

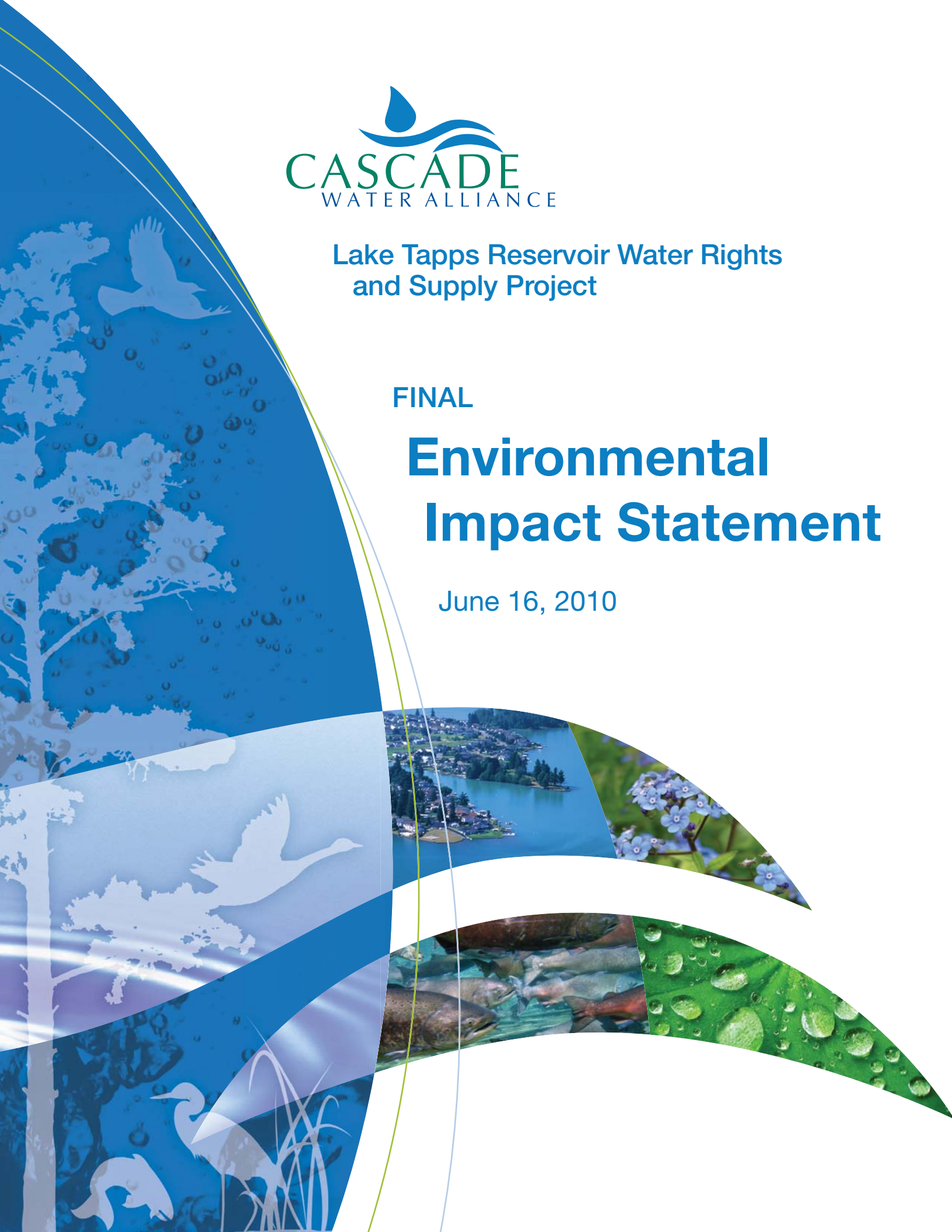


Lake Tapps Reservoir Water Rights
and Supply Project

FINAL

Environmental Impact Statement

June 16, 2010



Fact Sheet

Project Title

Lake Tapps Reservoir Water Rights and Supply Project

Project Proponent

The proponent of the Lake Tapps Reservoir Water Rights and Supply Project (Project) is Cascade Water Alliance (Cascade). Cascade is a non-profit corporation composed of municipal corporations and special-purpose municipal corporations in King County that are party to an Interlocal Agreement entered into under the authority of the Interlocal Cooperation Act (Chapter 39.34 RCW¹) for the purpose of its Members working together to plan, develop, and operate a water supply system and regional assets that will meet Cascade's Members' current and future drinking water needs. The Members of Cascade are as follows:

- City of Bellevue
- City of Issaquah
- City of Kirkland
- City of Redmond
- City of Tukwila
- Covington Water District
- Skyway Water and Sewer District
- Sammamish Plateau Water and Sewer District

Project Description

Project Location and Setting

Lake Tapps Reservoir is located in northern Pierce County, Washington, approximately 30 miles southeast of Seattle and 18 miles east of Tacoma in Section 2, Township 19 North, Range 6 East. The reservoir, approximately 4.5 miles long and 2.5 miles wide, is partially surrounded by private residences and public and private parks.

Background

Puget Sound Energy (Puget) built Lake Tapps Reservoir and the associated hydroelectric power facilities in 1911, generating power there until January 2004. Hydroelectric operations involved diverting a portion of the water in the White River into Lake Tapps Reservoir for storage, sending the water through a powerhouse and turbines to generate electricity for the

¹ RCW 39.34: Interlocal cooperation act. <http://apps.leg.wa.gov/RCW/default.aspx?cite=39.34>.

electrical network that supplied Seattle and Tacoma, and returning the water to the White River via a tailrace canal.

Because of its concerns about the economic viability of maintaining the White River Hydroelectric Project (Hydro Project) for power production, Puget, together with other members of the Lake Tapps Task Force, considered whether the project could serve as a regional water supply for current and future populations' needs. To facilitate development of Lake Tapps Reservoir as a source of municipal water supply, Puget submitted three municipal water right applications (S2-29920, R2-29935, and S2-29934) to the Washington State Department of Ecology (Ecology) in 2000 and a change/transfer application for its pre-code water right claim (Puget Claim) (CS2-160822CL) in 2005. These four applications are referred to collectively as "the Applications".

When Ecology receives an application for a new water right permit or for a change to or transfer of an existing water right permit, Ecology is required (by RCW 90.03.290²) to investigate the application and to document its findings and action for public review. Ecology describes its findings and actions in a Report of Examination (ROE). Ecology published the 2006 Draft ROE (2006 DROE) and took public comment. The 2006 DROE was drafted following a remand of the earlier ROEs on the three municipal water right applications by the Pollution Control Hearings Board and the submittal of the change/transfer application by Puget.

In February 2008, following issuance of the *Environmental Checklist and State Environmental Policy Act (SEPA) Mitigated Determination of Nonsignificance (MDNS) for the Lake Tapps Reservoir Water Supply Project*, Cascade's Board of Directors approved an Asset Purchase Agreement for the acquisition of Lake Tapps Reservoir, the Puget Claim, the Applications, and associated Hydro Project facilities. In June 2008, Cascade published the *Lake Tapps Reservoir Issuance of New Municipal Water Rights and Change of Use for Existing Claim No. 60822, Determination of Significance and Request for Comments on the Scope of Environmental Impact Statement and Environmental Checklist*. On December 18, 2009, the purchase and sale under the Asset Purchase Agreement was completed and Cascade became the owner of the Project.

² RCW 90.03.290: RCW 90.03.290

Appropriation procedure — Department to investigate — Preliminary permit — Findings and action on application.
<http://apps.leg.wa.gov/RCW/default.aspx?cite=90.03.290>.

Cascade's Proposed Action

The Proposed Action is for Cascade's Board of Directors to approve Cascade's operation of the Project and to request approval by Ecology of the Applications.

The three basic elements of the Project operation are as follows:

- Cascade would divert water from the White River into Lake Tapps Reservoir, store water in, and withdraw water from the reservoir for municipal water supply purposes.
- Cascade would operate the Project in a manner to provide enhanced flows in the White River (Recommended Flows) consistent with the 2008 White River Management Agreement with the Puyallup Tribe of Indians and the Muckleshoot Indian Tribe³.
- Cascade would operate the Project to store water and maintain the levels of Lake Tapps Reservoir to support recreation consistent with agreements between Cascade and the Lake Tapps Community.

More specifically, and as described in Table 1-1 of the Draft Environmental Impact Statement (Draft EIS), Ecology's approval of the Applications would permit the following:

1. Cascade would divert water from the White River into Lake Tapps Reservoir at an average annual rate of up to 75 cubic feet per second (cfs) (54,300 acre-feet per year) for municipal, industrial, and commercial water supply purposes⁴. Cascade would divert water from the White River at a maximum instantaneous rate of up to 1,000 cfs (this maximum rate would vary by season and would be lower at other times of the year).
2. Cascade would store up to 46,700 acre-feet of water in Lake Tapps Reservoir for municipal, industrial, and commercial water supply purposes.

³ Due to the timing of the closing of the Asset Purchase Agreement, the application for a donation of a portion of Puget's Claim into the State Trust Water Rights Program was for a temporary donation rather than a permanent donation. The temporary donation was accepted by Ecology on October 26, 2009 (Ecology 2009a). In anticipation of a future permanent donation application and for purposes of compliance with the State Environmental Policy Act (SEPA) for such permanent donation, the permanent donation is analyzed as a component of the Proposed Action in the Draft EIS. Cascade can provide for flows in accordance with the Recommended Flow Regime with or without Ecology's acceptance of the donation and, therefore, the donation is independent of and does not affect the remainder of the Proposed Action. The donation is intended to provide an additional legal mechanism to ensure implementation of the Recommended Flow Regime and there are no additional impacts beyond those analyzed for the Proposed Action.

⁴ As fully described in Chapter 13 of the Draft EIS, the average flow rate of 75 cfs may be increased to an average flow rate of 82 cfs. The 7 cfs is referred to as "Regional Reserved Water". The Regional Reserved Water would not alter or affect the environmental analysis described in the Draft EIS.

3. Cascade would withdraw water from Lake Tapps Reservoir at an average annual rate of up to 75 cfs (54,300 acre-feet per year) for municipal, industrial, and commercial water supply purposes. Cascade would withdraw water from Lake Tapps Reservoir at a maximum instantaneous rate of 135 cfs.
4. Cascade would divert water from the White River, store water in Lake Tapps Reservoir, and release water through the tailrace canal back to the White River in support of the following purposes: hydropower and other beneficial uses including recreational reservoir levels; winter reservoir levels; fish and wildlife habitat protection and enhancement; and maintenance of water quality for recreational purposes in the reservoir and to meet other regulatory requirements. For example, these other beneficial uses include operation of the sedimentation basins, operation of the fish screens and fish bypass pipeline, Spring Refill of Lake Tapps Reservoir, and maintaining water surface elevations in Lake Tapps Reservoir for recreation purposes.

Project Alternatives

In addition to the Proposed Action, the Draft EIS examines the following alternatives:

No Action Alternative

Under the No Action Alternative, the municipal water rights applications would not be acted upon and Cascade would not build or operate the Project. Because Cascade is a public water supply utility, it could face legal restrictions on owning a reservoir that it could not reasonably use for water supply purposes. Under those circumstances, Cascade would minimize expenditures associated with an operation not central to its core utilities' purposes and would attempt to sell the reservoir system.

Under the No Action Alternative, operation of the White River–Lake Tapps Reservoir system would most likely continue as it has since hydropower generation ceased in 2004.

1. Water would continue to be diverted from the White River at a rate that would maintain certain minimum flow rates in the White River. These minimum flow rates are referred to as the Interim Agency Flows (Interim Flows).⁵ The Interim Flows in the White River would range from a high flow rate of 500 cfs from mid-summer into the fall to a low flow rate of 350 cfs through the winter and early spring.

⁵ Under the White River Management Agreement (WRMA), Cascade would be obligated to meet the Recommended Flow Regime described in the WRMA so long as Cascade diverted water from the White River. However, for the purposes of the analysis described in the Draft EIS and for Ecology's baseline analysis described in the 2010 DROE, the Interim Agency Flows are used. The use of Interim Agency Flows allows for analysis of greater impacts than would occur under the Recommended Flow Regime.

2. Reservoir surface elevations would be maintained as they have been since 2004. Consistent with an agreement between Puget and the Lake Tapps Community, Normal Full Pool (i.e., a water surface elevation of 541.0 to 542.5 feet National Geodetic Vertical Datum [NGVD] 29) would be maintained from April 15 to October 31, allowing for operational variances required due to forecasts or available precipitation, conditions of water rights, any necessary aquatic plant control, or the terms and conditions of applicable law.
3. No water would be withdrawn from Lake Tapps Reservoir for municipal supply.

On-Site Alternatives

Under the Washington State Environmental Policy Act (SEPA), reasonable alternatives are actions that could feasibly attain or approximate a proposal's objective, but at a lower environmental cost or decreased level of environmental degradation (WAC 197-11-440(5)⁶).

Under the Proposed Action, the Recommended Flows in the White River and recreational surface levels in Lake Tapps Reservoir would be fully provided prior to the diversion of or withdrawal of water for municipal use. Under the Proposed Action, Cascade has reduced the amount of water for diversion and withdrawals for municipal water supply (from the amounts requested in the Applications) to the maximum extent feasible while still providing for the current and projected demands of its Members and the region. Any on-site alternatives that propose further diminishment of diversion and withdrawals would not allow the management of the White River–Lake Tapps Reservoir system for municipal use while maintaining water quality, recreational reservoir levels, and stream flows for fish and wildlife; and thus, would not meet the Project objective and/or would do so at a higher overall environmental cost. Such alternatives would not be reasonable alternatives and were not carried forward for analysis.

Reasonable alternatives may be mitigation measures not included in the Proposed Action (WAC 197-11-792(2)⁷). The conditions and additional mitigation measures from the 2006 Draft ROE were reviewed to determine whether there are any reasonable alternatives that are not already included either in the Proposed Action or among the mitigation measures to be provided in association with the Proposed Action. The following are addressed as part of the Proposed Action and associated mitigation measures, and, therefore, were not carried forward for separate analysis: minimum flows known as “Agency 10(j) Flows”; ramping rates; minimum instream flow (MIF) compliant diversion; flow augmentation; land conservation; Diversion Minimization Plan to identify the minimum diversion from the White River and outflows from Lake Tapps Reservoir that are necessary to maintain water quality in the reservoir; Water Quality Compliance Plan to achieve the goal of complying with the dissolved

⁶ WAC 197-11-440: EIS contents. <http://apps.leg.wa.gov/wac/default.aspx?cite=197-11-440>.

⁷ WAC 197-11-792. Scope. <http://apps.leg.wa.gov/wac/default.aspx?cite=197-11-792>.



oxygen and temperature standards applicable to the White River at the location of the tailrace; tailrace barrier to minimize attraction and block entry of migrating fish to the tailrace discharge; leakage reduction; fish screen installation on any water withdrawal structure; settling basins continued; and conservation. In addition, other mitigation measures are identified in Section 1.4 of the Draft EIS. The only measure not included in the Draft EIS is source exchange, which was determined to be infeasible.

Off-Site Alternatives

Under the Off-Site Alternatives, Cascade would develop an alternative source of supply in lieu of constructing the Project. Sources were evaluated via a multi-criteria analysis, including interim sources and permanent smaller and uncertain sources.

Cascade determined that Lake Tapps Reservoir is the only single source of supply that offers sufficient certainty for development to meet growth over a 50- to 100-year time frame. It is the only source that provides assurances needed to secure a significant increase in contracted supply from Seattle Public Utilities and/or Tacoma Public Utilities in the near-term. These assurances are important because the contracted supplies are designed to serve as a “bridge” supply pending Cascade’s development of a permanent, long-term supply in the future. The water suppliers providing the contracted supply need assurances that when the time comes to terminate the contract, the communities served by Cascade will not be dependent on the contracted water. The Lake Tapps Reservoir supply, regardless of when it is developed, has both the certainty and quantity needed to provide assurances to support further contracting. There is no other single potential supply that has both the quantity and certainty needed to provide these assurances. Thus, the Off-Site Alternatives were not carried forward for analysis.

Proposed Date of Implementation

A decision about the Proposed Action will not be made until at least 7 days after issuance of the Final EIS.

SEPA Lead Agency

Cascade Water Alliance is the lead agency for this proposal.

SEPA Responsible Official/Contact Person

Michael A. Gagliardo, Director of Planning
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Bellevue, WA 98004
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Permits and Approvals Required for the Proposed Action

Ecology's approval of the Applications is part of the Proposed Action and is required to fully implement the Proposed Action. In addition, a water system plan prepared in accordance with the Washington State Department of Health regulations would be required in future phases of the Project, as well as various state and local permits. These permits and approvals cannot be identified until the required infrastructure components are identified.

Authors and Principal Contributors

The individuals listed below were principal contributors to the preparation of the EIS.

Name	Contribution	Education	Years of Experience
HDR Engineering, Inc.			
Marc Auten	Plants and Wildlife Groundwater	B.S. Environmental Science	7
Leanne Bartle	Graphics	B.A. Graphics (New Media)	10
Joel Darnell	Earth	B.S. Civil Engineering M.S. Ocean Engineering	5
Karissa Kawamoto, AICP	Recreation and Aesthetics	B.A. Urban and Regional Planning	16
Robert D. "Bob" King, P.E.	Project Manager	B.S. Civil Engineering M.S. Civil Engineering	30
John Koreny, PH, RG, PHG, CEG	Surface Water Quality Groundwater	B.S. Environmental Science (Water Chemistry) M.S. Environmental Science (Hydrogeology) M.S. Civil and Environmental Engineering (Water Resources)	20
Bill Mavros	Fisheries	B.E.S. Environmental Sciences M.Sc. Zoology	21
Michael Miller	GIS	B.S. Plant Science B.L.A. Landscape Architecture	17
Mike Stimac, P.E.	EIS Manager Senior Reviewer	B.S. Electrical Engineering M.S. Fisheries	41
Steven M. Thurin, P.E.	Surface Water Quantity Surface Water Quality Climate Change	B.S. Civil Engineering M.S. Civil Engineering (Water Resources)	32
Sara Twitchell	Land and Shoreline Use Climate Change	B.S. Ecology and Evolutionary Biology	4
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Draft EIS Date of Issuance

January 29, 2010

Locations to Obtain Copies of or to View the Final EIS

The Final EIS is available to the public online at www.cascadewater.org.

The Final EIS is also available on compact disc (CD) for a cost of \$5, or printed copy for \$200, from the following address:

Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, WA 98004
Phone: 425-453-0930

Copies of the Final EIS are available for review at Cascade's office (see the address above).

Final EIS Date of Issuance

June 16, 2010

Subsequent Environmental Review

Further actions necessary to use water withdrawn from Lake Tapps Reservoir for municipal supply are known only in general terms and are not part of the Proposed Action.

Environmental review under SEPA will be conducted for future actions, as appropriate.

Background Documents

Final EIS technical reports, background data, adopted documents, and materials incorporated by reference for the Final EIS are available for public review at the following address:

Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, WA 98004
Phone: 425-453-0930