



REGULAR MEETING OF THE BOARD OF DIRECTORS
AGENDA
CASCADE WATER ALLIANCE
Held at Cascade's Office and Via Zoom
January 22, 2025
3:30 PM

	<u>Page</u>
1. CALL TO ORDER	
2. ROLL CALL	
3. PUBLIC COMMENT	
4. EXECUTIVE SESSION	
5. APPROVAL OF AGENDA	
6. CHIEF EXECUTIVE OFFICER'S REPORT	<u>3</u>
7. CONSENT ITEMS	
a. Board Meeting Minutes for November 20, 2024.	<u>22</u>
b. Motion to authorize the Chief Executive Officer to execute various 2025 Cascade sponsorship agreements for a combined total not to exceed \$47,000 (as shown in the events listed in the Agenda Memo).	<u>25</u>
c. Motion to adopt Resolution 2025-03 authorizing the Chief Executive Officer, in consultation with legal counsel, to finalize and execute a five-year temporary construction easement to be granted by Cascade Water Alliance to the U.S. Army Corps of Engineers, related to the Corps' Mud Mountain Dam Fish Passage Project, substantially in the form attached.	<u>28</u>
8. OTHER ACTION ITEMS	
a. Motion to adopt Resolution No. 2025-02 adopting the 2025 Integrated Aquatic Vegetation Management Plan with direction to the Chief Executive Officer to submit the Plan to the Department of Ecology and proceed with implementation of the Plan.	<u>36</u>
b. Motion to adopt Resolution No. 2025-01 Authorizing the Chief Executive Officer to Execute Agreements with the City of Tacoma for Wholesale Water Supply.	<u>108</u>

9. STAFF PRESENTATIONS
 - a. Seattle Regional Collaboration Discussion Update – *no materials in packet.*

10. COMMITTEE REPORTS
 - a. Executive Committee – *January 7, 2025.* 118
 - b. Finance and Management Committee – *January 14, 2025.* 119
 - c. Public Affairs Committee – *January 8, 2025.* 120
 - d. Resource Management Committee – *January 9, 2025.* 122

11. NEW BUSINESS

12. NEXT REGULAR MEETING – *February 26, 2025 – Cascade's Office or Via Zoom – 3:30 p.m.*

13. ADJOURN

NOTE: AS ALLOWED BY STATE LAW, THE BOARD OF DIRECTORS MAY ADD AND TAKE ACTION ON ITEMS NOT LISTED ON THE AGENDA.



MEMORANDUM

DATE: January 22, 2025

TO: Penny Sweet, Chair
Board of Directors

FROM: Ray Hoffman, Chief Executive Officer

SUBJECT: Chief Executive Officer's Report

Administration, Finance, and Economics

- On December 6, 2024, the Office of the Washington State Auditor presented the results of their 2023 accountability audit to management. No findings were reported. The Accountability Audit performed by the Office of the Washington State Auditor is attached at the end of this CEO Report.
- Cascade staff completed the 2025 - 2026 budget book in December 2024 and applied for the Distinguished Budget Presentation Award with the Government Finance Officers Association. The budget book can be found at <https://cascadewater.org/about/finance/budget/>
- Cascade staff will meet virtually later this month with its outside auditor, Clark Nuber. Cascade is preparing for Clark Nuber to conduct the annual audit of Cascade's fiscal year 2024 in March. The auditors will examine Cascade's financial reports, internal controls, and compliance with policies and procedures. Once complete, the auditors will present the results of the audit at a meeting of the Finance and Management Committee. The State Auditor's Office will conduct a separate audit of Cascade later this year.
- Cascade applied for the 2024 Association of Washington Cities Employee Benefits Trust WellCity Award. Cascade has won the award since 2018. If awarded the WellCity designation, Cascade would continue to save 2% on health insurance costs. The awards should be announced by March.
- Cascade's IT consultant, TeamLogicIT and Redbot, their subconsultant, performed a penetration test on Cascade's systems in December. Cascade is going to meet with them later this month to review the results. Additionally, in December, TeamLogic moved Cascade's file server to the cloud.
- Cascade is waiting for two members to finalize the RCFC connection data for 2024. As of now, 1,211.5 net CERUs have been reported. The 2024 budget expectation of 1,300 Regional Capital Facilities Charges (RCFCs) is possible but unlikely. In 2025 and 2026 1,150 RCFCs are budgeted. Connections have shown a positive trend since August.
- Cascade received notice in January from BrightNight, a battery storage provider, that they were issued two more permits (SEPA and CUP) for their project adjacent to the Powerhouse for which Cascade granted a transmission easement. They are now focusing on a few

remaining construction permits, preparing the site, and sourcing equipment with a new target of summer 2026 for construction kickoff. Previously, BrightNight anticipated the beginning of construction in the first quarter of 2025. If the project goes forward per the terms of the agreement, upon commencement of construction, Cascade will receive \$1.29 million.

Capital Projects and Operations

- Drawdown of the Lake Tapps Reservoir was initiated on November 1, and the reservoir level has been holding steady around 539.6 feet. To mitigate the risk of a later refill of the reservoir potentially caused by the Phase 3 project, staff anticipate maintaining a higher reservoir elevation of 539.85 feet through the rest of winter.
- Phase 3 construction is progressing slowly and is about four to five weeks behind its baseline schedule that was submitted in early August. The contractor (Kiewit) is working on completing scant pile drilled piers and forming wall footings and a center divider wall. Kiewit is expected to allow Cascade to divert up to a minimum of 250 cfs to Cascade's flowline by March to allow Cascade the ability to perform spring refill of the lake.
- All 2024 Outage projects are complete. All discharges from the upper conveyance system have been closed, and the upper conveyance is filling with storm and surface water run-off for spring reservoir refill. Cascade staff is working to close out project construction documentation and 2024 financials.
- Cascade staff has been working with the Washington State Department of Transportation (WSDOT) to negotiate an agreement for the I-90 Lewis Creek Fish Passage Project / Bellevue Issaquah Pipeline – (BIP) Relocation project for almost three years. Cascade's CEO and WSDOT's Regional Administrator met on January 8 due to stalled contract negotiations. As a result, Cascade will host a meeting at Cascade's offices in the next two to three weeks. The meeting will include the state's regional administrator, its construction management staff, the state's Design Build Contractor (DB), and Cascade staff. The goal of this meeting is to better inform the state and its DB of the unique challenges of relocating the BIP and determine a path forward for future contract negotiations.
- Cascade's five-year on-call electrical engineering contract with RH2 expired December 31, 2024. Cascade staff presented a modified scope for these services to the Resource Management Committee on January 9. Staff will finalize the request for qualifications based on RMC feedback and advertise mid-January. Staff anticipates presenting a recommendation to the Board to enter into a contract with one or more engineering firms during the March Board meeting.

Water Efficiency

- Staff continued building the relationship with the King County Housing Authority to help local property managers transition to more water efficient and sustainable landscapes. Cascade has a training for property managers scheduled for March 19.
- Staff have scheduled Cascade Gardener classes, nursery events, and garden tours for the rest of 2025, including a series on turf removal.

- Staff continue to receive requests from local students for support on water bottle filling station projects.
- Cascade is scheduled to attend several community events throughout the year, beginning with the Issaquah Sustainability Fair on April 26.
- Cascade is gearing up for a major push in 2025 for leak detection activities at a wide variety of commercial accounts.
- Cascade has published a new video on its website on installing drip irrigation systems, adding to a growing body of information available to residents on sustainable landscaping and irrigation efficiency.
- Cascade is creating an online student pledge for water efficiency on its website that will be utilized by its vendor for classroom education and teachers.

Intergovernmental and Communications

- The 2025 state regular legislative session began on January 13 and is expected to last 105 days, ending on April 27. Diana Carlen, Gordon Thomas Honeywell Government Relations, will be working with Cascade on tracking bills and water utility issues identified in Cascade's 2025 legislative priorities. The state budget deficit and new appointments to key positions in Governor Ferguson's administration mean this is shaping up to be an interesting and busy session. Staff will continue to work with the Public Affairs Committee by providing updates on policy bills and budget issues.
- Sean Taylor (from Van Ness Feldman, Cascade's federal government relations team in Washington, D.C.) provided a federal briefing for the Public Affairs Committee in January. The presentation discussed what we expect to see in 2025 from Congress and federal agencies. Cascade will continue to monitor federal policy and funding opportunities that might be of interest to members.
- Cascade's Executive Committee is scheduled to meet with Seattle Mayor Harrell on January 31 to discuss regional collaboration opportunities.

Planning

- Cascade has made good progress on developing its abbreviated Water System Plan and will route the draft for Member staff review by the end of the month. This Plan will cover a shorter period than the typically required 10-year period. DOH understands the new supply contracts with Tacoma have not yet been finalized and two to three years of planning for the Tacoma-Cascade Pipeline (TCP) project is a necessary next step. Given this, DOH approved deferring the 10-year comprehensive Water System Plan until the TCP project planning work is completed. In the interim, Cascade will submit a shorter-term Water System Plan and expects to seek Board approval for this in March.

Attachments

1. Budget to Actual Expenditure Report through December 31, 2024.
2. Statement of Revenues and Expenditures through December 31, 2024.
3. Statement of Net Position as of December 31, 2024.

4. Contract Status Summary.
5. Monthly Warrants Listing.
6. Monthly Treasurer's Report as of December 31, 2024.
7. 2023 SAO Accountability Audit.

Cascade Water Alliance
 Budget to Actual Expenditure Report
 January 1- December 31, 2024
 100% of the year completed

Administration		Budget		Actual		Balance		% Expended
Salaries	\$	1,689,112	\$	1,687,186		1,926		99.9%
Benefits		387,677		387,254		422		99.9%
Wellness program		1,000		80		920		8.0%
Prof. Fee (Technical)		131,500		81,326		50,175		61.8%
Prof. Fee (Legal)		597,450		570,366		27,084		95.5%
Prof. Fee (Audit)		96,555		95,859		696		99.3%
Prof. Fee (Other)		50,000		3,906		46,095		7.8%
Seismic Resillency		50,000		0		50,000		0.0%
Meetings Expense		11,000		6,538		4,462		59.4%
Telephone/Internet		45,000		41,710		3,290		92.7%
Office Rent		115,393		96,322		19,071		83.5%
Office Supplies Admin.		15,000		13,575		1,425		90.5%
Equip. and Furniture		17,000		16,522		478		97.2%
Bank Fees		600		252		348		41.9%
Dues & Subscriptions		25,000		18,785		6,215		75.1%
Taxes/Licenses		16,500		16,348		152		99.1%
Travel		10,000		5,061		4,939		50.6%
Professional Dev.		10,000		6,711		3,289		67.1%
Computer Equipment		45,000		44,978		22		100.0%
Software Licenses		62,500		62,359		141		99.8%
Postage & Delivery		3,000		1,598		1,402		53.3%
Printing & Repro.		5,000		3,729		1,271		74.6%
Insurance		194,427		193,992		435		99.8%
Contingency		169,500		0		169,500		0.0%
Total	\$	3,748,214	\$	3,354,457	\$	393,757		89.5%

Debt Service		Budget		Actual		Balance		% Expended
Bond Debt Service		10,795,666		10,795,216		450		100.0%
Total	\$	10,795,666	\$	10,795,216	\$	450		100.0%

Conservation		Budget		Actual		Balance		% Expended
Salaries	\$	105,077	\$	104,385	\$	692		99.3%
Benefits		24,176		24,174		2		100.0%
Prof. Fee (Technical)		33,500		33,440		60		99.8%
Prof. Fee (Legal)		1,000		0		1,000		0.0%
Dues & Subscriptions		5,500		709		4,791		12.9%
Rebate Reimb. Com.		126,000		125,373		627		99.5%
Irrigation Audit		15,000		3,578		11,422		23.9%
Turf Removal Rebates		50,000		36,802		13,198		73.6%
Comm. and Public I		416,000		415,998		2		100.0%
Misc. Serv. and Sup.		29,500		6,802		22,698		23.1%
Total	\$	805,754	\$	751,261	\$	54,492		93.2%

Com. and Intergovern		Budget		Actual		Balance		% Expended
Salaries	\$	163,968	\$	163,487	\$	481		99.7%
Benefits	\$	37,138		36,802		336		99.1%
Special Events		35,000		28,561		6,439		81.6%
Prof. Fee (Other)		181,000		180,890		111		99.9%
Sponsorships		30,000		15,650		14,350		52.2%
Comm. and Public I		210,000		137,734		72,266		65.6%
Total	\$	657,106	\$	563,124	\$	93,982		85.7%

Cascade Water Alliance
 Budget to Actual Expenditure Report
 January 1- December 31, 2024
 100% of the year completed

Operations-General		Budget	Actual	Balance	% Expended
Wholesale Water	\$	24,490,498	\$ 24,490,346	\$ 152	100.0%
Salaries		52,059	23,523	28,536	45.2%
Benefits		8,967	5,353	3,614	59.7%
BIP O&M		65,000	62,604	2,396	96.3%
Pipeline Prop. O&M		70,000	15,774	54,226	22.5%
PWTF Loan Debt		39,868	39,868	(0)	100.0%
Total	\$	24,726,392	\$ 24,637,467	\$ 88,924	99.6%

Operations-Lake Tapps		Budget	Actual	Balance	% Expended
Salaries	\$	527,510	\$ 511,873	\$ 15,637	97.0%
Benefits	\$	117,766	117,502	264	99.8%
Prof. Fee (Technical)		756,150	487,564	268,586	64.5%
Prof. Fee (Other)		30,250	30,000	250	99.2%
Meetings Expense		6,000	1,729	4,271	28.8%
Telephone/Internet		6,925	6,873	52	99.2%
Office Supplies		20,000	2,174	17,826	10.9%
Equipment & Furn.		30,000	12,103	17,897	40.3%
Taxes/Licenses		14,000	13,863	137	99.0%
Travel		20,000	6,309	13,691	31.5%
Professional Dev.		2,500	0	2,500	0.0%
Software Licenses		59,000	57,527	1,473	97.5%
Permitting Costs		8,560	808	7,753	9.4%
Misc. Serv. and Sup.		91,000	48,576	42,424	53.4%
LT Operator		2,628,819	2,026,655	602,164	77.1%
Unplanned O&M		50,000	7,023	42,977	14.0%
Misc. Facility Repairs		50,000	40,949	9,051	81.9%
USGS Joint Fund		374,812	262,253	112,560	70.0%
Construction		50,000	0	50,000	0.0%
Outage		80,000	4,838	75,162	6.0%
Milfoil Control		230,500	230,097	403	99.8%
Vendor Services		140,000	139,496	504	99.6%
Water Quality		150,000	107,163	42,837	71.4%
Dike and Roads		70,000	11,731	58,269	16.8%
Total	\$	5,513,791	\$ 4,127,104	\$ 1,386,688	74.9%

Total Operating Budget **\$** **46,246,923** **\$** **44,228,630** **\$** **2,018,293** **95.6%**

Capital Projects (multi-yr bdat not shown)		Budget	Actual	Balance	% Expended
Upper Conveyance	\$	2,525,000	2,427,397	97,603	96.1%
Lower Conveyance		1,000,000	39,991	960,009	4.0%
Equipment		100,000	99,961	39	100.0%
Facilities		200,000	98,968	101,032	49.5%
Bellevue-issaquah		130,000	0	130,000	0.0%
Tacoma Agreement		6,216,872	6,216,872	0	100.0%
Capital Risk		25,000	0	25,000	0.0%
Seattle contract		5,000,000	0	5,000,000	0.0%
IT Infrastructure		35,000	0	35,000	0.0%
Total CIP Budget	\$	15,231,872	\$ 8,883,190	\$ 6,348,682	58.3%

Total Overall Budget **\$** **61,478,795** **\$** **53,111,820** **86.4%**

Cascade Water Alliance
Statement of Revenues and Expenditures
From 1/1/2024 Through 12/31/2024

Attachment 2

Operating Revenue	
Water sales	\$ 41,024,789
Administrative dues	3,706,551
Conservation program	800,515
Total Operating Revenue	45,531,855
Operating Expenses	
Cost of water sold	24,490,346
Salaries and benefits	3,061,620
Professional services	1,526,715
Conservation program	128,951
Depreciation and amortization	4,282,445
Communication and public information	531,457
Office expenses	567,561
Operations	2,344,900
Bank charges	252
Rent	96,322
Maintenance	578,465
Dues and subscriptions	29,270
Miscellaneous	48,262
Total Operating Expenses	37,686,566
Operating Income	7,845,289
Non-Operating Revenue (Expenses)	
Interest income	2,142,646
Other income	86,929
Interest expense, net of amount capitalized	(2,484,027)
Total Non-Operating Revenue (Expenses)	(254,452)
Capital Contributions	
Regional Capital Facilities Charges	6,630,336
Increase in Net Assets	14,221,173
Net Assets, Beginning of Year	151,475,139
Net Assets, End of Year	\$ 165,696,312

Cascade Water Alliance
Statement of Net Position
As of 12/31/2024

Attachment 3

Assets	
Current Assets	
Cash and cash equivalents	\$ 32,674,230
Accounts receivable	4,708,131
Prepaid expenses	272,836
Total Current Assets	<u>37,655,197</u>
Capital Assets	
Equipment and furniture	2,386,409
Seattle water contract	22,267,611
Bellevue Issaquah pipeline	22,276,944
Tacoma water contract	119,740,687
Capital Leases	2,449,159
Less accumulated depreciation and amortization	(68,291,210)
Total Capital Assets	<u>100,829,600</u>
Projects in process and assets not yet in service	
Lake Tapps	108,497,234
Tacoma Cascade pipeline	26,539,385
Total Projects in process and assets not yet in service	<u>135,036,619</u>
Restricted cash and cash equivalents	24,313,030
Total Assets	<u><u>297,834,445</u></u>
Liabilities	
Current liabilities	
Payables and accrued liabilities	3,066,079
Retroactive water credit	405,216
Accrued interest	873,037
Long-term debt current portion	
Bonds Payable-Current Portion	6,945,000
Other	39,474
Total Long-term debt current portion	<u>6,984,474</u>
Total Current liabilities	<u>11,328,807</u>
Long-term Liabilities	
Long-term debt	70,640,000
Tacoma contract	47,680,238
Bond premium, net of amortization	2,070,103
Total Long-term Liabilities	<u>120,390,341</u>
Total Liabilities	<u>131,719,148</u>
Net Assets	
Restricted for debt service	109,959,810
Unrestricted	56,155,487
Total Net Assets	<u>166,115,297</u>
Total Liabilities & Net Assets	<u><u>\$ 297,834,445</u></u>

Consultant and Other Vendor Contract Status Summary

Open contracts											
Vendor	Contract number	Contract title	Cascade manager	Effective date	End date	Status date	Percent work completed	Contract amount, including	Amount invoiced	Percent invoiced	Contract balance
Aquatechnex	1	2025 Lake Tapps Aquatic Plant Maintenance Program	P. Anderson	1/1/2025	12/31/2025	1/10/2025	0%	\$ 160,000	\$ -	0%	\$ 160,000
Aspect	1	Water Supply Modeling	R. Hoffman	5/6/2020	N/A	1/10/2025	65%	\$ 24,900	\$ 16,196	65%	\$ 8,704
Aspect	2	Water Resources Services	R. Hoffman	8/17/2018	N/A	1/10/2025	98%	\$ 60,000	\$ 58,251	97%	\$ 1,749
Aspect	3	Climate Change Analysis	R. Hoffman	9/7/2022	N/A	1/10/2025	95%	\$ 150,000	\$ 144,571	96%	\$ 5,429
Ben Bernstein Music	1	Podcast production	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 7,000	\$ -	0%	\$ 7,000
BHC Consulting	1	Planning & Permit Assistance	T. Richmond	1/1/2024	12/31/2024	1/10/2025	50%	\$ 25,000	\$ 3,619	14%	\$ 21,381
Brilliant Marketing	1	We Need Water Social Media Outreach	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 55,000	\$ -	0%	\$ 55,000
Catalyst Workplace	1	Office Furniture	C. Paulucci	12/12/2024	N/A	1/10/2025	60%	\$ 29,506	\$ 16,522	56%	\$ 12,984
Clark Nuber	1	Annual Financial Audit and Quarterly AUPs	C. Paulucci	1/1/2025	N/A	1/10/2025	0%	\$ 89,200	\$ -	0%	\$ 89,200
Colehour and Cohen	1	Staffing for classes and events	M. Brent	1/1/2025	12/31/2025	1/10/2025	70%	\$ 116,065	\$ -	0%	\$ 116,065
Confluence Engineering Group, LLC	1	Lake Tapps Supply & BIP Water Quality Advisory Services Project	D. Roberts	12/1/2023	N/A	1/10/2025	35%	\$ 49,000	\$ 21,062	43%	\$ 27,938
Confluence Engineering Group, LLC	2	Water Quality Blending Study	M. Thung	12/5/2004	N/A	1/10/2025	10%	\$ 230,000	\$ -	0%	\$ 230,000
David Evans	1	On-call Land Surveyor	H. Chen	11/18/2022	12/31/2025	1/10/2025	30%	\$ 160,000	\$ 46,440	29%	\$ 113,560
David McGrath	1	Irrigation Program Assistance	M. Brent	1/25/2025	12/31/2025	1/10/2025	0%	\$ 20,000	\$ -	0%	\$ 20,000
Environmental Science Assoc (ESA)	1	Aquatic Plant Management	P. Anderson	1/1/2025	12/31/2025	1/10/2025	0%	\$ 49,000	\$ -	0%	\$ 49,000
Environmental Science Assoc (ESA)	2	Development of Cascade's Integrated Aquatic Plant Management Plan	P. Anderson	3/20/2024	N/A	1/10/2025	60%	\$ 44,750	\$ 23,311	52%	\$ 21,439
GeoEngineers	1	Dam Engineering/Hydrology/ Geotechnical Service	H. Chen	1/3/2024	12/31/2026	1/10/2025	50%	\$ 570,000	\$ 49,974	9%	\$ 520,026
Gordon Thomas Honeywell	1	State legislative outreach	A. Bennett	1/1/2025	12/31/2025	1/10/2025	0%	\$ 84,000	\$ -	0%	\$ 84,000
Herrera	1	On-call limnology services	M. Thung	12/1/2022	12/31/2025	1/10/2025	5%	\$ 45,000	\$ -	0%	\$ -
Herrera	2	Water Quality Management Plan	M. Thung	10/9/2023	12/31/2024	1/10/2025	65%	\$ 165,000	\$ 130,965	79%	\$ 34,035
Herrera	3	On-Call Water Supply Modeling Services	M. Thung	11/4/2024	12/31/2027	1/10/2025	0%	\$ 40,000	\$ -	0%	\$ 40,000
HDR	1	MMD Fish Passage Design Review	H. Chen	12/1/2015	N/A	1/10/2025	99%	\$ 1,231,100	\$ 1,223,976	99%	\$ 7,125
Jacobs Engineering Group	1	Demand Forecast Model Support Services	M. Thung	8/20/2021	N/A	1/10/2025	5%	\$ 5,000	\$ -	0%	\$ 5,000
Jennergy	1	Website Maintenance	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 25,000	\$ -	0%	\$ 25,000
Jon Shimada	1	On-Call Project Support Services	M. Thung	4/8/2024	12/31/2025	1/10/2025	0%	\$ 35,000	\$ 3,000	9%	\$ 32,000
Langton Spieth	1	Community relations	A. Bennett	1/1/2025	12/31/2025	1/10/2025	0%	\$ 78,000	\$ -	0%	\$ 78,000
Long Building Tech	1	Security Maintenance	H. Chen	6/1/2023	12/31/2024	1/10/2025	35%	\$ 120,000	\$ 74,719	62%	\$ 45,281
Marketplace Events	1	Northwest Flower and Garden Show	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 20,000	\$ 20,000	100%	\$ -
Nature Vision	1	Classroom Water Education	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 105,000	\$ -	0%	\$ 105,000
Okamoto Strategies, LLC	1	Capital Projects and Strategic Planning	H. Chen	6/21/2023	N/A	1/10/2025	25%	\$ 25,000	\$ 5,569	22%	\$ 19,431
Pacifica Law	1	Legal Assistance	H. Chen	1/1/2025	12/31/2025	1/10/2025	0%	\$ 25,000	\$ -	0%	\$ 25,000
Parametrix	1	On Call Civ/Mech/Structural Eng	H. Chen	1/1/2023	12/31/2025	1/10/2025	38%	\$ 550,000	\$ 199,532	36%	\$ 350,468
Puget Sound Energy	1	Water Efficiency Rebates	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 120,000	\$ -	0%	\$ 120,000
Rainier Stillwater Risk Advisors	1	Trespassing Management	M. Thung	12/14/2023	12/31/2024	1/10/2025	85%	\$ 33,000	\$ 27,000	82%	\$ 6,000
RH2	2	On-Call Electrical Engineering Svcs	H. Chen	1/1/2024	4/30/2025	1/10/2025	60%	\$ 133,750	\$ 104,819	78%	\$ 28,931
RH2	3	Wholesale Master Meter Eval	H. Chen	1/21/2020	3/31/2023	1/10/2025	8%	\$ 24,500	\$ 1,342	5%	\$ 23,158
Robinson Noble	1	Water Audits	E. Cebron	10/3/2019	N/A	1/10/2025	85%	\$ 135,060	\$ 115,183	85%	\$ 19,877
Sammamish Plateau Water	1	GIS support services	H. Chen	12/6/2022	N/A	1/10/2025	48%	\$ 50,000	\$ 31,352	63%	\$ 18,648
Sazan	1	On-call value analysis/engineering	J. Shimada	10/23/2023	10/23/2025	1/10/2025	30%	\$ 250,000	\$ 73,371	29%	\$ 176,629
SC Words & Pictures Inc.	1	Design Services	A. Bennett	1/1/2025	12/31/2025	1/10/2025	0%	\$ 25,000	\$ -	0%	\$ 25,000
Seattle Public Utilities	1	Garden Hotline	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 16,700	\$ -	0%	\$ 16,700
SMC Consulting	1	Water Efficiency Consultant	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 28,500	\$ -	0%	\$ 28,500
Sustainable Water	1	Teacher Fellows program	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 60,000	\$ -	0%	\$ 60,000
Tacoma Pierce County Health Department	1	TappsWise Monitoring at Lake Tapps	A. Bennett	1/1/2025	12/31/2025	1/10/2025	0%	\$ 140,000	\$ -	0%	\$ 140,000
TeamLogic IT	1	Info Technology Consulting	C. Paulucci	1/1/2025	12/31/2025	1/10/2025	0%	\$ 138,700	\$ -	0%	\$ 138,700
TechniArt	1	Conservation Website Order page	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 17,000	\$ -	0%	\$ 17,000
Tetra Tech	1	AWIA 2025-2026 Updates	M. Thung	12/9/2024	12/31/2026	1/10/2025	0%	\$ 350,000	\$ -	0%	\$ 350,000

Tilth Association	1	Garden Water Efficiency	M. Brent	1/1/2025	12/31/2025	1/10/2025	0%	\$ 48,000	\$ -	0%	\$ 48,000
Transpo Group	1	On-Call GIS Support	H. Chen	1/1/2025	12/31/2025	1/10/2025	0%	\$ 49,000	\$ -	0%	\$ 49,000
Upstream PBC	2	HydroForecast Subscription Service	M. Thung	10/1/2024	9/30/2025	1/10/2025	25%	\$ 23,500	\$ 23,500	100%	\$ -
USGS	1	Joint Funding Agre-Streamgaging	H. Chen	1/1/2025	12/31/2025	1/10/2025	25%	\$ 302,370	\$ -	0%	\$ 302,370
Vanir Construction Management, Inc.	1	On-call Construction Management	J. Shimada	5/1/2021	12/31/2024	1/10/2025	50%	\$ 560,000	\$ 186,174	33%	\$ 373,826
VanNess Feldman	1	General Counsel	R. Hoffman	1/1/2025	12/31/2025	1/10/2025	0%	\$ 850,000	\$ -	0%	\$ 850,000
Veolia	1	White River-Lake Tapps Reservoir Project Operations and Maintenance Agreement	J. Shimada	1/1/2025	12/31/2025	1/10/2025	0%	\$ 2,670,000	\$ -	0%	\$ 2,670,000
Water Value	1	Climate Study Advisory Services	M. Thung	6/16/2022	7/1/2025	1/10/2025	75%	\$ 22,500	\$ 12,345	55%	\$ 10,155

Closed Contracts

Vendor	Closed contract number	Contract title	Cascade manager	Effective Date	End date	Status date	Percent work completed	Contract amount, including amendments	Amount invoiced	Percent invoiced	Contract balance
Aquatechnex	1	2024 Lake Tapps Aquatic Plant Maintenance Program	P. Anderson	12/29/2023	12/31/2024	1/10/2025	100%	\$ 160,000	\$ 157,788	99%	\$ 2,212
Ben Bernstein Music	1	Podcast production	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 5,000	\$ 3,400	68%	\$ 1,600
Brilliant Marketing	1	We Need Water Social Media Outreach	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 49,500	\$ 49,500	100%	\$ -
Clark Nuber	1	Annual Financial Audit and Quarterly AUPs	C. Paulucci	1/1/2024	N/A	1/10/2025	100%	\$ 78,000	\$ 78,000	100%	\$ -
Colehour and Cohen	1	Staffing for classes and events	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 110,750	\$ 91,327	82%	\$ 19,423
David McGrath	1	Irrigation Program Assistance	M. Brent	1/25/2024	12/31/2024	1/10/2025	100%	\$ 18,000	\$ 3,578	20%	\$ 14,422
Environmental Science Assoc (ESA)	1	Aquatic Plant Management	P. Anderson	1/1/2024	12/31/2024	1/10/2025	100%	\$ 49,000	\$ 48,998	100%	\$ 2
Gordon Thomas Honeywell	1	State legislative outreach	A. Bennett	1/1/2024	12/31/2024	1/10/2025	100%	\$ 84,000	\$ 84,000	100%	\$ -
Industrial Fab and Repair	1	Valve house control system improvements	D. Roberts	8/28/2023	5/3/2024	1/10/2025	100%	\$ 88,118	\$ 88,118	100%	\$ -
Jennergy	1	Turf Out Guidebook	M. Brent	7/19/2024	N/A	1/10/2025	100%	\$ 16,900	\$ 16,600	98%	\$ 300
Lake Tapps Construction	1	Dingle Basin Actuators Replacement Project	D. Roberts	10/12/2023	5/25/2024	1/10/2025	100%	\$ 42,838	\$ 42,061	98%	\$ 777
Lake Tapps Construction	2	Clearing/Sign Posts/Eco Blocks for Covington Properties	J. Amspacher	11/7/2023	12/15/2023	1/10/2025	100%	\$ 4,908	\$ 4,908	100%	\$ (0)
Langton Spieth	1	Community relations	A. Bennett	1/1/2024	12/31/2024	1/10/2025	100%	\$ 78,000	\$ 78,000	100%	\$ -
Langton Spieth	2	25th Anniversary Event Support	A. Bennett	3/4/2024	N/A	1/10/2025	100%	\$ 5,000	\$ 5,000	100%	\$ -
Lisa Taylor	1	Turf Removal Program Development	M. Brent	4/3/2024	12/31/2024	1/10/2025	100%	\$ 21,500	\$ 16,884	79%	\$ 4,616
Long Building Tech	1	Security Maintenance	H. Chen	6/1/2023	12/31/2024	1/10/2025	50%	\$ 120,000	\$ 37,642	31%	\$ 82,358
Madsen Electric	1	Pipeline Intake and Valve House Battery Charger Inverter Removal and Replacement Project	D. Roberts	12/1/2023	4/27/2024	1/10/2025	100%	\$ 29,090	\$ 27,474	94%	\$ 1,616
Nature Vision	1	Classroom Water Education	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 105,000	\$ 104,990	100%	\$ 10
Pacifica Law	1	Legal Assistance	H. Chen	1/1/2024	12/31/2024	1/10/2025	100%	\$ 25,000	\$ 238	1%	\$ 24,763
Performance Dimensions	1	Executive Coaching Services	M. Thung	1/1/2024	12/31/2024	1/10/2025	100%	\$ 15,000	\$ -	0%	\$ 15,000
Puget Sound Energy	1	Water Efficiency Rebates	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 120,000	\$ 106,849	89%	\$ 13,151
SC Words & Pictures Inc.	1	Design Services	A. Bennett	1/1/2024	12/31/2024	1/10/2025	100%	\$ 30,000	\$ 17,200	57%	\$ 12,800
Seattle Public Utilities	1	Garden Hotline	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 15,825	\$ 15,825	100%	\$ -
SMC Consulting	1	Water Efficiency Consultant	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 26,500	\$ 23,805	90%	\$ 2,695
Sustainable Water	1	Teacher Fellows program	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 60,000	\$ 55,755	93%	\$ 4,246
Tacoma Pierce County Health Department	1	TappsWise Monitoring at Lake Tapps	A. Bennett	1/1/2024	12/31/2024	1/10/2025	100%	\$ 120,000	\$ 91,320	76%	\$ 28,680
TeamLogic IT	1	Info Technology Consulting	C. Paulucci	1/1/2024	12/31/2024	1/10/2025	100%	\$ 139,500	\$ 134,156	96%	\$ 5,344
TechniArt	1	Conservation Website Order page	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 15,900	\$ 10,008	63%	\$ 5,892
Tilth Association	1	Garden Water Efficiency	M. Brent	1/1/2024	12/31/2024	1/10/2025	100%	\$ 45,000	\$ 42,034	93%	\$ 2,966
Transpo Group	1	On-Call GIS Support	H. Chen	1/1/2024	12/31/2024	1/10/2025	100%	\$ 49,000	\$ 48,691	99%	\$ 309
Upstream PBC	1	HydroForecast-Glacier Climate Change Analysis	M. Thung	11/1/2022	N/A	1/10/2025	100%	\$ 49,900	\$ 40,000	80%	\$ 9,900
Upstream PBC	2	HydroForecast Subscription Service	M. Thung	8/9/2023	10/31/2024	1/10/2025	100%	\$ 24,000	\$ 9,900	41%	\$ 14,100
USGS	1	Joint Funding Agre-Streamgaging	H. Chen	1/1/2024	12/31/2024	1/10/2025	100%	\$ 374,000	\$ 262,253	70%	\$ 111,748
VanNess Feldman	1	General Counsel	R. Hoffman	1/1/2024	12/31/2024	1/10/2025	100%	\$ 630,000	\$ 567,504	90%	\$ 62,496
Veolia	1	White River-Lake Tapps Reservoir Project Operations and Maintenance Agreement \$2,251,944 Fixed, \$225,000 Variable	J. Shimada	1/1/2024	12/31/2024	1/10/2025	100%	\$ 2,476,944	\$ 2,234,293	90%	\$ 242,651
Washington Crane	1	Fish Screen Gantry Crane Repair	D. Roberts	11/9/2022	12/31/2024	1/10/2025	100%	\$ 168,700	\$ 168,700	100%	\$ -
Winterbauer and Diamond	1	Legal Assistance	R. Hoffman	1/1/2024	12/31/2024	1/10/2025	100%	\$ 20,000	\$ -	0%	\$ 20,000

Payment Authorization Warrants and Wire Transfers 1/22/25

WHOLESALE WATER

WIRE	Seattle Contract Payment 12/24	\$1,469,421.00
WIRE	Tacoma Contract Payment	\$6,341,209.00
WIRE	Seattle Contract Payment 1/25	<u>\$1,227,822.00</u>
		\$9,038,452.00

CONSULTANTS

31978	Herrera	\$12,550.71
31983	TeamLogic IT of Bellevue, WA	\$8,859.88
31984	Transpo Group	\$5,976.25
31985	Upstream Tech	\$23,500.00
31987	Van Ness Feldman, LLP	\$65,504.50
32001	Confluence Engineering Group, LLC	\$3,900.00
32002	Environmental Science Associates (ESA)	\$8,569.75
32009	Parametrix	\$15,796.70
32011	RH2 Engineering, Inc.	\$5,251.81
32013	State Auditor's Office	\$7,358.39
32016	TeamLogic IT of Bellevue, WA	\$6,868.90
32020	Water Value LLC	\$393.00
32023	Clark Nuber P. S.	\$8,400.00
32028	Gordon Thomas Honeywell Govern. Affairs	\$7,000.00
32034	SMC Consulting LLC	\$2,610.00
32036	Tacoma Pierce County Health Department	\$12,184.61
32040	bhc Consultants	\$322.00
32043	Langton Public Affairs LLC	\$6,500.00
32048	TeamLogic IT of Bellevue, WA	\$5,756.41
32049	Transpo Group	\$3,727.50
32052	Van Ness Feldman, LLP	\$52,587.55
32062	Herrera	\$11,390.45
32063	Inslee, Best, Doezie & Ryder	\$350.00
32066	Parametrix	\$9,711.60
32068	State Auditor's Office	\$2,503.80
32070	TeamLogic IT of Bellevue, WA	\$7,453.90
32071	Upstream Tech	\$23,500.00
32074	Aspect Consulting	\$4,882.16
32081	Environmental Science Associates (ESA)	\$9,540.75
32083	Jon Shimada	\$3,000.00
32089	RH2 Engineering, Inc.	\$20,557.50
32090	Sammamish Plateau Water & Sewer District	\$7,332.03
32099	Environmental Science Associates (ESA)	\$182.00
32100	Gordon Thomas Honeywell Govern. Affairs	\$7,000.00
32101	Jennergy	\$5,570.00
32108	Rainier Stillwater Risk Advisors, LLC	\$27,000.00
		<u>\$400,592.15</u>

SALARY, BENEFITS AND EXPENSE REIMBURSEMENTS

	Payroll (November)	\$176,178.20
31991	MissionSquare-107080	\$41,215.63
31992	MissionSquare-304525	\$18,974.37
31994	AWC Employee Benefit Trust	\$24,160.16
32003	HRA VEBA Trust	\$2,574.00
32004	Inslee, Best, Doezie & Ryder	\$50.00
32027	Paula Anderson	\$56.68
32072	MissionSquare-107080	\$37,728.10
32073	MissionSquare-304525	\$19,075.63
32075	AWC Employee Benefit Trust	\$29,804.02
32082	HRA VEBA Trust	\$2,772.00
32094	Association of Washington Cities	\$2,307.38
		<u>\$354,896.17</u>

GENERAL

31975	Bellevue Chamber of Commerce	\$550.00
31979	Lakemont Business Services Inc.	\$600.00
31986	Utilities Underground Location Center	\$7.92
31995	AT&T FirstNet	\$769.99
31996	Bellevue Gateway One Equities, LLC	\$31,919.61
31998	Cintas Corporation	\$7.83
31999	CIT	\$3,128.92
32000	Comcast	\$2,040.69
32008	Pacific Office Automation	\$298.41
32018	U. S. BANK	\$2,992.13
32022	CIT	\$3,270.01
32024	CLEARFLY	\$1,094.97
32025	Comcast	\$551.67
32026	Covington Water District	\$93.00
32029	NALMS-North American Lake Mgmt Societ	\$300.00
32032	Pacific Office Automation, Inc.	\$311.22
32033	Puget Sound Energy	\$350.21
32035	Staples Advantage	\$413.79
32037	WaterISAC	\$2,310.00
32044	Pacific Office Automation Inc.	\$100.89
32045	PNWS-AWWA	\$2,200.00
32050	U. S. BANK	\$8,569.32
32051	Utilities Underground Location Center	\$15.84
32056	AT&T FirstNet	\$505.51
32059	Comcast	\$1,977.79
32060	SC Words & Pictures, Inc.	\$1,200.00
32064	Pacific Office Automation	\$298.41
32076	Bellevue Gateway One Equities, LLC	\$32,175.93
32078	City of Seattle	\$11,824.64
32079	Comcast	\$582.24
32080	Daily Journal of Commerce	\$133.40
32087	One Redmond	\$2,500.00
32091	Staples Advantage	\$1,124.03
32097	CLEARFLY	\$1,109.67
32103	Lumen	\$115.32
32104	Pacific Office Automation Inc.	\$100.89
32105	Pacific Office Automation, Inc.	\$311.22
32110	Seattle Southside Chamber of Commerce	\$324.45
32111	Utilities Underground Location Center	\$17.16
32112	Verizon Wireless	\$135.03
32113	Washington State Department of Revenue	\$473.04
		<u>\$116,805.15</u>

SOFTWARE AND EQUIPMENT

31988	Industrial Software Solutions	\$28,894.44
31993	Abila	\$292.04
32007	Nearmap US Inc.	\$7,493.60
32039	Access Telephone Solutions, Inc.	\$1,258.32
32047	SmartSights	\$7,295.24
32053	Catalyst Workplace Activation	\$14,752.84
32055	Abila	\$292.04
32061	Environmental Systems Research Inst.	<u>\$12,783.20</u>
		\$73,061.72

CONSERVATION

31976	BRILLIANT MARKETING LLC	\$5,881.35
31977	Colehour & Cohen	\$8,746.88
31981	Marianna Binetti	\$500.00
31997	Ben Bernstein Music	\$700.00
32005	Lisa Taylor	\$350.00
32006	Makarios Communications	\$500.00
32010	Puget Sound Energy	\$3,275.00
32015	Sustainable Seattle dba Sustainability	\$3,289.00
32017	Techniart C S D	\$493.08
32030	Nature Vision, Inc.	\$8,210.56
32031	Nita-Jo Rountree	\$300.00
32041	BRILLIANT MARKETING LLC	\$3,985.89
32042	Jennergy	\$1,270.00
32046	Tiith Alliance	\$7,978.13
32057	City of Seattle	\$3,956.25
32058	Colehour & Cohen	\$4,734.75
32077	Ben Bernstein Music	\$225.00
32085	Marketplace Events LLC	\$20,000.00
32086	Nature Vision, Inc.	\$6,308.10
32088	Puget Sound Energy	\$928.30
32092	Sustainable Seattle dba Sustainability	\$2,852.00
32093	Alliance for Water Efficiency	\$708.75
32095	BRILLIANT MARKETING LLC	\$4,661.61
32098	David F. McGrath	\$2,239.00
32106	PromoShop WA, LLC	\$6,923.31
32107	Puget Sound Energy	\$18,524.34
32109	SMC Consulting LLC	<u>\$2,430.00</u>
		\$119,971.30

LAKE TAPPS

31980	Linde Gas & Equipment Inc.	\$580.47
31982	Robblee's Total Security, Inc.	\$45.99
32012	Robblee's Total Security, Inc.	\$566.01
32014	Sunbelt Rentals	\$1,182.94
32019	Veolia Water North America	\$191,179.13
32021	Cintas Corporation	\$137.97
32054	Linde Gas & Equipment Inc.	\$598.69
32065	Pape Machinery Inc.	\$2,158.26
32067	Pierce County Budget & Finance	\$37.91
32069	Sunbelt Rentals	\$1,849.57
32084	LONG Building Technologies, Inc.	\$37,076.79
32096	Cintas Corporation	\$137.97
32102	Johansen Construction Company, In	<u>\$33,041.63</u>
		\$268,593.33

CONSTRUCTION

31989	HDR	\$18,433.68
31990	Vanir Construction Management Inc.	\$33,350.46
32038	Vanir Construction Management Inc.	<u>\$22,123.14</u>
		\$73,907.28

DESTROYED AND VOIDED CHECKS:

31959; 31985

Total Warrants	\$1,407,827.10
Total Wires	\$9,038,452.00
Total warrants/wire transfers authorized for January 2025	<u>\$10,446,279.10</u>

Approved: _____ Date: _____
 Andy Baker, Economist

Approved: _____ Date: _____
 Mayor Mary Lou Pauly, Secretary/Treasurer

**Cascade Water Alliance
Monthly Treasurer's Report
December 2024**

	Operating Fund	Construction Fund	Bond Fund	RCFC Fund	Water Supply Development Fund	Rate Stabilization Fund	US Bank Payroll Account	All Funds
Beginning Balances, December 1	\$ 14,243,711	\$ 19,229,868	\$ 10,100,878	\$ -	\$ 13,726,459	\$ 2,452,590	\$ -	\$ 59,753,507
Additions:								
Cash received	\$ 4,818,523	\$ 51,733	\$ 52,460	\$ -	\$ 23,818	\$ 9,041	\$ -	\$ 4,955,574
Transfers from other Cascade funds	\$ 175,395	\$ -	\$ 689,747	\$ -	\$ -	\$ -	\$ 183,392	\$ 1,048,533
Total additions	\$ 4,993,917	\$ 51,733	\$ 742,207	\$ -	\$ 23,818	\$ 9,041	\$ 183,392	\$ 6,004,108
Subtractions:								
Bank fees, payroll, and bond payments	\$ 1,100	\$ 1,007	\$ 1,555	\$ -	\$ 1,116	\$ 176	\$ 183,392	\$ 188,346
Warrants paid	\$ 860,067	\$ 73,907	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 933,974
Wire and other electronic payments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
King Co. Investment Pool impairment (realized)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
King Co. Investment Pool impairment (retained)	\$ (68)	\$ (57)	\$ (31)	\$ -	\$ -	\$ (8)	\$ -	\$ (164)
Transfers to other Cascade funds	\$ 873,139	\$ 175,395	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,048,533
Total subtractions	\$ 1,734,238	\$ 250,252	\$ 1,523	\$ -	\$ 1,116	\$ 168	\$ 183,392	\$ 2,170,689
Ending Balances, December 31, 2024	\$ 17,503,390	\$ 19,031,350	\$ 10,841,562	\$ -	\$ 13,749,161	\$ 2,461,463	\$ -	\$ 63,586,926



Office of the Washington State Auditor
Pat McCarthy


Accountability Audit Report

Cascade Water Alliance

For the period January 1, 2023 through December 31, 2023

Published December 23, 2024

Report No. 1036192



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**Office of the Washington State Auditor
Pat McCarthy**

December 23, 2024

Board of Directors
Cascade Water Alliance
Bellevue, Washington

Report on Accountability

Thank you for the opportunity to work with you to promote accountability, integrity and openness in government. The Office of the Washington State Auditor takes seriously our role of providing state and local governments with assurance and accountability as the independent auditor of public accounts. In this way, we strive to help government work better, cost less, deliver higher value and earn greater public trust.

Independent audits provide essential accountability and transparency for Alliance operations. This information is valuable to management, the governing body and public stakeholders when assessing the government's stewardship of public resources.

Attached is our independent audit report on the Alliance's compliance with applicable requirements and safeguarding of public resources for the areas we examined. We appreciate the opportunity to work with your staff and value your cooperation during the audit.

Sincerely,

Pat McCarthy, State Auditor
Olympia, WA

Americans with Disabilities

In accordance with the Americans with Disabilities Act, we will make this document available in alternative formats. For more information, please contact our Office at (564) 999-0950, TDD Relay at (800) 833-6388, or email our webmaster at webmaster@sao.wa.gov.

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AUDIT RESULTS

Results in brief

This report describes the overall results and conclusions for the areas we examined. In those selected areas, Alliance operations complied, in all material respects, with applicable state laws, regulations, and its own policies, and provided adequate controls over the safeguarding of public resources.

In keeping with general auditing practices, we do not examine every transaction, activity, policy, internal control, or area. As a result, no information is provided on the areas that were not examined.

About the audit

This report contains the results of our independent accountability audit of the Cascade Water Alliance from January 1, 2023 through December 31, 2023.

Management is responsible for ensuring compliance and adequate safeguarding of public resources from fraud, loss or abuse. This includes the design, implementation and maintenance of internal controls relevant to these objectives.

This audit was conducted under the authority of RCW 43.09.260, which requires the Office of the Washington State Auditor to examine the financial affairs of all local governments. Our audit involved obtaining evidence about the Alliance's use of public resources, compliance with state laws and regulations and its own policies and procedures, and internal controls over such matters. The procedures performed were based on our assessment of risks in the areas we examined.

Based on our risk assessment for the year ended December 31, 2023, the areas examined were those representing the highest risk of fraud, loss, abuse, or noncompliance. We examined the following areas during this audit period:

- General disbursement – meals with meetings and vendor payments
- Procurement – professional services
- Open public meetings – compliance with minutes, meetings and executive session requirements
- Financial condition – reviewing for indications of financial distress

RELATED REPORTS

Financial

A financial statement audit was performed by a firm of certified public accountants. That firm's report is available on our website, <https://portal.sao.wa.gov/ReportSearch>.

INFORMATION ABOUT THE ALLIANCE

The Cascade Water Alliance is a joint municipal utility services authority located in Bellevue, Washington. Its membership consists of the cities of Bellevue, Issaquah, Kirkland, Redmond and Tukwila, along with the Sammamish Plateau Water and the Skyway Water and Sewer District. The Alliance was organized to coordinate and plan cooperatively with other regional water providers and local nonmember water utilities, to maximize supply availability and to minimize system costs.

Established in 1999, Cascade Water Alliance converted from a Washington State nonprofit corporation to a Washington State Joint Municipal Service Authority on July 12, 2012. The Alliance supplies over 380,000 King County residents and 20,000 businesses. The Alliance is governed by a Board of Directors that consists of seven elected officials appointed from member entities. Operating expenditures for 2023 totaled \$38 million. The Alliance has thirteen employees and two temporary employees.

Contact information related to this report	
Address:	Cascade Water Alliance 11400 SE 8th ST #400 Bellevue, WA 98004
Contact:	Christopher Paulucci, Finance and Administration Manager
Telephone:	(425) 453-0934
Website:	www.cascadewater.org

Information current as of report publish date.

Audit history

You can find current and past audit reports for the Cascade Water Alliance at <https://portal.sao.wa.gov//ReportSearch>.

ABOUT THE STATE AUDITOR'S OFFICE

The State Auditor's Office is established in the Washington State Constitution and is part of the executive branch of state government. The State Auditor is elected by the people of Washington and serves four-year terms.

We work with state agencies, local governments and the public to achieve our vision of increasing trust in government by helping governments work better and deliver higher value.

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MEETING MINUTES OF THE
BOARD OF DIRECTORS
VIA HYBRID
NOVEMBER 20, 2024

1. CALL TO ORDER

At 3:32 p.m. Chair Sweet called the meeting to order. Board Members confirmed that they received the meeting materials and could hear the speakers clearly.

2. ROLL CALL

Board Members Present: City of Bellevue (Hamilton), City of Issaquah (Pauly¹), City of Kirkland (Sweet), City of Redmond (Birney), Sammamish Plateau Water & Sewer District (Warren), Skyway Water and Sewer District (Ault), and City of Tukwila (McLeod)

Board Alternates Present: City of Bellevue (Stokes), City of Redmond (Nuevacamina), Sammamish Plateau Water & Sewer District (Hooshangi)

3. PUBLIC COMMENT

None.

4. EXECUTIVE SESSION

None.

5. APPROVAL OF AGENDA

Motion by Mr. Warren and second by Mr. Ault to approve the meeting agenda as presented. Motion carried unanimously (7-0).

6. CHIEF EXECUTIVE OFFICER'S REPORT

Ray Hoffman, Cascade CEO, reviewed the Chief Executive Officer's Report that was included in the Board Packet, and responded to questions from Board Members.

7. CONSENT ITEMS

- A. Board Meeting Minutes for October 23, 2024.
- B. Motion to authorize the Chief Executive Officer to execute a contract with Confluence Engineering Group to conduct a water quality blending study in an amount not to exceed \$230,000.

¹ Not present for vote on Item 12.

- C. Motion to authorize the Chief Executive Officer to renew contracts for vendor and consulting services totaling \$2,191,450 in accordance with the adopted 2025 - 2026 Cascade budget.

Motion by Mr. Warren and second by Ms. Birney to approve Consent Action Items A-C as presented. Motion carried unanimously (7-0).

8. OTHER ACTION ITEMS

- A. Motion to adopt Resolution No. 2024-16 adopting Cascade's 2025 Legislative and Public Policy Agenda.

Alison Bennett, Cascade's Communications and Intergovernmental Relations Director, highlighted several items in Cascade's 2025 Legislative and Public Policy Agenda at the federal, state, and local levels.

Motion by Ms. Birney and second by Ms. Pauly to authorize staff to adopt Cascade's 2025 Legislative and Public Policy Agenda. Motion carried unanimously (7-0).

- B. Wholesale Contracts Update.

Ed Cebon, Cascade's Chief Economist, presented an update on the progress staff has made in developing the new supply contracts with Tacoma Public Utilities. Final drafts of the contracts are expected to be ready for circulation around Christmas and authorization by the Board in late January 2025. With respect to Seattle Public Utilities, Ray Hoffman informed the Board that Seattle Mayor Bruce Harrell has offered to meet with the Executive Committee to discuss ways to enhance our working relationship.

The Board directed Cascade staff to hold off on sending responses to Mayor Harrell's letter, dated September 10, until the Executive Committee meets with Mayor Harrell.

9. STAFF PRESENTATIONS

- A. Turf Removal Program.

Mike Brent, Cascade's Water Resources Manager, presented a new water efficiency program that will provide rebates to customers who agree to remove irrigated turfgrass and replace it with native or drought-tolerant plants. The program aims to reduce outdoor water use and to educate the community that there are alternatives to traditional landscapes.

10. COMMITTEE REPORTS

- A. Executive Committee – no meeting held.
- B. Finance & Management Committee – Meeting held November 12, 2024. The meeting recap was included in the Board Packet.
- C. Public Affairs Committee – Meeting held November 6, 2024. The meeting recap was included in the Board Packet.
- D. Resource & Management Committee – Meeting held November 7, 2024. The meeting recap was included in the Board Packet.

11. NEW BUSINESS

None

12. NEXT REGULAR MEETING

Motion by Ms. Birney and second by Mr. Hamilton to cancel all December committee meetings and the December Board meeting. Motion carried unanimously (6-0).

13. ADJOURN

The meeting was adjourned at 4:40 p.m.

APPROVED BY:

Penny Sweet, Chair

Angela Birney, Vice-Chair

DRAFT AGENDA MEMORANDUM

SUBJECT

Motion to authorize the Chief Executive Officer to execute various 2025 Cascade sponsorship agreements for a combined total not to exceed \$47,000 (as shown in the events listed in this Agenda Memo).

BACKGROUND

Pursuant to Resolution 2009-02, sponsorship proposals will be reviewed on their merits and how well they relate to Cascade's mission and bylaws. Cascade's Intergovernmental and Communications and Water Efficiency budgets have allocated funds to cover these sponsorships. The resolution indicates that any sponsorship over \$1,000 requires Board authorization. This proposal is for \$47,000 and is supported by the Chief Executive Officer and the Public Affairs Committee. It is within the budgeted amount for 2025.

Pursuant to CWAC 5.45.030, the Chief Executive Officer recommends that the Board authorize sponsorship agreements with each of the following event organizers in 2025:

Event	Area	Date	Est. Cost	Station	Est. Value
Bellevue Family 4 th	Bellevue	7/4	\$4,000	YES	\$8,000
Issaquah Salmon Days	Issaquah	Oct.	\$4,000	YES	\$7,500
Kirkland Concert Series	Kirkland	July/Aug	\$2,500	YES	\$2,500
Redmond Derby Days	Redmond	July	\$3,000	YES	\$6,000
Sammamish Party on the Plateau	Sammamish	August	\$1,000	YES	\$2,000
Skyway Health and Wellness Fair	Skyway	August	\$750	YES	\$1,200
Tukwila Summer Events	Tukwila	July/Aug	\$1,000	YES	\$1,000
WA Environmental Council Gala	Regional	March	\$2,500	NO	\$2,500
Leadership Eastside Mayors Lunch	Eastside	September	\$5,000	NO	\$5,000
Bonney Lake Days/Tunes at Tapps	Lake Tapps	August	\$500	NO	\$500
Beautify Bonney Lake	Lake Tapps	September	\$500	NO	\$500
Bonney Lake Chamber Triathlon	Lake Tapps	September	\$500	NO	\$500
TOTAL FOR COMM/OUTREACH			\$25,250		\$37,200
Water Wise Events (Conservation Budget)					
2026 NW Flower and Garden Festival	Regional	February	\$20,000	YES	\$20,000
Bellevue Farmers' Market	Bellevue	TBD	\$0	YES	N/A
Kirkland Farmers' Market	Kirkland	TBD	\$0	YES	N/A
Kirkland Sustainability Fair	Kirkland	TBD	\$0	YES	N/A

These events meet several Cascade purposes as listed in section 3.3 of the Cascade Water Alliance Joint Municipal Utility Services Agreement. These include support for Cascade to:

- a. provide a safe, reliable, high quality drinking water supply to meet the current and projected demands of Cascade Members and for Non-Members as determined by Cascade, and to carry out this task in a coordinated, cost-effective, and environmentally sensitive manner;
- d. provide conservation programs to promote the wise and efficient use of resources;
- h. share costs and risks among Members commensurate with benefits received; and
- i. carry out, or to further other water supply purposes that the Members determine, consistent with the provisions of this Agreement.

These events support Cascade’s ability to provide safe, reliable, high quality drinking water to meet the needs of Cascade members. These sponsorships are vital in our service area to get our message to key constituents, as well as our members’ service areas, and to demonstrate Cascade’s commitment to providing quality water. To create a water supply system, Cascade must have the support and cooperation of the communities in which it operates. These events focus on regional collaborative and successful relationships and partnerships, as well as cementing good neighbor relationships.

PROCUREMENT PROCESS

Not applicable.

FISCAL IMPACT

Budget Line	2025 Budget	Spent or Committed to Date	Available 2025 Budget	This Action	2025 Remaining Balance
Sponsorships	\$30,000	\$0	\$30,000	\$27,000	\$3,000
Community Engagement	\$75,000	\$0	\$75,000	\$20,000	\$55,000

For its \$47,000 investment, Cascade’s sponsorship will be noted at events that reach the public and key regional stakeholders. This recognition for Cascade at these events includes being featured on event promotional materials and at events; being listed on respective websites; posters and materials displayed at local businesses advertising; social media; opportunities to display Cascade banner and booths; and areas to display Cascade promotional materials. The promotional value of these events exceeds the investment from Cascade and furthers Cascade’s goal of reaching the public and supporting members’ communities.

The 2025 Intergovernmental and Communications budget includes up to \$30,000 for sponsorships for events, and this \$27,000 action includes some leeway in case the cost of an event is raised slightly in 2025. Funds are also reserved for other opportunities that may arise during 2025, and those will be presented separately.

The 2025 Water Efficiency budget includes up to \$75,000 for community events and training that will accommodate the \$20,000 cost for the 2026 Northwest Flower and Garden Festival (NWFGF). Cascade will be the primary utility sponsor of the NWFGF which will include many benefits to Cascade including:

- Cascade's logo and website will be prominently displayed and promoted on the NWFGF's website, social media content, press releases, and at the event (this is the largest landscaping and gardening event in Washington).
- Cascade will be featured as a show partner to emphasize sustainable landscaping and gardening.
- Cascade will receive space for its station and the We Need Water wall at no additional cost.
- Cascade will have access to the facility, presenters, and attendees for filming or other social media content development.
- An onsite banner ad will include Cascade's website.
- Cascade will receive a two-page ad in the show's program guide, customizable to include any information Cascade wishes.
- Cascade will be the presenting partner at the Container Showdown, a popular and well attended portion of the NWFGF.
- The Cascade Gardener classes, water efficiency programs, videos, and social media content will be promoted during and after the NWFGF reaching thousands of people.

OPTIONS

1. Authorize the Chief Executive Officer to execute various 2025 Cascade sponsorship agreements for a combined total not to exceed \$47,000 (as shown in the events listed in this Agenda Memo).
2. Do not authorize the Chief Executive Officer to execute various 2025 Cascade sponsorship agreements and provide alternate direction to staff.

RECOMMENDED ACTION

Authorize the Chief Executive Officer to execute various 2025 Cascade sponsorship agreements for a combined total amount not to exceed \$47,000 (as shown in the events listed in this Agenda Memo).

ATTACHMENTS

None.

AGENDA MEMORANDUM

SUBJECT

Motion to adopt Resolution 2025-03 authorizing the Chief Executive Officer, in consultation with legal counsel, to finalize and execute a five-year temporary construction easement to be granted by Cascade Water Alliance to the U.S. Army Corps of Engineers, related to the Corps' Mud Mountain Dam Fish Passage Project, substantially in the form attached.

BACKGROUND

By Resolution 2018-05, the Board authorized execution of a package of agreements with the U.S. Army Corps of Engineers (Corps), related to the Corps' Mud Mountain Dam Fish Passage Project (MMD FPP). The MMD FPP includes:

1. Demolition of the existing 100+ year old barrier structure and the 70-year-old fish trap and haul facility located in Buckley.
2. Construction of a new barrier structure.
3. Construction of a new fish trap and haul facility designed to meet the conditions of the NMFS Biological Opinion.
4. Construction of improvements to the Cascade intake and diversion facilities (the Cascade Intake Improvements).

The 2018 agreements included a five-year temporary construction easement (TCE) for the Corps' short-term access to Cascade's road (2018-2023) and a seven-year TCE for short-term access to Cascade's headworks area (2018-2025).

By Resolution 2023-10, the Board authorized execution of a new TCE for access to specified Cascade's road (2024-2029). Number 1 and 2 are completed, and Number 3 is being finalized.

Now, a new five-year TCE for short term access to Cascade's headworks area (2025-2030) is needed for the work to be done under Number 3 and 4.

PROCUREMENT PROCESS

N/A

FISCAL IMPACT

Cascade will be compensated for the new five-year TCE as follows: In exchange for the 2024-2029 five-year TCE for road access and this new 2025-2030 TCE for headworks access, the Corps will construct Cascade's drainage outlet.

OPTIONS

1. Adopt Resolution 2025-03 authorizing the Chief Executive Officer, in consultation with legal counsel to finalize and execute a five-year temporary construction easement to be granted by Cascade Water Alliance to the U.S. Army Corps of Engineers, related to the Corps' Mud Mountain Dam Fish Passage Project, substantially in the form attached.
2. Do not adopt Resolution 2025-03 and provide alternate directions to staff.

RECOMMENDED ACTION

Adopt Resolution 2025-03 authorizing the Chief Executive Officer, in consultation with legal counsel to finalize and execute a five-year temporary construction easement to be granted by Cascade Water Alliance to the U.S. Army Corps of Engineers, related to the Corps' Mud Mountain Dam Fish Passage Project, substantially in the form attached.

ATTACHMENTS

1. Resolution 2025-03.
2. Final Draft of Five-year Temporary Construction Easement to be granted by Cascade to the Corps.



CASCADE WATER ALLIANCE
RESOLUTION No. 2025-03

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE CASCADE WATER ALLIANCE,
A WASHINGTON MUNICIPAL CORPORATION
AUTHORIZING THE CHIEF EXECUTIVE OFFICER TO EXECUTE A TEMPORARY
CONSTRUCTION EASEMENT AND AGREEMENT WITH THE UNITED STATES ARMY
CORPS OF ENGINEERS RELATED TO THE CORPS' MUD MOUNTAIN DAM FISH
PASSAGE PROJECT

WHEREAS the Cascade Water Alliance ("Cascade") is a Washington municipal corporation formed under authority of the Joint Municipal Utilities Authority Act (Chapter 39.106 RCW) to provide water supply to its Members; and

WHEREAS Cascade owns property necessary for the United States Army Corps of Engineers' ("Corps") construction, access and operation of the Corps' Mud Mountain Dam Fish Passage Project ("MMD FPP"); and

WHEREAS by Resolution No. 2018-05, the Cascade Board of Directors ("Board") authorized execution of a package of agreements so the Corps could engage in the following activities: (1) Demolition of the existing 100+ year old barrier structure and the 70-year-old fish trap and haul facility located in Buckley; (2) Construction of a new barrier structure; (3) Construction of a new fish trap and haul facility designed to meet the conditions of the NMFS Biological Opinion; and Construction of improvements to the Cascade intake and diversion facilities (the Cascade Intake Improvements); and

WHEREAS by Resolution 2023-10, the Board authorized the execution of a new five-year Temporary Construction Easement (TCE) under which the Corps could continue to access Cascade's roads to complete activities (3) and (4); and

WHEREAS the Corps has requested a new five-year TCE under which the Corps could continue to access Cascade's headworks area to complete activities (3) and (4); and

WHEREAS in support of the Corps' MMD FPP and for valuable consideration, the Board now desires to authorize the Chief Executive Officer, in consultation with legal counsel, to finalize and execute a new five-year Temporary Construction Easement, substantially in the form of the attached.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE CASCADE WATER ALLIANCE, as follows:

Section 1. Adoption. The Board authorizing the Chief Executive Officer, in consultation with legal counsel to finalize and execute a five-year temporary construction easement to be granted by Cascade Water Alliance to the U.S. Army Corps of Engineers, related to the Corps' Mud Mountain Dam Fish Passage Project, substantially in the form attached.

Section 2. Effect. This Resolution shall be in full force and effect on the date of its adoption.

ADOPTED AND APPROVED by the Board of Directors of the Cascade Water Alliance at a regular meeting thereof, held on the 22nd day January 2025.

CASCADE WATER ALLIANCE

Penny Sweet, Chair

Attest – Ray Hoffman, Chief Executive Officer

Angela Birney, Vice Chair

Mary Lou Pauly, Secretary/Treasurer

Members
Yes _____
No _____

Demand Share
Yes ___%
No ___%

Include in CWAC?

___ Yes
 X No

When recorded return to
Department of the Army
U.S. Army Corps of Engineers, Seattle District
4735 East Marginal Way South Bldg 1202
ATTN: CENWS-RET
Seattle, WA 98134-2388

Temporary Easement Deed

CONTRACT NO.:	DACW672250018400
PROJECT:	MUD MOUNTAIN DAM FISH PASSAGE
GRANTOR NAME & ADDRESS:	CASCADE WATER ALLIANCE 11400 SE 8th STREET, SUITE 400 BELLEVUE, WASHINGTON 98004
GRANTEE:	UNITED STATES OF AMERICA
PARCEL NO.:	0619021006

Abbreviated Legal Description: Portion of Section 2, Township 19 North, Range 6 EWM, Pierce County, Washington

The GRANTOR, Cascade Water Alliance, a municipal corporation, as legal successor of Cascade Water Alliance, a non-profit corporation, for value received the receipt of sufficiency of which is hereby acknowledged, does hereby grant, bargain, sell and convey to the United States of America an easement and right-of-way for the uses and purposes set forth hereinafter in connection with the Mud Mountain Dam Fish Passage Project, in, upon, over and across the following described parcel of land situate, lying and being in the County of Pierce, State of Washington (the "Easement"):

THE LEGAL DESCRIPTION IS ATTACHED AS EXHIBIT A

This Conveyance is for the Department of the Army.

The Easement and rights hereby granted include the right, power, privilege and easement in, on, over and across the above-described property for the following purposes:

A temporary easement and right-of-way in, on, over, and across Tract No. B101E-8 (the "Premises"), for a period not to exceed 5 years, beginning on March 2, 2025, for use by the United States, its representatives, agents, and contractors as a work area including the right to move, store, and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the Mud Mountain Dam Fish Passage Project, together with the right to trim, cut, fell, and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles

Mud Mountain Dam Fish Passage Project
DACW672250018400 Cascade Water Alliance

within limits of the right-of-way; reserving, however, to the GRANTOR, its successors and assigns, the right to access, operate, use, patrol, maintain, repair, upgrade, reconstruct and replace GRANTOR's facilities located within or adjacent to the Premises; together with all other such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired to include; subject however, to existing easements for public roads and highways, public utilities, railroads, and pipelines.

Upon expiration of this easement and subject to improvements constructed pursuant to the design requirements for the Project identified above, the premises will be restored to substantially the same condition as that which existed at the time possession was granted to the United States unless otherwise agreed by the parties.

In exercising its rights under this Easement, GRANTEE shall comply with all applicable laws and regulations now or hereafter enacted pertaining to the Project. Further, GRANTEE is responsible for meeting all applicable federal, state and local safety and other codes, and for obtaining all applicable federal, state and local permits, licenses, or other authorizations required for the construction and operation of the Project including, but not limited to, such laws or permits as may pertain to building, zoning, shoreline regulation, environmental protection or other matters pertaining to the general public health, safety and welfare to the extent Congress has waived sovereign immunity. Nothing in this Easement shall be interpreted as a waiver of sovereign immunity by the United States.

GRANTOR does not assume any liability for injury or damage to any person or property incident to or that may arise during and in consequence of the GRANTEE's or its assignees use, occupancy and enjoyment of the Premises or their construction of, erection of, maintenance of, or their failure to properly and safely construct, operate and maintain the Project or to use and occupy said Premises.

GRANTEE shall, consistent with the purposes of the Project, construct the Project in a safe, careful, and workmanlike manner so as to avoid damage to the GRANTOR'S facilities or interference with the GRANTOR'S operations and to prevent injury to property of the GRANTOR and to the life and property of third persons. GRANTEE agrees, to the extent permitted by federal law, to indemnify and hold harmless GRANTOR, its members, and its elected or appointed officers, officials, and employees from any damage caused by GRANTEE, its employees and/or contractors on the Premises, in the exercise of rights under this Easement, provided, no obligation or payment by GRANTEE may exceed the amount of funds authorized and available for such purpose at the time of the damage.

In any litigation or other proceeding arising out of this Easement, the substantially prevailing party shall be entitled to an award of its reasonable attorneys' fees and other costs incurred therein to the extent permitted by federal law.

Invalidation of any of the provisions contained in this Easement, or of the application thereof to any person, by judgment or court order, shall in no way affect any of the other provisions thereof or the application thereof to any other person and the same shall remain in full force and effect.

The failure of any party to insist upon strict performance of any of the terms, covenants or conditions hereof shall not be deemed a waiver of any rights or remedies which that party may have hereunder or at law or equity and shall not be deemed a waiver of any subsequent breach or default in any of such terms, covenants or conditions.

GRANTOR alone shall pay any and all taxes, charges or use fee(s) levied by any governmental agency against GRANTEE's interest in the Premises, or against any of GRANTOR's real property as a result of the Easement herein granted. GRANTEE shall not cause liens of any kind to be placed against the Premises or any of GRANTOR's other real property.

GRANTEE's obligation to pay or reimburse any money under this Easement is subject to express Congressional authorization and the availability of fund appropriated for this purpose to the Department of the Army, and nothing in this Easement shall be interpreted to require obligations or payments by the GRANTEE in violation of the Anti-Deficiency Act, 31 U.S.C. §1341. The provisions of this clause are without prejudice to any rights GRANTOR may have to make a claim under applicable laws for any other damages than provided herein. Nothing in this Easement may be considered as implying that the Congress will at a later date authorize and appropriate funds to meet deficiencies.

WITNESS MY HAND AND SEAL this _____ day of _____, 2025.

CASCADE WATER ALLIANCE:

UNITED STATES OF AMERICA

BY: _____
Chief Executive Officer

BY: _____
Todd Czarnecki
Real Estate Chief, Northwestern Division
Real Estate Contracting Officer

Printed Name Date

Phone Number

Email Address

STATE OF WASHINGTON)
) ss
County of King)

On this ____ day of _____, 2025, before me the undersigned, a Notary Public for the State of Washington, duly commissioned and sworn, personally appeared _____, to me known to be the _____, who executed the foregoing instrument and acknowledged to me that he was authorized to execute said instrument on behalf of the Cascade Water Alliance for the uses and purposes mentioned therein.

WITNESS my hand and official seal hereto affixed the day and year in this certificate above written.

[Signature of Notary]

[Print Name of Notary]
Notary Public in and for the State of Washington
Residing at: _____
My Commission expires: _____

STATE OF OREGON)
) ss
County of Multnomah)

On this ____ day of _____, 2025, before me the undersigned, a Notary Public for the State of Oregon, duly commissioned and sworn, personally appeared Todd Czarnecki, to me known to be a Real Estate Contracting Officer, who executed the foregoing instrument and acknowledged to me that he was authorized to execute said instrument on behalf of the United States Army Corps of Engineers for the uses and purposes mentioned therein.

WITNESS my hand and official seal hereto affixed the day and year in this certificate above written.

[Signature of Notary]

[Print Name of Notary]
Notary Public in and for the State of Oregon
Residing at: _____
My Commission expires: _____

AGENDA MEMORANDUM

SUBJECT

Motion to adopt Resolution No. 2025-02 adopting the 2025 Integrated Aquatic Vegetation Management Plan with direction to the Chief Executive Officer to submit the Plan to the Department of Ecology and proceed with implementation of the Plan.

BACKGROUND

An Integrated Aquatic Vegetation Management Plan (“IAVMP” or “Plan”) is required to receive Department of Ecology (“Ecology”) grants. In 2024, Cascade received a \$75,000 Ecology grant to chemically treat milfoil in the Lake Tapps Reservoir. An IAVMP is also beneficial in providing direction on managing aquatic vegetation in the Lake Tapps Reservoir.

Cascade developed its first IAVMP in 2010 and updated it in 2015. The 2025 IAVMP has a 10-year planning horizon and is a living document. The Plan’s goal is to provide a long-term, adaptive management strategy for aquatic plants in the Lake Tapps Reservoir that is cost effective, ecologically sustainable, and maintains the reservoir’s water quality.

Like the 2010 and 2015 IAVMPs, the 2025 IAVMP continues to focus on controlling milfoil. In addition, it recognizes the need to identify and manage other nuisance aquatic plants to meet the Plan’s goal. To that end, the 2025 IAVMP has three objectives:

1. Continue to maintain a low density of milfoil using the most cost-effective and environmentally friendly method(s) available.
2. Minimize or prevent overgrowth of other non-native plants (as well as over-production of nuisance native species) that are not currently prevalent in the Lake Tapps Reservoir through early detection and management.
3. Identify new aquatic plant infestations early and minimize introductions.

To achieve these objectives, the 2025 IAVMP makes two recommendations:

1. Continue the use of herbicides to control milfoil and other invasive, non-native plants.
2. Conduct reservoir-wide surveys on a regular basis to monitor the presence and absence of milfoil as well as other non-native and native nuisance plants to prevent infestations and overgrowth.

Cascade applied the Board-adopted Drinking Water Quality Policy Framework to the two recommendations (Appendix C of the IAVMP) and determined that both enable Cascade to maintain high water quality in the reservoir. The second recommendation is limited to conducting surveys and does not recommend treating other nuisance plants at this time.

Cascade staff completed SEPA review, issued a Determination of Non-Significance on December 18, 2024, and made the Plan available for public comment. No comments were received by the January 6, 2025 deadline.

Staff presented the 2025 IAVMP to the Resource Management Committee on January 9, 2025 and received the committee's support.

PROCUREMENT PROCESS

Not applicable.

FISCAL IMPACT

There are no direct costs associated with the Board approving the 2025 IAVMP. The costs to implement the first recommendation (continued use of herbicides to control milfoil) is included in the 2025-2026 adopted budget. Funding to implement the second recommendation (reservoir-wide surveys) will not be needed until 2027. Staff will request funding for the next survey via the 2027-2028 budget process.

OPTIONS

1. Adopt Resolution No. 2025-02 adopting the 2025 Integrated Aquatic Vegetation Management Plan (Attachment 2) with direction to the Chief Executive Officer to submit the Plan to the Department of Ecology and proceed with implementation of the Plan.
2. Do not adopt Resolution No. 2025-02 and provide alternative direction to staff.

RECOMMENDED ACTION

Adopt Resolution No. 2025-02 adopting the 2025 Integrated Aquatic Vegetation Management Plan (Attachment 2) with direction to the Chief Executive Officer to submit the Plan to the Department of Ecology and proceed with implementation of the Plan.

ATTACHMENTS

1. Resolution No. 2025-02
2. 2025 Integrated Aquatic Vegetation Management Plan



CASCADE WATER ALLIANCE
RESOLUTION NO. 2025-02

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE CASCADE WATER ALLIANCE,
A WASHINGTON MUNICIPAL CORPORATION, ADOPTING THE 2025 INTEGRATED AQUATIC VEGETATION
MANAGEMENT PLAN

WHEREAS, the Cascade Water Alliance (“Cascade”) is a Washington municipal corporation formed under authority of the Joint Municipal Utilities Authority Act (Chapter 39.106 RCW) to provide water supply to its Members;

WHEREAS, an Integrated Aquatic Vegetation Management Plan is beneficial in providing direction on managing aquatic vegetation in the Lake Tapps Reservoir and is required to receive Department of Ecology grants;

WHEREAS, Cascade completed its first Integrated Aquatic Vegetation Management Plan in 2010 and updated the Plan in 2015;

WHEREAS, Cascade completed the 2025 Integrated Aquatic Vegetation Management Plan with a goal to provide a long-term, adaptive management strategy for aquatic plants in the Lake Tapps Reservoir that is cost effective, ecologically sustainable, and maintains the reservoir’s water quality; and

WHEREAS, the Board now desires to adopt the 2025 Integrated Aquatic Vegetation Management Plan.

NOW THEREFORE BE IT RESOLVED BY THE BOARD OF DIRECTORS OF CASCADE WATER ALLIANCE as follows:

Section 1. Adoption of the 2025 Integrated Aquatic Vegetation Management Plan.

The Board hereby adopts the 2025 Integrated Aquatic Vegetation Management Plan (Attachment 2) and directs the CEO to submit the Plan to the Department of Ecology and proceed with implementation of the Plan.

Section 2. Effect. This Resolution shall be in full force and effect on the date of its adoption.

ADOPTED AND APPROVED by the Board of Directors of the Cascade Water Alliance at a meeting thereof, held on the 22nd day of January 2025.

CASCADE WATER ALLIANCE

Penny Sweet, Chair

Attest – Ray Hoffman, Chief Executive Officer

Angela Birney, Vice Chair

Mary Lou Pauly, Secretary/Treasurer

Members

Yes _____

No _____

Demand Share

Yes _____%

No _____%

Include in CWAC?

Yes

No

LAKE TAPPS RESERVOIR

Integrated Aquatic Vegetation Management Plan

Prepared for
Cascade Water Alliance

January 2025



LAKE TAPPS RESERVOIR

Integrated Aquatic Vegetation Management Plan

Prepared for
Cascade Water Alliance

January 2025

2801 Alaskan Way
Suite 200
Seattle, WA 98121
206.789.9658
esassoc.com



Atlanta	Pasadena	San Francisco
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Irvine	Petaluma	Santa Barbara
Los Angeles	Portland	Sarasota
Mobile	Rancho Cucamonga	Seattle
Oakland	Sacramento	Tampa
Orlando	San Diego	Thousand Oaks
Palm Beach County		

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- D. ProcellaCOR® Safety Data Sheet

Acronyms and Other Abbreviations

Acronym or Abbreviation	Definition
AIS	Aquatic invasive species
BAT	Best Available Technology
Cascade	Cascade Water Alliance
DOM	Dissolved Organic Matter
Ecology	Washington Department of Ecology
EDRR	Early Detection and Rapid Response
EPA	US Environmental Protection Agency
ESA	Environmental Science Associates
HAB	Harmful Algal Bloom
HOA	Homeowner association
IAVMP	Integrated Aquatic Vegetation Management Plan
MIB	2-methylisoborneol
Milfoil	Eurasian Watermilfoil
OHWM	Ordinary High-Water Mark
Policy Framework	Cascade's Drinking Water Quality Policy Framework
PSE	Puget Sound Energy
SD	Secchi Disc
THMs	Trihalomethanes
WRIA	Water Resource Inventory Area

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LAKE TAPPS RESERVOIR

Integrated Aquatic Vegetation Management Plan

Purpose

The purpose of the Lake Tapps Integrated Aquatic Vegetation Management Plan (IAVMP) is to provide for a long-term, adaptive management strategy for aquatic plants in the Lake Tapps Reservoir that is cost-effective, ecologically sustainable, and maintains the reservoir’s water quality.

Executive Summary

In 2009, Cascade Water Alliance (Cascade) purchased the Lake Tapps Reservoir from Puget Sound Energy (PSE) as a source of future drinking water supply for Cascade’s member agencies. Although the reservoir is unlikely to be used for this purpose for several decades, it is critical to protect the water quality today to avoid having to restore it in the future.

Currently, the Lake Tapps Reservoir is used for recreation (e.g. swimming, boating, fishing), fish and wildlife habitat, aesthetics, and wildlife viewing. Most lake-users are waterfront property owners, homeowner association (HOA) members, and residents from the Seattle metropolitan area. The vast majority of the shoreline is developed with residential properties.

Data from 2004 to 2021 indicates the trophic status¹ of the Lake Tapps Reservoir has been oligotrophic (low biological activity) to mesotrophic (moderate biological activity) (Herrera 2022). This low to moderate biological activity shows the reservoir is currently in a healthy state. Maintaining high water quality in the Lake Tapps Reservoir is important for Cascade’s future use as a drinking water source as well as for current and future recreational purposes. Keeping the reservoir in a healthy state could help lower capital and operating costs of removing contaminants, including taste and odor compounds, at the future treatment plant and reduce the risk of service disruptions.²

It is critical to protect the water quality in the Lake Tapps Reservoir today to avoid having to restore it in the future.

Eurasian watermilfoil (*Myriophyllum spicatum*) (milfoil) is a highly invasive, non-native aquatic plant and has been prevalent in the Lake Tapps Reservoir since PSE’s ownership. Today, it is by far the most problematic aquatic plant in the reservoir. Classified as a Class C (non-regulated) noxious weed by Pierce County, the County recommends controlling milfoil. Milfoil is very aggressive and can form dense mats

¹ Trophic status is a measure of the overall biological productivity in a body of water. It is a key indicator of water quality and is based on the total biomass of living organisms in the water at a given time.

² Higher levels of contamination in raw water can result in operational problems in water treatment plants, such as filters getting clogged, which in turn could result in service disruptions.

on the water surface that interfere with navigation, disrupt natural water flow and mixing, limit light for native plants, clog water in-takes, and disrupt recreational activities. Importantly, when milfoil dies back in the fall, the decaying plants use up dissolved oxygen, adding nutrients to the water that potentially increase algae growth and related water quality problems (King County 2010).

In 2010, Cascade completed its first *Integrated Aquatic Vegetation Management Plan* (IAVMP). At that time, milfoil was classified by the State of Washington and Pierce County as a Class B noxious weed, requiring control. As such, the 2010 IAVMP's goal was to develop a long-term strategy to eradicate milfoil in the Lake Tapps Reservoir, and Cascade began treating milfoil with herbicides along with other control measures. By 2015, Pierce County no longer regulated milfoil. Thus, Cascade's 2015 IAVMP had a goal of implementing approaches that would result in a low density of milfoil populations. After evaluating various methods of control, the 2015 IAVMP recommended the continued application of herbicides to reduce milfoil populations.

As with the 2015 IAVMP, the 2025 IAVMP has a 10-year planning horizon and is a living document. The goal of the 2025 IAVMP is to provide a long-term, adaptive management strategy for aquatic plants in the Lake Tapps Reservoir that is cost-effective, ecologically sustainable, and maintains the reservoir's water quality. While the 2025 IAVMP continues to focus on controlling milfoil, it also recognizes the need to identify and manage other nuisance aquatic plants to meet the Plan's goal.

In the summers of 2023 and 2024, Cascade conducted a reservoir-wide survey of aquatic plants. In total, 18 aquatic plant species were identified at 412 sampling points. Of the 18 species identified, four (including milfoil) were non-native. Among the most prevalent native species was native pondweed, whose population has increased over the past few years.

Since continued effective management of aquatic plants is key to keeping the reservoir healthy and from moving to a state of high biological activity (eutrophication), the 2025 IAVMP has three objectives:

1. Continue to maintain a low density of milfoil using the most cost-effective and environmentally friendly method(s) available.
2. Minimize or prevent overgrowth of other non-native plants (as well as over-production of nuisance native species) that are not currently prevalent in the Lake Tapps Reservoir through early detection and management.
3. Identify new aquatic plant infestations early and minimize introductions.

To achieve these objectives, the 2025 IAVMP makes two recommendations:

1. Continue the use of herbicides to control milfoil and other invasive, non-native plants.
2. Conduct reservoir-wide surveys on a regular basis to monitor the presence and absence of milfoil as well as other non-native and native nuisance plants to prevent infestations and overgrowth.

Cascade has a formal Drinking Water Quality Policy Framework (Policy Framework), which outlines a process to evaluate potential water quality actions. Cascade applied its Policy Framework to both recommendations and determined both enable Cascade to maintain high water quality in the reservoir. The second recommendation is limited to surveys. If Cascade identifies issues with potential overgrowth of other nuisance plants during the surveys, it will apply the Policy Framework before taking action.

Problem Statement

Cascade purchased the Lake Tapps Reservoir in 2009 from PSE as a source of future drinking water supply for its member agencies. Although the reservoir is unlikely to be used for this purpose for several decades, it is important to protect the water quality today to avoid having to restore it in the future.

Milfoil, a highly invasive aquatic plant, has been prevalent in the Lake Tapps Reservoir since PSE's ownership. Milfoil is capable of growing in up to 30 feet of water but typically grows in one to 15 feet. It primarily spreads by stem fragments that can produce new roots and root crowns. Milfoil is very aggressive and can form dense mats on the water surface that interfere with navigation, disrupt natural water flow and mixing, limit light for native plants, clog water in-takes, and disrupt recreational activities. Studies have shown diminished lakefront property values on the order of <1% to 19% with incremental increase in milfoil abundance (Zhang et al. 2010, Olden et al. 2014).

Continued effective management of milfoil, as well as other invasive aquatic vegetation, is a key to protecting the Lake Tapps Reservoir's water quality for future municipal supply and current beneficial uses.

Importantly, when milfoil dies back in the fall, the decaying plants use up dissolved oxygen, adding nutrients to the water that potentially increase algae growth and related water quality problems (King County 2010). Through annual chemical treatment, Cascade has maintained a low density of milfoil in the reservoir. Continued effective management of milfoil, as well as other invasive aquatic vegetation, is a key to protecting the reservoir's water quality for future municipal supply.

Cascade has no regulatory obligations or contractual obligations with the Lake Tapps Reservoir community, Tribes, or other stakeholders to control milfoil. Nonetheless, as noted above, keeping milfoil and other invasive vegetation growth in check provides current operational and future drinking water quality benefits to Cascade. Controlling milfoil also maintains the ecological balance of the reservoir (protecting native plants and fish) and provides beneficial uses to the community in the form of swimming, boating, fishing, aesthetics, fish and wildlife habitat, and wildlife viewing.

Protecting Water Quality for Future Municipal Use

Trophic status is a measure of the overall biological productivity in a body of water. It is a key indicator of water quality and is based on the total biomass of living organisms in the water at a given time. Herrera Environmental Consultants (Herrera) carried out two years of baseline/routine water quality monitoring in the Lake Tapps Reservoir during water years (WY) 2020 and 2021 as part of Cascade's long-term Water Quality Monitoring Program (WQMP) (Herrera 2022).

Looking at data from 2004 to 2021, the trophic status of the Lake Tapps Reservoir has been in the oligotrophic (low biological activity) to mesotrophic (moderate biological activity) range (Herrera 2022). There have been minor algal blooms in Lake Tapps Reservoir. An unusual bloom was reported by reservoir residents in April 2021 and species of cyanobacteria were observed in the reservoir, although infrequently, in 2020 and 2021 (Herrera 2022). This low to moderate biological activity shows the Lake Tapps Reservoir is currently in a healthy state, and continued effective management of aquatic plants is

key to keeping the reservoir healthy and from moving into the state of high biological activity (eutrophication). Eutrophication occurs when excessive nutrient enrichment of a water body can lead to water quality issues such as the formation of harmful algal blooms (HABs), excessive algal blooms and scums, low water clarity, and the depletion of oxygen levels. Sources of nutrients, primarily phosphates and nitrates, may include watershed inputs, failing septic systems, agriculture, stormwater runoff, animal waste, and the decay of aquatic plants. Submersed aquatic plants, such as milfoil, that are rooted in the lakebed, obtain most of their nutrients from the sediment, which is returned to the water column when the plants decompose and is available for algae growth (King County 2010). Over time, this repeated contribution of nutrients, regardless of source, can lead to ecosystem imbalance and potentially eutrophication.

Water supply reservoirs with high concentrations of dissolved organic material (DOM) may result in high levels of chlorinated organic molecules (contaminants) such as trihalomethanes (THMs) in finished drinking water (Cooke and Carlson 1990). A shift to a eutrophic state will see an increase in oxygen demand in deeper water, increased plant growth (which, for water supply reservoirs, can result in diminished raw water quality), loss of reservoir volume, increased THM precursors, increased taste and odor problems associated with geosmin and MIB (2-methylisoborneol) produced by cyanobacteria, and increased drinking water treatment cost (Cooke and Carlson 1990). Although the Lake Tapps Reservoir is currently a low productivity waterbody with good water quality, there have been detections of cyanobacteria and the taste and odor compound, geosmin (Herrera 2020).

In addition to reduction in nutrient inputs, controlling milfoil and the overgrowth of other non-native plants (and potentially overgrowth of natives) is key to slowing down eutrophication.

In nearby Spanaway Lake, also in Pierce County, there have been nearly annual exceedances of state recreational guidelines for microcystin. Microcystins are the most commonly measured and detected cyanotoxins and are potent liver toxins and possible human health carcinogens (EPA 2024). On August 20, 2024, Spanaway Lake was closed due to toxic algae. That closure was lifted September 30, 2024, following treatment with algaecide and lanthanum (a phosphorus-inactivation agent). At the national level, it was estimated that in Lake Waco (Texas), the city incurred an estimated \$70 million between 2002 and 2012 to address tap water taste and odor problems associated with algae blooms (Dunlap 2015).

Management Goal and Objectives

Cascade's goal is to continue to protect water quality in the Lake Tapps Reservoir to ensure long-term sustainable supplies for a variety of uses, with priority placed on future municipal water supply.

To achieve this goal, Cascade aims to continue to manage nutrient loading in the Lake Tapps Reservoir through the following objectives:

Maintain a low density of milfoil using the most cost-effective and environmentally friendly method(s) available.

Minimize or prevent overgrowth of other non-native plants (as well as over-production of nuisance native species) that are not currently prevalent in the Lake Tapps Reservoir through early detection and management.

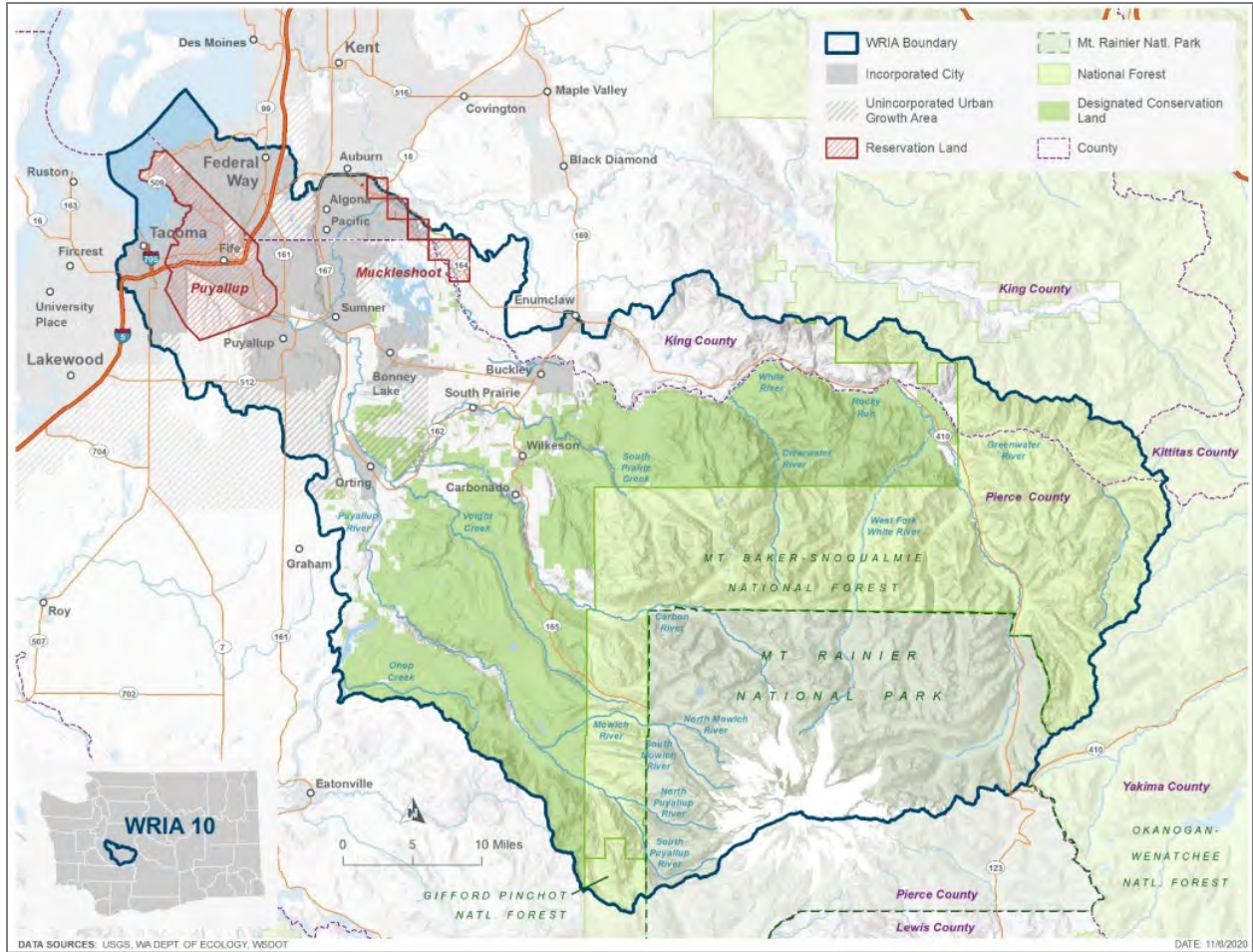
Identify new aquatic plant infestations early and minimize introductions.

Watershed and Waterbody Characteristics

Watershed Characteristics

The Lake Tapps Reservoir is east of Tacoma, Washington, near the cities of Bonney Lake and Auburn in north central Pierce County. It is in the northwestern portion of the Puyallup-White River Water Resource Inventory Area (WRIA) 10 (**Figure 1**). WRIA 10 covers 1,000 square miles and drains the Puyallup, Carbon, and White Rivers to Commencement Bay and Puget Sound in Tacoma (Ecology 2021). The southeastern portion of the WRIA is heavily forested while the western portion is characterized as urban and agricultural. The area adjacent to the Lake Tapps Reservoir is predominantly urban (residential and commercial) with some forested and agricultural areas. The area adjacent to the White River is primarily classified as forest (evergreen and mixed) and barren. The Lake Tapps Reservoir is considered a Shoreline of Statewide Significance as it has a surface acreage of 1,000 acres or more measured at ordinary high-water mark (OHWM) (Pierce County 2024).





Source: Ecology, 2021.

Figure 1
WRIA 10 Vicinity Map and Land Uses

Lake Tapps Reservoir Characteristics

The region currently occupied by the Lake Tapps Reservoir was once four lakes (Tapps, Kirtley, Crawford, and Church Lakes) (**Figure 2**). Early in the 1900s, Puget Sound Power and Light’s White River Power Plant Project constructed a dynamic system of dikes, flumes, diversions, pipes, and valves (**Figure 3**) constructed around the four lakes to form the Lake Tapps Reservoir. This context may explain some of its shoreline bathymetric complexity (**Figure 4**).



Figure 2

U.S. Geological Survey map, dated April 12, 1900, prior to the construction of infrastructure that formed the Lake Tapps Reservoir.

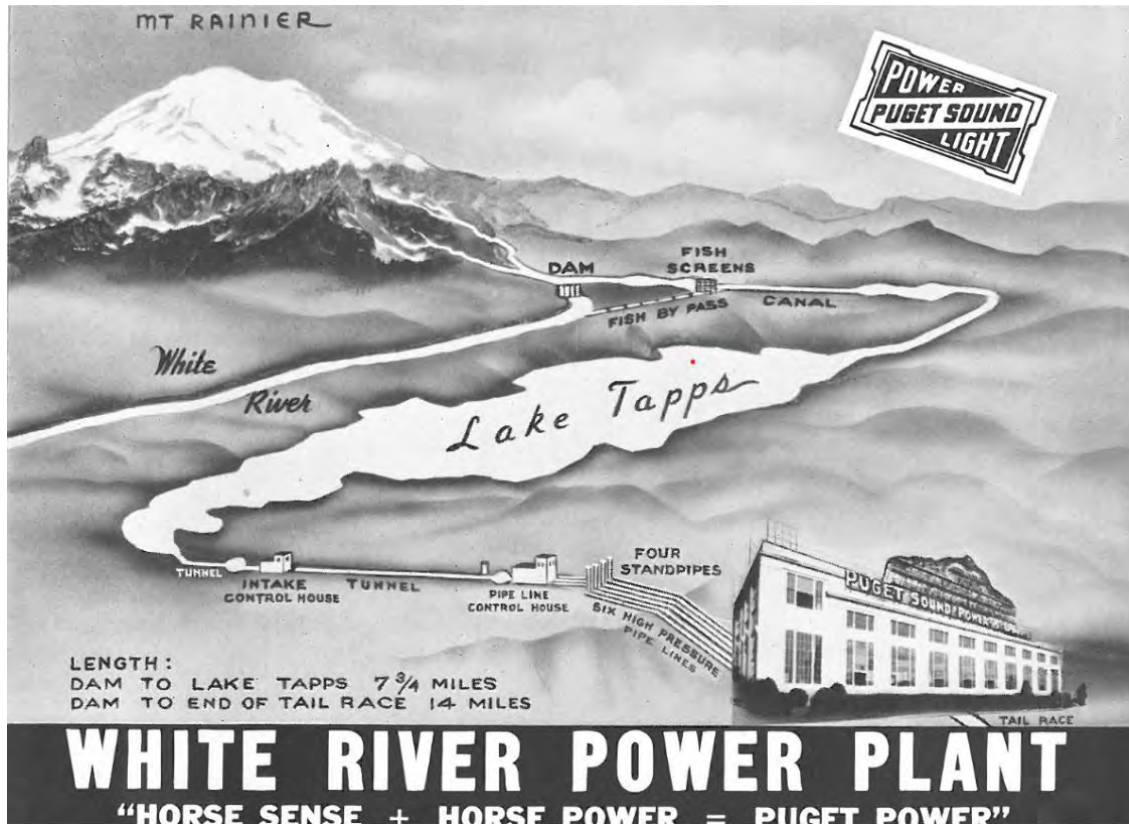


Figure 3

Early public outreach materials for Puget Sound Power and Light's White River Power Plant Project.

The historical and current source of water to the Lake Tapps Reservoir is the White River (**Figure 5**). The water quality of the Lake Tapps Reservoir is largely characterized by the chemical and biological attributes of the White River. The White River originates from the Emmons and Fryingpan Glaciers of Mount Rainier and contributes a significant bedload and suspended sediment load to the lake. When Lake Tapps was operated for power production, large diversions from the White River carried a high suspended solids load to the lake. Also at that time, hydraulic residence time at mean flow (949 cfs) was approximately 36 days and decreasing to 17 days at maximum flow (2,000 cfs) (Mueller 1997). Inflows were reduced in 2004-2006, averaging 159 cfs, which produced a residence time of 277 days. As a result of reduced suspended solids and the nearly sevenfold decrease in residence time, summer Secchi disc (SD) transparency during 2004-2006 increased from a historical average of 1 to 3.1 meters, allowing more light penetration for aquatic plant growth.

Until 2004, the reservoir was operated as a hydropower facility by PSE, with water released back to the White River through a tailrace canal on the reservoir's west side. When the reservoir was used for hydropower generation, water flow in the 20.7 miles of White River between the diversion dam and tailrace was often reduced to 30 cfs in the White River, resulting in impacts to water quality and the native fisheries.

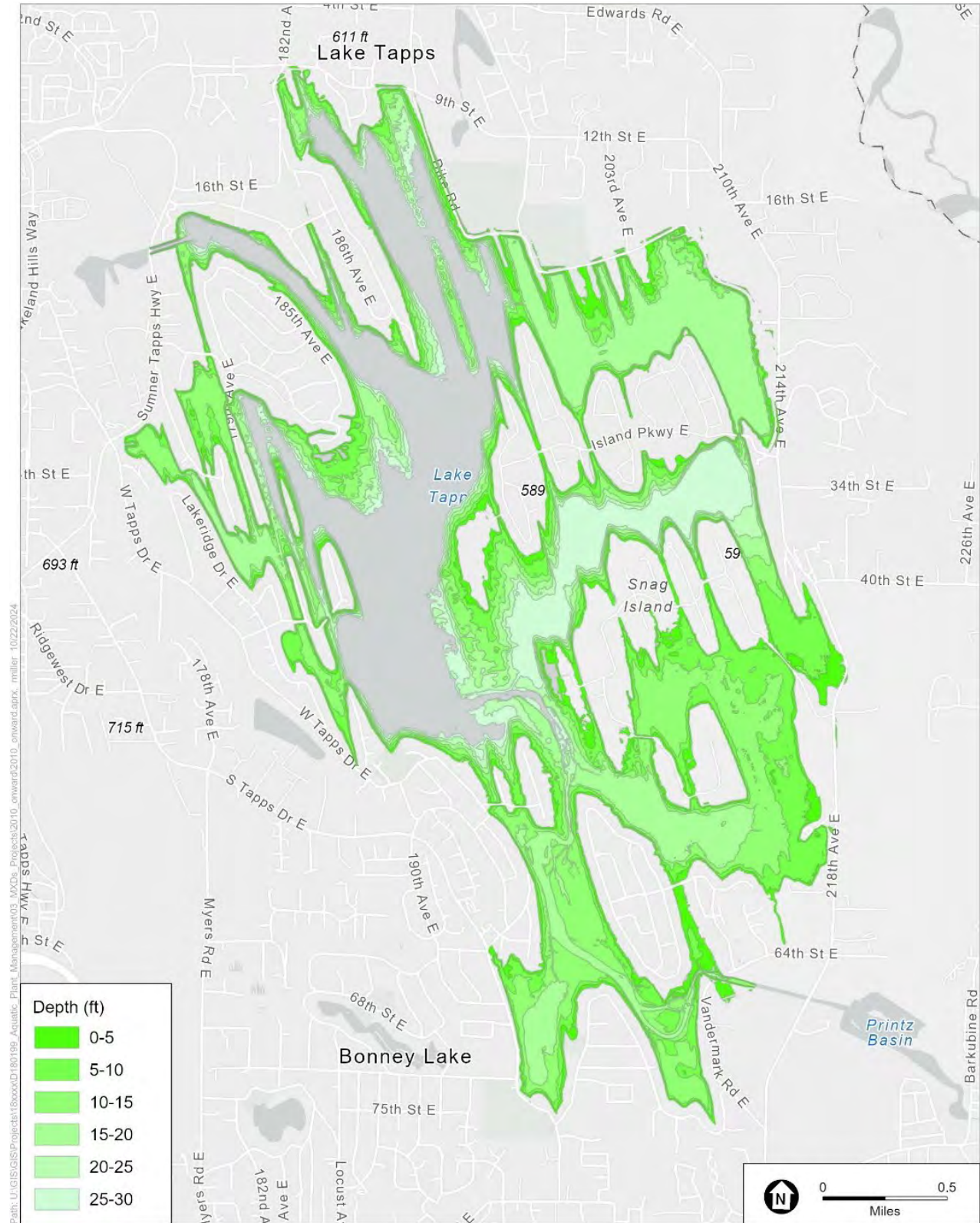


Figure 4
Bathymetric map of the Lake Tapps Reservoir in 5-foot increments.

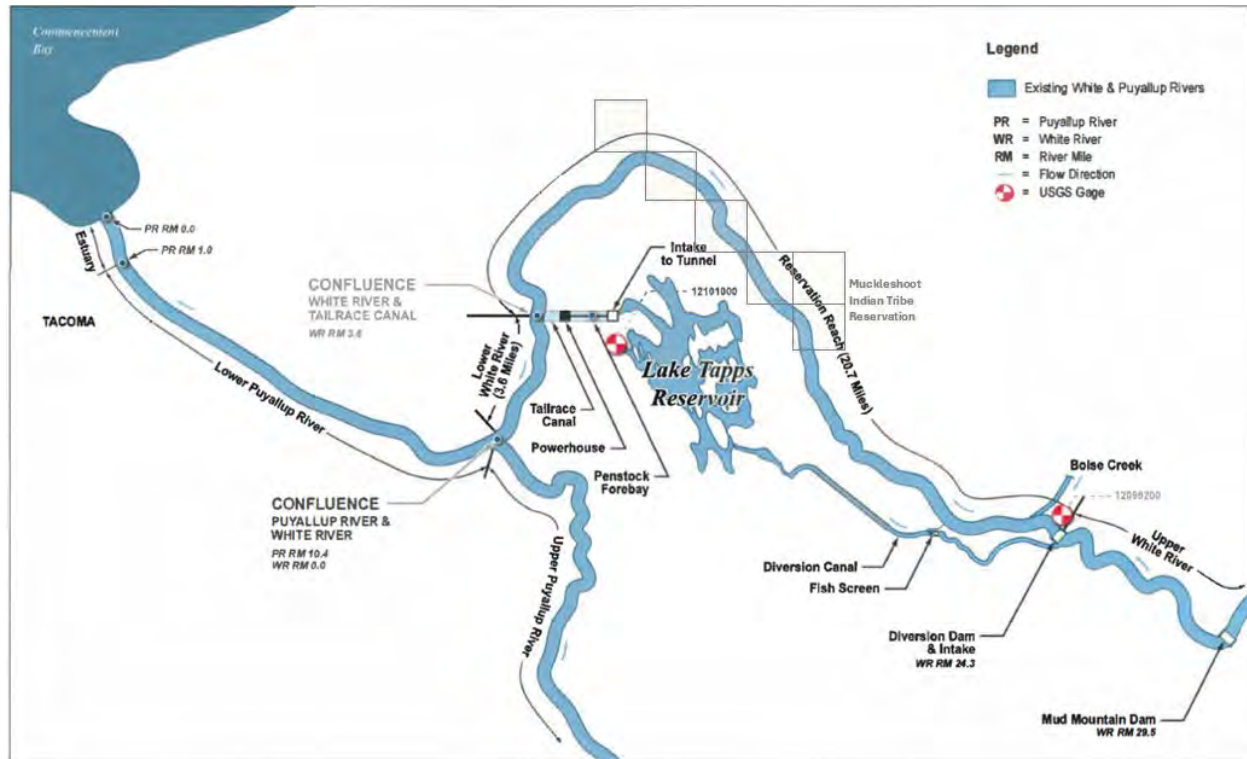


Figure 5
Schematic of water inflow and outflow at the Lake Tapps Reservoir.

Over time, instream flow requirements were increased, and due to the difficulty of generating enough power with the higher instream flow requirements, PSE decided to stop generating power in 2004.

Cascade purchased the Lake Tapps Reservoir in 2009 and negotiated increased instream flows with the Tribes with the 2008 White River Management Agreement. This resulted in even longer water residence time and increased water clarity in the Lake Tapps Reservoir, which potentially contributed to the more prolific growth of submersed aquatic vegetation.

Since 2009, water has been diverted from the White River from April 15 to October 31 to maintain recreational water levels in the Lake Tapps Reservoir at “normal full pool” (elevation 541.5 to 543 feet) per an agreement with the Lake Tapps Reservoir community.

The Lake Tapps Reservoir is routinely drawn down in the winter, typically from November 1 to February 1 (**Figure 6**). This drawdown period is used to conduct maintenance and repair work on the dikes and other operational structures and to ensure waves from severe winter storms do not overtop the reservoir's dikes. These drawdowns have been attributed to reducing the presence of invasive aquatic plants; however, it should be noted that rainfall during the drawdown months coupled with the temperate climate does not contribute to a decrease in plant abundance or density.

The Lake Tapps Reservoir has a surface area of 2,750 acres with the capacity to impound 46,700 acre-feet of water. The maximum depth is 80 feet with a mean depth of roughly 25 feet. The reservoir has approximately 45 miles of complex shoreline characterized by numerous islands and peninsulas.



Figure 6

Aerial imagery from 2015 when the Lake Tapps Reservoir was drawn down for infrastructure repairs.

Approximately 1,600 residences are immediately adjacent to the Lake Tapps Reservoir with about 5,050 residences within a quarter mile of the lake. Much of the shoreline is characterized by cobble and gravel sediment bars with extensive armoring and numerous private boat launches. Silty sediment is more common to backwater areas and channels between islands.

Beneficial Uses of Lake Tapps Reservoir

Current beneficial uses of the Lake Tapps Reservoir include swimming, boating, fishing, aesthetics, fish and wildlife habitat, and wildlife viewing. The reservoir also provides views of Mount Rainier. Warm water fish species (largemouth bass, smallmouth bass, and yellow perch), rainbow trout, and tiger musky are popular sport fisheries at the reservoir. There are two public parks with boat launches on the reservoir--North Lake Tapps Park and Allan Yorke Park--with numerous access points for other recreational uses such as picnic facilities, playgrounds, athletic fields, hike/bike trails, and golf (**Figure 7**). Most reservoir-

The vast majority of the Lake Tapps Reservoir shoreline is developed with residential properties, and beneficial uses include swimming, fishing, boating, and fish and wildlife habitat.

users are waterfront property owners, HOA members, and residents from the Seattle metro area. The vast majority of the shoreline is developed with residential properties.

The Washington Department of Natural Resource (WDNR) Heritage Program database was reviewed. No rare species or rare and high-quality ecosystems, known as Element Occurrences (EOs), were found (WDNR 2024). Inclusion of rare plant communities could require additional protections.

Cascade purchased the Lake Tapps Reservoir as a source of future drinking water supply for its member agencies, with the purpose of meeting Cascade's mission to provide clean, safe, and reliable drinking water. At this time, Cascade expects to use the Lake Tapps Reservoir for municipal supply starting in the 2060s.



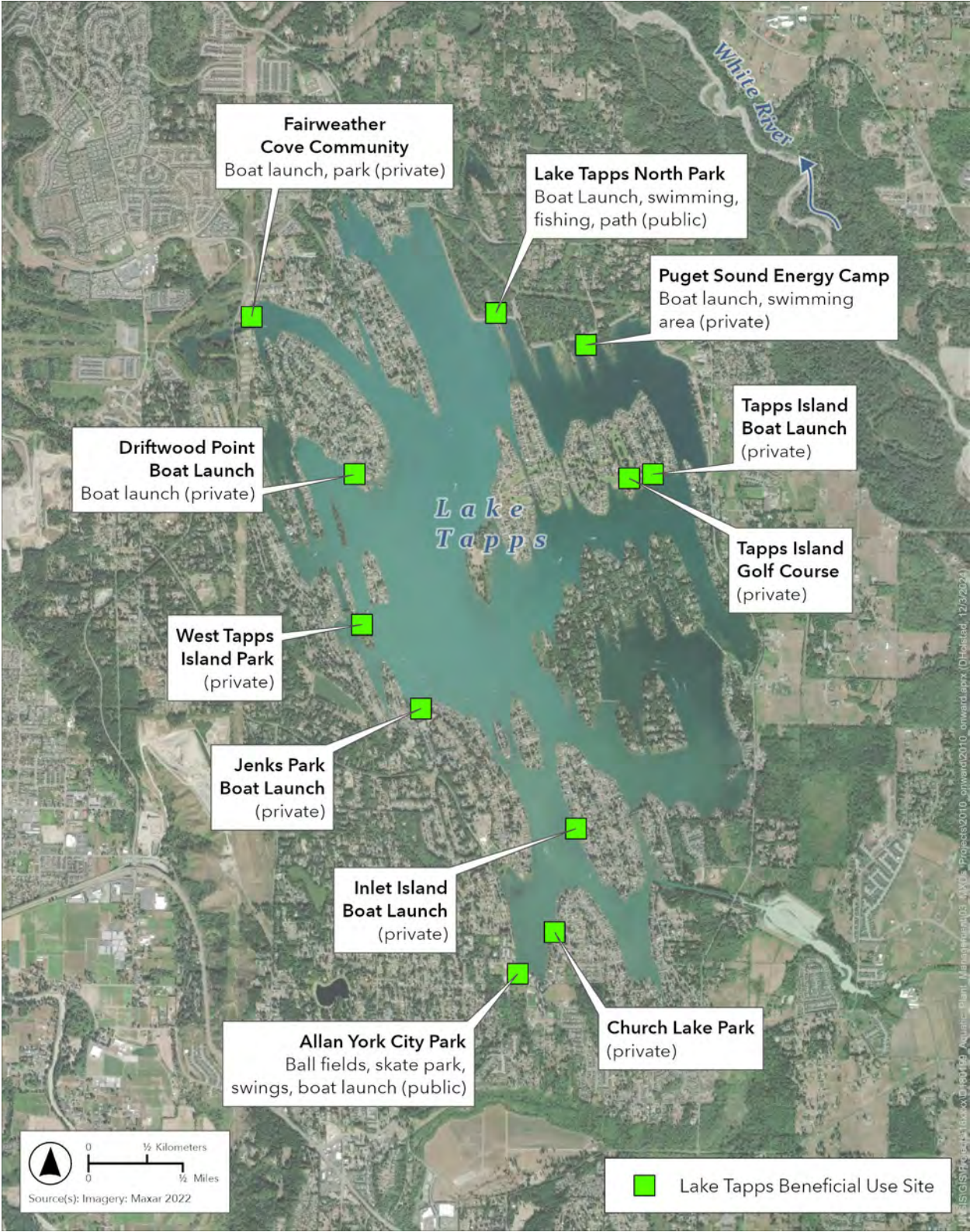


Figure 7
Location of Recreational Areas (Beneficial Uses) at Lake Tapps

Aquatic Plant Characteristics

Myriophyllum spicatum, Eurasian watermilfoil (milfoil), is widely known to alter aquatic ecosystems by forming dense mats that shade out other aquatic plants, degrade water quality, inhibit water flow, and impact recreational activities (Washington State Noxious Weed Board 2024). Below the plant canopy, dissolved oxygen is routinely lower, there are increased shifts in daily pH levels, and sedimentation is increased (Gettys et al. 2020, Cooke et al. 2005, Frodge et al. 1990). The plant canopy also physically limits the mixing of atmospheric oxygen within the water column (Frodge et al. 1990). Such low or highly fluctuating dissolved oxygen levels in the water column provide poor habitat for invertebrates and fish.

A reservoir-wide survey of aquatic plants in the Lake Tapps Reservoir was conducted by ESA and Cascade in 2023 and completed in 2024 (Appendix A). There were two components to the survey: 1) collection of rake grab samples to assess distributions and densities of plant species within the littoral zone and 2) a hydroacoustic survey to assess submerged aquatic plant coverage. Survey data was used to identify areas with current and potential aquatic plant problems and assess the effectiveness of management activities. In addition to milfoil, other non-native aquatic plants known to occur in the

Lake Tapps Reservoir include wild celery (*Vallisneria americana*), yellow flag iris (*Iris pseudacorus*), and fragrant waterlily (*Nymphaea odorata*). There are at least 14 native submersed aquatic plants present. Most common are long-leaved/ribbon-leaved pondweed (*Potamogeton nodosus/epihydus*³), stonewort (*Nitella* sp.), water nymph (*Najas guadalupensis*), and Canadian waterweed (*Elodea canadensis*).⁴ Emergent aquatic plants are uncommon to the Lake Tapps Reservoir due to heavy water level fluctuation and shoreline armoring; however, yellowflag iris appears to be expanding (*Iris pseudacorus*).

Milfoil is the most problematic plant in the Lake Tapps Reservoir; it is non-native, aggressive, and can form dense mats that degrade water quality, inhibit water flow, and impact recreational activities.

By far the most problematic aquatic plant in the Lake Tapps Reservoir is milfoil, which was introduced to the U.S. from Europe in the 1940s and is now the most widespread submersed aquatic weed in the northern U.S. (Madsen 2009). *M. spicatum* is a Class B Noxious Weed in Washington, meaning prevention and containment are the primary goals (WAC 16-750-011). Species are “designated” for control at the state level (by region). Milfoil is non-designated in Region 2, which includes Pierce County. Though it is not known exactly when milfoil was introduced or became established in the Lake Tapps Reservoir, it was noted as an issue with the Lake Tapps Community Task Force in 2000, and the PSE Reservoir Management Agreement between PSE and the Lake Tapps Community addressed milfoil.

Milfoil is capable of growing in up to 30 feet of water but typically grows in 1 to 15 feet. Though milfoil produces flowers and seeds, it primarily spreads by stem fragments that can produce new roots and root crowns. The starch-rich stems and root crowns of milfoil allow it to overwinter and survive long periods in the water or sediment. Fragments are commonly created mechanically by boat props; however, milfoil

³ Identification unconfirmed

⁴ ESA (Environmental Science Associates). Lake Tapps Reservoir reservoir-wide survey conducted 2023-2024 (see Appendix A)

naturally fragments as part of its lifecycle. Like most invasive aquatic plants, milfoil forms thick surface mats that can impact water quality, interfere with recreation and fishing, and limit access to docks.

Past Management Efforts

In 2010, in part funded by a grant from the Washington Department of Ecology (Ecology), Cascade completed and began implementing its first IAVMP, a plan to manage milfoil in the Lake Tapps Reservoir. At that time, milfoil was classified by the State of Washington and Pierce County as a Class B noxious weed requiring control and spread-prevention measures. The 2010 IAVMP’s purpose was to develop a long-term strategy to eradicate milfoil in the Lake Tapps Reservoir, continue improving

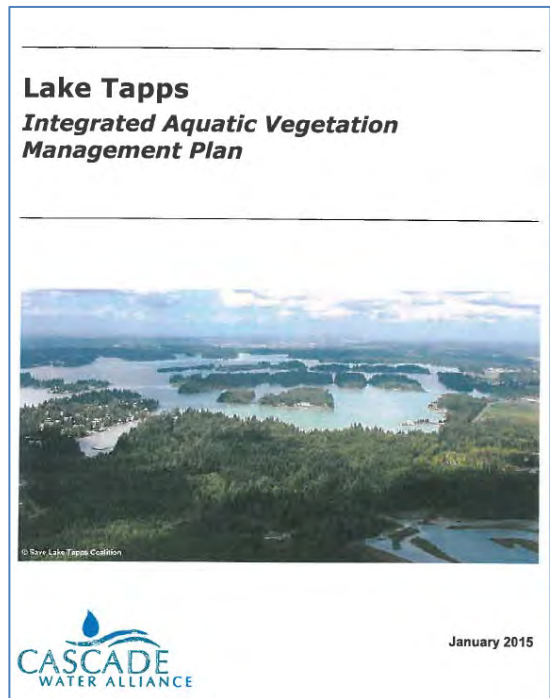
Managing milfoil growth in the reservoir provides operational benefits to Cascade, as well as recreational and water quality benefits.

existing beneficial and recreational uses, and ensure water quality to meet future drinking water demands. Implementation of the 2010 IAVMP was successful but did not achieve the goal of eradicating milfoil.

Today, the Washington State Department of Agriculture exempts Pierce County from its classification of milfoil as a Class B weed, and the Pierce County Noxious Weed Control Board considers milfoil to be a non-regulated noxious weed for which it

encourages voluntary control measures. In addition to having no regulatory obligations to control milfoil, Cascade also has no contractual obligations with the Lake Tapps Reservoir community, Tribes, or other stakeholders.⁵ Nonetheless, managing milfoil growth in the reservoir provides many current operational benefits to Cascade, as well as recreational and ecological benefits. It also provides future drinking water quality benefits such as potentially lowering capital and operating costs of removing contaminants, including taste and odor compounds.

In 2015, Cascade updated its IAVMP with the goal of implementing plant control approaches that would result in a low density of milfoil populations. The 2015 IAVMP evaluated many means of controlling milfoil in the Lake Tapps Reservoir, including environmental manipulation, biological controls, manual controls, mechanical controls, and chemical controls. Many of these means of control were labor intensive, expensive, or unsuitable for the Lake Tapps Reservoir. Consequently, the 2015 IAVMP recommended the application of herbicides, in combination with other aquatic plant control methods such as hand pulling, to substantially increase the efficacy of controlling milfoil in the reservoir.



⁵ The Lake Tapps Community Agreement calls for Cascade to control milfoil as required by law or to meet Cascade’s operational goals.

Chemical Control

Cascade has, and continues to take, an adaptive management approach to managing aquatic plants. Since the 2010 IAVMP, Cascade has primarily managed milfoil growth with chemical treatments with success.

In 2019, after approval by Washington State, Cascade began using the herbicide floryprauxifen-benzyl (tradename: ProcellaCOR®) in its annual treatment program. Of the herbicides available for milfoil control, ProcellaCOR® is considered Best Available Technology (BAT), with a better environmental profile than other products like 2,4-D and Triclopyr. In addition, one or two pints of this product replaces between 200 and 400 pounds of 2,4-D or Triclopyr, thereby reducing the amount of herbicide required to be applied. ProcellaCOR® also has one of the fastest uptake times of any available aquatic herbicide, making it more effective in high water-exchange environments like the Lake Tapps Reservoir.

Cascade typically treats milfoil in two phases each summer, using boat surveys to determine areas that need treatment the most.

For typical treatments, Cascade and its limnologist conduct a boat survey late in the previous treatment year (September or October) and then again in the spring of the upcoming treatment year (May) to identify the areas to be treated in the first round of treatment

(late June to mid-July). Timing of the first treatment is a balancing act between treating as early as possible for the recreation season yet waiting long enough to be able to determine needed treatment areas by boat survey. In late July, Cascade conducts another boat survey to determine which areas to treat in the second round (usually mid- to late August). Complaints from residents about milfoil growth also strongly factor into the location of treatment areas. **Figure 8** illustrates ProcellaCOR® treatment areas for the years 2022 through 2024.

Cascade conducted a pilot study in 2018 on controlling milfoil with dry-land herbicide treatments and found it ineffective. In February 2018, four plots were treated with products registered for aquatic use to control milfoil, including: fluridone (tradename Sonar Genesis) + imazamox (tradename Clearcast) and triclopyr (tradename Renovate3). During the May 2018 survey, milfoil was observed in the general area and a visual assessment by divers showed the plot areas were not substantially different than the surrounding untreated area.



Milfoil

Other Control Methods

In addition to chemical treatment, over the years Cascade has employed and considered several other methods of milfoil control, as described below.

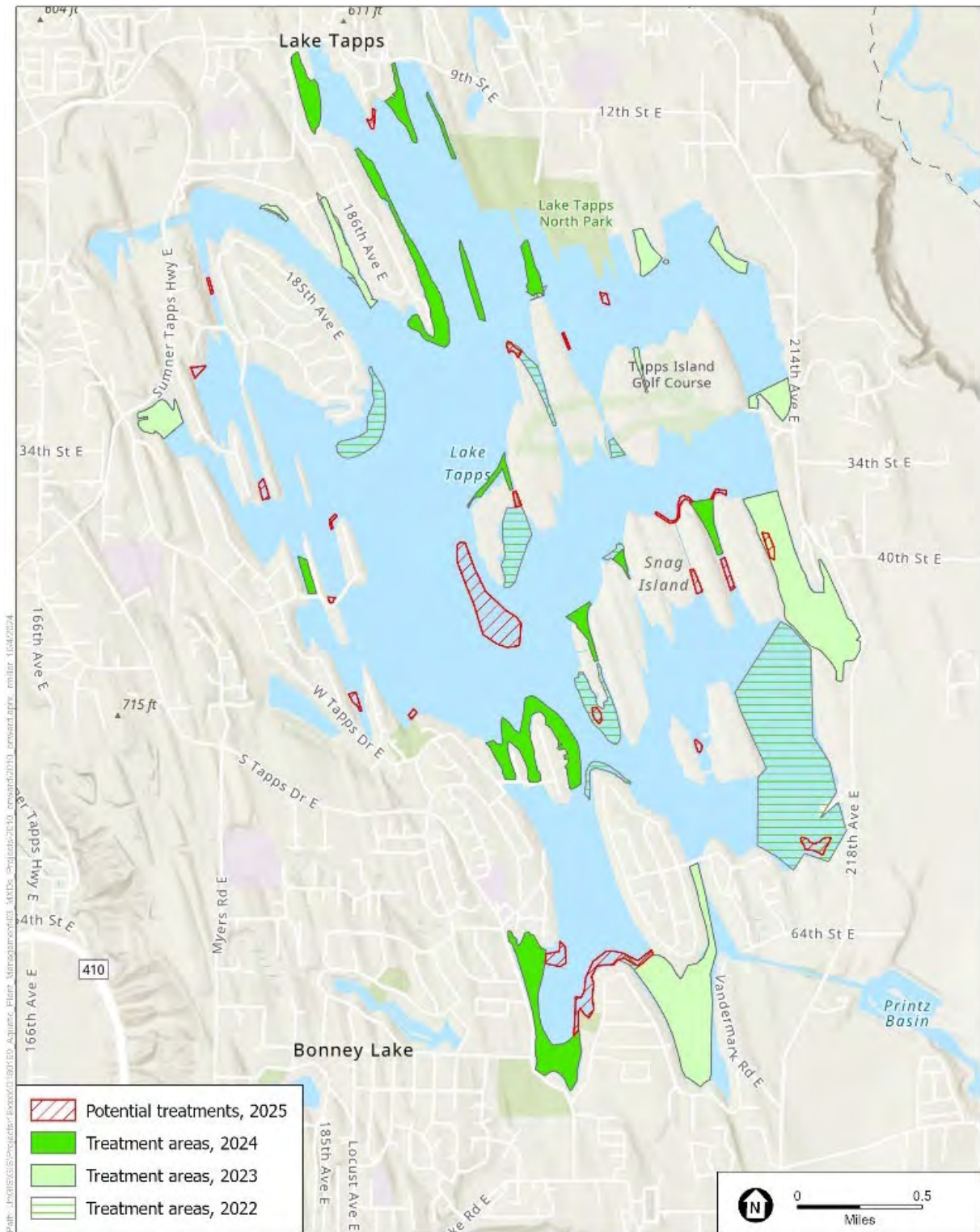
Manual Control Methods

Bottom barriers (pilot study). In January 2018, during the reservoir drawdown, burlap bottom barriers were installed over a 1.5-acre channel on the south side of Tapps Island. One layer of barrier was placed alongside a double layer of barrier, both secured by rocks. In July 2018, divers surveyed the area and found sediment covering the barriers from 0.5 to 6.0 inches. Fragments of milfoil were also observed growing on 40% to 50% of the barrier. They noted no observable difference between plant growth on the single or double layered barrier. Based on the rapid deposition of sediment and growth of milfoil within six months of installing the bottom barrier, Cascade determined this treatment method was not successful in controlling milfoil in the Lake Tapps Reservoir.

Diver hand pulling. Cascade used divers to hand pull milfoil for five years: 2013, 2014, 2016, 2017, and 2018. Diver hand pulling was very labor-intensive and expensive when compared to chemically treating milfoil. Based on this, Cascade ceased using divers in 2018.



Dense mat of milfoil growing in the Lake Tapps Reservoir.



Source: ESRI, 2023

Figure 8
Location of ProcellaCOR® treatments between 2022 and 2024.

Environmental Manipulation

Water level drawdown. As noted earlier, Cascade draws the water level down each winter for dike safety and maintenance projects. Cascade has not used the drawdown to control milfoil because to effectively do so requires freezing temperatures for at least two continuous weeks, with no precipitation.

Education and Awareness

Cascade’s website. Cascade has an informative webpage on milfoil that includes photos, descriptions, options for homeowners to control milfoil, and information on Cascade’s programs:

<https://cascadewater.org/lake-tapps/milfoil/>.

Social media. Cascade has a Facebook page where it posts information on the milfoil treatment program and the annual meetings.

Community meetings. Cascade holds annual meetings at the Lake Tapps Reservoir where information about the milfoil treatment program is presented. Cascade also provides information to residents on the spread and prevention of invasive aquatic plant species’ establishment in the reservoir, and on available, effective control options for milfoil they can individually implement near their shorelines to complement Cascade’s treatment program.

Signage. Cascade supports public boat launch signage regarding milfoil.

TappsWise Program. Nutrients from failing septic tanks, fertilizers, and stormwater runoff feed vegetation in the reservoir and can result in excessive growth of plants, algae, reduced water clarity, and stress on fish and wildlife. Cascade has partnered with the Tacoma-Pierce County Health Department since 2017 to improve water quality in the Lake Tapps Reservoir with the *TappsWise* program. This program offers workshops, site visits, and other education for homeowners around the reservoir.

A summary of all control methods evaluated in the 2015 IAVMP can be found in **Appendix B**.

Aquatic Plant Control Alternatives and Control Strategy

In 2023, Cascade adopted a formal Drinking Water Quality Policy Framework (Policy Framework), which outlined a process to evaluate potential water quality programs, projects, policies, and other actions. Since the Lake Tapps Reservoir will not be developed for municipal supply for several decades, the Policy Framework guides Cascade’s decision-making on which water quality actions to implement, when to implement them, and how much to invest.

Cascade applied its Policy Framework to the milfoil program to first assess whether this continues to be the preferred strategy.

The assessment indicated that the benefits of controlling milfoil

to protect water quality in the Lake Tapps Reservoir continues to outweigh the costs. The second part of the Policy Framework evaluated the options to control milfoil. As described earlier, based on prior evaluations, Cascade determined chemical control is the most cost-effective means of control. More detailed information on the application of the Policy Framework can be found in **Appendix C**.

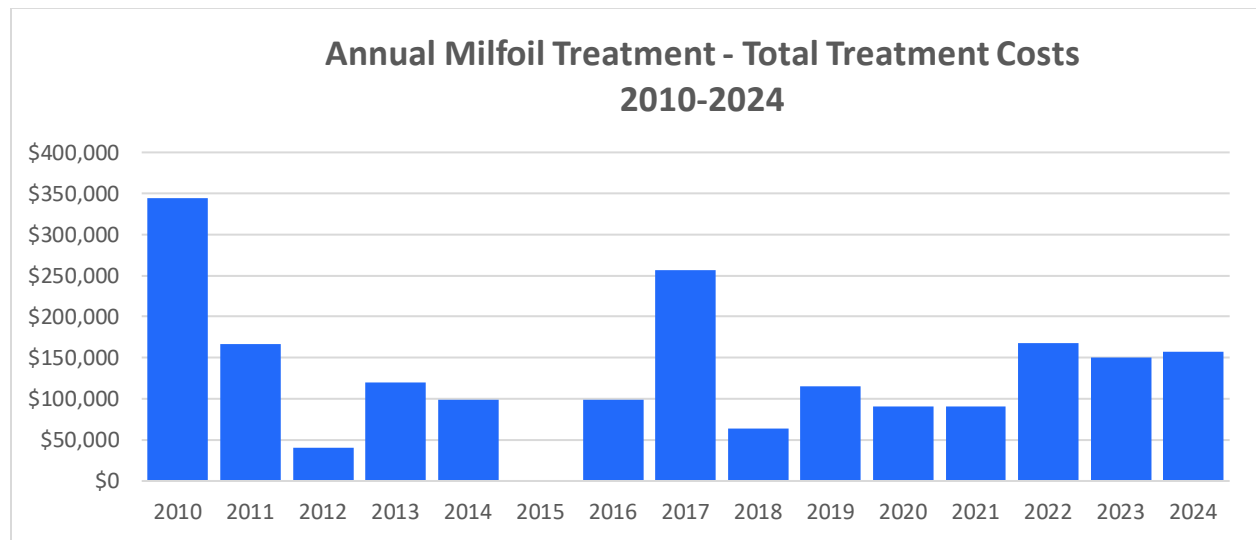
**Cascade’s Drinking Water
Quality Policy Framework
Assessment indicates that the
benefits of controlling milfoil to
protect water quality continue
to outweigh the costs.**

Preferred Milfoil Control Method

Use of ProcellaCOR® in the Lake Tapps Reservoir has been successful, as illustrated by the fact that only a few areas have required retreatment in the three years following treatment and is currently Cascade’s preferred control method.

Cascade’s preferred method of treatment for milfoil is ProcellaCOR®, which is considered Best Available Technology, has a better environmental profile than other products, requires less product, and has a fast uptake time, making it more effective in high-water exchange environments such as the Lake Tapps Reservoir.

Cascade has spent nearly \$2 million for milfoil treatment to date (**Figure 9**). The amount of treatment varies from year to year as shown in the graph below. Over the past three years, the annual cost has averaged \$159,000. A comparable amount has been approved by Cascade’s Board of Directors for 2025-2027.



Note: No treatments occurred in 2015 due to a maintenance drawdown.

Figure 9

Annual treatment costs of Eurasian watermilfoil in the Lake Tapps Reservoir for the years 2010 through 2024

Cascade has an adaptive management strategy for controlling aquatic plants, and it has shown its ability to be nimble and adaptable to changing conditions. An example is the addition of a new component to the annual treatment program in response to community feedback. At the 2022 Lake Tapps Reservoir community meeting, residents offered to pay for treatment beyond Cascade’s planned treatment areas. The following year and again in 2024, Cascade conducted a pilot project that allowed HOAs and individual homeowners to pay Cascade’s contractor for treatment (through Cascade’s permit) beyond Cascade’s planned treatment areas. Although participation was low during the pilots, Cascade feels this offers a great benefit to the homeowners and HOAs, and Cascade is offering this as an option to the community on a permanent basis. Cascade will continue to be adaptable and strive to stay on top of the latest technologies, and Cascade remains open to better options as they become available.

SEPA Review and Public Involvement

Cascade has overwhelming support from the community for its milfoil management program, as demonstrated by endorsements from many homeowners at well-attended annual public meetings. Cascade’s public outreach will continue with its annual community meetings, informational webpage and social media, public boat ramp signage, and its partnership with the Tacoma-Pierce County Health Department *TappsWise* program to improve water quality.

A State Environmental Policy Act (SEPA) Review was conducted on this Lake Tapps Reservoir IAVMP. The completed plan was sent to Ecology with a completed SEPA Plan Elements for review and comment, initiating a fourteen-day comment period. No comments were received during the comment period. The Determination of Non-significance was issued on December 18, 2024.

Monitoring, Watchlist, and Evaluation

Reservoir-wide surveys are a specific method for early detection of other non-native invasive aquatic plants. The recommended frequency for reservoir-wide surveys is every three years. The reservoir-wide plant surveys can be done in conjunction with the smaller scale annual plant treatment surveys. Community input and identification of potential new infestations of aquatic plants will also help guide the frequency of the more in-depth reservoir-wide surveys.

In 2023-2024, Cascade conducted a reservoir-wide macrophyte survey (**Appendix A**), and this information will assist in developing the chemical treatment strategy for the following years. The survey also identified plants other than milfoil, including native plants, that have, or may become, a nuisance and may require treatment. In total, 18 species of aquatic plant species were identified at 412 points sampled during early September 2023 and late August 2024,

Reservoir-wide surveys are an important method for early detection of non-native plants that may require a rapid treatment response to reduce future control costs due to the establishment of unwanted species.

including observations of shoreline/emergent species. **Table 1** summarizes the species observed, listed in order of frequency of occurrence from greatest to least. Milfoil was present at 14.6% of the sample points scattered throughout the survey area. It should be noted that much of the milfoil found in the first half of the reservoir-wide survey in 2023 was treated in 2024.

In addition to evaluating management efforts, the purpose of the reservoir-wide survey is to provide early detection of other non-native aquatic plants. Based on information from sources such as the Washington State Noxious Weed Board, Pierce County Noxious Weed Control Board, Washington Department of Agriculture, Washington Department of Ecology, King County, and personal peer communications, a “watch list” of species was developed to alert staff, homeowners, and contractors about what plants to look for such that rapid response measures can be implemented.

The science of invasion biology emphasizes the importance of early detection and rapid response (EDRR) and relies heavily on prevention as a means to reduce future control costs after an unwanted species becomes established. The Invasion Curve (**Figure 10**) is widely used to illustrate that prevention is the most efficient and least costly method of combating invasive species.

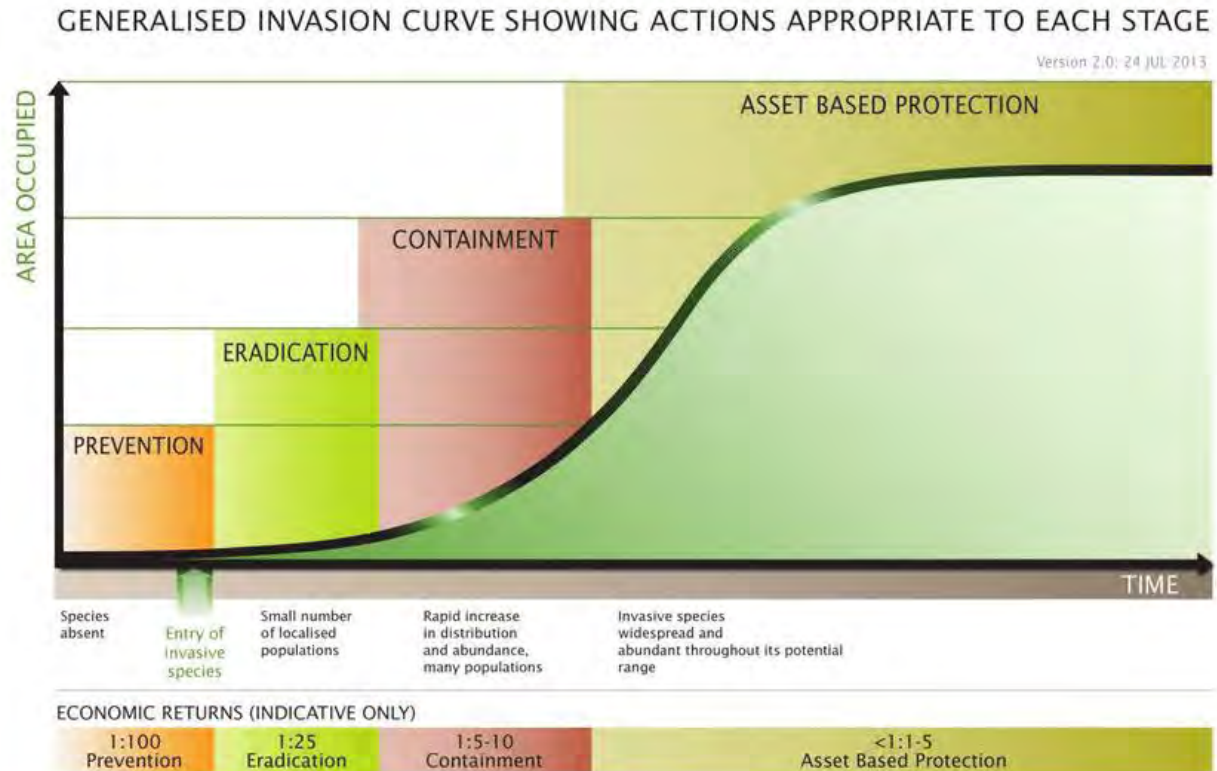
Cascade applied its Drinking Water Quality Policy Framework to the concept of conducting reservoir-wide surveys on a regular basis. The evaluation determined the benefits of reservoir-wide surveys outweigh the costs, assuming a frequency of every three years. If, during reservoir-wide surveys, Cascade identifies non-native or nuisance native plants that could become problematic, it will apply its Policy Framework prior to treatment or other actions.

TABLE 1
AQUATIC PLANT SPECIES FREQUENCY OF OCCURRENCE IN THE LAKE TAPPS RESERVOIR DURING 2023 - 2024
RESERVOIR-WIDE SURVEY

Species	Common Name	Status	Frequency of Occurrence
Nitella sp ¹	stonewort	native	42.7%
Potamogeton nodosus/epiphydrus	long-leaved/ribbon-leaved pondweed	native	37.9%
Najas guadalupensis	waternymph	native	36.2%
Elodea canadensis	Canadian waterweed	native	23.8%
Vallisneria americana	wild celery	non-native	21.1%
Myriophyllum spicatum	Eurasian watermilfoil	non-native	14.6%
Chara sp. ²	muskgrass	native	7.5%
Potamogeton pusillus/foliosus ¹	slender pondweed/leafy pondweed	native	3.6%
Potamogeton richardsonii	Richardson's pondweed	native	2.7%
Potamogeton amplifolius	large leaf pondweed	native	2.0%
Potamogeton gramineus	variableleaf pondweed	native	1.9%
Nuphar polysepala	yellow pond lily	native	1.2%
Nymphaea odorata	fragrant water lily	non-native	1.2%
Ceratophyllum demersum	hornwort	native	0.5%
Potamogeton natans	floating leaf pondweed	native	0.5%
Eleocharis acicularis	needle spikerush	native	0.2%
Iris pseudacorus ³	yellowflag iris	non-native	0.2%
Potamogeton praelongus	whitestem pondweed	native	0.2%
Site with no plants			12.1%

NOTES:

¹ Macroalgae² Shoreline/emergent species



Source: Department of Primary Industries, Victoria.

Figure 10

The generalised species invasion curve, adapted from Harvey and Mazzotti (2014) and Haubrock et al. (2022). Labels at the top refer to the stages of the invasion process (the invasion stage is divided into low, medium, and high level). Bold labels refer to management actions appropriate at each stage of invasion. White boxes below the graph indicate terms used to refer to alien species within each invasion stage. Economic return values listed at the bottom indicate the amount of money that is returned based on the money invested at each invasion stage, adapted from Victorian Government (2010) and Reid et al. (2021).

A “watch list” of potential non-native aquatic plants, as well as potentially nuisance native aquatic plants, will assist Cascade, its contractors, and lake residents to identify new species in between recommended reservoir-wide surveys. **Table 2** summarizes aquatic plant species that should be considered for the “watch list” (descriptions are taken from resources cited above).

TABLE 2
AQUATIC PLANT “WATCH LIST” FOR THE LAKE TAPPS RESERVOIR

Common Name	Scientific Name	Weed Class ^{a,b,c}	Known Lake Occurrences in WA ^d
Brazilian elodea	<i>Egeria densa</i>	B	Battle Ground Lake (Clark Co.), Big Lake (Skagit Co.), Black Lake (Pacific Co.)
Curlyleaf pondweed	<i>Potamogeton crispus</i>	C	Isolated and very sparse observations in the Lake Tapps Reservoir; noted as wide and patchy distribution in nearby Spanaway Lake
Delta arrowhead	<i>Sagittaria platyphylla</i>	Quarantine list	Deep Lake (Thurston Co.)
Fanwort	<i>Cabomba caroliniana</i>	B	Solo Slough (Cowlitz Co.), Willow Grove Slough (Cowlitz Co.)
Floating primrose-willow	<i>Ludwigia peploides</i>	A	Occurrences of Ludwigia sp. in Battle Ground Lake, Haven Lake (Mason Co.), Solo Slough
Flowering rush	<i>Butomus umbellatus</i>	A	Boundary and Box Canyon Reservoirs (Pend Oreille Co.), Chambers Lake (Pierce Co.), Silver Lake (Whatcom Co.)
Grass-leaved arrowhead	<i>Sagittaria graminea</i>	B	Echo Lake, Lake Loma, Lake Roesiger (Snohomish Co.)
Hydrilla	<i>Hydrilla verticillata</i>	A	Previously in Lake Lucerne and Pipe Lake (King Co.)
Parrotfeather	<i>Myriophyllum aquaticum</i>	B	Buena Creek (Yakima Co.), Chehalis River (Grays Harbor Co. and Lewis Co.)
South American sponge	<i>Limnobium laevigatum</i>	A	Canal on Long Beach Peninsula (Pacific Co.)
Variable-leaf milfoil	<i>Myriophyllum heterophyllum</i>	A	Blue Lake (Thurston Co.), Clear Lake (Pierce Co.), Clear Lake (Thurston Co.)

NOTES:

- Class A noxious weeds are non-native species whose distribution in Washington State is still limited. Eradication is the highest priority, and is required by law. It is prohibited to transport, buy, sell, offer for sale, or distribute plants or plant parts of quarantined species into or within the state of Washington or to sell, offer for sale, or distribute seed packets of seed, flower seed blends, or wildflower mixes of quarantined species into or within the state of Washington (WAC 16-752).
- Class B noxious weeds are nonnative species whose distribution is limited to portions of Washington State.
- Class C noxious weeds are widespread in Washington or are of special interest to the agricultural industry.
- Washington Department of Ecology. Lakes Environmental Data. Available at: <https://apps.ecology.wa.gov/lakes/>. This dataset does not fully address noxious aquatic weeds in rivers.

As previously mentioned, at least three other non-native aquatic plants are known to occur in the Lake Tapps Reservoir. Wild celery is the most common, though generally limited in distribution, far less abundant than milfoil, and, while non-native, is not considered a noxious weed. Yellow flag iris, a Class C noxious weed, is limited to shorelines and is unlikely viewed as problematic to most homeowners. Like milfoil, yellow flag iris is non-regulated in Pierce County. Two instances of previously unreported fragrant waterlily were observed during the reservoir-wide survey, emphasizing the importance of these surveys. Fragrant waterlily is also a Class C noxious weed unregulated in Pierce County. Left unchecked, this species has great potential to spread across shallow backwater areas of the reservoir.

Conclusions

The Lake Tapps Reservoir is an important resource for Cascade’s members, the Lake Tapps Reservoir community, partner agencies, and other stakeholders. Protecting the water quality of the reservoir provides numerous benefits today, including operational benefits for Cascade, recreational benefits for the community, and habitat for fish and wildlife. Preventing eutrophication of the reservoir is also critical for Cascade’s future use as a source of drinking water, as this can reduce treatment costs and service disruptions.

Since milfoil is by far the most problematic aquatic plant in the reservoir, continued management to prevent overgrowth is key to maintaining high water quality. Based on prior experiences and evaluations of various control measures, continued chemical treatment, and specifically the use of ProcellaCOR®, is Cascade’s preferred strategy.

In addition to controlling milfoil, Cascade aims to minimize or prevent overgrowth of other non-native plants (as well as over-production of nuisance native species) that are not currently prevalent in the Lake Tapps Reservoir. To achieve this, Cascade plans to conduct reservoir-wide surveys to identify and manage these issues before they become problematic.

As it has in the past, Cascade will continue to take an adaptive strategy to managing nuisance aquatic plants in the Lake Tapps Reservoir. It will strive to stay on top of the latest technologies and remain open to better options as they become available. Cascade will also continue to work with its regulators, partner agencies, and the Lake Tapps Reservoir community to maintain the reservoir’s water quality for today and tomorrow.

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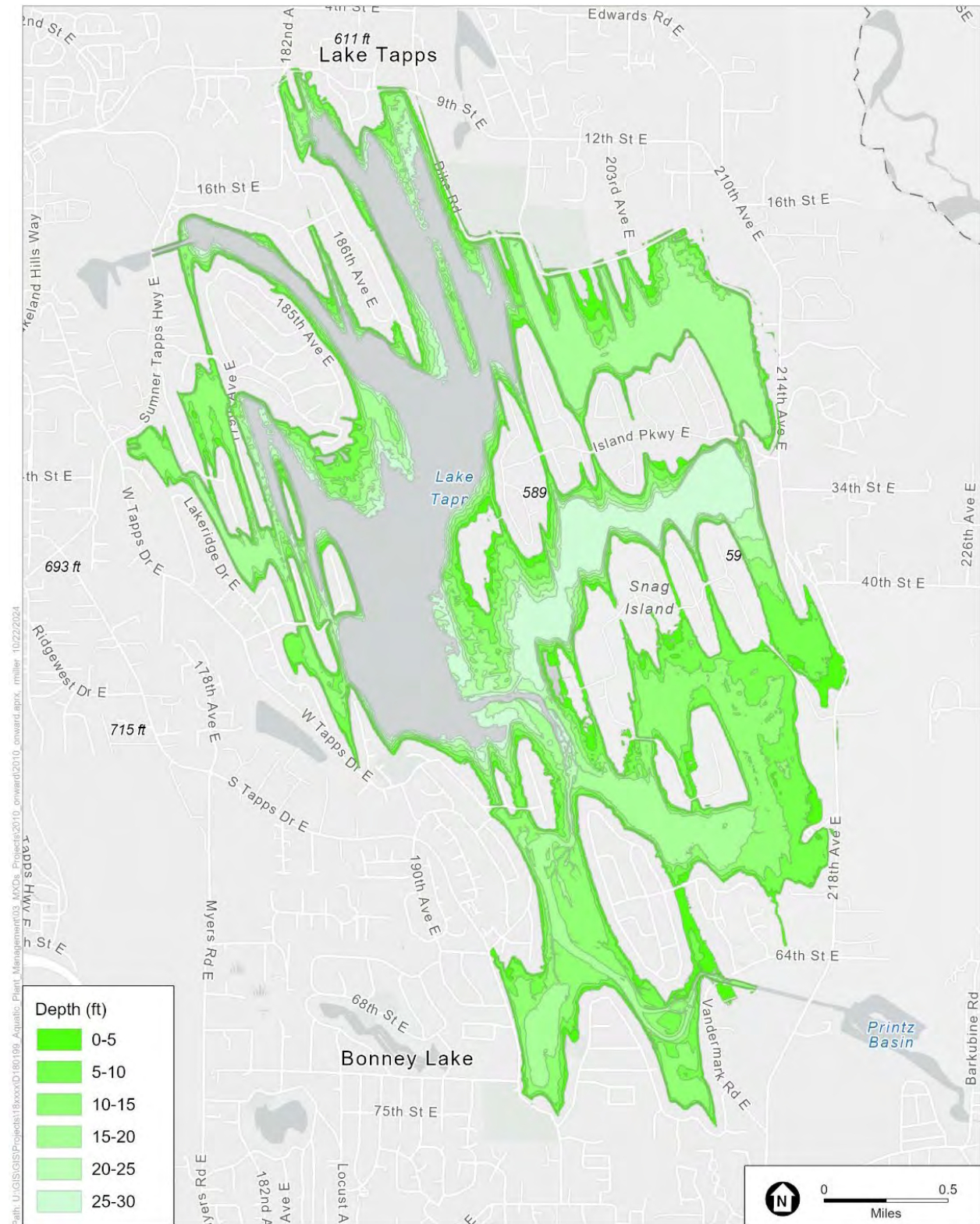
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Appendix A
**2023-2024 Reservoir-Wide Aquatic
Plant Survey**



Source: ESRI, 2024

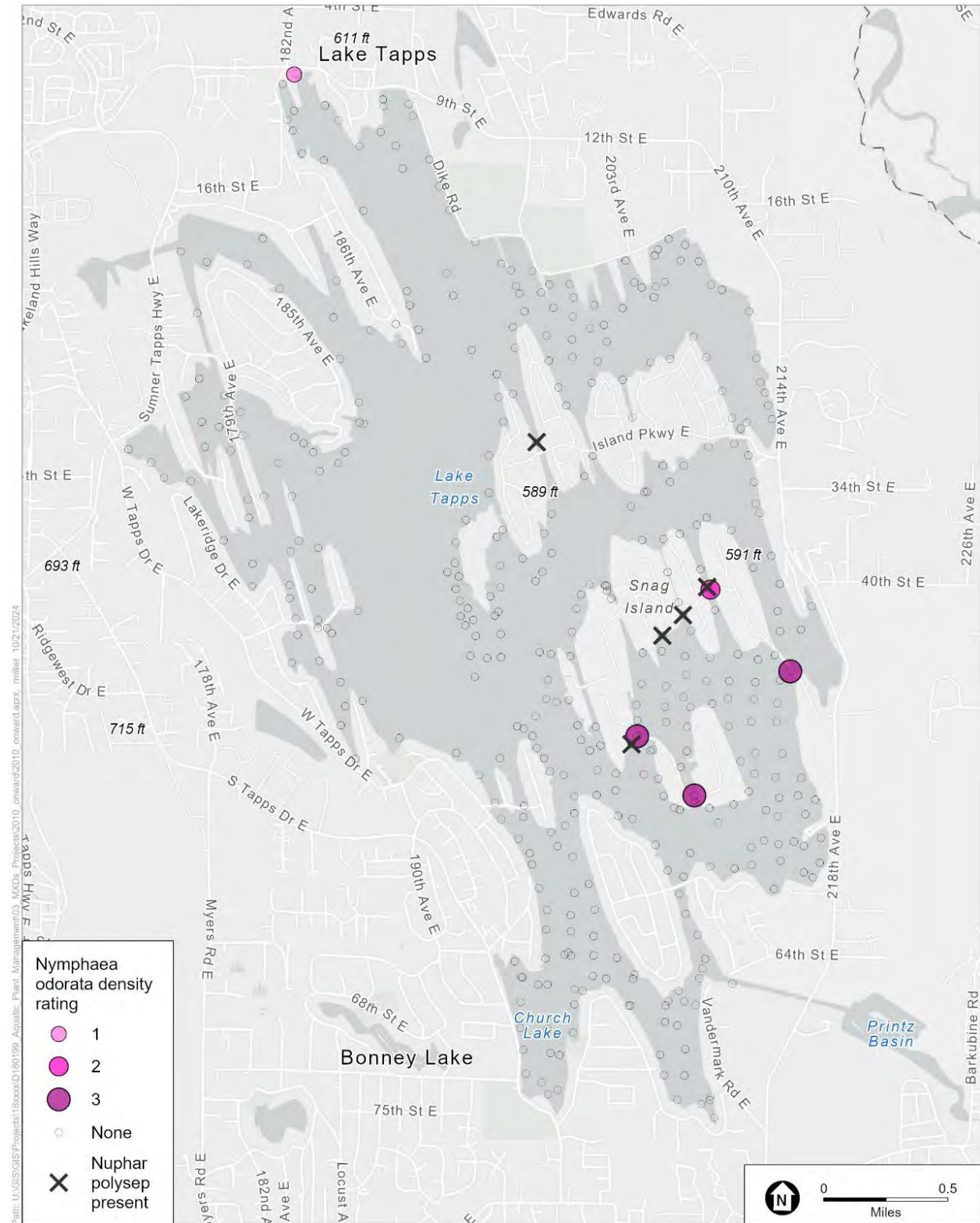
Figure A-1
Phase 1 and Phase 2 In-Water Herbicide Treatment Areas in 2024.



Source: ESRI, 2024

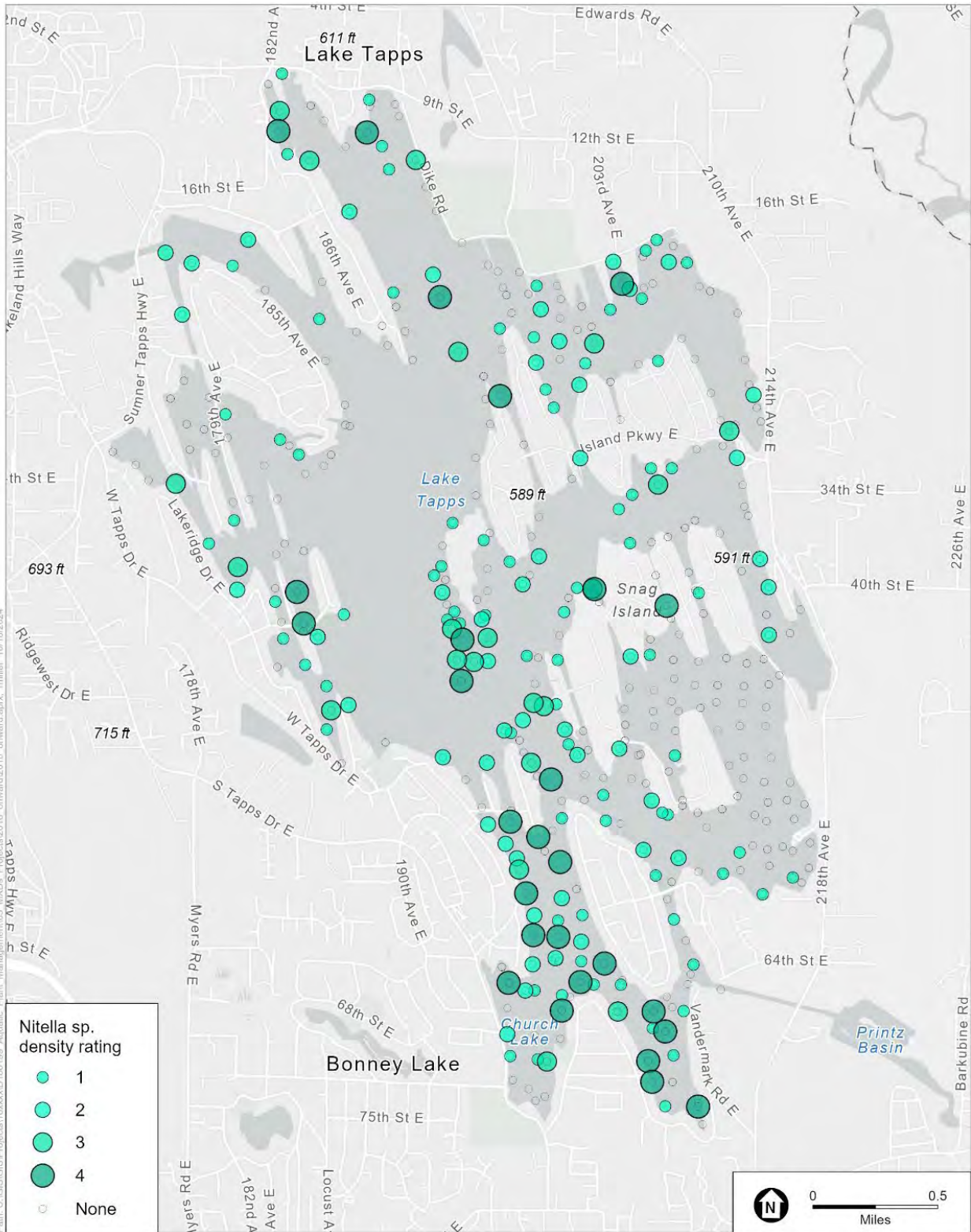
Figure A-2

Lake Tapps Reservoir 30 ft littoral zone and 0- 25 zone surveyed for aquatic plant species composition and aquatic plant height during September 2023 and August 2024.



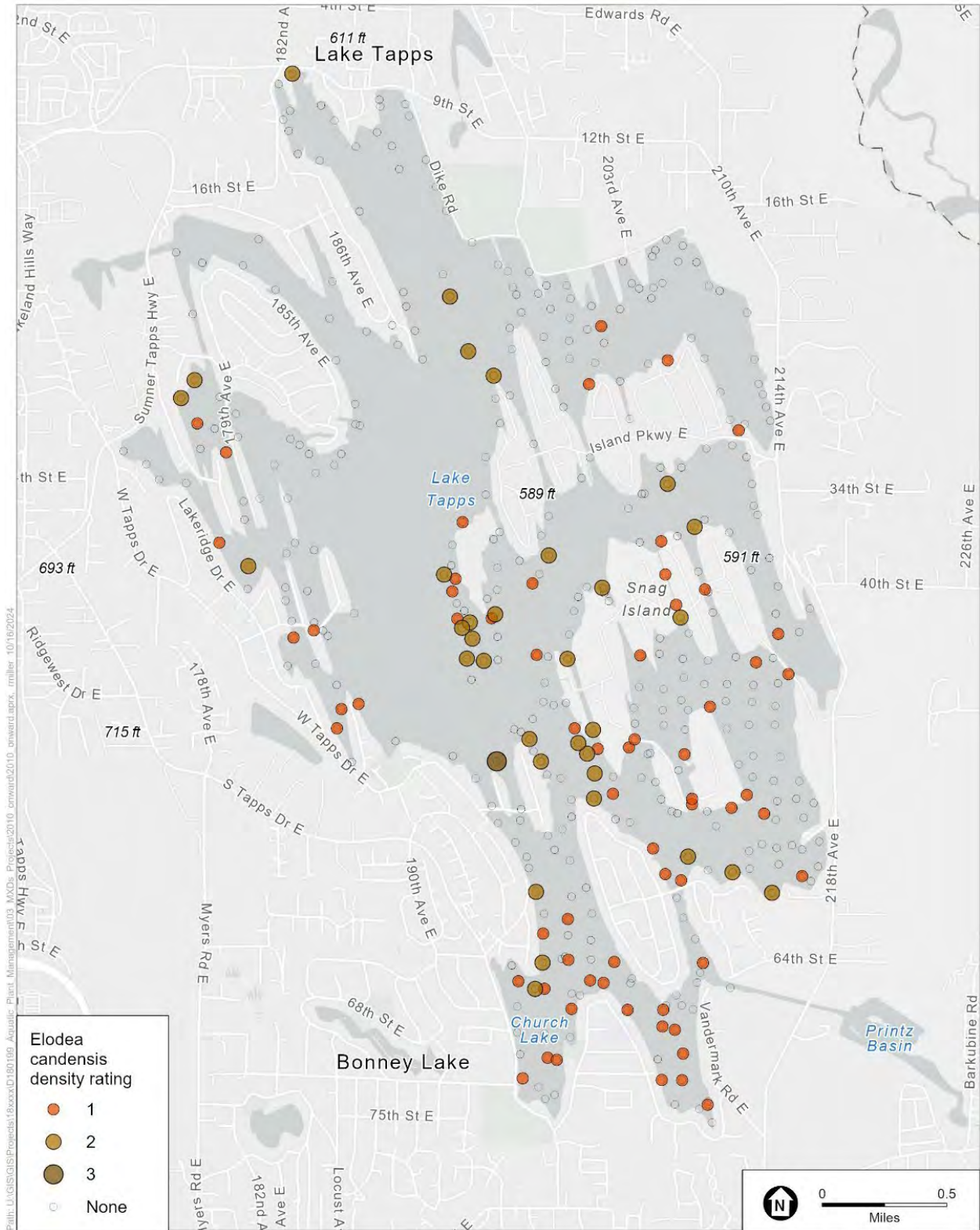
Source: ESRI, 2024

Figure A-4
Class C noxious weed fragrant waterlily (*Nymphaea odorata*) and native spatterdock (*Nuphar polysepala*) density measured during the 2023 – 2024 reservoir-wide survey.



Source: ESRI, 2024

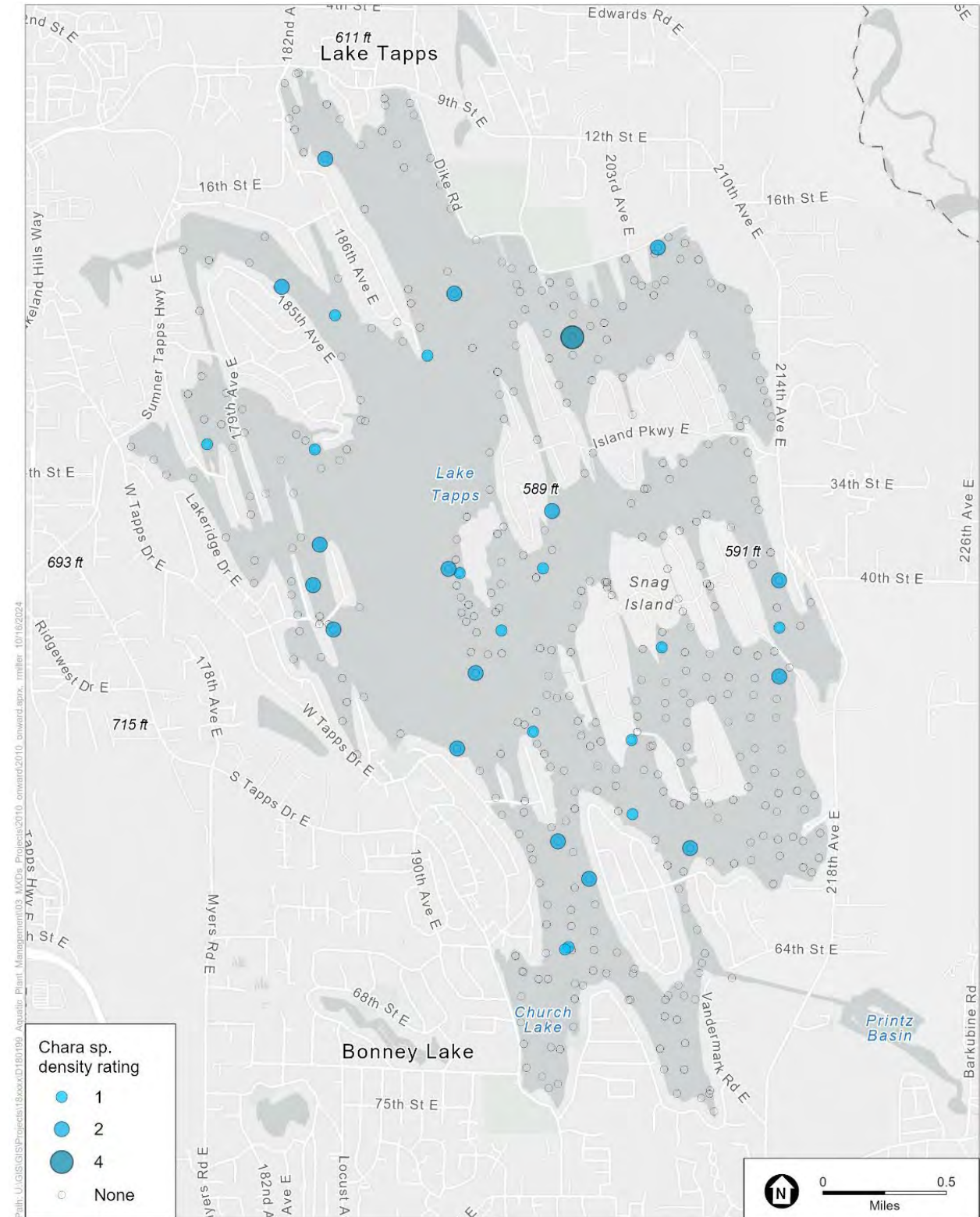
Figure A-5.
Nitella species density measured during the 2023 - 2024 reservoir-wide survey.



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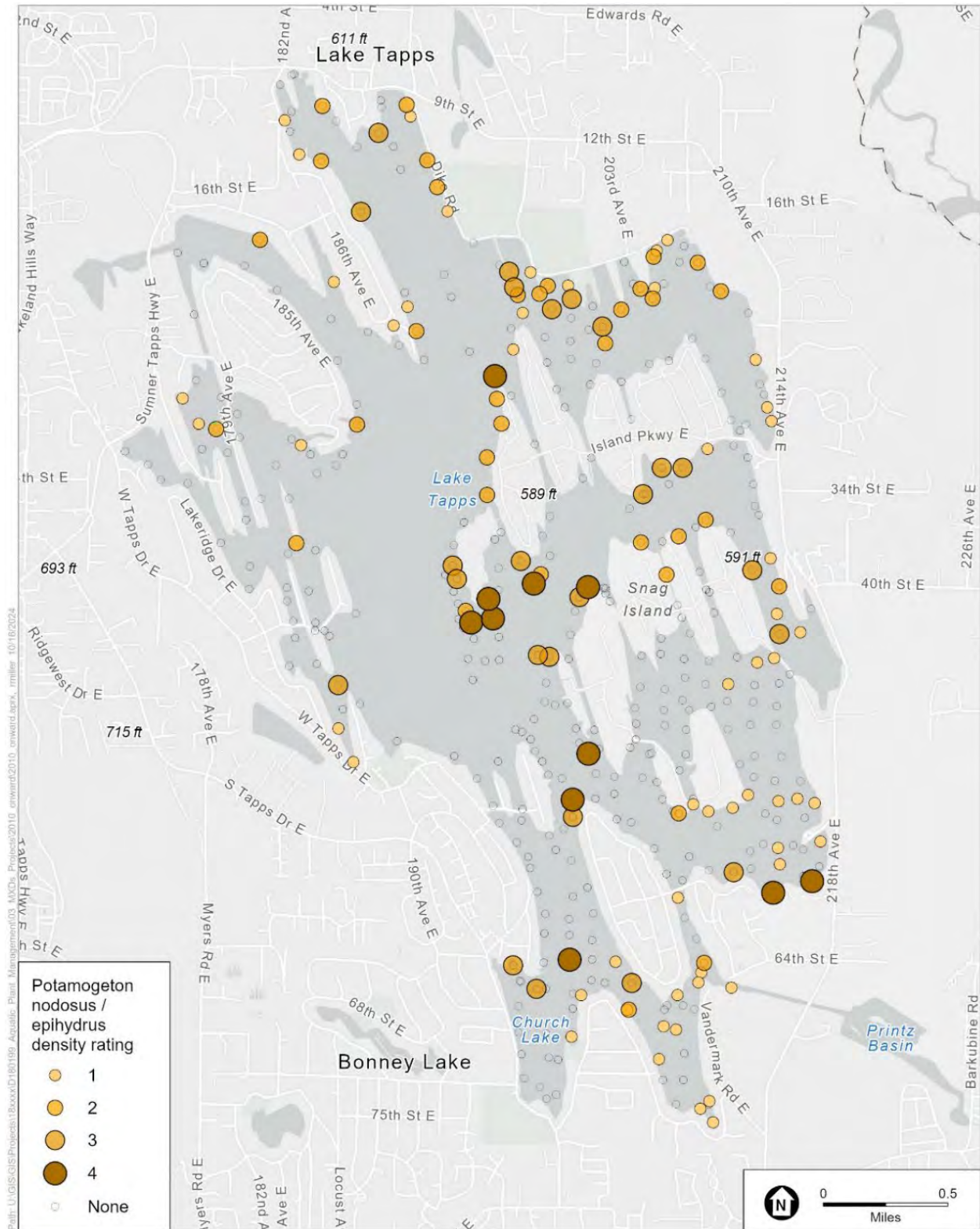
Source: ESRI, 2024

Figure A-7. Canadian waterweed (*Elodea canadensis*) density measured during the 2023 - 2024 reservoir-wide survey.



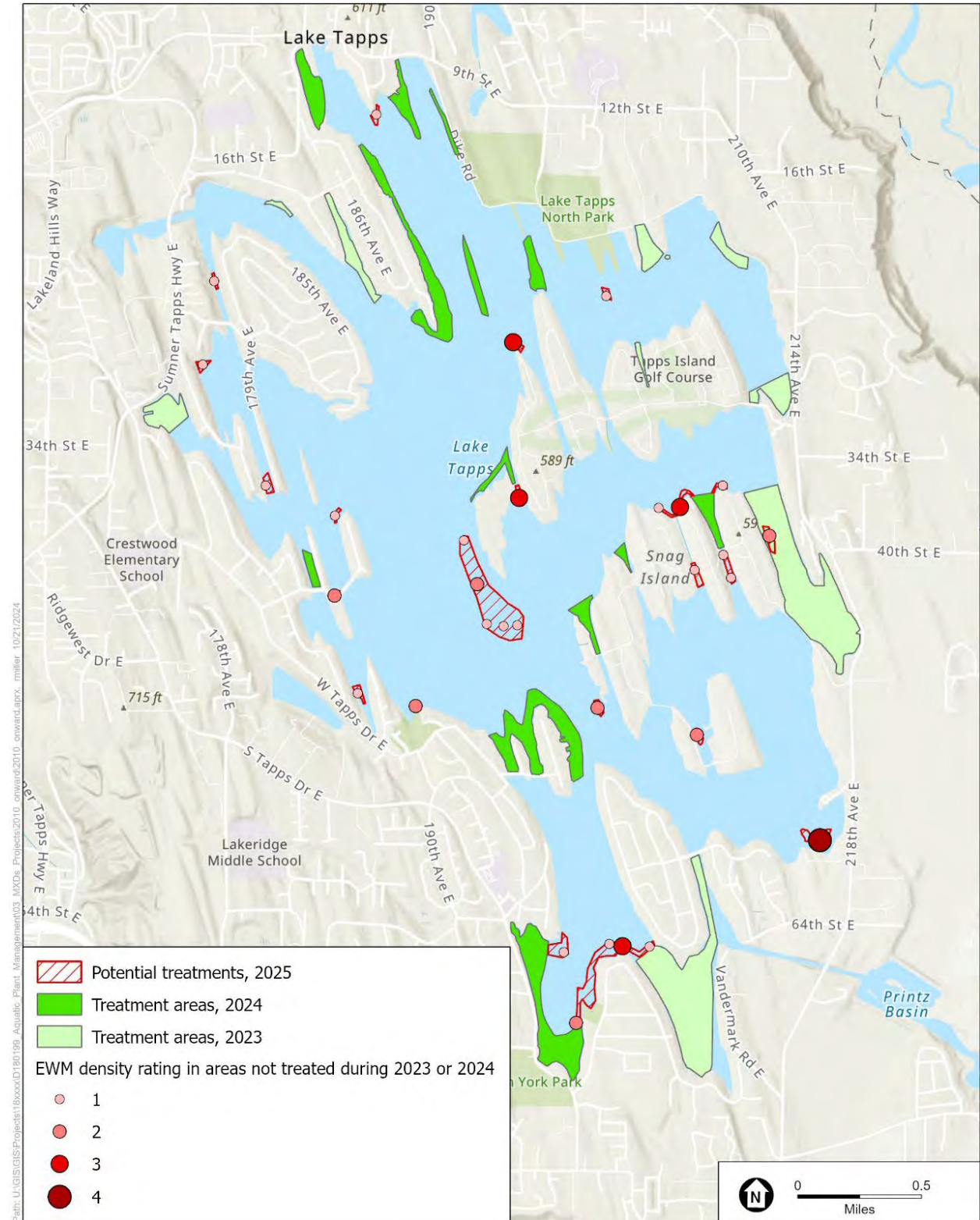
Source: ESRI, 2024

Figure A-8.
Chara species density measured during the 2023 - 2024 reservoir-wide survey.



Source: ESRI, 2024

Figure A-9
 Floating leaf pondweed (*Potamogeton nodosus/epiphydrus*) density measured during the 2023 - 2024 reservoir-wide survey.



Source: ESRI, 2024

Figure A-10.
Recent milfoil treatment areas (2023 and 2024) and potential treatment areas in 2025.

Appendix B
**2015 IAVMP Evaluation of Milfoil
Control Measures**

Table B-1 summarizes the numerous milfoil control measures that were evaluated in Cascade's 2015 IAVMP.

TABLE B-1
AQUATIC PLANT CONTROL MEASURES EVALUATED IN THE 2015 IAVMP

Category	Control Measure	Advantages	Disadvantages
Environmental manipulation	Water control level (winter drawdown) – exposes plant stems to freezing and drying conditions.	Can be relatively inexpensive.	The temperate climate and precipitation in the northwest is less effective than in regions with lower temperatures and less precipitation.
Biological control (use of natural enemies to reduce milfoil's biomass)	Grass carp – consumes aquatic weeds.	Proper use can achieve long-term reductions in nuisance growth of vegetation.	Grass carp has exhibited a conspicuous lack of preference for milfoil.
	Watermilfoil weevil – feeds on aquatic plants.	Used in an integrated approach with other control techniques, can stress target plants, making them more susceptible to other control methods.	Very costly and no documented declines in milfoil in Washington can be attributed to watermilfoil weevil.
Manual control - most appropriate for small, low plant density treatments.	Hand-pulling – removes rooted, submerged plants with divers.	Results in immediate removal of milfoil.	Highly labor intensive and costly; not appropriate for large, high plant density treatments.
	Hand cutting – cuts plants with tools/devices below the water surface but usually does not remove roots.	Results in immediate removal of milfoil.	Highly labor intensive and does not result in long-term growth reductions because entire plant is not removed.
	Raking – tears plants from the sediment, breaking some plants off and removing some roots.	Results in immediate removal of milfoil.	Highly labor intensive; cleared plants may regrow, resulting in needing to rake several times during the summer.
	Bottom barrier – applies barrier material over the lake bottom to prevent plants from growing.	Easily applied to small, confined areas and does not result in significant production of plant fragments.	Installation can be labor intensive; costly materials with limited durability; periodic maintenance required; barriers are rapidly covered by sediment loading.
Mechanical control	Mechanical harvesting – involves large machines that cut aquatic plants then collect fragments by a conveyor belt system for disposal.	Results in immediate removal of milfoil and creates open spaces of water.	Very costly and only removes upper stem material; regrowth typically occurs within 30 to 60 days.
	Diver-assisted suction (diver dredging) – uses hoses that are attached to small dredges to suck up plant material.	Effectively removes milfoil around docks and other areas that are difficult to reach by large equipment.	Highly labor intensive and costly; not suitable for large areas.
	Hydraulic (suction) dredging – removes littoral sediments and associated rooted aquatic plants using hydraulic dredging equipment.	Removes entire plants, thus minimizing regrowth; can be used in larger areas than diver-assisted suction.	Very costly and highly disruptive to the local environment; permitting, transport, and proper disposal can be difficult.
	Rotovation – uses highly specialized large aquatic rototillers to uproot entire plants from the sediment, then uses a rake or mechanical harvester to remove the plants.	Removes entire plants, thus minimizing regrowth.	Very costly, labor intensive, equipment difficult to maneuver particularly with obstacles in the way (tree stumps and docks).

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Appendix C
**Cascade's Drinking Water Quality
Policy Framework**

In 2023, Cascade adopted a formal Drinking Water Quality Policy Framework (Policy Framework), a process to evaluate potential water quality programs, projects, policies, and other actions. Since the Lake Tapps Reservoir will not be developed for municipal supply for several decades, the Policy Framework guides Cascade's decision-making on which water quality actions to implement, when to implement them, and how much to invest.

The Policy Framework is composed of two parts: policy drivers and criteria. The policy drivers answer the question, "What's the purpose of the water quality action?". Once the policy drivers are identified, each proposed action is evaluated against a set of criteria. If a proposed action is determined to be viable vis-à-vis the Policy Framework, the final step is to evaluate it against alternative solutions.

Recommendation 1: Continue Milfoil Chemical Treatment

The Policy Framework evaluated whether controlling milfoil continues to be a good investment for Cascade, particularly with respect to protecting water quality as a source of future drinking water. It also evaluated which control method is most cost effective.

Policy Drivers. Treating milfoil is driven by the following three policy drivers (#1, 3, and 6):

Policy Drivers	Assessment (Milfoil Treatment)	
<p>1. Future Treatment Plant Requirements for Drinking Water. Improvements, programs, policies, or other actions implemented by Cascade which are likely to reduce capital and/or operating costs for future drinking water treatment by improving raw water quality. Evaluation will consider known or anticipated federal or state regulatory treatment requirements for drinking water, emerging drinking water quality issues, or water quality expectations for introducing Lake Tapps water supplies to regional systems not owned by Cascade.</p>	<input checked="" type="checkbox"/>	<p>Protecting raw water quality could reduce future treatment capital and/or operating costs of removing contaminants, including taste and odor compounds, and reduce the risk of service disruptions (e.g. clogged filters due to algae).</p>
<p>2. Regulatory or Contract Water Quality or Lake Management Obligations. Improvements, programs, policies, or other actions necessary to meet:</p> <ul style="list-style-type: none"> a) Minimum requirements of regulatory agencies for owning, managing, and operating a lake and a surface water system to be used for drinking water supplies. b) Obligations under current and future water rights issued by the State. c) Requirements of agreements or inherited obligations as part of the acquisition of the Lake Tapps project. Includes agreements with Puget Sound Energy, the Tribes, Lake Tapps homeowners, property deeds, and agreements acquired from PSE at the time of ownership transfer. d) County and City regulatory obligations as a property owner. e) Agreements executed by Cascade since the purchase of the Lake Tapps system. 		
<p>3. Cascade's Other Operational (Non-Treatment) Needs. Improvements, programs, policies, or other actions that are needed for Cascade to cost-effectively and efficiently operate and</p>	<input checked="" type="checkbox"/>	<p>Preventing overgrowth of milfoil allows Cascade to easily navigate the reservoir to inspect dikes and</p>

Policy Drivers	Assessment (Milfoil Treatment)	
maintain the water supply assets of the White River-Lake Tapps Reservoir system.		perform other maintenance work. It also prevents inlets from getting clogged.
<p>4. Responsibilities of Others that Impact Water Quality. Working with the State, County, Cities, and property owners to implement policies, regulations, programs, or practices that benefit the Lake Tapps system water quality. This may include, but not be limited to the following:</p> <ul style="list-style-type: none"> a) Working with other agencies in the implementation of their regulatory obligations. b) Working with other agencies in the development of regulations and policies that benefit water quality. c) Working with other agencies to develop plans and programs that benefit the unique characteristics of the Lake Tapps watershed. d) Working with property owners in assuring compliance with regulatory requirements or agreements. 		
<p>5. Partnerships and Funding Opportunities. Water quality benefits derived as a result of partnerships with other agencies, groups, or private parties. Water quality issues may compose all or part of such arrangements and costs and benefits for water quality elements may need to be evaluated as part of all the elements of such arrangements. Funding opportunities include grants, loans, or other financial considerations that would prioritize an improvement or program that would not otherwise be considered at that time.</p>		
<p>6. Being a Good Community Steward. Programs or actions that would be considered as part of being a neighbor, good steward of resources, and presence in the community. Programs and actions would have associated tangible and measurable or intangible benefits to Cascade either short- or long-term.</p>	<input checked="" type="checkbox"/>	Preventing overgrowth of milfoil facilitates recreational use which is extremely important to the Lake Tapps Community.

Criteria: Below is an assessment of how treating milfoil meets the Policy Framework criteria.

Criteria	Assessment (Milfoil Treatment)	
Threshold Criteria – All Four Threshold Criteria Must First Be Met		
A. Is within Cascade’s Purposes (Mission) and can be implemented through its Powers or the powers of its partner agency/agencies.	☑	Cascade’s Mission is to provide safe, clean, and reliable water to our members. To fulfill our mission, we need to maintain the reliability and resiliency of the Lake Tapps Reservoir as a future source of municipal supply. Milfoil control helps protect water quality which is key to maintaining reliability and resiliency.
B. Meets one or more Board-adopted Strategic Plan Goals.	☑	Controlling milfoil meets several Strategic Goals: <ul style="list-style-type: none"> • <i>Asset Management Strategy 1</i> - Implement strategies and make investments to protect the Lake Tapps Reservoir as a future drinking water supply. • <i>Environmental Stewardship Strategy 9</i> - Sustainably manage Cascade’s facilities, equipment, assets, and capital projects in a way that minimizes impacts on the natural environment. • <i>Regional Leadership Strategy 12</i> - Maintain trust and a good working relationship with Cascade’s member communities and Lake Tapps partners.
C. Specific drinking water quality benefits to Cascade can be identified.	☑	As described under <i>Policy Drivers</i> , controlling milfoil helps protect raw water quality in the Lake Tapps Reservoir.
D. Cascade has staffing capacity to implement the project.	☑	Cascade has and plans to continue to contract out milfoil treatment. This approach requires a limited amount of Cascade staff time.
Additional Criteria – Proposals that meet the Threshold Criteria must next be evaluated against all applicable Additional Criteria but do not need to meet all Additional Criteria.		
E. Funding is available	☑	Cascade’s five-year contract with a treatment contractor was approved by Cascade’s Board and has the following budgeted amounts remaining: <ul style="list-style-type: none"> • 2025 - \$160,000 • 2026 - \$165,000 • 2027 - \$165,000
F. Project is cost-beneficial (benefits exceed costs over the project’s life).	Unable to determine NPV at this time	One of the main benefits of controlling milfoil is protecting raw water quality so future treatment plant capital and operating costs are reduced. The net present value (NPV) was not calculated because the benefits (future avoided costs) cannot be reasonably quantified at this time.
G. Ease of implementation.	☑	Cascade has contracted out chemically treating milfoil since 2010. The level of effort for this program has been low.

Criteria	Assessment (Milfoil Treatment)	
H. Reduces Cascade's risk (e.g. legal, regulatory, operational, financial, etc.) or still results in benefits if risk does not materialize.	✓	Preventing overgrowth of milfoil reduces operational problems and risk for Cascade, such as avoiding clogged inlets and impeding crews' ability to navigate the reservoir to inspect dikes and perform other work.
I. Maintains or enhances Cascade's relationships with key stakeholders (e.g. regulators, Tribes, community, other agencies).	✓	The Lake Tapps Reservoir community consistently indicates its appreciation of Cascade's milfoil treatment program.
J. Maintains or improves public trust (e.g. consumer confidence).	✓	As noted above, the Lake Tapps Reservoir community appreciates Cascade's effort to control milfoil, which in turn generates trust. In addition, by protecting the raw water quality, Cascade should increase consumer confidence when the reservoir becomes a source of drinking water supply.

Alternative Solutions. The alternative to controlling milfoil is do nothing – do not control milfoil. As described earlier in this Plan, overgrowth of milfoil can lead to a degradation of water quality in the Lake Tapps Reservoir. For this reason, Cascade did not further consider this alternative. By extension, it is also important to manage other invasive aquatic vegetation to maintain the water quality of the reservoir.


Alternative Treatment Solutions. As described in Appendix B, in its 2015 IAVMP, Cascade evaluated numerous other options to control milfoil and found chemical treatment is currently the most cost-effective option. In addition, as described in the *Past Management Practices* section, Cascade has employed a variety of control strategies validating the effectiveness of chemical treatment.

Preferred Strategy. Cascade's preferred strategy is to continue to control milfoil with chemical treatment, specifically using ProcellaCOR®. Cascade's practice is to recommend the amount invested in a given year, and that amount (or different amount) is approved by its Board of Directors. This practice is expected to continue in the future. While ProcellaCOR® has been the most cost-effective method to date, Cascade will continue to explore other chemical products and other control methods.





Recommendation 2: Conduct Reservoir-Wide Surveys Every Three Years

Policy Drivers. Conducting a reservoir survey as a means of monitoring the Lake Tapps Reservoir will likely result in Cascade taking action to: 1) eradicate regulated non-native species; and 2) prevent or control the overgrowth of nuisance non-native and native aquatic plants. As such, a reservoir survey is driven by the following four policy drivers (#1, 2, 3, and 6).

Policy Drivers	Assessment (Reservoir Survey)	
<p>1. Future Treatment Plant Requirements for Drinking Water. Improvements, programs, policies, or other actions implemented by Cascade which are likely to reduce capital and/or operating costs for future drinking water treatment by improving raw water quality. Evaluation will consider known or anticipated federal or state regulatory treatment requirements for drinking water, emerging drinking water quality issues, or water quality expectations for introducing Lake Tapps water supplies to regional systems not owned by Cascade.</p>	<input checked="" type="checkbox"/>	<p>Identifying and preventing overgrowth of other aquatic plants, both non-native and native, protects raw water quality and could reduce future treatment capital and/or operating costs (as described under Recommendation 1).</p>
<p>2. Regulatory or Contract Water Quality or Lake Management Obligations. Improvements, programs, policies, or other actions necessary to meet:</p> <ul style="list-style-type: none"> a) Minimum requirements of regulatory agencies for owning, managing, and operating a lake and a surface water system to be used for drinking water supplies. b) Obligations under current and future water rights issued by the State. c) Requirements of agreements or inherited obligations as part of the acquisition of the Lake Tapps project. Includes agreements with Puget Sound Energy, the Tribes, Lake Tapps homeowners, property deeds, and agreements acquired from PSE at the time of ownership transfer. d) County and City regulatory obligations as a property owner. e) Agreements executed by Cascade since the purchase of the Lake Tapps system. 	<input checked="" type="checkbox"/>	<p>Identifying and eradicating regulated non-native plants and species enables Cascade to meet Piece County noxious weeds regulations and Washington State invasive species regulations.</p>
<p>3. Cascade's Other Operational (Non-Treatment) Needs. Improvements, programs, policies, or other actions that are needed for Cascade to cost-effectively and efficiently operate and maintain the water supply assets of the White River-Lake Tapps Reservoir system.</p>	<input checked="" type="checkbox"/>	<p>Identifying and preventing overgrowth of aquatic plants and species allows Cascade to easily navigate the reservoir to inspect dikes and perform other maintenance work. It also prevents inlets from getting clogged.</p>
<p>4. Responsibilities of Others that Impact Water Quality. Working with the State, County, Cities, and property owners to implement policies, regulations, programs, or practices that benefit the Lake Tapps system water quality. This may include, but not be limited to the following:</p> <ul style="list-style-type: none"> a) Working with other agencies in the implementation of their regulatory obligations. b) Working with other agencies in the development of regulations and policies that benefit water quality. c) Working with other agencies to develop plans and programs that benefit the unique characteristics of the Lake Tapps watershed. d) Working with property owners in assuring compliance with regulatory requirements or agreements. 		

Policy Drivers	Assessment (Reservoir Survey)	
<p>5. Partnerships and Funding Opportunities. Water quality benefits derived as a result of partnerships with other agencies, groups, or private parties. Water quality issues may compose all or part of such arrangements and costs and benefits for water quality elements may need to be evaluated as part of all the elements of such arrangements. Funding opportunities include grants, loans, or other financial considerations that would prioritize an improvement or program that would not otherwise be considered at that time.</p>		
<p>6. Being a Good Community Steward. Programs or actions that would be considered as part of being a neighbor, good steward of resources, and presence in the community. Programs and actions would have associated tangible and measurable or intangible benefits to Cascade either short or long term.</p>		Identifying and preventing overgrowth of aquatic plants and species facilitates recreational use and is extremely important to the Lake Tapps Community.

Criteria. Below is an assessment of how conducting lake surveys meets the Policy Framework criteria. As above, the assumption is a lake survey will lead to Cascade taking proactive action to address regulated non-native species and other nuisance plants.

Criteria	Assessment (Reservoir Survey)	
Threshold Criteria – All Four Threshold Criteria Must First Be Met		
A. Is within Cascade’s Purposes (Mission) and can be implemented through its Powers or the powers of its partner agency/agencies.		Cascade’s Mission is to provide safe, clean, and reliable water to our members. To fulfill our mission, we need to maintain the reliability and resiliency of the Lake Tapps Reservoir as a future source of municipal supply. Proactively identifying and controlling the overgrowth of aquatic plants and species helps protect water quality which is key to maintaining reliability and resiliency.
B. Meets one or more Board-adopted Strategic Plan Goals.		Proactively identifying and controlling the overgrowth of aquatic plants and species meets several Strategic Goals: <ul style="list-style-type: none"> • <i>Asset Management Strategy 1</i> - Implement strategies and make investments to protect the Lake Tapps Reservoir as a future drinking water supply. • <i>Environmental Stewardship Strategy 9</i> - Sustainably manage Cascade’s facilities, equipment, assets, and capital projects in a way that minimizes impacts on the natural environment. • <i>Regional Leadership Strategy 12</i> - Maintain trust and a good working relationship with Cascade’s member communities and Lake Tapps partners.
C. Specific drinking water quality benefits to Cascade can be identified.		As described under <i>Policy Drivers</i> , identifying and controlling the overgrowth of aquatic plants and species helps protect raw water quality in the Lake Tapps Reservoir.
D. Cascade has staffing capacity to implement the project.		Cascade contracted out a reservoir survey in the past year. This approach requires a limited amount of Cascade staff time.

Criteria	Assessment (Reservoir Survey)	
Additional Criteria – Proposals that meet the Threshold Criteria must next be evaluated against all applicable Additional Criteria but do not need to meet all Additional Criteria.		
E. Funding is available	<input checked="" type="checkbox"/>	The cost of the 2023-2024 reservoir survey was less than \$50K This is a relatively small amount of funding and can be included in the 2027 budget (or later budget) when the reservoir survey is next needed.
F. Project is cost-beneficial (benefits exceed costs over the project's life).	Unable to determine NPV at this time	One of the main benefits of controlling overgrowth of aquatic plants and species is protecting raw water quality so future treatment plant capital and operating costs are reduced. The net present value (NPV) was not calculated because the benefits (future avoided costs) cannot be reasonably quantified at this time.
G. Ease of implementation.	<input checked="" type="checkbox"/>	As noted above, Cascade recently contracted out a reservoir-wide survey, and the level of effort for the work was low.
H. Reduces Cascade's risk (e.g. legal, regulatory, operational, financial, etc.) or still results in benefits if risk does not materialize.	<input checked="" type="checkbox"/>	Proactively identifying and controlling the overgrowth of aquatic plants and species reduces operational problems and risk for Cascade, such as avoiding clogged inlets and impeding crews' ability to navigate the reservoir to inspect dikes and perform other work.
I. Maintains or enhances Cascade's relationships with key stakeholders (e.g. regulators, Tribes, community, other agencies).	<input checked="" type="checkbox"/>	Proactively identifying and eradicating regulated aquatic plants and species will maintain Cascade's good relationship with its regulators.
J. Maintains or improves public trust (e.g. consumer confidence).	<input checked="" type="checkbox"/>	The Lake Tapps Reservoir community appreciates Cascade's effort to control milfoil, which in turn generates trust. Identifying and controlling overgrowth of other nuisance aquatic plants should further enhance that trust. In addition, by protecting the raw water quality, Cascade should increase consumer confidence when the reservoir becomes a source of drinking water supply.

Alternative Solutions. Two alternatives to conducting a reservoir-wide survey every three years were evaluated and summarized below.

Option	Pros	Cons
Do not conduct lake surveys	Eliminates costs of the survey (\$50K every three years in 2024 dollars)	Cascade will need to rely on homeowners and its own limited boat surveys to identify the presence of regulated species and/or overgrowth of nuisance non-native or native plants.
Conduct lake surveys less frequently, such as every five years	Reduces costs of the survey (\$50K every six years in 2024 dollars)	Identifying the presence of regulated species and/or overgrowth of nuisance non-native or native plants could be delayed, likely resulting in more treatment costs.

Preferred Strategy. Given the relatively small amount of funding to conduct the reservoir surveys, the recommendation is to perform the surveys, preferably every three years. However, Cascade will reevaluate the effectiveness and frequency of the surveys no later than in its next IAVMP, due in 2035.

Appendix D

ProcellaCOR® Safety Data Sheet

Conforms to HazCom 2012/United States

SAFETY DATA SHEET



ProcellaCOR EC

Section 1. Identification

GHS product Identifier : ProcellaCOR EC

Recommended use of the chemical and restrictions on use

Identified uses : End use herbicide product

EPA Registration No. : 67690-80

Supplier's details : SePRO Corporation
 11550 North Meridian Street
 Suite 600
 Carmel, IN 46032 U.S.A.
 Tel: 317-580-8282
 Toll free: 1-800-419-7779
 Fax: 317-580-8290
 Monday - Friday, 8am to 5pm [E.S.T.](mailto:info@sepro.com)
www.sepro.com

Emergency telephone number (with hours of operation) : INFOTRAC - 24-hour service 1-800-535-5053

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

Hazard classification: This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards: No data available.

Section 3. Composition/information on ingredients

Chemical nature: This product is a mixture.

Component	CASRN	Concentration
Florpyrauxifen-benzyl	1390661-72-9	2.7%
Ethylhexanol	104-76-7	2.1%
Methanol	67-56-1	0.9%
Balance	Not available	94.3%

Section 4. First aid measures

Description of first aid measures

General advice:	If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation:	Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
Skin contact:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye contact:	Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Ingestion:	No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician:	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
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Section 5. Fire-fighting measures

Suitable extinguishing media:	Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.
Unsuitable extinguishing media:	No data available
Special hazards arising from the substance or mixture	
Hazardous combustion products:	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen fluoride. Hydrogen chloride. Carbon monoxide. Carbon dioxide.
Unusual Fire and Explosion Hazards:	Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Advice for firefighters Fire Fighting Procedures:	Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred

because uncontrolled water can spread possible contamination. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

Special protective equipment for firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions:

Spills or discharges to natural waterways are likely to kill aquatic organisms. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up:

Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact SePRO Corporation for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Section 7. Handling and storage

Precautions for safe handling: Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

Section 8. Exposure controls/personal protection

Control parameters: Exposure limits are listed below, if they exist.

Component	Regulation	Type of Listing	Value/Notation
Ethylexanol	Dow IHG	TWA	2 ppm
	Dow IHG	TWA	SKIN
Methanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	250 ppm
	OSHA Z-1	TWA	260 mg/m ³ 200 ppm
	ACGIH	TWA	SKIN, BEI

ACGIH	STEL	SKIN, BEI
CAL PEL	C	1,000 ppm
CAL PEL	PEL	260 mg/m ³ 200 ppm
CAL PEL	STEL	325 mg/m ³ 250 ppm

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Section 9. Physical and chemical properties

Appearance

Physical State	Liquid
Color	Amber
Odor	Solvent
Odor Threshold	No data available
pH	4.24 (1% aqueous suspension)
Melting point/range	Not applicable to liquids
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	> 100 °C (> 212 °F)
Evaporation Rate (Butyl Acetate =1)	No data available
Flammability (solid, gas)	Not applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	0.0000002 mmHg at 20°C (68°F)
Relative Vapor Density (air = 1)	No data available

Relative Density (water = 1)	0.93
Water solubility	0.015 mg/l at 20°C (68°F)
Partition coefficient:	
n-octanol/water	No data available
Auto-ignition temperature	260°C (500 °F)
Decomposition temperature	No data available
Dynamic Viscosity	15.4 mPa.s at 20°C (68°F) 8.90 mPa.s at 40°C (104°F)
Kinematic Viscosity	14.2 mm ² /s at 20°C (68°F) 7.91 mm ² /s at 40°C (104°F)
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing
Liquid Density	0.9257 g/cm ³ at 20 °C (68 °F) <i>Digital density meter</i>
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

Section 10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Thermally stable at typical use temperatures.
Possibility of hazardous reactions:	Polymerization will not occur.
Conditions to avoid:	Exposure to elevated temperatures can cause product to decompose.
Incompatible materials:	None known.
Hazardous decomposition products:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Hydrogen fluoride. Nitrogen oxides.

Section 11. Toxicological information

Toxicological information appears in this section when such data is available.

Acute toxicity	
Acute oral toxicity	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. As product: LD50, Rat, female, > 5,000 mg/kg
Acute dermal toxicity	Prolonged skin contact is unlikely to result in absorption of harmful amounts. As product: LD50, Rat, male and female, > 5,000 mg/kg
Acute inhalation toxicity	No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed. As product: LC50, Rat, male and female, 4 Hour, dust/mist, > 5.40 mg/l No deaths occurred at this concentration.
Skin corrosion/irritation	Brief contact may cause slight skin irritation with local redness.
Serious eye damage/eye irritation	May cause slight eye irritation. Corneal injury is unlikely.
Sensitization	Did not cause allergic skin reactions when tested in guinea pigs. For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)	Evaluation of available data suggests that this material is not an STOT-SE toxicant.
Specific Target Organ Systemic Toxicity (Repeated Exposure)	For the active ingredient(s): Based on available data, repeated exposures are not anticipated to cause significant adverse effects. For the major component(s): Based on available data, repeated exposures are not anticipated to cause significant adverse effects. For the minor component(s): In animals, effects have been reported on the following organs: Blood, kidney, liver, and spleen.
Carcinogenicity	For the active ingredient(s): Did not cause cancer in laboratory animals. For the major component(s): No relevant data found.
Teratogenicity	For the active ingredient(s): Did not cause birth defects or any other fetal effects in laboratory animals. For the major component(s): No relevant data found. For the minor component(s): Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. These concentrations exceed relevant human dose levels.
Reproductive toxicity	For the active ingredient(s): In animal studies, did not interfere with reproduction. For the major component(s): In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.
Mutagenicity	In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.
Aspiration Hazard	Based on physical properties, not likely to be an aspiration hazard. No aspiration toxicity classification

Section 12. Ecological information

Ecotoxicological information appears in this section when such data is available.

Toxicity	
Acute toxicity to fish	Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L). EC50, <i>Cyprinus carpio</i> (Carp), static test, 96 Hour, > 120 mg/l, OECD Test Guideline 203 or Equivalent
Acute toxicity to aquatic invertebrates	Material is slightly toxic to aquatic invertebrates on an acute basis (LC50/EC50 between 10 and 100 mg/L). EC50, <i>Daphnia magna</i> (Water flea), 48 Hour, 49 mg/l, OECD Test Guideline 202
Acute toxicity to algae/aquatic plants	Material is very highly toxic to some aquatic vascular plant species. ErC50, <i>Pseudokirchneriella subcapitata</i> (green algae), 72 Hour, > 5.4 mg/l, OECD Test Guideline 201 ErC50, <i>Myriophyllum spicatum</i> , 14 d, 0.000919 mg/l NOEC, <i>Myriophyllum spicatum</i> , 14 d, 0.0000954 mg/l

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

oral LD50, *Colinus virginianus* (Bobwhite quail), > 2500mg/kg bodyweight.

oral LD50, *Apis mellifera* (bees), 48 Hour, > 212.2µg/bee

contact LD50, *Apis mellifera* (bees), 48 Hour, >200µg/bee

Toxicity to soil-dwelling organisms

LC50, *Eisenia fetida* (earthworms), 14 d, mortality, >2,500 mg/kg

Persistence and degradability**florpyrauxifen-benzyl**

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail

Biodegradation: 14.6 %

Exposure time: 29 d

Method: OECD Test Guideline 301B

Stability in Water (1/2-life)

Hydrolysis, DT50, 913 d, pH 4, Half-life Temperature 25 °C
Hydrolysis, DT50, 111 d, pH 7, Half-life Temperature 25 °C
Hydrolysis, DT50, 1.3 d, pH 9, Half-life Temperature 25 °C

Ethylhexanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
10-day Window: Not applicable

Biodegradation: > 95 %

Exposure time: 5 d

Method: OECD Test Guideline 302B or Equivalent
10-day Window: Pass

Biodegradation: 68 %

Exposure time: 17 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 2.95 mg/mg

Chemical Oxygen Demand: 2.70 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	26-70 %
10 d	75-81 %
20 d	86-87 %

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals

Atmospheric half-life: 9.7 Hour

Method: Estimated.

Methanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 99%
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 1.50 mg/mg

Chemical Oxygen Demand: 1.49 mg/mg Dichromate

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	72 %
20 d	79 %

Photodegradation Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 8-18 d
Method: Estimated.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential**Florpyrauxifen-benzyl**

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient:
n-octanol/water(log Pow): 5.5 at 20 °C
Bioconcentration factor (BCF): 356 *Lepomis macrochirus* (Bluegill sunfish) 30 d

Ethylhexanol

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient:
n-octanol/water(log Pow): 3.1 Measured

Methanol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient:
n-octanol/water(log Pow): -0.77 Measured
Bioconcentration factor (BCF): <10 Fish Measured

Balance

Bioaccumulation: No relevant data found.

Mobility in soil**Florpyrauxifen-benzyl**

Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient (Koc): 34200

Ethylhexanol

Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient (Koc): 800 Estimated.

Methanol

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 0.44 Estimated.

Balance

No relevant data found.

Section 13. Disposal considerations

Disposal methods:

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Section 14. Transport information

DOT Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Florpyrauxifen-benzyl)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Florpyrauxifen-benzyl
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Florpyrauxifen-benzyl)
UN number	UN 3082
Class	9
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15. Regulatory information

OSHA Hazard Communication Standard This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Worker and Community Right-To-Know Act: The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Ethylhexanol	104-76-7

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

United States TSCA Inventory (TSCA) This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Section 16. Other information

Hazard Rating System
National Fire Protection Association (U.S.A.)

Health: 1 Flammability: 1 Instability: 0

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants
PEL	Permissible exposure limit
SKIN	Absorbed via skin
SKIN, BEI	Absorbed via Skin, Biological Exposure Indice
STEL	Short term exposure limit
TWA	Time weighted average

History

Date of Issue mm/dd/yyyy : 10/09/2017

Version : 1.0

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

AGENDA MEMORANDUM

SUBJECT

Motion to adopt Resolution No. 2025-01 Authorizing the Chief Executive Officer to Execute Agreements with the City of Tacoma for Wholesale Water Supply.

BACKGROUND

Cascade's current contract with Seattle Public Utilities (Seattle) for drinking water is a declining block agreement for 33.3 million gallons per day (MGD) for average use and 63 MGD for peak use through 2039. Starting in 2039, the block of water begins to decline annually until reaching 5.3 MGD by 2064. This "Block Contract" ends December 31, 2063, with the exception that Cascade can continue to purchase 5.3 MGD for its Members.

Cascade also currently has a contract with Tacoma Public Utilities (Tacoma) to receive up to 8.0 MGD of water supply ("2012 Water Supply Agreement"). Cascade's annual payments to Tacoma are in excess of \$6 million; this amount drops to about \$1 million beginning in 2030 and through 2042. To date, Cascade has not requested any water under this contract.

In 2009, Cascade purchased the White River-Lake Tapps Reservoir system as a source of future drinking water supply. Cascade's *Base Case* scenario assumes the Lake Tapps Reservoir will need to be in service by 2042 to replace declining Seattle supply. The estimated cost to develop the Reservoir is about \$2 billion. Cascade needs 20 years to plan, conduct environmental review, secure permits and property rights, and design and construct the transmission pipes, treatment plant, and other facilities and assets.

Based on Seattle's, Tacoma's, and Everett's current water system plans, water supply in the region should be ample through at least 2060. Cascade's business model calls for the use of available regional water to "bridge" demand until the Lake Tapps Reservoir is developed. Given this, coupled with the 20 years needed to develop the Lake Tapps Reservoir, in July 2021, Cascade's Board of Directors directed staff to pursue two potential supply contracts with Seattle and Tacoma, with the following objectives:

1. A 20-year (or longer) extension of contract supply sufficient to defer development of the Lake Tapps Reservoir,
2. Reasonable and predictable costs,
3. Net economic and/or rate benefit versus developing Lake Tapps Reservoir,
4. Flexibility in contract term and/or quantity to allow for future variation in supply and demand,
5. Possible further extensions if mutually beneficial given supply/demand status, and
6. Possible partnership opportunities for assets of regional significance.

After more than two years of discussions, Seattle and Tacoma both offered terms that would allow Cascade to cost-effectively defer developing the Lake Tapps Reservoir. Cascade

thoroughly analyzed both proposals, presented the information at Board and committee meetings on numerous occasions, responded to questions from the Board and member staff over the course of the discussions, and received Board feedback. In addition, both Seattle and Tacoma presented their proposals directly to the Board in January 2024.

Tacoma's proposal met the objectives listed above and provided greater benefits than Seattle's, as described below.

- Longer Supply Certainty. Tacoma offered Cascade a 20+-year guaranteed supply of water. Seattle offered Cascade a 10-year guaranteed block extension through 2049 and two five-year conditional block extensions through 2054 and 2059, respectively.
- Cost Effectiveness. Tacoma's proposal provides greater financial benefit than a 10-year, 15-year, or 20-year extension with Seattle in terms of total cost (net present value), unit cost, rate increases, and debt.
- Reduced Construction Risk. The financial analyses included the cost to develop the Lake Tapps Reservoir for both the Tacoma and Seattle proposals. Contracting with Tacoma allows Cascade to phase development over time by building two-thirds of the transmission pipelines in the 2030s and building the remaining pipelines and the treatment plant two decades later. A 10, 15, or 20-year extension with Seattle requires building the transmission pipelines and treatment plant concurrently and within a compressed period of time, greatly increasing construction risk. A phased construction approach with Tacoma also enables Cascade to increase rates more moderately.
- Regionalism and Resiliency. Projections show the tri-county area will continue to have an ample supply of water decades into the future. The challenge is these systems are currently not connected. Cascade and Tacoma have a strong interest in partnering with each other and with other utilities to plan for the region's future today -- before a regional solution is needed. A contract with Tacoma would be a first step toward creating a regional water system in which water can move to where it is needed, similar to the electricity industry. Such a system would increase resiliency for Puget Sound water utilities. If and when the Lake Tapps Reservoir is developed, it could be an important part of the regional system. Maximizing the region's water supply and water rights can also defer the need for individual utilities to find new, expensive sources of supply to meet their customers' demand.
- Flexibility. Tacoma's proposal, with its longer term guaranteed supply, ability to phase construction, and opportunity to partner on a regionalized water system, also provides Cascade with flexibility. The future is uncertain, and Cascade needs to be able to adapt to changing circumstances, such as significant changes in regional supply and demand.

On May 22, 2024, via Resolution 2024-06, Cascade's Board directed staff to:

- Negotiate the terms of a water supply contract consistent with the six objectives outlined by the Board in July 2021,

- Commence drafting the contract documents with Tacoma consistent with the draft term sheet that was attached to Resolution 2024-06,
- Continue open communications with Seattle, and
- Provide regular status updates to the Board.

Since May 2024, Cascade and Tacoma staff and their respective attorneys have negotiated the terms of the new water supply contracts/agreements. The final draft contracts are attached to the attached Resolution 2025-01.

As the Cascade and Tacoma teams negotiated the terms of the new contract, they mutually agreed to several provisions that either modify or add to the provisions in the draft May 2024 term sheet. These fall into two groupings, as described below.

The first group of modifications are changes to specific terms that were outlined in the May 2024 draft term sheet. The most significant changes include the following:

- Permanent Supply. The draft term sheet contemplated Cascade purchasing temporary supply of 24 MGD annual average and 35 MGD peak from 2041 through 2065, with an option to purchase permanent supply of up to 12 MGD average and 17.5 MGD peak. During negotiations, Tacoma offered to provide permanent supply as a contract term rather than providing this as an option for future negotiation. Securing permanent supply provides significant benefits to Cascade’s Members.
- Two Separate Agreements. For ease of contract development and execution, Cascade and Tacoma decided to develop two separate contracts instead of one: 1) The Agreement for the Sale of Wholesale Water (“**Wholesale Agreement**”) for permanent supply; and 2) the Agreement for the Sale of Market-Priced Wholesale Water (“**Market-Priced Agreement**”) for temporary supply. Many of the terms are identical in both contracts, such as conservation and planning. However, some of the terms differ, such as charges and fees. Earlier drafts of the contracts stipulated 12 MGD average and 17.5 MGD peak in each contract, for a combined supply amount of 24 MDG average and 35 MGD peak, mirroring the supply terms in the draft term sheet.
- Timeframe for the Market-Priced Agreement. As noted above, the draft term sheet contemplated Cascade purchasing temporary supply from 2041 through 2065. After further analysis, Cascade and Tacoma mutually agreed to change the Market-Priced Agreement end date from 2065 to 2062. Cascade’s demand begins to exceed Tacoma supply in the early 2060s, and Cascade will need to have the Lake Tapps Reservoir in service by then. As such, purchasing supply beyond 2062 is not needed. Upon mutual agreement, Cascade and Tacoma can extend the timeframe.
- Peak Supply for the Wholesale Agreement. Alongside the decision to shorten the timeframe for the Market-Priced Agreement, Cascade and Tacoma mutually agreed to lower the peak supply (from the two contracts combined) from 35 MGD to 32.5 MGD. The Market-Priced Agreement supply remains at 17.5 MGD but the Wholesale Agreement changed to 15 MGD (2.5 MGD lower). Cascade does not need 2.5 MGD difference in the Wholesale Agreement. Furthermore, Cascade receives a financial

benefit by reducing the System Development Charge and Ready-to-Serve Charge associated with the lower amount.

- Water Use Between the Two Agreements. Specified amounts of water supply are available to Cascade in the two contracts. The contract provisions allow Cascade to use the lowest cost water first.

The second group of changes include adding provisions that were not considered in the May 2024 draft term sheet, including the following:

- Restructured Payments. As mentioned earlier, under the current 2012 Water Supply Agreement, Cascade is obligated to make payments to Tacoma through 2042, with the amount dropping significantly starting in 2030. Tacoma offered a new restructured payment schedule which includes the current payments plus the new Market-Priced Agreement and Wholesale Agreement payments. The restructured payment schedule provides Cascade with rate stability and Tacoma with cash flow stability.
- Guardrails. One of Cascade's and Tacoma's goals throughout the contract negotiations has been to strike a good balance between predictability and flexibility. To achieve predictability, Cascade and Tacoma mutually agreed to a number of "guardrails" to protect the Parties' interests over the next several decades.
 - Financial Guardrails. Examples of financial guardrails include a limit on administrative overhead charges to Cascade and a prohibition of an outside city multiplier (i.e. charging higher rates to wholesale customers outside the City of Tacoma).
 - Legal Guardrail. Examples of legal guardrails include agreement on use of standards for decision-making such as "Prudent Utility Practices" and good faith, prompt notice of water quality or contamination problems, and a clear dispute resolution process.
- Management Agreements. As allowed in the current Block Contract with Seattle, Cascade and Tacoma will develop Management Agreements to implement and administer the Market-Priced and Wholesale Agreements. Cascade's CEO and Tacoma Water's Superintendent will be authorized to negotiate and execute Management Agreements. Examples of these agreements include water quality monitoring protocols, shortage management coordination, a process for the five-year reviews, and revisions to allocable cost centers, assets, or expenses.
- Regular Contracts Reviews. Cascade and Tacoma realize emergent issues may arise after the two contracts are signed and executed, which could cause either or both Parties to request updates to one or both contracts. Given this, Cascade and Tacoma agree to meet and jointly review both contracts every five years, starting in 2029. This review process will be defined by a Management Agreement. In addition, Cascade will present, for approval of the Board, guidelines for the role of Board regarding the five-year reviews.

Throughout the contract negotiations, Tacoma has been a collaborative partner with shared goals and values. The draft contracts reflect this, and the outcomes of the contracts provide great benefit to both Cascade and Tacoma. In short, the two contracts achieve the Board's guiding principles and objectives, as earlier described. Specifically:

- Cascade will receive supply reliability through 2062,
- Cascade can cost-effectively defer development of the Lake Tapps Reservoir and can potentially further defer development if additional future supply is secured from Tacoma or other sources,
- The supply and financial terms of the contracts result in reduced cost of water over time and lower long-term rate forecasts,
- Inclusion of financial and legal guardrails help maintain Cascade's long-term interests,
- The contracts strike a good balance between certainty and flexibility, including flexibility to allow for future variation in supply and demand, and
- Connecting Cascade's system with that of Tacoma's enhances Cascade's resiliency and regional resiliency.

The attached Resolution 2025-01 requests the Board to authorize Cascade's Chief Executive Officer, in consultation with legal counsel, to finalize and execute the two contracts substantially consistent with the attached Final Draft Agreements.

PROCUREMENT PROCESS

Not applicable.

FISCAL IMPACT

Contracting with Tacoma is more cost-effective than developing the Lake Tapps Reservoir by 2042. In terms of net present value, it is an estimated savings of about \$300 million. The extended capital development schedule also reduces rate pressure and financial risk throughout the multi-decade supply development period. Finally, by reducing initial capital expenditures, new contracts with Tacoma also provide a favorable near-term rate profile. Longer-term rates are moderated by the separation of capital development into "generations" of projects, which also helps to meet generational equity objectives.

The near-term budget and rates impact of this proposed action were included in Cascade's adopted 2025-2026 operations and maintenance budget, 2025-2026 rates, and 2025-2030 capital budget, approved by the Board in September 2024.

Consistent with Cascade code, staff will embark on developing a project funding plan that considers various forms of debt and assistance, establishes a funding strategy for the initial projects, and evaluates cost and schedule risks. The funding plan will be developed in 2025 and provided to the Board for review, consideration, and ultimate adoption as the financial plan for implementation.

OPTIONS

1. Adopt Resolution No. 2025-01, Authorizing the Chief Executive Officer to Execute Agreements with the City of Tacoma for Wholesale Water Supply.
2. Do not adopt Resolution No. 2025-01 and provide alternative direction to staff.

RECOMMENDED ACTION

Adopt Resolution No. 2025-01, Authorizing the Chief Executive Officer to Execute Agreements with the City of Tacoma for Wholesale Water Supply.

ATTACHMENTS

1. Resolution No. 2025-01, Authorizing the Chief Executive Officer to Execute Agreements with the City of Tacoma for Wholesale Water Supply.
2. Final Draft of the Agreement for Market-Priced Wholesale Water Supply.¹
3. Final Draft of the Agreement for Wholesale Water Supply.¹

¹ Both final draft contracts will be provided prior to the Board meeting



A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE CASCADE WATER ALLIANCE,
A WASHINGTON MUNICIPAL CORPORATION,
AUTHORIZING THE CHIEF EXECUTIVE OFFICER TO EXECUTE
AGREEMENTS WITH THE CITY OF TACOMA FOR
WHOLESALE WATER SUPPLY

WHEREAS the Cascade Water Alliance ("Cascade") is a Washington municipal corporation formed under authority of the Joint Municipal Utilities Authority Act (Chapter 39.106 RCW) to provide water supply to its Members; and

WHEREAS Cascade, at the direction of the Board of Directors (Board) provided in Resolution No. 2024-06, negotiated the terms of water supply contracts with the City of Tacoma, Department of Public Works, Water Department ("Tacoma") consistent with the six objectives set by the Board: of (1) a 20-year (or longer) extension of contract supply sufficient to defer development of the Lake Tapps Reservoir; (2) at reasonable and predictable costs; (3) with net economic and/or rate benefit versus developing Lake Tapps Reservoir; (4) with flexibility in contract term and/or quantity to allow for future variation in supply and demand; (5) with possible further extensions if mutually beneficial given supply/demand status; and (6) with possible partnership opportunities for assets of regional significance; and

WHEREAS the Board now desires to authorize the Chief Executive Officer to finalize and execute two agreements between Cascade and Tacoma.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE CASCADE WATER ALLIANCE, as follows:

Section 1. Adoption. The Board authorizes the Chief Executive Officer, in consultation with legal counsel, to finalize and execute the *AGREEMENT FOR MARKET-PRICED WHOLESALE WATER SUPPLY BETWEEN THE CITY OF TACOMA, DEPARTMENT OF PUBLIC UTILITIES, WATER DIVISION AND CASCADE WATER ALLIANCE* and the *AGREEMENT FOR WHOLESALE WATER SUPPLY BETWEEN THE CITY OF TACOMA, DEPARTMENT OF PUBLIC UTILITIES, WATER DIVISION AND CASCADE WATER ALLIANCE*, substantially consistent with the attached.

Section 2. Governance and Oversight. In 2025, Cascade staff shall present, for approval of the Board, guidelines for the role of Board regarding the five (5) year reviews and the Management Agreements.

Section 3. Effect. This Resolution shall be in full force and effect on the date of its adoption.

ADOPTED AND APPROVED by the Board of Directors of the Cascade Water Alliance at a special meeting thereof, held on the 22nd day of January 2025.

CASCADE WATER ALLIANCE

Penny Sweet, Chair

Attest – Ray Hoffman, Chief Executive Officer

Angela Birney, Vice Chair

Mary Lou Pauly, Secretary/Treasurer

Members

Yes _____

No _____

Demand Share

Yes _____%

No _____%

Include in CWAC?

___ Yes

X No

[Final Draft of the Agreement for Market-Priced Wholesale Water Supply will be provided prior to the Board Meeting]

[Final Draft of the Agreement for Wholesale Water Supply will be provided prior to the Board Meeting]



EXECUTIVE COMMITTEE

Penny Sweet, Chair, City of Kirkland
Angela Birney, Vice Chair, City of Redmond
Mary Lou Pauly, Secretary/Treasurer, City of Issaquah

Meeting Recap
Tuesday, January 7, 2025
2:00 PM – 2:30 PM
Held via Zoom

Discussion Items.

- A. Water Supply Contract Negotiations – Next Steps with Seattle.** This item is for the Executive Committee to prepare for its meeting with Seattle Mayor Harrell.

***Recap:** The committee discussed the plan to meet with Mayor Harrell on January 31. The committee expressed its interest in continuing to explore regional collaboration opportunities with Seattle and directed CEO Ray Hoffman to prepare background materials for them to review. The committee asked to meet again with the CEO before the January 31 meeting with Mayor Harrell.*



FINANCE & MANAGEMENT COMMITTEE

Mary Lou Pauly, Chair, City of Issaquah

Penny Sweet, City of Kirkland

Dave Hamilton, City of Bellevue

John Stokes, City of Bellevue

Meeting Agenda RECAP
Tuesday, January 14, 2025
1:30 PM – 2:30 PM

Held at Cascade's office and via Zoom

Call to Order

- 1. Chair Comments.**
- 2. Executive Session.**
- 3. Items Recommended for Action at the January 22, 2025 Board Meeting**
- 4. Discussion Items**

A. Wholesale Contracts Update. Staff will update the committee on the status of the draft supply contracts with Tacoma, the questions received from Members about the Tacoma contracts, and the upcoming meeting between the Executive Committee and Seattle's Mayor.

***Recap:** Staff reviewed the Executive Summary presentation with the committee, provided an overview of questions received from Member staff, and addressed committee questions. Staff also brought the committee up to date regarding upcoming meetings with Seattle.*

- 5. Other Issues.**
- 6. Next Meeting Date and Location.**

The next meeting will be held Tuesday, February 18, 2025, 1:30 p.m. – 3:00 p.m. at Cascade's office and via Zoom.

Please Note: Zoom instructions are in the meeting invite and the email with the agenda and attachments.



PUBLIC AFFAIRS COMMITTEE

Angela Birney, Chair, City of Redmond
Penny Sweet, City of Kirkland
John Stokes, City of Bellevue
Ryika Hooshangi, Sammamish Plateau Water
Russell Joe, City of Issaquah
Dennis Martinez, City of Tukwila

**Meeting Agenda RECAP
Wednesday, January 8, 2025
9:00 AM – 10:00 AM**

Held at Cascade's Office and via Zoom

1. **Chair Comments.**
2. **Executive Session.**
3. **Items Recommended for Action at the January 22, 2025 Board Meeting.**
 - A. **2025 Omnibus Sponsorship Proposal.** A list of proposed sponsorships for 2025 are presented for committee review in one omnibus package. Staff recommends support for the \$47,000 proposal.

Recap: The committee supported the sponsorship proposal and recommended the item be placed on the Board's consent agenda for January 22.
4. **Discussion Items.**
 - A. **State Legislative Update.** Staff will provide an update on state legislative activities and the upcoming session. The 2025 regular session begins on January 13 and is expected to last 105 days, ending on April 27, 2025.

Recap: Diana Carlen, Gordon Thomas Honeywell, updated the committee on the upcoming legislative session, the state budget deficit, changes in the House and Senate due to the election, and appointments in Governor Ferguson's administration. The state session begins on January 13, 2025, and staff will update the committee about policy bills and budget issues at future committee meetings.
 - B. **Federal Update.** Van Ness Feldman's government relations team in Washington, D.C. will join the committee meeting and provide an update on the federal topics of interest to Cascade.

Recap: Sean Taylor, Van Ness Feldman, updated the committee on a variety of federal topics. The briefing included a recap of 2024, election results and leadership changes in the House and Senate, and the likely Congressional agenda for 2025. Finally, Mr. Taylor reviewed water grant and loan opportunities for Cascade and its members.

5. Other Issues.

- A. 2025 Communications and Outreach Plan.** Attached is Cascade's 2025 Communications and Outreach plan. The plan includes communications efforts Cascade will undertake in 2025 based on member and staff input. No action is required by the committee, but feedback can be provided to staff at any time.

Recap: Staff provided a copy of the plan in the packet and noted that feedback is always welcome on communications and outreach activities throughout the year.

- B. Wholesale Contracts Update.** Staff will briefly update the committee on the status of the negotiations and contracts with Tacoma Water.

Recap: Staff gave a brief update on the Tacoma contract negotiations. A summary version of the Mini Deep Dive workshop presentation was sent out to all Board Members, Alternates, and staff. Board consideration of the Tacoma contract authorization is scheduled for January 22, 2025. The Seattle Mayor and Cascade's Executive Committee will be meeting on January 31, 2025. In the meantime, Cascade staff and SPU staff will be meeting to explore the possibility of Cascade purchasing additional residual water from SPU.

6. Next Meeting Date and Location.

The next meeting will be Wednesday, February 5, 2025, 9:00 a.m. – 10:00 a.m. at Cascade's office and via Zoom.

Please Note: Zoom instructions are in the meeting invite and the email with the agenda and attachments.



RESOURCE MANAGEMENT COMMITTEE
Lloyd Warren, Chair, Sammamish Plateau Water
Jon Ault, Skyway Water & Sewer District
Dave Hamilton, City of Bellevue
Tom McLeod, City of Tukwila
John Stokes, City of Bellevue
Jon Pascal, City of Kirkland
Ryika Hooshangi, Sammamish Plateau Water
Angie Nuevacamina, City of Redmond

Meeting Agenda RECAP
Thursday, January 9, 2025
2:00 PM – 3:30 PM

Held at Cascade's office and via Zoom

1. Chair Comments.
2. Executive Session.
3. Discussion Items.

A. Phase 3 Update. Staff will update the committee on the Corps of Engineers Phase 3 Project.

Recap: Staff provided an update to the committee that the Phase 3 project is about four to five weeks behind schedule due to contractor difficulties with its cofferdam, differing site conditions, and change orders. The spring reservoir refill is scheduled to begin in March instead of on February 15, 2025. The positive news is the mountain snowpack that directly impacts the amount of flow in the White River and the ability to refill is above normal. The project cost is still tracking within the Board-approved amount from 2018.

B. On-call Electrical Engineering Contract. Staff will update the committee on a proposed change of approach to on-call electrical engineering services. The proposed change would expand the scope of services to include integration (construction). Staff will also discuss the potential benefits of selecting more than one firm resulting in more than one on-call contract for 2025-2028.

Recap: Staff provided a brief presentation requesting feedback from the committee to modify the historical approach for procuring Electrical and Controls On-call Engineering Services. The modified approach would allow staff to issue a request for qualifications (RFQ) for a three-year contract, select more than one firm, and would modify the scope of services to include integration / field support. Staff anticipates presenting a request to authorize the CEO to enter into a contract with one or more professional services firms for the Electrical On-call at the March 26 Board meeting.

C. WSDOT Lewis Creek Culvert Project. Staff will provide an update on the status of contract negotiations with WSDOT.

Recap: Staff informed the committee that Cascade’s CEO and the Washington State Department of Transportation’s (WSDOT) Regional Administrator met to discuss the Lewis Creek Culvert Crossing – BIP relocation project due to stalled contract negotiations. As a result of the meeting, Cascade will host a meeting at Cascade’s offices in the next two to three weeks. Attendees will include the state’s Regional Administrator, the state’s construction management team, the state’s design build contractor (Atkinson Construction), and Cascade staff and consultant support as needed.

- D. Wholesale Contracts Update.** Staff will update the committee on the current status of the contracts with Tacoma Water, discussions with SPU, and the water quality blending study.

Recap: Staff informed the committee that Cascade and Tacoma continue to make good progress on the draft contracts for the two new supply contracts. The final drafts will be included in the Board packet along with a resolution to authorize the CEO to finalize and execute the contracts. Staff also informed the committee that Ray Hoffman met with the Executive Committee in preparation for the Executive Committee’s meeting with Mayor Harrell on January 31 to discuss regional collaboration. Ray will meet with the Executive Committee again prior to their meeting with Mayor Harrell.

4. Items Recommended for Action at the January 22, 2025 Board Meeting.

- A. Integrated Aquatic Vegetation Management Plan (IAVMP).** The final IAVMP will be presented to the committee prior to requesting approval of the IAVMP at the January Board meeting. The purpose of the IAVMP is to provide long-term adaptive management strategies for aquatic plants that are cost effective, ecologically sustainable, and maintain the Lake Tapps Reservoir’s water quality, with a focus on water quality for future drinking water supply. The plan includes two recommendations which were evaluated using the Board-approved *Drinking Water Quality Policy Framework*: 1) continued chemical treatment of milfoil, and 2) regular reservoir-wide surveys to monitor other non-native and native nuisance plants. The plan does not include treatment of any plants other than milfoil, and staff would return to the Board for direction if a future reservoir survey indicated a need for treatment of additional plants. A determination of non-significance for SEPA and a public comment period have been conducted. The IAVMP Executive Summary is attached, and the full plan can be found here: [IAVMP Final Draft](#)

Recap: The committee supported the recommendation that the item be placed on the January 22 Board agenda as an action item.

USACE Five-Year Temporary Construction Easement #2. Motion to adopt Resolution 2025-02 authorizing the Chief Executive Officer, in consultation with legal counsel to finalize and execute a five-year temporary construction easement to be granted by Cascade Water Alliance to the U.S. Army Corps of Engineers, related to the Corps’ Mud Mountain Dam Fish Passage Project, substantially in the form attached. (Attachments)

Recap: The committee supported the recommendation that the item be placed on the Board’s consent agenda for January 22.

5. Other issues.

6. Next Meeting Date and Location.

The next meeting will be Thursday, February 13, 2024, 2:00 p.m. – 3:30 p.m. at Cascade's office and via Zoom.

Please Note: Zoom instructions are in the meeting invite and the email with the agenda and attachments.