 4,803,628	\$ 4,805,342	\$ 5,114,942
Member Contributions	-	-	-	-	-	-	-	-	-	-
PWTF Loan Proceeds	-	-	-	-	-	-	-	-	-	-
Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 12,044,972</b>	<b>\$ 13,345,115</b>	<b>\$ 10,016,209</b>	<b>\$ 10,522,590</b>	<b>\$ 9,538,514</b>	<b>\$ 9,614,342</b>	<b>\$ 10,397,586</b>	<b>\$ 4,803,628</b>	<b>\$ 4,805,342</b>	<b>\$ 5,114,942</b>
<b>Capital Funding Surplus (Deficit)</b>	<b>\$ -</b>	<b>\$ (61,756)</b>	<b>\$ -</b>	<b>\$ (1,430,443)</b>	<b>\$ (433,880)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Debt Principal Outstanding	\$ 85,795,000	\$ 77,585,000	\$ 70,640,000	\$ 63,400,000	\$ 55,865,000	\$ 48,040,000	\$ 39,930,000	\$ 34,530,000	\$ 28,955,000	\$ 23,290,000
Annual Debt Service	\$ 9,238,507	\$ 10,834,035	\$ 9,262,762	\$ 9,222,041	\$ 9,221,141	\$ 9,215,741	\$ 9,207,966	\$ 6,253,091	\$ 6,252,191	\$ 6,245,006
Rate-Funded Debt Service Account Transfers	\$ 8,562,921	\$ 9,635,182	\$ 8,544,147	\$ 8,538,359	\$ 8,004,832	\$ 8,014,722	\$ 7,987,443	\$ 2,061,681	\$ 5,618,233	\$ 6,125,862

## IV. FINANCIAL STRUCTURE AND FISCAL POLICIES

### A. Funds

Cascade’s has five funds, and the table below shows the appropriation authority.

Fund	2023 Appropriation Authority	2024 Appropriation Authority
Operating	\$52,431,642	\$54,246,578
Water Supply Development	\$9,398,647	\$11,370,104
Rate Stabilization	\$2,181,498	\$2,290,715
Construction	\$26,125,333	\$24,298,926
Bond	\$22,502,171	\$23,170,942
<b>Total</b>	<b>\$112,639,291</b>	<b>\$115,377,264</b>

Funds descriptions:

- **Operating Fund.** The Operating Fund is used to cover all operating expenses. The beginning and ending Operating Fund target balance is no less than 13.7% (50 days) of budgeted annual operating expenses. Cascade routinely budgets higher levels of reserves to mitigate unpredictable lump sum expense adjustments, such as the annual Seattle contract true-up, and to reflect accruals toward intermittent large scale operating expenditures. If the Operating Fund balance falls below the target balance, Cascade sets budgets and rates so that target fund levels are restored within two years.
- **Water Supply Development Fund (WSDF).** The WSDF was established in 2021 and is a structured means to accumulate cash to meet Cascade’s 20% equity requirement and mitigate project financial impacts when the time is ready to develop the Lake Tapps Reservoir or to pay for other water supply needs.
- **Rate Stabilization Fund.** The Rate Stabilization Fund is used to mitigate fluctuations in revenues, expenses, or rates. Cascade targets a Fund balance equal to 5% of operating revenues plus provisions for accruals for intermittent large-scale operating expenditures.
- **Construction Fund.** The Construction Fund is used to cover construction projects, and funding comes from RCFC revenue, bonds, and member rates.
- **Bond Fund.** The Bond Fund is comprised of funds necessary for debt service payments and a Reserve Account. Funding for debt service comes from member rates.

## B. Fiscal Policies Summary

Cascade’s Board has determined that Cascade will maintain fiscal policies that promote four goals:

Policy Goal	Description
Financial integrity and stability	Cascade will provide a stable financial structure that enables it to fulfill its mission to provide regional water supply and transmission services in an efficient and cost-effective manner.
Rate equity	Members shall not enjoy or suffer from geographic advantage as an element of the allocation of regional water resources or their costs.
Efficiency and conservation	Cascade is committed to efficient and responsible use and stewardship of water resources. Water efficiency and conservation provide cost-effective means to avoid or delay costly system expansions while reducing environmental impacts on water systems.
Balanced budget	Total resources will equal total uses.

The complete list of fiscal policies is included in the [Cascade Code, Section 5.05](#).

**Debt Coverage Ratio And Debt Capacity.** One of Cascade’s fiscal policies requires that it complies with bond covenants and satisfies related coverage requirements. In addition, the fiscal policies require that Cascade establish member charges sufficient to maintain net revenues that provide a debt coverage ratio of no less than 1.25 times total annual debt service. The following table shows Cascade’s actual debt coverage ratio since 2016 and the projected ratios for 2023 and 2024.

	2024	2023	2022	2021	2020	2019	2018	2017	2016
Ratio	2.20	2.57	2.93	2.11	1.63	1.47	1.58	1.35	1.40

In accordance with the fiscal policies, Cascade issues debt for investments in system infrastructure that provides tangible or intangible assets. Debt is not used to fund ongoing operating and maintenance costs that cannot be capitalized. Cascade does not use non-traditional debt, such as derivatives, swaps, variable rate obligations or other financial mechanisms, unless such instruments are allowable under Washington law, determined by the Board to be in the best interest of Cascade, and found by the Board to provide financial benefit to Cascade without undue risk.

Cascade may consider debt refunding, defeasance or restructuring when demonstrated to be financially advantageous. When Cascade accumulates cash and investments in excess of identified near-term requirements, Cascade considers debt reduction as one of the potential uses for such resources.

Cascade’s outstanding debt as of December 31, 2022, is \$92,228,422. The percentage of Cascade’s forecasted revenues committed to debt repayment is 20.65% in 2023 and 23.71% in 2024. Cascade’s debt-to-assets ratio has trended down over the last few years, currently under 31%. Net assets have decreased recently as amortization has outpaced capital projects. However, debt has decreased more and will continue to as Cascade does not anticipate issuing debt other than to refinance existing debt in the next decade.

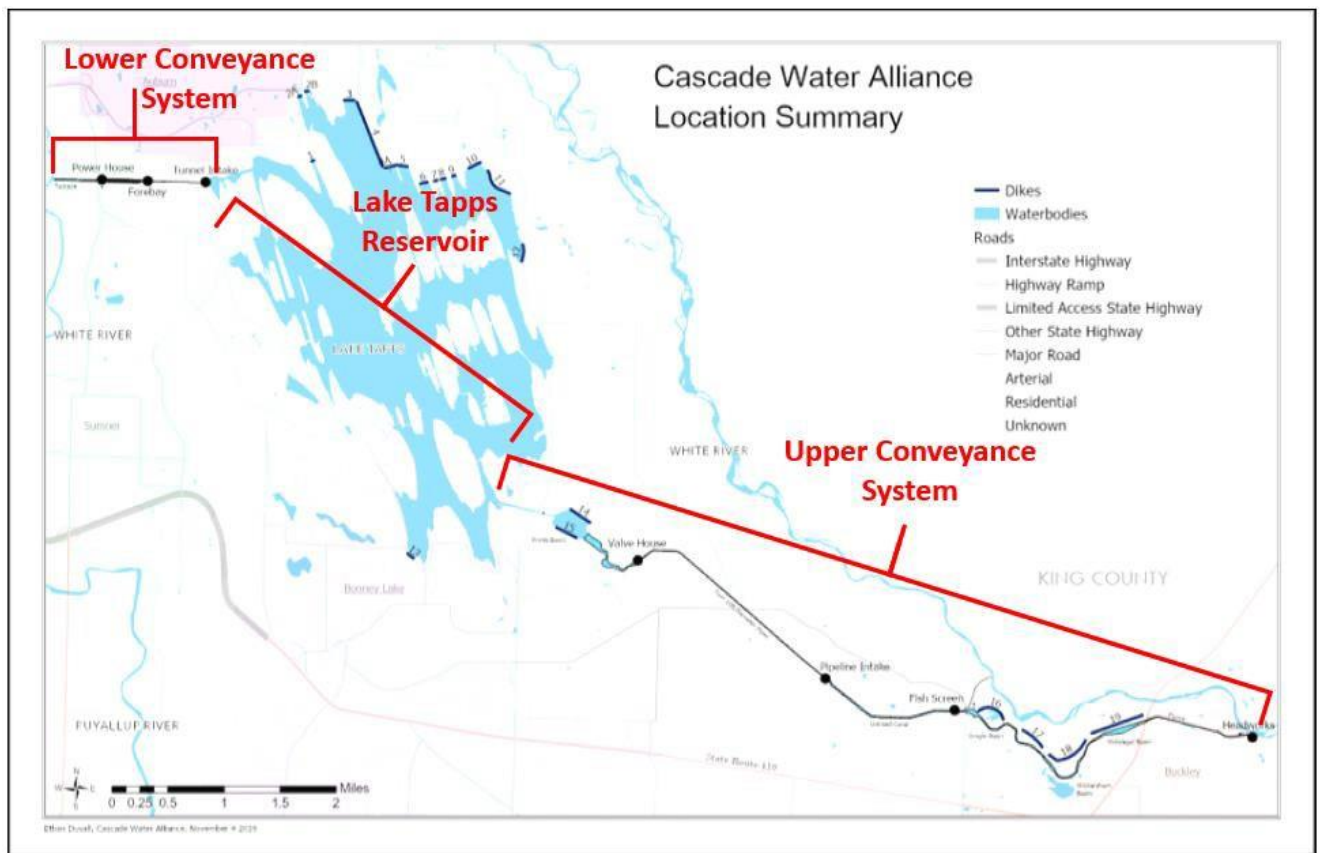
# ASSETS AND INFRASTRUCTURE

## I. WHITE RIVER-LAKE TAPPS RESERVOIR SYSTEM

Cascade owns and operates the White River-Lake Tapps Reservoir system as a future source of municipal drinking water. To date, Cascade’s management of the system has focused on keeping the system functioning to meet regulatory requirements and operating agreements. This includes maintaining recreational lake levels, managing aquatic vegetation, maintaining/improving water quality, and maintaining/upgrading infrastructure to ensure reliable operations.

The system is composed of three segments, as shown in the map below. The distance between the Headworks area in the Upper Conveyance System to the Powerhouse in the Lower Conveyance system is approximately 14 miles by car but eight miles as the crow flies.

- A. The Upper Conveyance System
- B. Lake Tapps Reservoir
- C. The Lower Conveyance System



The following pages summarize Cascade’s assets and infrastructure in the three segments.

## A. Upper Conveyance System

**Barrier Structure.** The original Barrier Structure in Buckley was built by PSE in 1911 to create a pool enabling water to be diverted from the White River to fill Lake Tapps. It also provided flow to a fish trap-and-haul facility that was owned and operated by the US Army Corps of Engineers (USACE) to transport fish around the USACE’s Mud Mountain Dam (located about six miles upstream).

In 2018, Cascade conveyed the Barrier Structure to the USACE to construct, own and operate a new barrier and trap-and-haul facility – the Mud Mountain Dam Fish Passage Project. Phase 1 of the project was construction of the barrier dam on the left side of the river; Phase 2 was construction on the right side of the river; and Phase 3 will improve how water is diverted from the White River to Lake Tapps. Phase 2 was completed in 2021 and Phase 3 is expected to start in 2024.

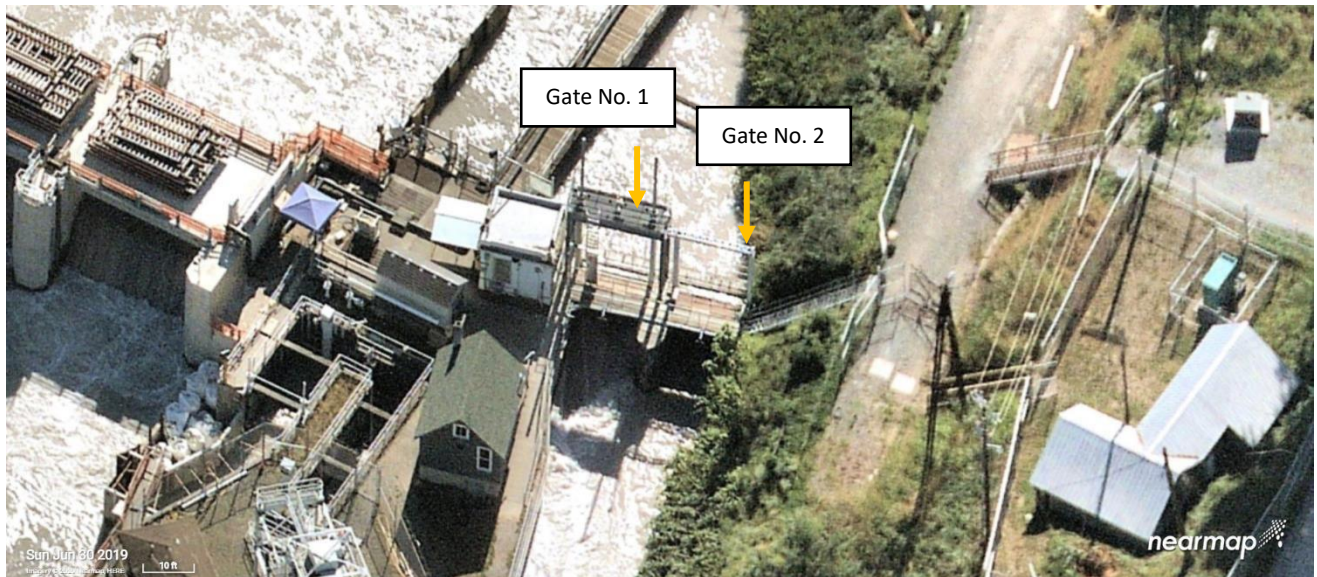
*Construction of New USACE Barrier Structure – December 2020*



**Headworks Intake.** Two, 13-foot high by 15.5-foot wide Headgates control diversion of water from the White River to the Lake Tapps Reservoir. These vertically operated riveted steel slide gates were originally constructed in 1911 and refurbished and upgraded in 2015. Gate No. 1 is the primary gate and is fitted with automated controls and can be operated remotely. Gate No. 2 is an emergency gate that must be operated manually. In 2021, Gate No. 1 malfunctioned and was repaired in 2022.

As part of Phase 3 of the USACE’s Mud Mountain Dam Fish Passage Project, Cascade will construct new facilities to improve how water is diverted from the White River to the Lake Tapps Reservoir by reducing sediment and debris diversion. The existing Headgates will remain in place and left in the open position to act only as barriers, if needed. For instance, whenever an outage is necessary, both gates could be closed and used as part of a “double” block system to hold back the water. Or if anything happens to the new diversion system while in operation, the gates could be the backup system to control White River flows into the Flowline.

*Headgates at Headworks Intake*



**Flowline (or Flume).** The Flowline (or Flume) conveys water approximately eight miles to the Lake Tapps Reservoir and consists of concrete lined canals, open canals, settling basins and a buried pipeline. The total concrete canal ranges from 18-feet-wide to 28-feet-wide, is approximately one mile long and is designed to handle the Water Right maximum diversion of 1,000 cfs. The current concrete canal is approximately 4,100 feet long.

*Aerial View of Flowline*



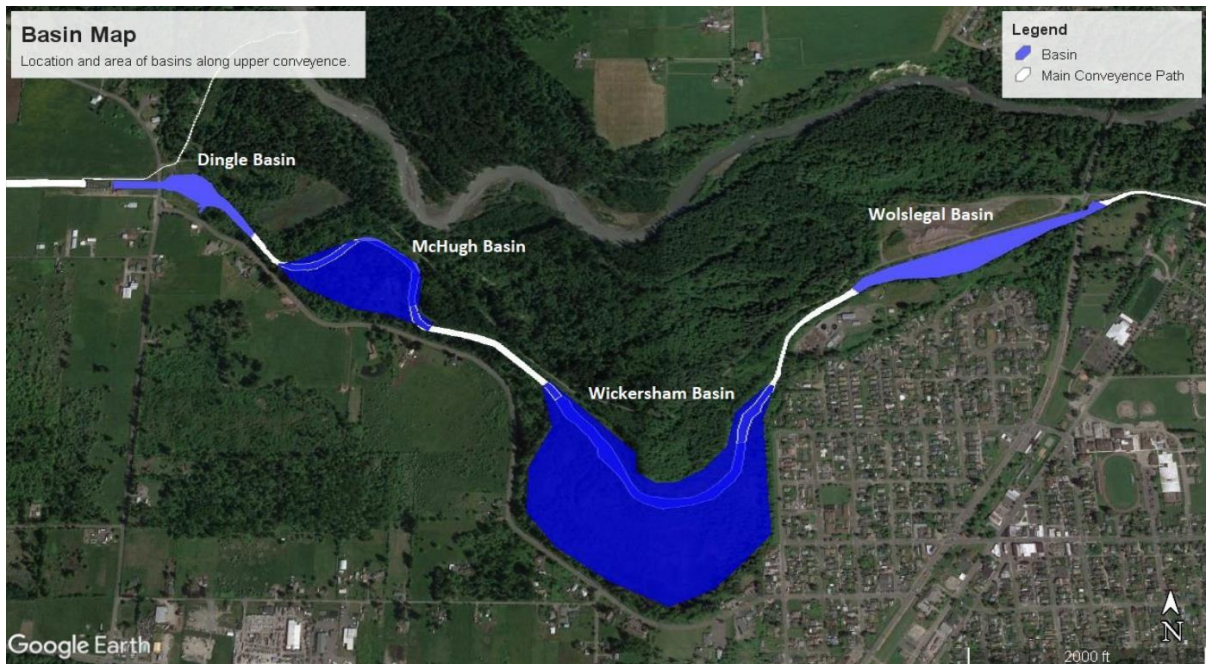
*Concrete-Lined Canal Section of Flowline*





**Settling Basins.** After the concrete-lined canal, water flows through four settling basins to catch heavy sediment before reaching the fish screens and then the Lake Tapps Reservoir. The settling basins are connected by unlined canals. Wolslegal Basin is the first and largest and needs sediment to be removed every five to seven years, which requires the basin to be drained using the six-foot outlet valve. In 2021 Cascade removed about 55,000 cubic yards of sediment. Dingle Basin is the fourth settling basin and includes a system that can recover fish by crane and transported by fish trailer truck back to the White River.

*Settling Basins*



*Sediment Removal at Wolslegal Basin – September 2021*



**Fish Screens Facility.** The screens were installed in 1996 to ensure migrating fish do not enter the Lake Tapps Reservoir. The facility consists of large “V” shaped static screens with travelling cleaning brushes, preceded by a trash rack system to prevent large debris from damaging the screens. An approximately one mile long 30-inch fish bypass pipeline returns fish to the White River.

*Cleaning and Sediment Removal at Fish Screen Facility – September 2021*



**Twin Pipeline System.** After the Fish Screens facility, water flows through approximately 6,800 feet of open canal and concrete S-curved-lined canal before entering the Twin Pipeline System. The intake structure for the Twin Pipelines is a 30-by-20 foot-long reinforced concrete structure, containing a trash rack on the upstream side of the bulkhead, preceded by a 200-foot-long concrete lined canal. Each of the pipes is 10 feet in diameter. The outlet structure (Valve House) transitions flow from the pressurized pipes to an open canal leading to Printz Basin. The buried portion of the Valve House contains two 60-inch energy dissipating cone valves.



*Intake Structure and Trash Rack*



*Outlet Structure (Valve House)*



**Printz Basin.** Printz Basin is bordered by two dikes and is the last settling basin before the water exits the Flowline and enters the Lake Tapps Reservoir. Over the years there has been significant development around Printz Basin, resulting in trespassing and encroachment problems. People often recreate in the channel between the Valve House and Printz Basin. However, unlike the Lake Tapps Reservoir, Printz Basin is a strict no-trespassing area because it is part of Cascade’s operations. Water released from the Valve House from the Twin Pipelines results in rapidly fluctuating water levels.

*Aerial View of Printz Basin*



*Water Released from the Valve House to Printz Basin*



**Backflow Preventer Structure.** Constructed by PSE in 2007, the Backflow Preventer consists of a concrete dam with two tide gates designed to prevent water from the Reservoir from draining into Printz Basin in the event of the failure of Dike 14 and/or 15. The structure includes a debris boom to keep debris from obstructing the Backflow Preventer.

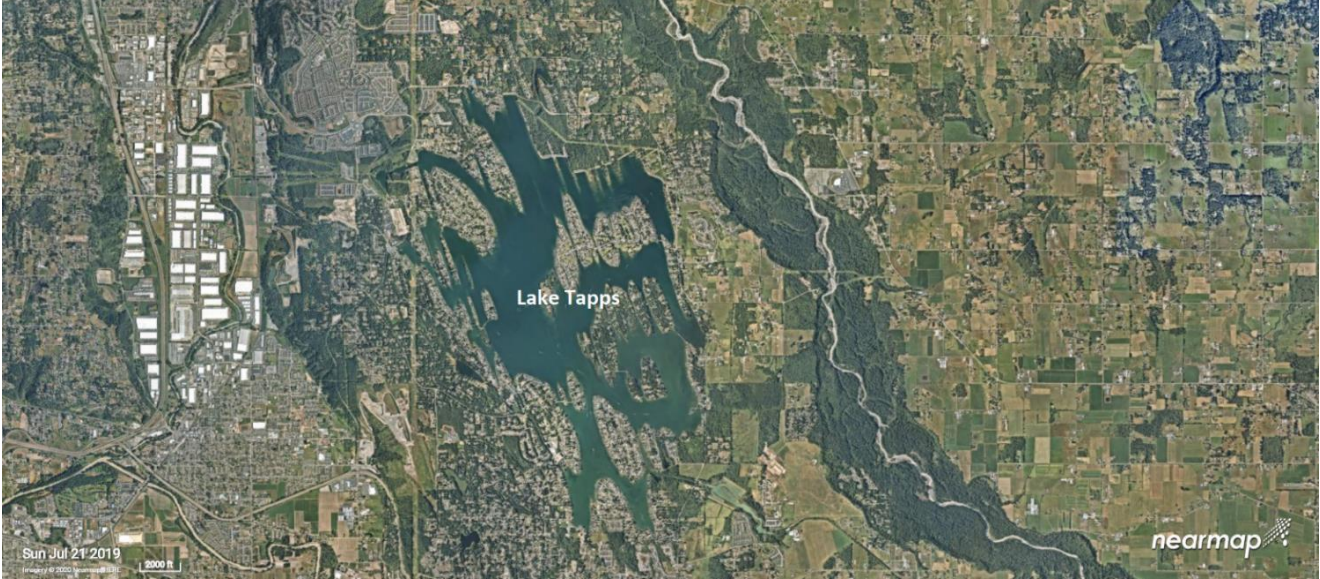
*Backflow Preventer Structure*



*Debris boom at Backflow Preventer Facility*



**B. Lake Tapps Reservoir**



**Dikes 1-13.** In 1911, PSE built a series of earthen dikes to create the Lake Tapps Reservoir. In addition to owning the Reservoir (including the lakebed), Cascade also owns all land below the elevation 545-foot line (gauge height) and the dikes. Cascade monitors the dikes to measure leakage through each dike and maintains the dikes to ensure the safety of development surrounding the Reservoir. Emergency plans are in place should a dike be breached due to damage caused by an earthquake, etc. The state’s Dam Safety Office (DSO) performs inspections of the Dikes 1-13 every five years (as well as Dikes 14 and 15 and the Backflow Preventer Structure). Crest elevations of the Lake Tapps dikes range from approximately elevation 548 feet to elevation 551 feet.

*Capital Improvements Made to Dike 12 in 2020*



*Dike 12 before raising*



*Dike 12 after raising*

Trespassing and encroachment are problematic on several dikes. On some dikes, the issues are primarily limited to walking, jogging, cycling and dog walking. For the past two years Cascade has put up temporary fencing during summer months on these dikes. In other cases, particularly Dike 11, homeowners have installed structures without Cascade’s permission.

*Unpermitted Rockery Installed on Dike 11*



## C. Lower Conveyance System

The only significant outlet for the Lake Tapps Reservoir is the Lower Conveyance System. No other overflow or reservoir release systems have been constructed, making these facilities essential to the safe operation of the Reservoir.

**Tunnel Intake Facility.** The Tunnel Intake facility is the outlet structure for the water to leave the Lake Tapps Reservoir. It is part of the system which is used to control lake levels and protect the 12-Foot Tunnel. The facility is a 54-foot tall by 55-foot wide curved reinforced concrete structure carved into a bench of a steep embankment. It includes a trash rack and 12-foot-wide by 12.5-foot-high steel vertical slide gate (Stoney Gate). A two-foot square bypass slide gate in the Stoney Gate provides a means for filling the tunnel and equalizing pressure on the gate before opening. The Gate House at the Tunnel Intake is an 18-foot square concrete building (surrounded by a deck) which houses electrical equipment.

*Tunnel Intake Facility*





**12-Foot Tunnel.** The 12-foot (interior) diameter steel reinforced concrete tunnel connects to the Tunnel Intake Facility and extends approximately 3,000 feet long to the Forebay. It has more than 40 feet of cover.

*Aerial View of 12-Foot Tunnel*



*Interior of 12-Foot Tunnel*



**Bear Trap.** Constructed between 1911 and 1924, this 12-foot diameter, 55-foot tall concrete shaft is located approximately halfway between the Tunnel Intake and the Forebay. It provides an overflow spillway in the event of a surge in the tunnel because of rapid stoppage of water flow.

**Forebay.** The Forebay connects the 12-Foot Tunnel to the Penstocks. It consists of the caisson, surge chamber, and building, all originally constructed in 1911. The caisson is a circular concrete and steel structure measuring 30 feet in diameter and extending 73 feet below grade. Initially, three Penstock inlets were located on the west side, with independent motor operators for each eight-foot slide gate. The top was originally open, providing an overflow chamber. This was enclosed in 1924, replaced by two seven-foot diameter side outlets (the surge chamber). The concrete Forebay building measures 18.5 feet by 39 feet and houses control equipment for the Forebay gates.

*Temporary Bear Trap Cover*



*Forebay*



*Aerial View of Forebay*

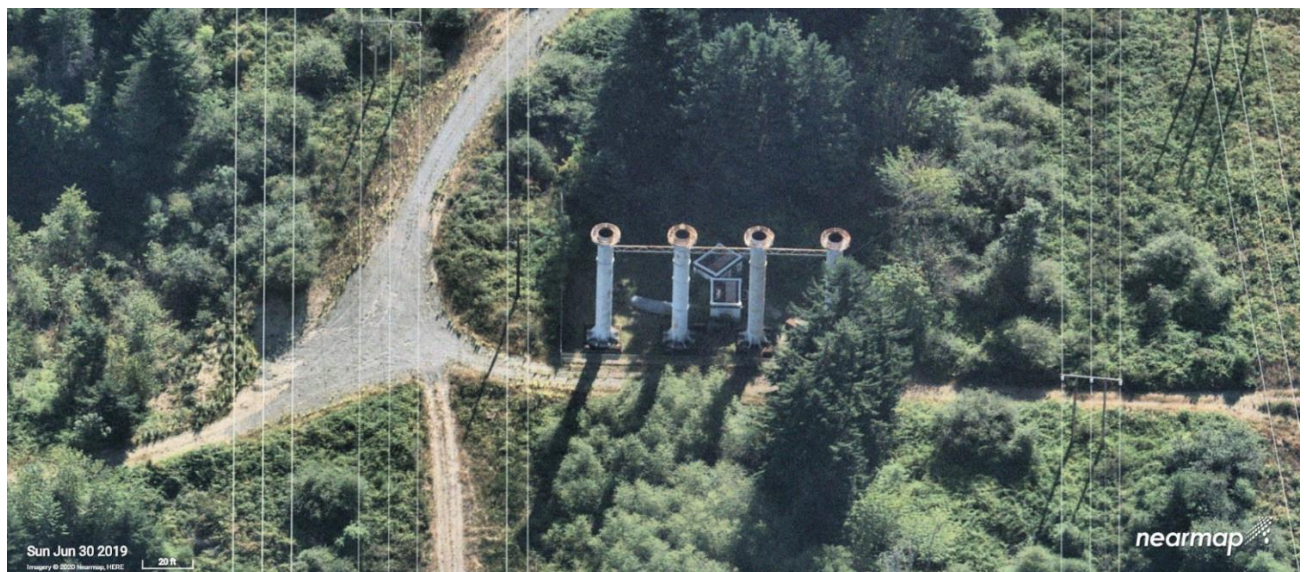


**Penstocks and Standpipes.** The Penstocks lead from the Forebay to the Powerhouse. Penstocks are used to convey the water from the lake back to the White River. Penstocks 1, 2, and 3 are eight-foot diameter riveted steel pipelines housed inside independent, approximately 300-foot-long, elliptical nine-foot diameter concrete tunnels. From this intermediate point they are direct buried to the Powerhouse (approximately 2,200 feet). The diameter of the Penstocks reduces to six feet at the Powerhouse. Penstocks 1 and 2 were bifurcated at the intermediate point to create Penstock 4, but Penstock 4 was later decommissioned due to the butterfly valves being inoperable. Four six-foot diameter riveted steel standpipes (one for each Penstock) rise approximately 75 feet above grade at the intermediate point. Standpipes are blowoffs or pressure relief structures.

*Aerial View of Penstocks and Standpipes*



*Penstocks and Standpipes*



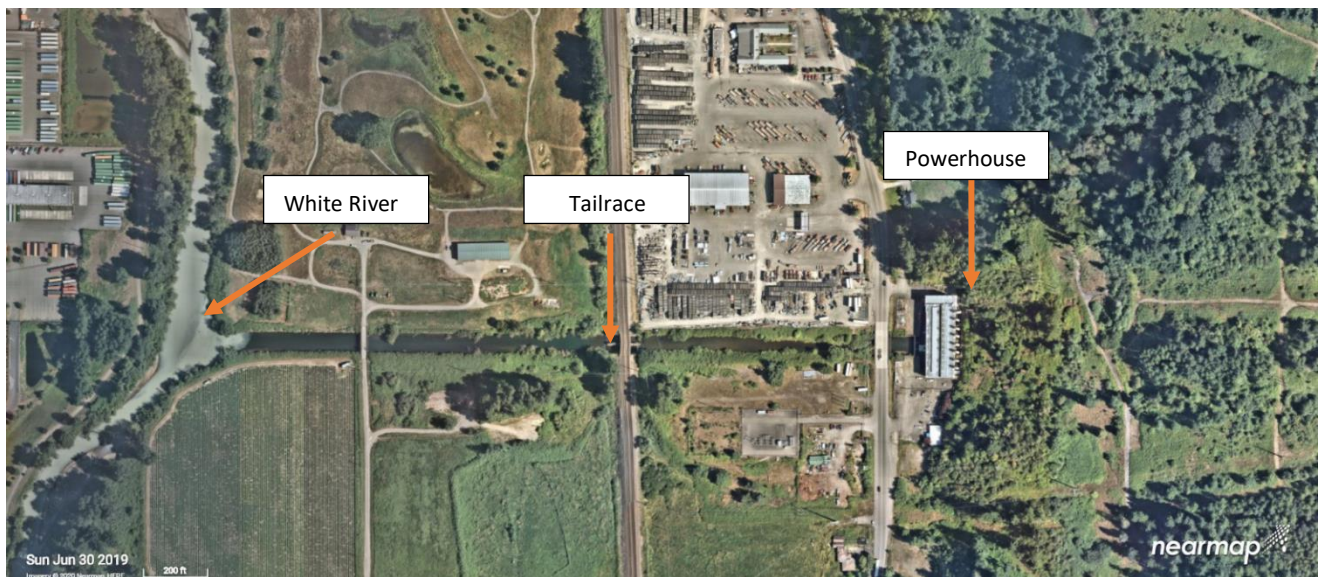
**Powerhouse.** The Powerhouse is a concrete-framed building two-and-a-half stories tall, 85-foot-wide by 225-foot-long. Most critical to Cascade’s operation are the valves in the Powerhouse that enable water to be released to the Tailrace. Releases initially flow into the 200-foot-long by 22-foot-wide by 23-foot-high reinforced concrete Plunge Pool. Flow exits the Plunge Pool through a 58-foot-wide weir wall into the Tailrace. The DSO requires Cascade to be able to release 450 cfs from the Reservoir (through the Powerhouse) under emergency conditions (i.e., dike failure caused by an earthquake).

*Powerhouse*



**Tailrace.** The Tailrace is an open channel that conveys water released from the Plunge Pool at the Powerhouse back to the White River.

*Aerial View of Tailrace*



## II. SITE OF FUTURE WATER TREATMENT PLANT

Water from the Lake Tapps Reservoir is currently used for recreational purposes. When it is time to develop the Reservoir for municipal drinking water, Cascade will need to construct the necessary water treatment and delivery infrastructure. The map below shows the area where the future water treatment plant will be sited.

Schematic from Water Right Draft Environmental Impact Statement (DEIS)

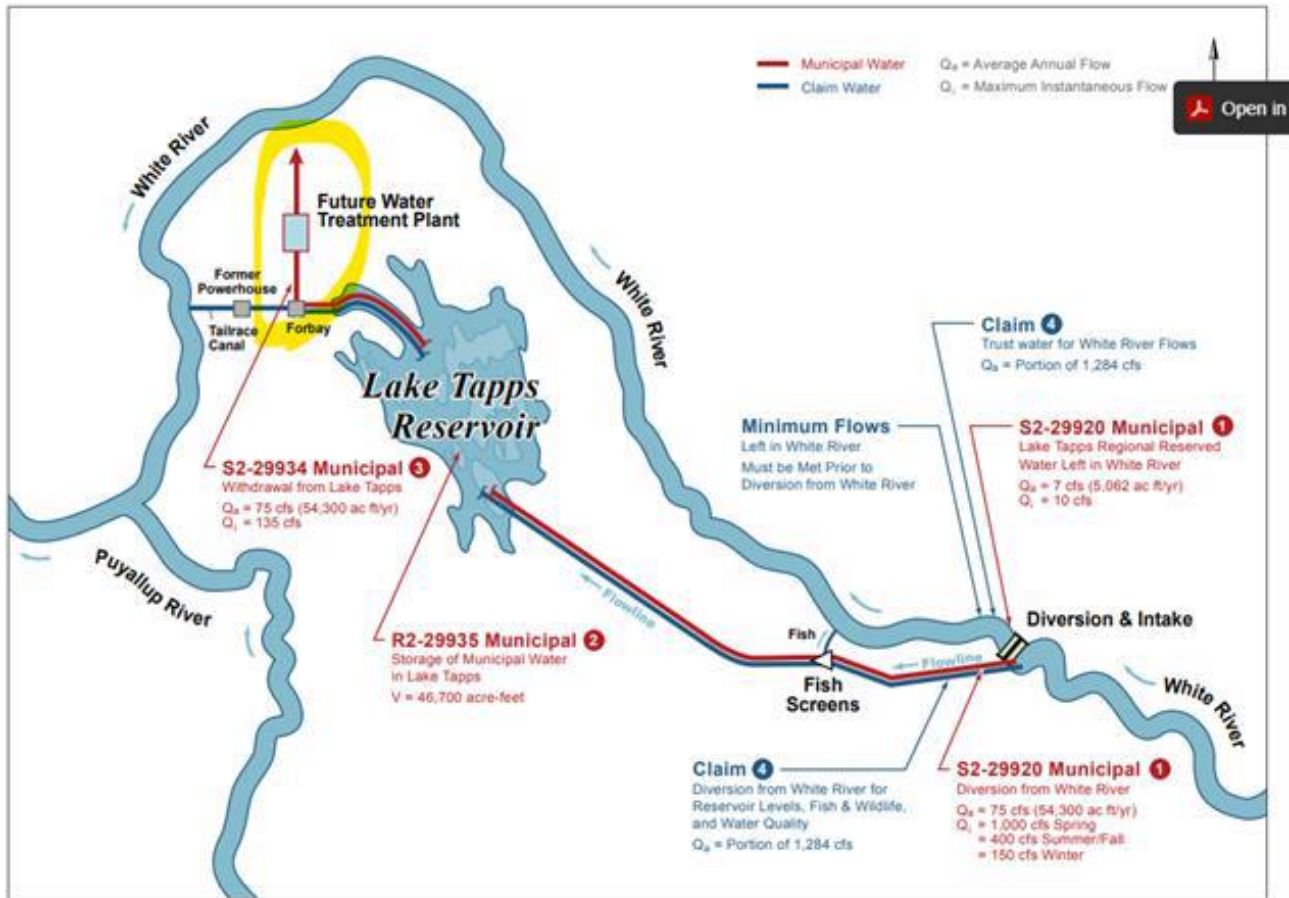
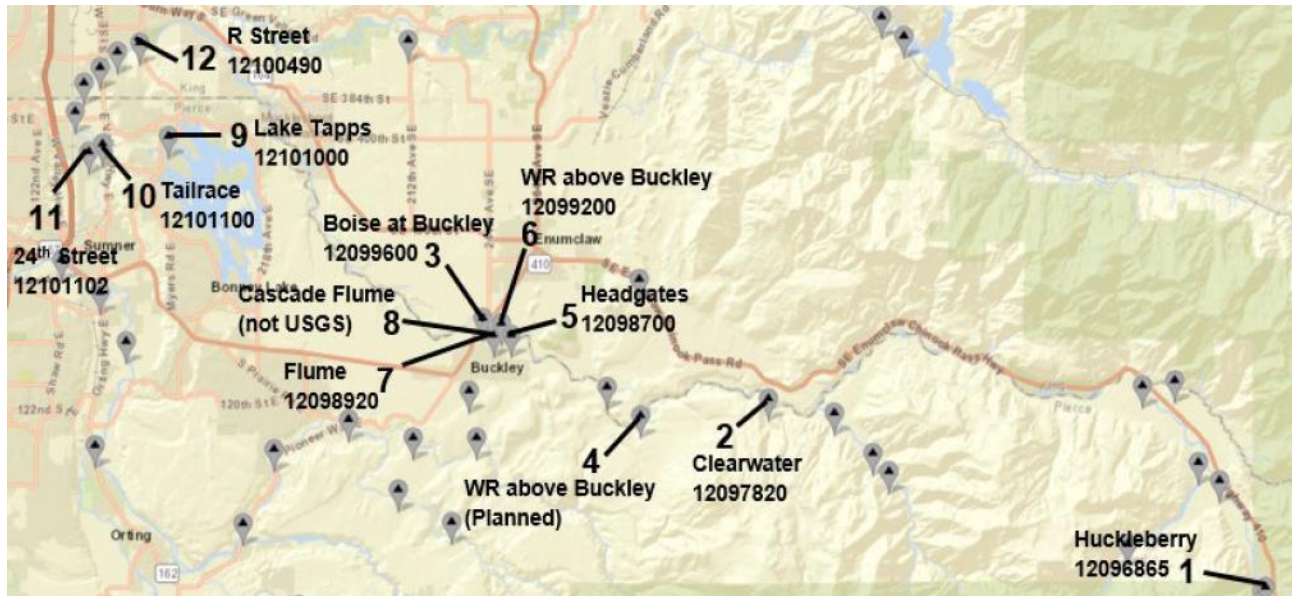


Figure S-1. Schematic of the Water Right Applications and Change of Use Application  
Lake Tapps Water Rights and Supply Project

### III. STREAM FLOW AND WATER QUALITY GAUGING SYSTEM

Cascade’s Lake Tapps Water Right Permits and the White River Management Agreement (WRMA) require operation and maintenance of a series of streamflow gauges to measure compliance with minimum flows, ramping rates, lake levels and maximum diversion rates. Currently a series of 11 gauges are operated by the USGS on behalf of Cascade (four required by the Water Right Permits and WRMA). In addition to stream flow, water quality parameters are measured at four gauges.

*Aerial View of Stream Gauge Locations*



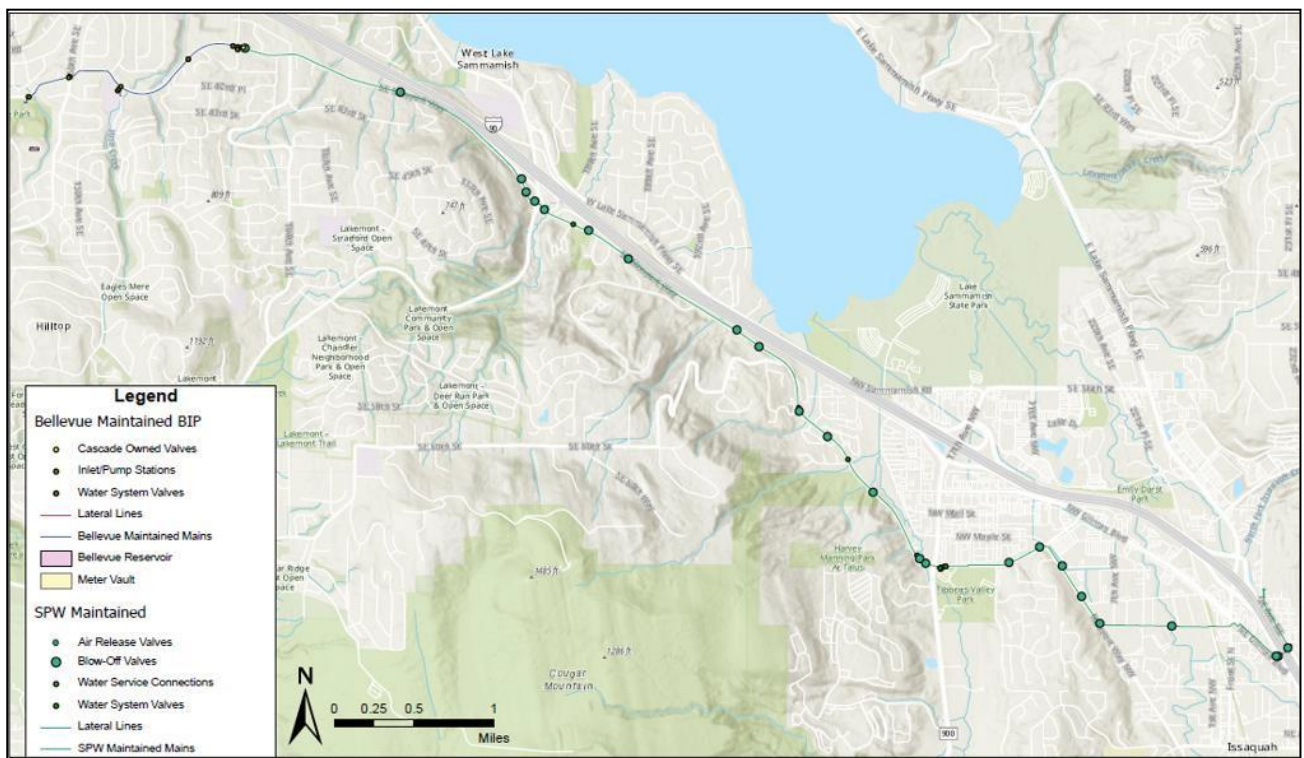
## IV. BELLEVUE-ISSAQUAH PIPELINE (BIP)

To perform its responsibilities for regional water deliveries, Cascade purchased the BIP from Bellevue and Issaquah in 2004 and 2006, respectively. Currently, the BIP is the only infrastructure Cascade owns that is used to deliver municipal water supply. The average daily flow is between 1.5 MGD and 3.5 MGD.

The ductile iron BIP conveys water from SPU's Tolt Eastside Supply Line and Eastside Reservoir to Issaquah and Sammamish Plateau Water. It is 24 inches in diameter, a little over seven miles long, and extends from near the easterly city limits of Bellevue, along the south side of I-90, and then continues through Issaquah to its terminus at the Sammamish Plateau Water turnout.

Cascade contracts out the operation and maintenance of the BIP to Bellevue and Sammamish Plateau Water. Bellevue maintains about 1.1 miles of the BIP and Sammamish Plateau Water maintains about 5.9 miles.

*BIP Mains and Structures*



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# STRATEGIC PLAN

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Cascade's 2020-2024 Strategic Plan (Plan) is a guide to meet Cascade and members' priorities over a five-year period. The Plan was developed with input from the Board of Directors, member staff and Cascade staff and adopted by the Board on February 26, 2020.

The 2020-2024 Strategic Plan can be found in its entirety on [Cascade's website](#).

**Mission.** Cascade provides safe, clean and reliable water to our members in a cost-effective and environmentally responsible way. To accomplish this, Cascade will:

- Invest in Cascade's assets and infrastructure
- Protect, enhance and steward water resources
- Lead, influence and convene regional issues and maintain strong relationships
- Ensure Cascade's financial efficiency and stability

**Vision.** Create a lasting legacy by establishing a model for regional cooperation and effective public resource management.

## Values

1. Provide high quality member service
2. Foster forward-thinking and innovation
3. Commit to teamwork, collaboration and transparency
4. Commit to a sustainable business and environmental strategy
5. Promote public trust



*Photo courtesy of Janice Thomas.*





The pillars of the Plan are long-term goal statements in six focus areas. Each focus area includes several outcome-based strategies to meet defined goals over the five-year period.

**1. Focus Area 1: Asset Management**

Goal: Optimize Cascade’s assets to support current and future needs.

**2. Focus Area 2: Water Resources**

Goal: Ensure flexibility, certainty and resiliency of Cascade’s future drinking water supply for the region.

**3. Focus Area 3: Environmental Stewardship**

Goal: Protect the natural environment by advancing water resource stewardship and sustainable business practices.

**4. Focus Area 4: Regional Leadership**

Goal: Lead, influence and serve as a convener on regional water-related issues and proactively maintain strong relationships to achieve the priorities of Cascade and its members.

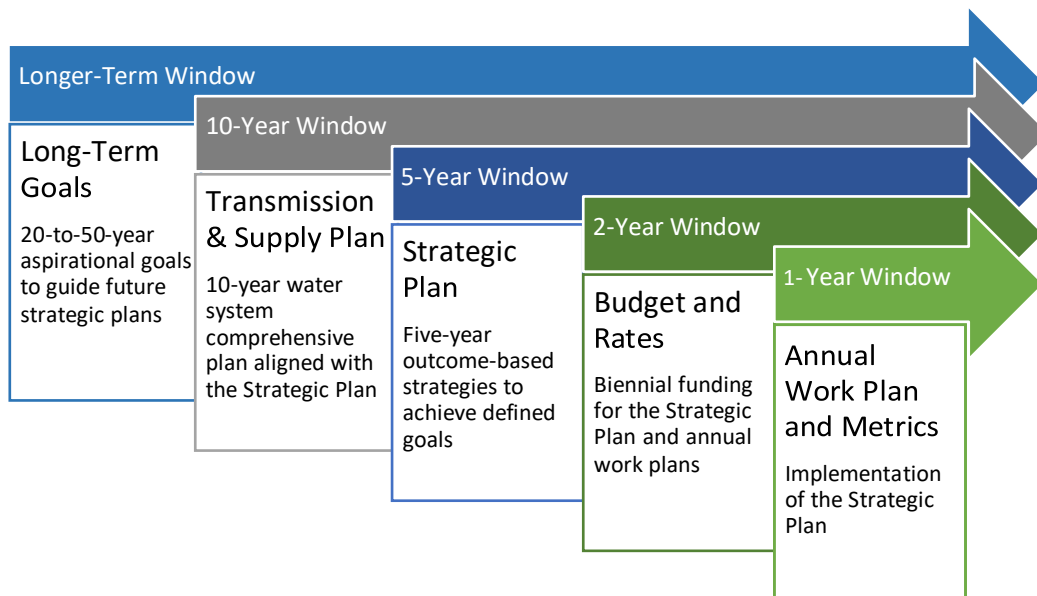
**5. Focus Area 5: Good Governance**

Goal: Provide the most cost-effective services possible through Cascade’s governance model of a small, efficient and nimble organization with engaged members and Board of Directors.

**6. Focus Area 6: Emerging Issues**

Goal: Support members in addressing emergent priority issues while maintaining accountability to ratepayers.

The Plan is aligned with near-term activities and long-range planning to serve members today and tomorrow. Specific actions that implement the focus area strategies, as well as performance measures to track the Plan’s progress, are included in Cascade’s annual work plan.



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# CASCADE CODE AND OTHER REFERENCES

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Below are links to materials that are referenced elsewhere in this document.

## General Information

- [Cascade Water Alliance Code](#)
  - [Joint Municipal Utilities Service Agreement \(JMUSA\)](#)
  - [Bylaws \(Chapter 2.05\)](#)
- [Cascade History Book](#)
- [2012 Transmission & Supply Plan](#)
- [2019 Transmission & Supply Plan Extension](#)
- [2023-2024 Budget Book](#)
- [2020-2024 Strategic Plan](#)

## Key Historic Agreements

1. [Joint Municipal Utilities Service Agreement \(JMUSA\)](#)
2. [Water Right Permits](#)
3. [White River Management Agreement with Puyallup and Muckleshoot Tribes](#)
4. [Puyallup Tribe Settlement Agreement](#)
5. [Muckleshoot Tribe Settlement Agreement](#)
6. [Four Cities Agreement](#)
7. [Lake Tapps Community Agreement](#)
8. [Pierce County Water Supply and Recreation MOU](#)
9. [Seattle Water Sale Agreement](#)
10. [Tacoma Water Sale Agreement](#)
11. **Membership Audit Acceptance Agreements**
  - a. [Bellevue Audit Agreement](#)
  - b. [Issaquah Audit Agreement](#)
  - c. [Kirkland Audit Agreement](#)
  - d. [Redmond Audit Agreement](#)
  - e. [Sammamish Plateau Water Audit Agreement](#)
  - f. [Skyway Audit Agreement](#)
  - g. [Tukwila Audit Agreement](#)