CASCADE
WATER ALLIANCE

June 16, 2010

Subject: Cascade Water Alliance
Lake Tapps Reservoir Water Rights and Supply Project
Notice of Availability, Final Environmental Impact Statement

To Whom it May Concern:

The Final Environmental Impact Statement (Final EIS) for the Lake Tapps Reservoir Water Rights and Supply Project (Project) has been prepared and is being distributed in compliance with the State Environmental Policy Act (SEPA) under Chapter 43.21 RCW. Cascade Water Alliance (Cascade) is the project proponent and lead agency.

An Environmental Checklist was prepared for the Project in June 2008. Following review of the Environmental Checklist, the Cascade SEPA Official determined that the Project could have a significant adverse impact on the environment and that an environmental impact statement (EIS) would be required. A Determination of Significance and Request for Comments on Scope of EIS were issued on June 30, 2008. The Draft EIS was then prepared and a Notice of Availability and Request for Comments on the Draft EIS was issued on January 29, 2010. The comment period for the Draft EIS ended on March 15, 2010; however, the comment period was extended to April 30, 2010, and again to May 21, 2010, to provide overlapping comment periods for the Draft EIS and the Washington State Department of Ecology's Draft Reports of Examination[1].

In February 2008, Cascade's Board of Directors approved an Asset Purchase Agreement with Puget Sound Energy for the acquisition of Lake Tapps Reservoir, associated White River Hydroelectric Project facilities, and the following associated water rights and applications: three municipal water rights applications (S2-29920, R2-29935, and S2-29934), a pre-code water right claim, and a change/transfer application (CS2-160822CL) (collectively known as the "Applications"). On December 18, 2009, the purchase and sale under the Asset Purchase Agreement was completed.

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

[1] On May 7, 2010, Ecology posted on its Web site the Draft Reports of Examination for the Lake Tapps Public Water Supply Project. The comment period for the Draft Reports of Examination ends June 21, 2010. See http://www.ecy.wa.gov/programs/wr/swro/lktappshome.html.

- Cascade would operate the Project in a manner to provide enhanced flows in the White River consistent with the 2008 White River Management Agreement with the Puyallup Tribe of Indians and the Muckleshoot Indian Tribe.

- 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.

The Final EIS includes the comments received on the Draft EIS and Cascade's responses. The Fact Sheet and the Distribution List have been updated, as well as two chapters (Chapters 6 and 13).

Background materials are available for public review at Cascade's offices and are available on Cascade's Web site: www.cascadewater.org.

Sincerely,

Michael A. Gagliardo
Director of Planning

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Phone: 425.453.0930 — Fax: 425.453.0953
Website: www.cascadewater.org

CASCADE WATER ALLIANCE

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 RCW[1]) 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 90.03.290[2]) 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 Tribe[3].
- 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 purposes[4]. 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
Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, WA 98004
Phone: 425-453-0930

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
Barb Whiton	Technical Editor	B.A. Anthropology M.A. Anthropology (Archaeology)	28

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

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Table of Contents

Appendices

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Appendix A: Comments and Responses

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This appendix includes the comments received on the Draft EIS and Cascade's responses to those comments. The comment letters are reproduced in the following pages, annotated by assigned comment numbers. Cascade's responses follow each comment letter.

The Draft EIS was issued on January 29, 2010. The initial comment period for the Draft EIS ended on March 15, 2010; however, the comment period was extended to April 30, 2010, and again to May 21, 2010, to provide overlapping comment periods for the Draft EIS and the Washington State Department of Ecology's (Ecology's) Draft Reports of Examination[1]. Cascade received written comments on the Draft EIS from local agencies, from one federally-recognized tribe, from non-governmental organizations, and from private citizens.

Table A-1 lists the name of the entity or individual who submitted comments, the assigned comment numbers, and the locations(s) in the Final EIS where those comments are addressed.

Table A-1. Comment Origin and Location of Response

Comments received from:	Assigned comment numbers:	See these sections for response:
Puyallup Tribe of Indians	1 – 4	Appendix A, Page A-9 through A-11 Appendix C, Revised Chapter 13
K&L Gates LLP on behalf of Lake Tapps Community Council	5 – 7	Appendix A, Page A-19 through A-20
Kenneth W. Castile	8 – 15	Appendix A, Page A-43 through A-45
Renay Bennett	16	Appendix A, Page A-49
Chris Mantell	17	Appendix A, Page A-53
Dan Fishburn	18 – 20	Appendix A, Page A-59
Ray Hoffman, Seattle Public Utilities	21	Appendix A, Page A-63
Dave Monthie, King County	22 – 24	Appendix A, Page A-67
Geoffrey J. Bidwell	25 – 27	Appendix A, Page A-71

[1] On May 7, 2010, Ecology posted on its Web site the Draft Reports of Examination for the Lake Tapps Public Water Supply Project (2010 DROE). The comment period for the 2010 DROE ends June 21, 2010. See http://www.ecy.wa.gov/programs/wr/swro/lktappshome.html.

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LAW OFFICE
of the
PUYALLUP INDIAN TRIBE

May 21, 2010

VIA ELECTRONIC MAIL

Michael Gagliardo
Director of Planning
Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, WA 98004

RE: Comments on Draft Environmental Impact Statement, Lake Tapps Water Rights and Supply Project, dated January 29, 2010

Dear Mr. Gagliardo:

This letter is submitted to the Cascade Water Alliance, (Cascade) on behalf of the Puyallup Tribe of Indians (Tribe), a sovereign entity whose government is recognized by the United States. The Tribe appreciates this opportunity to present its comments on Cascade's Draft Environmental Impact Statement, Lake Tapps Water Rights and Supply Project (DEIS).

The Tribe appreciates the amount of time, effort, and resources Cascade put in to develop the DEIS. Overall, Tribal staff were particularly impressed with the level of analysis in the individual sections, consideration of relevant data, and in particular the Tribe was very pleased with the analysis regarding climate change. The staff commented that Cascades analysis on climate change was one of the most comprehensive analyses they had ever seen in such documents on that subject.

The Tribe also provides the following specific comments on the Draft EIS:

1 A. The Potential Impacts of the Proposal are Evaluated Against A Baseline That Is Not Appropriate.

A primary purpose of SEPA is to provide the public and decision makers with information about the potential adverse impacts of a proposed action and the decision must be based on information sufficient to evaluate the proposal's environmental impact. Therefore, the baseline against which the impacts of the proposed project are evaluated must represent the conditions without the project, or the natural conditions in the environment prior to the project, and not a speculative set of conditions.

In the DEIS, the impacts of the project are evaluated against flows set forth by a federal agency that assumed continued operation of the project by Puget Sound Energy. The flows set forth were developed as part of an application for continued operation of the hydropower facility. Cascade erroneously assumes those flows would apply as a baseline because Cascade erroneously assumes that

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water would still be withdrawn from the White River to maintain a reservoir even without the the beneficial use the water rights were originally based upon. *See* DEIS, § 3.1. The Tribe disagrees that the reservoir, Lake Tapps, would remain and continue to withdraw water from the White River because there is no water right for such withdrawals without a beneficial use. Therefore, the baseline against which continued withdrawals from the White River should be evaluated is the natural flow rates in the White River.

Even if withdrawals from the White River to solely maintain Lake Tapps were found to be subject to a valid water right to do so, the baseline remains incorrect. At the very least, the baseline is the flows which have been present in the White River since the cessation of hydropower with the diversions to continue to maintain Lake Tapps. In addition, minimum flows have been set for this interim period by the Water Resources Management Agreement executed by the Tribe, Cascade, and Muckleshoot Indian Tribe (WRMA). Those minimum flows are set forth in the DEIS in Table 3.2. At the very least, the minimum flows set forth in Table 3.2 are the baseline conditions against which impacts should be evaluated.

The Tribe, however, has fully evaluated the DEIS along with the mitigation measures provided by Cascade for each of the elements of the EIS and, in particular, those for Fisheries, Surface Water Quality, Surface Water Quantity, Plants and Wildlife, and Climate Change. The Tribe has also evaluated the operating conditions including the minimum flows which are also a condition of the draft records of examination for the water rights. The Tribe believes with each of these measures in the identified chapters and conditions, such as the flows, provide well thought out projections for fish and fish habitat. However, a change to the mitigation measures in the aforementioned sections or failing to condition the rights on the minimum flows found in Table 3.2 would render the entire analysis and its conclusion based upon the baseline in the DEIS flawed.

B. <u>The Lake Tapps Regional Reserved Water Program Is Not Adequately Evaluated in the DEIS.</u>

The Tribe has significant concerns regarding the Regional Reserved Water Program described in Chapter 13 of the DEIS (RRWP). The RRWP purports to leave 7 cfs (Qa) and 10 cfs (Qi) in the White River to be used at some uncertain time in the future by the cities of Auburn, Bonney Lake, Buckley and Sumner (Four Cities) as mitigation water for some unknown impacts identified in some yet to be filed applications for new water rights or changes to existing water rights. Until such time as the Four Cities apply for water rights, the ultimate environmental impacts of the use of the RRWP to mitigate impacts from speculative ground water withdrawals are completely unknown at this time and cannot be evaluated as part of this instant SEPA process.

2

The purpose of an environmental impact statement is to "present decisionmakers with a reasonably thorough discussion of the significant aspects of the probable environmental consequences" of an agency's decision. *Klickitat Cy. Citizens Against Imported Waste v. Klickitat Cy.*, 122 Wn.2d 619, 633, 860 P.2d 390 (1993). Given the speculative nature of the RRWP, it is impossible to identify the probable environmental consequences of the Program. In fact, the DEIS states that the evaluation of the environmental impacts of the Lake Tapps Regional Reserved Water Program (RRWP), including the identification of probable impacts to the White River, would occur at the time one of the Four Cities applies for a new water right or a change to an existing water right and is "beyond the scope of this Draft EIS." p. 13.3. Thus, the environmental analysis for a future water right application would

necessarily include whether the use of Regional Reserved Water would be adequate to mitigate for those identified impacts. The DEIS is, therefore, establishing a phased environmental review of the RRWP.

Although the DEIS defers the environmental analysis for the RRWP to some future date, it concludes that the "inclusion of the Lake Tapps Regional Reserved Water Program in the Proposed Action analyzed in this Draft EIS would not result in any additional impacts beyond those analyzed in Chapters 1 though 12 of this Draft EIS." DEIS, p. 13.1, underline added. It makes this conclusion despite the fact that (1) the DEIS merely describes the RRWP, which is a component of the Proposed Action, in a footnote; and (2) Chapters 1 through 12 contain no analysis of the impacts of the RRWP, but again in footnotes, state that the "Regional Reserved Water Program would not alter or affect the environmental analysis described in this Draft EIS." See, eg. p. 1.4 and 3-4. It is compelling to note that even the modeling used to support the environmental analysis was performed using withdrawal quantities that did not account for any loss in flow due to the RRWP. Presumably, impacts to the White River that will rely on the RRWP to mitigate will cause a loss of flow in the White River. Therefore, the RRWP results in a net loss of flow to the White River that is NOT analyzed or accounted for in this DEIS. How can the DEIS conclude that the RRWP would not result in additional impacts and/or affect the environmental analysis until there are impacts to White River to be mitigated?

3

The Tribe is also concerned about the use of a significant volume of flow of a dynamic and fluctuating river, in which the minimum flows established under the Water River Management Agreement and the pending water right are not always met, is being made available to mitigate uncertain impacts from the withdrawal of ground water in hydraulic continuity with the river. Further, the relationship between the impact to surface waters of the White River from ground water withdrawals, and the ability to mitigate that impact with Reserved Regional Water is unknown.

Simply put, the current draft EIS does not, and cannot be used to support the RRWP. Further, inclusion of the RRWP may invalidate the EIS for its intended purpose – support of the ROE for the CWA Lake Tapps Project. As a matter of public policy, full disclosure requires that the cumulative impacts of the complete project, the Lake Tapps Water Supply Project and the RRWP, be evaluated in the DEIS. This has not been done and cannot be done due to the uncertain and speculative nature as to how, and by whom, the RRWP may be implemented at a future date.

Finally, the description of the RRWP in the DEIS is inconsistent with the description contained in the draft Report of Examination dated May 7, 2010 for the Water Right (Draft ROE). The DEIS stated that any portion of the RRWP that is "authorized for in a water right by December 31, 2030, *would revert to Cascade*." DEIS p. 13-4, italics added. However, the Draft ROE states that the portion of the RRWP not used "*would be relinquished.*" Draft ROE, Investigator's Report for S2-29920, p. 25, italic added. Thus, it is unclear whether the inchoate flow that may go to the RRWP would in the end: (1) revert back to Cascade and thus be available for another use; (2) be relinquished to the state; or (3) become part of Puget's Claim and thus be available for placement in the State's Trust Water Right Program.

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C. The DEIS Contains Factual Errors Within Chapter 6.

Tribal Staff have identified the following errors within Chapter 6 of the DEIS:

6-2. The Puyallup Tribe has established surface water quality standards from RM 1.0 (not RM 0.0) to RM 7.3; these standards have been approved (not adopted) by the U.S. Environmental Protection Agency.

6-5. Table 6-1 Surface Water Designations and Water Quality Criteria. At the bottom of the table, the Puyallup Tribe does not have jurisdiction from river mile 0.0 to 1.0 in the lower Puyallup River. This reach is within the state's jurisdiction.

6-14. Puyallup River Water Quality Standards. The language in this section after the first two sentences should be replaced with the following: "The lower Puyallup River reach from RM 1.0 to 7.3 is designated as Class A with an applicable temperature criterion of 18° C and dissolved oxygen criterion of 8.0 mg/L. EPA approved the Tribe's surface water quality standards in 1994. The reach immediately adjacent to the upstream Reservation boundary is designated as core summer habitat with an applicable temperature criterion of 16° C and 9.5 mg/L."

6-36. Puyallup Tribe Standards. The Puyallup tribe has federally approved surface water quality standards in the lower Puyallup River (RM 1.0 to 7.3).

In sum, the baseline against which the impacts of the project are evaluated is wrong. The Interim Agency flows are simply a fallacy at this point, and not an appropriate baseline condition. Further, Chapter 13 should be deleted from the DEIS. The Tribe reserves the right to provide additional comments on DEIS to the extent that it may be revised or otherwise modified to reflect the terms and conditions contained in the Draft ROE.

Sincerely,

Lisa A. Brautigam

cc: Tribal Council

Responses to Comments from the Puyallup Tribe of Indians

Response to Comment No. 1

No changes were made to the EIS in response to this comment.

The baseline for the Draft EIS, referred to as "Interim Agency Flows," is the minimum flows established in 2005 by the National Marine Fisheries Service.

The history of these minimum flows is as follows: NOAA Fisheries issued a preliminary draft biological opinion in 2002 and a *Draft Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Consultation* in 2003. Through subsequent consultation, the Washington State Department of Ecology (Ecology), the Washington Department of Fish and Wildlife (WDFW), the Puyallup Tribe of Indians, and NOAA Fisheries made recommendations to the Federal Energy Regulatory Commission (FERC) about minimum flows in the White River under Section 10(j) of the Federal Power Act. These recommendations, known as the "Agency 10(j) Flows," were superseded in 2005. In March 2005, by means of a letter addressed to the U.S. Army Corps of Engineers, the National Marine Fisheries Service modified the "Agency 10(j) Flows" to establish flows for Puget Sound Energy's operation of its project to be provided at the White River above Boise Creek at the Buckley gage. Thereafter referred to as the "Modified 10(j) Flows," these minimum flows were incorporated into Ecology's 2006 Draft Report of Examination (2006 DROE) on the Lake Tapps water right. Under the 2006 DROE, diversions of water from the White River would be subject to the "Modified 10(j) Flows." The "Modified 10(j) Flows" are referred to in the Draft EIS as the "Interim Agency Flows."

In August 2008, Cascade Water Alliance (Cascade) entered into the 2008 White River Management Agreement (WRMA) with both the Puyallup Tribe of Indians and the Muckleshoot Indian Tribe. A central feature of the WRMA is the "Agreed Flow Regime" for the White River, under which Cascade agreed to limit diversion from the White River into Lake Tapps Reservoir in accordance with the Diversion Optimization Plan and the Ramping Rates to achieve or exceed specified minimum flows in the White River downstream of the diversion dam. Under the WRMA, the "Agreed Flow Regime" would guide Cascade, rather than the "Interim Agency Flows," so long as Cascade diverts water from the White River. The Draft EIS refers to the "Agreed Flow Regime" as the "Recommended Flow Regime" or "Recommended Flows".

However, Ecology is not obligated to incorporate the "Recommended Flows" into the Lake Tapps water rights. The baseline used by Ecology's 2010 "Investigator's Report" to support the 2010 Draft Reports of Examination (2010 DROE) for the Lake Tapps water rights are the minimum flows established by the National Marine Fisheries Service in 2005: the "Interim Agency Flows."

The use of the same baseline in the Draft EIS allows for more understandable and consistent analysis. The "Recommended Flows" are more protective of fisheries than the "Interim Agency Flows." Thus, the use of "Interim Agency Flows" in the Draft EIS analysis is a more conservative and environmentally protective approach that allows for analysis of greater impacts than would occur under the "Recommended Flow Regime."

Response to Comment No. 2

No changes were made to the EIS in response to this comment.

The Draft EIS does not establish a phased review for the Lake Tapps Regional Reserved Water Program (LTRRWP). As explained in Chapter 13 of the Draft EIS, the Regional Reserved Water would not be authorized for diversion or withdrawal from the White River by the Lake Tapps Reservoir Water Rights and Supply Project (Project). The LTRRWP simply provides one means for a future City applicant to mitigate for impacts to the White River from a future application of such City for new water rights or changes to existing water rights.

Cascade, the proponent of the Proposed Action analyzed in the Draft EIS, is not and will not be the project proponent for an action utilizing the LTRRWP. As stated in Chapter 13 of the Draft EIS, "[t]he environmental analysis for any proposed water right application by any city applicant, as well as the mitigation of any impacts, would be the responsibility entirely of the City applicant and would be independent of the environmental review for Cascade's Lake Tapps Reservoir Water Rights and Supply Project contained in this Draft EIS."

Response to Comment No. 3

No changes were made to the EIS in response to this comment.

First, the Draft EIS adequately describes the LTRRWP and the scope of impacts that were evaluated as components of the Project. It is incorrect that the LTRRWP is described only in a footnote. Chapter 13 of the Draft EIS describes the LTRRWP. Chapter 13 of the Draft EIS states that 10 cubic feet per second (cfs) peak flow (instantaneous quantity) and 7 cfs average flow (5,060 acre-feet annual quantity) from the White River are designated for the "Four Cities" to use as partial mitigation for their own water rights applications that are independent of the Project. The Draft EIS states that the Reserved Water is subordinate to the White River minimum flows and would not be available when the minimum flows are not met. The Draft EIS states that the Reserved Water would only serve as mitigation for impacts to the White River and that, therefore, it is appropriate for the Project's EIS to evaluate only White River impacts. In addition, the Draft EIS explains that the Four Cities are entirely responsible for filing their own water rights applications, meeting all Ecology requirements to support and process such applications including environmental review, and

for providing any other mitigation for environmental impacts to tributaries and groundwater resources.

The effect of the LTRRWP on the main stem White River was evaluated. Comment 3 is incorrect in stating that the modeling used water quantities that did not account for any loss in river flow as a result of the LTRRWP. Ecology's "Investigator's Report"[2] to support the 2010 DROE for the Lake Tapps water rights describes the modeling work employed to evaluate the effect of the LTRRWP on the White River. Specifically, pages 84-88 of the Investigator's Report describe the modeling and evaluation of the LTRRWP's impact on White River hydrology and river flow, water quality, and aquatic habitat. The report clearly states that the Reserved Water would not be available when the White River minimum flows or the Lower Puyallup River minimum instream flows were not met.

Comment No. 3 correctly points out that a description of the modeling analysis mentioned above was omitted from the Draft EIS. The analysis is included in the Final EIS (see Appendix C, revised Chapter 13, Section 3.6).

The remaining components of the LTRRWP are yet to be proposed and evaluated by the Four Cities. Impacts to the environment other than to the main stem White River will depend on the specifics of water rights applications to be proposed by the cities. For example, any effects on groundwater, on tributaries of the White River, or on other river basins will be evaluated by the cities; Cascade has not evaluated these effects because they are unknown (and thus properly outside the scope of this State Environmental Policy Act [SEPA] review) and will be a feature of future actions to be proposed by the cities.

The comment is correct that the Draft EIS description of the disposition of unused water is inconsistent with Ecology's description in the relevant 2010 DROE (No. S2-29920(B)[3]). The 2010 DROE is correct. Chapter 13 of the Draft EIS has been revised accordingly (see Appendix C, revised Chapter 13, Section 3.5). The Final EIS states that any portion of the Reserved Water that has not been allocated in conjunction with a water right approved by Ecology shall be cancelled on January 1, 2031.

Response to Comment No. 4

Comment No. 4 correctly points out details that require correction in Chapter 6. The affected pages in Chapter 6 have been revised accordingly and appear in Appendix B of this document.

[2] See https://fortress.wa.gov/ecy/wrx/wrx/fsvr/ecylcyfsvrxfile/WaterRights/ScanToWRTS/hq4/06518969.pdf.
[3] See https://fortress.wa.gov/ecy/wrx/wrx/fsvr/ecylcyfsvrxfile/WaterRights/ScanToWRTS/hq4/06533375.pdf.

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May 20, 2010

Elizabeth Thomas
liz.thomas@klgates.com

VIA EMAIL AND US MAIL

Mr. Michael Gagliardo, Director of Planning
Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue WA 98004

Re: Comments of Lake Tapps Community Council on Draft Environmental Impact Statement (EIS) for the Lake Tapps Reservoir Water Rights and Supply Project

Dear Mr. Gagliardo:

Enclosed please find the Lake Tapps Community Council's comments on Cascade Water Alliance's Draft Environmental Impact Statement (EIS) for the Lake Tapps Reservoir Water Rights and Supply Project.

Very truly yours,

K&L GATES LLP

By
Elizabeth Thomas

ET:lm
Enclosure
Cc with enclosure by email:
Lake Tapps Community Council
Hon. Shawn Bunney
Hon. Chris Hurst
Jay Manning
Adam Gravley
T.C. Richmond

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Comments of Lake Tapps Community Council on Draft Environmental Impact Statement (EIS) for the Lake Tapps Reservoir Water Rights and Supply Project

May 20, 2010

Introduction and Summary

The Lake Tapps Community Council (the "Community Council") appreciates the opportunity to review Cascade Water Alliance's ("CWA") January 29, 2010 Draft EIS (the "DEIS") on the Lake Tapps Reservoir Water Rights and Supply Project (the "Project"). As detailed below, the Community Council in general:

- supports the approach that the DEIS takes on such issues as priority of uses (reservoir levels take precedence over municipal supply) and beneficial use (recreation is a type of beneficial use for the oldest of the water rights); and
- has concerns about the DEIS regarding (a) the lack of specificity as to adaptive management and (b) CWA's proposed donation of any excess rights to the Water Right Trust.[1]

DEIS Treatment of Key Issues for Community Council

5 In general, the DEIS takes a fair, accurate and open approach to the issues of concern to the Community Council. It refers to a number of points that are important to the Community Council:

1. The 2009 agreement between CWA and the Community Council is included as an appendix and is frequently referred to.
2. The DEIS acknowledges that the Community Council's 2004 Reservoir Management Agreement with PSE will remain in effect until both CWA and the Community Council have accepted the water right.
3. The DEIS states in several places that maintaining lake levels takes priority over municipal withdrawals.
4. The DEIS recognizes recreation as one of the beneficial uses of the most senior of the water rights, acknowledges that recreational use was provided for when PSE first deeded land for real estate development, and recognizes how extensive and important recreational uses are.
5. The DEIS eliminates the previously proposed source exchange and limits the MIF-compliant diversion, which focused on flows in the Puyallup River, to winter months.

[1] Although the Community Council understands that the transfer of water rights into trust will require an application that has not yet been filed, we further understand that this DEIS is designed to provide environmental review for the forthcoming application. See, *e.g.*, DEIS Fact Sheet at footnote 3. Accordingly comments on the trust water right element of the proposed action are included here.

6. The DEIS acknowledges the potential cumulative impact of climate change.

7. The DEIS recognizes the arrangement that CWA and the local cities have made to designate 7 cfs of Lake Tapps water as "reserved water," which can be considered to be mitigation for the cities' own water right applications.

6

Inadequate Specificity for Adaptive Management Measures

The Community Council has long been concerned about the possibility that factors such as climate change, or incorrect assumptions regarding, *e.g.*, leakage from the reservoir, may cause predictions based on modeling to be inaccurate. While the DEIS seems to recognize this risk, the Proposed Action does not incorporate mitigation measures that are sufficient to address associated impacts.

The DEIS expressly recognizes the impacts that climate change could have under the Proposed Action:

> … the Proposed Action flow and water level results summarized in Chapter 5 could be affected by natural climate variability, and would be affected by the climate change-influenced flows estimated by Palmer and Polebitski. Water cannot be diverted to Lake Tapps Reservoir when flow arriving at the diversion dam is less than the required minimum flow. As a result, lower summer flow in the White River above the diversion dam could lead to less water being diverted into Lake Tapps Reservoir to maintain recreational water levels and to meet water supply withdrawals. During certain years, diversions into the reservoir might not be high enough to completely meet both needs. ***Under these conditions, Lake Tapps Reservoir water levels could fall below the minimum recreational level of 541 feet and withdrawals from the reservoir to meet Project water supply demands might need to be reduced. These conditions could continue until flow in the White River increased above the required minimum flow.*** [Page 12-8; emphasis added.]

Through a series of Executive Orders and Legislative enactments, the State of Washington has determined that climate change is a certainty, not just a possibility.[2] Although there is some uncertainty as to precisely what impacts climate change will have on various resources, it is certain that there will be impacts. The Proposed Action therefore must incorporate an adaptive management program to address these impacts consistent with achieving the Project objective of having certainty regarding the availability of water over a 50- to 100-year period. DEIS §1.2

The DEIS does take some steps in the direction of adaptive management. Section 12.3 describes "potential elements" that "could include" the following:

- "Initiation" of "efforts" by an unspecified entity to utilize storage at Mud Mountain Dam;

[2] *See, e.g.*, Executive Order 07-02 (Feb. &, 2007) (" there is scientific consensus that increasing emissions of greenhouse gases are causing global temperatures to rise at rates that have the potential to cause economic disruption, environmental damage, and a public health crisis"); RCW 80.80.005(1).

- A flow forecasting system;
- Evaluation of conjunctive use of Lake Tapps and other municipal supplies; and
- A shortage management plan.

These are all good ideas, but even if they are made mandatory (which they should be), they do not go far enough. SEPA provides that mitigation should be required if a "proposal would be likely to result in significant adverse environmental impacts." WAC 197-11-660(1)(f)(i). The Proposed Action coupled with climate change is likely to have significant adverse effects unless the above "potential elements" are made mandatory, and unless an adaptive management program is established to deal with the possible collapse of the three agreements that serve as the foundation for the instream flows that are included as part of the Proposed Action.

These three agreements are the "White River Management Agreement between the Puyallup Tribe of Indians, the Muckleshoot Indian Tribe and Cascade Water Alliance" (the "Tribal Agreement"); the "2009 Agreement Regarding Lake Tapps between Cascade Water Alliance and the Lake Tapps Community" and its precursor, the agreement between the Community and PSE (collectively, the "Community Agreement"); and the recent "Lake Tapps Area Water Resources Agreement between Cascade Water Alliance and the Cities of Auburn, Bonney Lake, Buckley, and Sumner". The flow regime was first articulated in the Tribal Agreement. The Community has continuing doubts as to whether the flow regime is necessary to serve any fishery or other resource purpose. Nevertheless, the Community recognizes that CWA has worked very hard to balance the public interests and interests under specific water rights of all stakeholders as well as the interests of its customers through the Proposed Action. Accordingly, the Community is comfortable with the inclusion of the flow regime in the proposed action provided that the three agreements remain in place. If the careful balance struck by the three agreements is disrupted, however, the flow regime should be revisited. In that case, Ecology should be able to evaluate whether conditioning the water right aspects of the Proposed Action upon continued implementation of the instream flows set forth in the Tribal Agreement will impair existing water rights or be detrimental to the public welfare, per RCW 90.03.290, and whether continued implementation will clearly serve overriding considerations of the public interest, per RCW 90.54.020(3)(a).

7

Improper Proposed Donation of Water Rights to Trust or Tribe

The Community Council has long been concerned about the provisions in CWA's agreement with the Tribes that calls for CWA to transfer in perpetuity all of the water right that it gets from PSE over and above the amounts it is permitted to divert into Lake Tapps into the State Water Right Trust program, or failing that to the Tribes. Part of the concern stems from the fact that the amount CWA can transfer into the Lake varies from one year to the next, and can be expected to increase once municipal supply obligations begin. Further, future diversions into the Lake may need to be greater than we now expect due to the effects of climate change, or due to underestimating the seepage from the Lake to groundwater, or due to the need to run more water through the lake to maintain the quality of the water, both while it is in the Lake and when it

flows back into the river.[3] The agreement with the Tribes might be read to say that today's "excess capacity" must be transferred into trust in perpetuity, and it is unclear whether there will be any way to get donated water back out of the trust should the need arise.

The DEIS takes an interesting approach on this issue. *See, e.g.*, footnote 4 on page 1-3. The proposed donation is part of the SEPA analysis under the DEIS, but "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 Community Council's concern is that depending on how it is designed, the donation might have significant additional impacts. The application for a permanent donation has not yet been submitted, so it is impossible to determine how the amount to be donated will be calculated or whether the donation goes beyond providing "another legal mechanism to enforce the flow regime." Because the donation is an "independent" proposed action whose scope is as yet unknown, the Community reserves its right to comment on the sufficiency of the DEIS to support the proposed donation. With the limited amount of information presently available on the proposed donation and its impacts, it is impossible to determine whether the donation meets the clear Legislature intent that use of the trust water right program should NOT adversely affect other water rights. RCW 90.42.010 provides in part, "It is the intent of the legislature that persons holding rights to water, including return flows, not be adversely affected in the implementation of the provisions of this chapter." Similarly, a trust water right may be exercised, "only if the department first determines that neither water rights existing at the time the trust water right is established, nor the public interest will be impaired." RCW 90.42.040(4).

Conclusion

By and large, the DEIS does a very good job of analyzing the impacts associated with the Project, and evaluating the manner in which CWA's proposal carefully balances the competing interests of many stakeholders. The Community Council appreciates the opportunity to comment on the DEIS.

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[3] Ecology's 2006 draft ROE for the Lake Tapps water rights did include an adaptive management element to address the possibility that restrictions on diversions into the Lake might be so stringent as to exacerbate water quality issues. Ecology provided a mechanism in §5.3.11:

> The [diversion minimization] plan shall provide for continuing monitoring of water quality in Lake Tapps and the discharge from the lake to the White River, and provide flexibility for adaptive management, with approval of Ecology, to respond to new information and circumstances to achieve the above objective in conformity with the conditions of the permit. ... ***The permit holder may from time to time request Ecology to approve changes to the Diversion Minimization Plan in light of new information or circumstances, to the extent that the existing adaptive management process is unable to provide the needed changes.*** [Emphasis added.]

Responses to Comments from the Lake Tapps Community Council

Response to Comment No. 5

No changes were made to the EIS in response to this comment.

In March 2004, the Lake Tapps Community entered into the *Agreement Regarding Reservoir Management Between Puget Sound Energy and the Lake Tapps Community ("*2004 Agreement*").* Under the Asset Purchase Agreement, Cascade took assignment of the 2004 Agreement.

In May 2009, the Lake Tapps Community entered into an agreement with Cascade called the *2009 Agreement Regarding Lake Tapps between Cascade Water Alliance and the Lake Tapps Community* ("2009 Agreement"). The 2009 Agreement is not effective until both Cascade and the Lake Tapps Community accept the Final Report of Examination. Until that time, the 2004 Agreement remains in effect. Under the 2009 Agreement, the priority of interests for use of the White River flows is as follows: (i) provision of instream flows, (ii) provision of recreational lake levels, and (iii) provision of municipal water supply. When the 2009 Agreement becomes effective, that priority of uses becomes effective.

Recreational use is permitted by the adjacent landowners who are the successors in interest to Lake Tapps Development Corporation ("LTDC"). In 1954, Puget Sound Energy ("Puget") conveyed most of the land surrounding the reservoir to LTDC. In the 1954 Deed, Puget reserved ownership of the land and lake bed below a specified elevation, but also agreed to allow certain uses by LTDC and its successors on the Puget-reserved land and lake beds. Under the LTDC Deed and in easement documents, adjacent homeowners were given easement rights that included a limited, non-exclusive right to use the waters of Lake Tapps – to the extent that Puget stored water in the reservoir – for boating, swimming, fishing, and any other usual or ordinary recreational purposes. Neither the Community Council nor individual property owners hold a water right for recreational use.

Response to Comment No. 6

No changes were made to the EIS in response to this comment.

The Project is not expected to affect climate in the region; rather, it is the Project that might be adversely affected by natural climate variability or climate-change-influenced hydrologic conditions, the predictions of which vary greatly. Table 12-2 in the Draft EIS shows that the effects of the Project would not be significantly different under the assumed climate-change-influenced hydrologic conditions. If the 2009 Agreement becomes effective (see the Response to Comment No. 5), Cascade commits to a priority of use for White River flows that places the Project (municipal use) third (after instream flows and recreational lake

levels). Therefore, it is proposed that an adaptive management process be utilized to address potential climate-change-influenced hydrologic conditions. The process would allow for a variety of measures (not just the elements listed) to be considered for implementation depending on the actual climate-change-influenced hydrologic conditions.

Cascade is confident that the mitigation measures proposed in the Draft EIS provide sufficient flexibility to operate the Project such that the minimum flow, recreational lake level, and municipal water supply objectives can be met on a reliable basis. In the event that these objectives are not reliably met, Cascade has the ability to and will consider (in consultation with interested parties) the reasons the objectives are not met and identify possible operational (or capital) changes to enable meeting the objectives on a reliable basis.

Response to Comment No. 7

No changes were made to the EIS in response to this comment.

Regarding Cascade's plan to donate a portion of Water Right Claim No. 160822 (the Claim) to the State's trust water rights program, Cascade will retain a portion of the Claim sufficient to maintain Lake Tapps Reservoir's levels for recreational purposes (and other purposes). Cascade will structure the trust water donation so that it honors and meets all agreements, including the 2009 Agreement between Cascade and the Lake Tapps community (or the 2004 Reservoir Management Agreement if it remains in effect). Finally, Cascade will structure the trust water donation so that no existing water rights will be impaired. See the response to Comment No. 5.

May 17,2010

Chuck,

This "appeal" is not what it appears to be. It is something, which is intended to help both CWA and ourselves. If you don't get the water that you need, from Lake Tapps, then we both lose. I am very much concerned over the mid summer time frame - August is the toughest month.
Owen Reese is a very capable engineer and I have the deepest respect for his capabilities. If I was in his shoes I probably would be coming up with the same answers, but I do believe they (his answers) "lean one way" and that might be in favor of approval of the water right. That is okay, but let's look a few years ahead - let's say to 2025. There isn't going to be enough water going down the White River, during the dry summer months, to support what the Tribes want in stream flow and what we need. I think it is very important to have something in place to handle this pending problem.
We are on a RV vacation in Nevada and Utah. I have had limited time to work this memo and the supporting attachments. In that respect I envy you where you can solicit help from your troops and have time to massage the English. I once had that kind of support. Please, when you read this appeal, understand the conditions, which I am under, and the lack of support (none) that I have.
If you have any questions or concerns, please don't hesitate to call or email. We are not good about our cell phones - neither of us carries them with us religiously, so (our kids have found) that email is a most reliable means of contact.

Ken

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May 17, 2010

To:

The Pollution Control Hearings Board
PO Box 40903
Olympia, WA 98504-0903

The Department of Ecology
Appeals & Applications for Relief Coordinator
PO Box 47608
Olympia, WA 98504-7608

CC:

Thomas Loranger
Section Manager
Water Resources Program – Dept. of Ecology
Southwest Region
PO Box 47775
Lacey, WA 98504-7775

Chuck Clarke
Chief Executive Officer
Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, WA 98004

Subject: Report of Examination, Application Number S2-29920(A), attachment A to this letter

References: (a) White River Management Agreement between Tribes and CWA, dated August 6, 2008
(b) 2009 Agreement Regarding Lake Tapps between Cascade Water Alliance and the Lake Tapps Community
(c) State Dept. of Ecology Report of Examination, WRTS File #CS2-160822CL

Dear Sir or Madam:

This appeal is not intended to lead to the denial of the subject Report of Examination but, rather, to modify it. The report is very complete and detailed; however, a few changes are recommended before final approval is given. Below are comments, which are background that have led the undersigned to the recommendations, which follow.

Comments:

8

1. Lake Loss
In evaluating the feasibility of maintaining Lake Tapps at the proper lake levels, during the recreational period, the amount of lake loss is a very important part of the formula for the evaluation. There has been a difference of opinion on the values to be used for lake loss, one by Aspect Consulting and the other by the undersigned. Both have arguments for and against for which an understanding can, quite easily, be resolved. Attachment B is an illustration showing four curves, which illustrate a computation of actual lake losses, during the summer months, for the years 2004, 2005, 2006 and 2007. It also shows the lake loss, which was formally used by PSE (65 cfs), that which has been used by the undersigned (65 cfs) and that which has been used by Aspect Consulting. These curves were derived using the gauge readings at the inlet and outlet (to the lake), subtracting the water flow diverted at the fish screens, allowing for the rise and fall of the lake, and then computing the resultant lake loss. Aspect Consulting derived lake loss from a more detailed analysis using established criteria for water seepage, rain runoff, etc. Their numbers for lake loss were variable throughout the year with the month of August being 28.5 cfs. Lake Tapps is a very large lake with variable inputs and outputs that affect the lake loss. One of these variable outputs is the immense lake bottom and it's ability to retain water. To illustrate this point, over thirty years ago, PSE attempted to add "Extension Lake" to the Lake Tapps reservoir (Satellite image in attachment C). The porosity of the lake bottom of Extension Lake was such that even with corrective measures they could not get the lake to retain sufficient water to sustain the lake elevations of Lake Tapps without a large penalty in lake loss. Additional evaluation of existing conditions for Lake Tapps, using accurate instrumentation, and accounting for all the known variables, should be done.

9

2. Warming Trend
Climate change was not added to either the Aspect Consulting model or the work done by the undersigned. As it was pointed out in the Investigators Report (S2-29920(A)), "Warming in the western mountains of North America is projected to cause decreasing snowpack, more winter flooding and reduced summer flows ---." "Summer flows are predicted to decline over time, decreasing by 17.8% by 2025." "It would be wise for Cascade to incorporate adaptive management measures into the project to allow for adaption to the potential impacts of climate change." Monthly averaging of historical White River flow rates, for 50 years,

indicates a decline in river flow rates of approximately 100 cfs during August and September.

10 3. Fish Biology

The undersigned does not claim to be an expert (by any means) of the science of understanding the fish in the White River; however, I was exposed to many of the problems when I served on the "Biology Committee" for the Lake Tapps Task Force. The science of forecasting when and how the fish will behave in the White River is full of very flexible data. For example, predicting that there will be a predetermined number of fish migrating up the river, requiring 650 cfs of river flow, the first week in August could change to the last week in August, etc. It is even more unpredictable to estimate what might be required to support the fish on a daily basis. The tendency, in making fish behavior predictions, is to make them on the conservative side and to allow for the worst-case situations. How the estimates were accomplished, when the tribes determined the minimum White River In stream Flow requirements, is not known by the undersigned but they (the Tribes) may welcome some flexibility to those requirements to allow for the unpredictable events, which may occur.

11 4. Flood Control

In January of 2009 the city of Pacific experienced a flood, which caused a large amount of damage. There was some operational error involved but the Core of Engineers was dealing with a maximum flood condition and had to release a large amount of water from Mud Mountain Dam. If 2000 cfs of White River flow could have been diverted into Lake Tapps it is very possible that the flood in the White River valley could have been avoided. The entire Lake Tapps diversion canal has been constructed to handle 2000 cfs of flow except for a "check valve" which was installed at the entrance to Lake Tapps 3 to 4 years ago. It was constructed to only handle less than 1000 cfs (some have indicated only 700 cfs). The Core of Engineers is presently designing and getting ready to build a new cement diversion dam to replace the very undependable log structure, which exists today. The dam and the check valve should be capable of handling the full 2000 cfs. The undersigned understands that "flood control" is not part of this application but it is related and should be recognized.

12 5. Force Majeure

The reference (a) agreement refers to Force Majeure and events, which may be labeled as such. There are two events, which should be added:

I.4.c. A Force Majeure event whereby Cascade is requested to divert up to 2000 cfs into Lake Tapps in response to a predictable flood condition in the White River Valley. The forecast and request would have to be declared by the proper authorized agency after other flood preventative actions have taken place and when the lake is at a low lake level during it's wintertime condition.

I.4.d. A Force Majeure event where there is insufficient water flow in the White River to: (1) maintain the minimum Lake Tapps lake level and comply with the Minimum Flows of paragraph B.2 or, (2) provide sufficient water to support the fish biology in the White River. If this is a predictable event, then committee review should be authorized to review the fish biology and migration count vs. the flow of water required on a daily basis. If the biological conditions and/or fish count is above or below that which has been anticipated then the committee should be able to authorize a reallocation of water.

13

6. Forecast of Lake Level
The preliminary area of concern (for the Lake Tapps Community) is maintaining the lake above minimum level during the recreational period. A minimum amount of water flow, in the inlet canal, is required to counter the losses due to the fish screen diversion, outlet leakage, CWA water withdrawal, and normal lake losses. If there is insufficient water flow, in the inlet canal, to support these losses, then the lake level will go down. Attachment D is a study, which evaluates the water flow, in the inlet canal, for the month of August in 21 years (using data from the years 1978 through 1998). The first and second sheet (of attachment D) assumes that CWA does not with draw water from the lake. It concludes that in 6 out of 21 years (29%) there will not be sufficient water flow in the canal to keep the lake above the minimum level (541.0 ft. elev.). The third and fourth sheet (of the attachment D) assumes that CWA withdraws 90 cfs in August. It concludes that in 9 years out of 21 (43%) there will not be sufficient water flow in the canal. The fifth and sixth sheets (of attachment D) assume that CWA withdraws 117 cfs in August. It concludes that in 10 out of 21 years (48%) there will not be sufficient water flow in the canal. These numbers may be modified several different ways. If you are to assume that CWA will immediately stop withdrawing from the lake when the lake level gets down to the minimum recreational level then the study will revert back to the conditions of sheets one and two. If you were to add in the warming trend requirement, then you would be back to sheets three through six. The study is very flexible but it does indicate that for 21 years the situation can be critical in 29% to 48% of the years in the month of August. The model

produced by Aspect Consulting indicates: "Under the baseline, there will be sufficient water to maintain recreational levels from April 15 to September 30 in all years ---." Their model has three distinct differences in input values: (1) lake loss is much lower (28 vs. 65 cfs for Aug.), (2) the years evaluated are less (15 vs. 21) and, (3) the water flow used is 18 cfs higher (at gauge # 12098500).

14

7. Adaptive Management
   In the reference (a) agreement, it indicates that a Coordinating Committee be established. It prescribes the membership, the meeting conditions, mediation procedure, etc. In the reference (b) agreement it indicates that a Lake Management Team be established. In paragraph 22 of the reference (c) Report of Examination, it calls for an adaptive management procedure. "In the event that in-stream flow, recreational lake level, or municipal water supply objectives are not reliably met, Ecology shall consult with the permit holder to consider the reasons the objectives are not being met and identify possible changes in conformity with conditions of the water right." Additionally the stakeholder has proposed language, which ends: "--- beneficial uses may be altered and accordingly public interest considerations should be subject to re-evaluation." All of which indicates that all parties have recognized the need for future coordination and decision-making requirements.

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8. Decision Flow Time
   Reference has been made to "Judicial Review" and referring items back to the responsible parties for further review and proposals for resolution. Both of these indicate extended flow times, which would not be reasonable in many situations. Estimates of river flow can be very marginal and not very reliable when dependant on short-term weather predictions and the many variables involved. To provide timely resolution, the adaptive management committee (referred to above) should have authorization to act, within reasonable time and value limits.

Conclusions and Recommendations:

1. Investigations and Forecasting
   CWA should be tasked to:
   (a) Further investigate lake loss for Lake Tapps. Accurate instrumentation should be provided to record critical inlet and outlet water flow data, which has a bearing on calculating lake loss for Lake Tapps. Other data, regarding weather, runoff, etc., that may affect lake loss, should be recorded on a timely basis.

Data should then be correlated to analytical data and reasonable conclusions drawn.

(b) Further investigate the warming trend and add a factor to all forecasting.

(c) Provide annual forecasting for Lake Tapps. The frequency and detail of the forecasts should be dependant on the conditions derived for that particular year. A dry year would require more attention than a year with ample snow and moisture.

2. Adaptive Management
   CWA/Tribes/Others should be tasked to form a committee as recommended in reference (a) and (b). This committee should have authorization to resolve those issues, described above, in a timely fashion (paragraph 8 above). This committee should have the expertise and management capabilities to make decisions within reasonable limits, without having to negotiate with higher management.

3. Flood Control
   As previously mentioned, flood control is beyond the realm of this application; however, there are direct relationships, which should be addressed. The Core of Engineers should be requested to investigate the possibility of a Lake Tapps diversion of 2000 cfs. The communities, within the flood boundaries of the White River, should be very interested in this proposal.

Qualifications:

The undersigned graduated from the University of Washington with a Bachelor of Science Degree in Civil Engineering in 1953. I was a design engineer and a manager of design organizations within Boeing for 37 years. In 1999, I joined forces with several others in an attempt to resolve the Lake Tapps issues. I was a member of the Lake Tapps Task Force and two of it's committees, the Biology Committee and the Economics and Option Committee. I have been a member of the Save Lake Tapps Coalition and the Lake Tapps Community Council. In all of those involvements I have conducted a multitude of studies involving Lake Tapps and the White River.

Kenneth W. Castile
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P.S. My wife and I are presently on an RV vacation and will not return to our Lake Tapps home until June 3. If there is a need to reach me before that, I keep close tract of my email, when we are on the road, and we have two cell phones, (253) 334-5203 and (253) 740-6434.

Attachment A: State Dept. of Ecology Report of Examination, application #S2-29920(A)
Attachment B: A Curve of Lake Tapps Loss vs. Mid June thru Sept. (4 yrs.)
Attachment C: A Satellite Image of Extension Lake by MapQuest
Attachment D: Lake Tapps Diversion Flow Data, 6 sheets

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Attachment A of Kenneth W. Castile's comments (Ecology's 2010 DROE, Application S2-29920(A)) can be accessed online via the following link, and is not reproduced here:

https://fortress.wa.gov/ecy/wrx/wrx/fsvr/ecylcyfsvrxfile/WaterRights/ScanToWRTS/hq4/06117315.pdf

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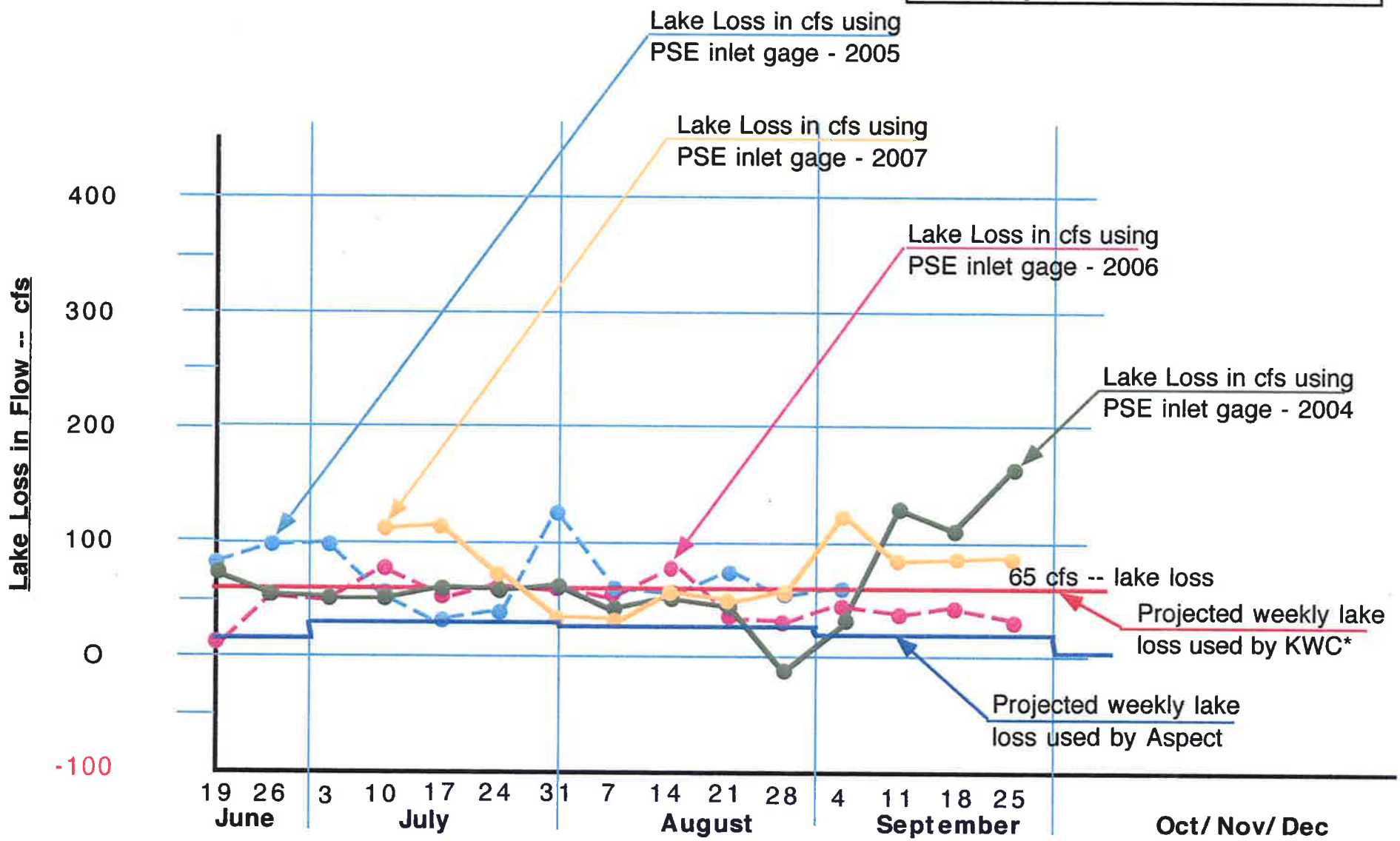
Lake Tapps Lake Loss (avg. weekly) Actual & Projected vs. Mid June thru Sept. (4 yrs)

Calculations used the difference between PSE inlet gauge** and outlet gauge #12101100 then corrected for lake level changes.



* Originally obtained from PSE (Bob Barnes) & later derived by averaging

**less flow from fish screens to White River

KWC 3/10/09
Rev. 5/17/10

Attachment B

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MAPQUEST.

Map of Lake Tapps, WA

Notes

This was known as "Extension Lake." PSE could not get it to hold water to a level which would match Lake Tapps.

← Lake Tapps

Extension Lake

Attachment C

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Lake Tapps Computation Inputs (in cfs) for Zero WR Withdraw

Date/any Yr		Lake Tapps Lake Level Computation Inputs (in cfs)					
From	To	WR Min Flo	Fish Screen	Lake Loss	CWA Draw	Outlet Leak	Total Lk Out
31-Dec	13-Jan	650	30	65	0	5	100
14-Jan	30-Jan	525	30	65	0	5	100
31-Jan	13-Feb	550	30	65	0	5	100
14-Feb	End of Feb	500	30	65	0	5	100
28-Feb	13-Mar	550	30	65	0	5	100
14-Mar	30-Mar	725	30	65	0	5	100
31-Mar	13-Apr	775	30	65	0	5	100
14-Apr	29-Apr	825	30	65	0	5	100
30-Apr	30-May	875	30	65	0	5	100
31-May	29-Jun	800	30	65	0	5	100
30-Jun	22-Jul	800	30	65	0	5	100
23-Jul	30-Jul	650	30	65	0	5	100
31-Jul	5-Aug	650	30	65	0	5	100
6-Aug	30-Aug	500	30	65	0	5	100
31-Aug	29-Sep	500	30	65	0	5	100
30-Sep	30-Oct	500	30	65	0	5	100
31-Oct	13-Nov	500	30	65	0	5	100
14-Nov	29-Nov	550	30	65	0	5	100
30-Nov	13-Dec	550	30	65	0	5	100
14-Dec	30-Dec	600	30	65	0	5	100
			Average CWA Draw/yr		0		

Area of Concern

The above are the listed inputs (in cfs) for the lake input analysis for 20+ years

* The old outlet leakage has been a much higher number than that which is shown. This number is using an input from CWA & adding a factor.

** Ltr M.A. Gagliardo (CWA) to T. Loranger (State of WA) dated Aug. 12, 2008

***Assumes that CWA does not draw water from Lake Tapps in Aug.

****The lake losses used are those derived for the Community Council by Castile and match the losses used by PSE in earlier model exercises

WR Min Flo
is that minimum flow which will be allowed to protect the the fish runs on the White River (Tribal Agreement**)

Fish Screen
Is that amount of water which is diverted from the inlet to provide for the fish which are diverted back to the river by the fish screens****

Lake Loss
is the total amount of water lost to evaporation, leakage and stream outflow from the lake****

CWA Draw
is the total amount of water withdrawn from the lake by Cascade Water Alliance***

Outlet Leak
is the total amount of water which leaks through the old power station to the outlet*

Total Lk Out
The sum of Fish Screen, Lake Loss, CWA Draw & Outlet Leak

KWC

Attachment D Sheet 1

White River Flow Data (Station No. 12098500)

WATER AVAILABLE FOR DIVERSION

Assumes 5 cfs outlet leakage from the lake.

Divert Flow = **715** Tribe flows (Aug 1 - 6) = **650** 10%

Divert Flow = **550** Tribe flows (Aug 7 & on) = **500** 10%

(add gage tol.) (Gage Tol.)

Ave. CFS = 338

Assume the lake demand as: zero cfs (WR), 95 cfs (lake + fish screen) then any demand under100 cfs will lower lake level.

Flow under 100 cfs printed in red

Aug.	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
1	485	885	165	119	106	535	146	295	365	0	192	0	50	161	655	675	565	115	215	143	71
2	385	855	135	154	123	545	112	295	252	0	131	0	127	164	635	615	60	110	183	59	167
3	325	845	85	163	191	565	39	305	229	0	118	0	189	157	565	535	295	100	158	0	203
4	365	885	31	172	175	555	34	325	259	0	140	33	132	154	465	505	243	85	121	0	375
5	465	915	52	156	138	525	23	315	278	0	162	41	79	153	435	465	0	75	80	0	285
6	465	1,065	5	125	46	465	23	345	285	35	108	15	73	425	345	475	445	120	0	0	179
7	444	1,200	164	510	196	560	249	560	403	254	215	181	291	1,040	438	630	420	346	181	142	332
8	333	970	206	396	195	480	132	550	385	248	221	234	323	850	460	640	560	406	228	159	356
9	312	890	271	230	158	419	38	530	393	194	257	328	328	630	550	660	580	500	207	148	392
10	327	870	283	215	151	382	89	349	408	144	271	305	310	530	590	640	500	520	266	182	398
11	346	860	337	186	196	342	167	249	480	98	0	182	264	173	560	650	396	480	299	212	362
12	369	880	274	160	227	330	244	238	470	87	0	132	241	207	560	550	295	448	319	194	344
13	417	890	219	126	237	324	307	232	480	72	269	189	255	600	420	520	305	400	295	212	374
14	460	890	250	114	242	288	298	222	398	74	277	158	271	330	340	520	350	436	262	212	230
15	414	940	244	126	221	239	199	275	295	37	262	79	227	330	305	520	275	470	183	170	680
16	265	860	199	109	170	254	125	330	218	0	242	42	188	300	315	430	240	450	177	218	560
17	168	760	141	178	139	245	168	352	205	3	264	32	144	160	366	380	235	394	162	266	236
18	108	710	86	125	144	267	212	341	260	60	148	33	147	104	330	345	230	322	259	188	205
19	89	650	54	76	145	260	155	335	198	102	146	47	165	334	255	310	245	310	88	153	175
20	118	630	59	75	86	277	78	280	260	101	139	67	160	198	205	280	340	265	111	148	120
21	188	620	34	76	62	246	51	248	460	208	116	0	160	69	205	270	420	170	62	194	145
22	221	580	34	83	0	197	0	313	437	219	111	0	156	26	240	260	355	135	76	236	200
23	209	570	13	83	0	224	0	196	261	184	148	0	134	0	245	285	290	155	109	142	180
24	146	570	0	61	0	216	0	120	188	76	186	480	112	0	185	260	265	220	423	65	326
25	115	500	0	54	0	228	0	52	162	32	198	59	120	0	140	235	265	155	65	60	356
26	101	510	0	45	23	173	0	19	100	20	201	89	165	0	145	215	270	62	58	76	170
27	89	530	25	15	0	168	0	35	80	29	223	66	241	434	230	205	225	30	183	164	110
28	102	436	870	20	13	160	0	217	88	4	223	91	332	620	250	235	180	6	41	131	55
29	144	377	218	25	0	133	0	358	150	0	230	67	309	67	160	305	140	50	0	126	55
30	146	340	236	20	0	139	0	375	289	5	164	83	195	110	150	540	125	110	0	142	140
31	127	320	144	0	0	134	0	243	208	0	121	0	126	14	130	530	78	54	232	109	308
Avg	**266**	**736**	**156**	**129**	**109**	**319**	**93**	**287**	**289**	**74**	**177**	**98**	**194**	**269**	**351**	**441**	**297**	**242**	**163**	**137**	**261**
Max	485	1,200	870	510	242	565	307	560	480	254	277	480	332	1,040	655	675	580	520	423	266	680
Min	89	320	0	0	0	133	0	19	80	0	0	0	50	0	130	205	0	6	0	0	55
SFD	8,248	22,803	4,834	3,997	3,384	9,875	2,889	8,899	8,944	2,286	5,483	3,033	6,014	8,340	10,874	13,685	9,192	7,499	5,043	4,251	8,089

6 yrs. in 21 years (29 %) will lower the lake level for an extended period in Aug.

Attachment D sheet 2

Lake Tapps Computation Inputs (in cfs) for Nom. WR Withdraw

Date/any Yr		Lake Tapps Lake Level Computation Inputs (in cfs)					
From	To	WR Min Flo	Fish Screen	Lake Loss	CWA Draw	Outlet Leak	Total Lk Out
31-Dec	13-Jan	650	30	65	0	5	100
14-Jan	30-Jan	525	30	65	0	5	100
31-Jan	13-Feb	550	30	65	0	5	100
14-Feb	End of Feb	500	30	65	0	5	100
28-Feb	13-Mar	550	30	65	0	5	100
14-Mar	30-Mar	725	30	65	0	5	100
31-Mar	13-Apr	775	30	65	0	5	100
14-Apr	29-Apr	825	30	65	0	5	100
30-Apr	30-May	875	30	65	0	5	100
31-May	29-Jun	800	30	65	0	5	100
30-Jun	22-Jul	800	30	65	0	5	100
23-Jul	30-Jul	650	30	65	0	5	100
31-Jul	5-Aug	650	30	65	90	5	190
6-Aug	30-Aug	500	30	65	90	5	190
31-Aug	29-Sep	500	30	65	90	5	190
30-Sep	30-Oct	500	30	65	0	5	100
31-Oct	13-Nov	500	30	65	0	5	100
14-Nov	29-Nov	550	30	65	0	5	100
30-Nov	13-Dec	550	30	65	0	5	100
14-Dec	30-Dec	600	30	65	0	5	100
			Average CWA Draw/yr		13.5		

Area of Concern

The above are the listed inputs (in cfs) for the lake input analysis for 20+ years

* The old outlet leakage has been a much higher number than that which is shown. This number is using an input from CWA & adding a factor.

** Ltr M.A. Gagliardo (CWA) to T. Loranger (State of WA) dated Aug. 12, 2008

***Assumes that CWA draws water at a nom. rate from Lake Tapps in Aug.

****The lake losses used are those derived for the Community Council by Castile and match the losses used by PSE in earlier model exercises

WR Min Flo
is that minimum flow which will be allowed to protect the the fish runs on the White River (Tribal Agreement**)

Fish Screen
Is that amount of water which is diverted from the inlet to provide for the fish which are diverted back to the river by the fish screens****

Lake Loss
is the total amount of water lost to evaporation, leakage and stream outflow from the lake****

CWA Draw
is the total amount of water withdrawn from the lake by Cascade Water Alliance***

Outlet Leak
is the total amount of water which leaks through the old power station to the outlet*

Total Lk Out
The sum of Fish Screen, Lake Loss, CWA Draw & Outlet Leak

KWC

Attachment D sheet 3

White River Flow Data (Station No. 12098500)

WATER AVAILABLE FOR DIVERSION

Assumes 5 cfs outlet leakage from the lake.

Divert Flow = **715** Tribe flows (Aug 1 - 6) = **650** 10%

Ave. CFS = 338

Divert Flow = **550** Tribe flows (Aug 7 & on) = **500** 10%

Assume the lake demand as: 90 cfs (WR), 95 cfs (lake + fish screen) then any demand under190 cfs will lower lake level.

(add gage tol.) (Gage Tol.)

Flow under190 cfs printed in red

Aug.	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
1	485	885	165	119	106	535	146	295	365	0	192	0	50	161	655	675	565	115	215	143	71
2	385	855	135	154	123	545	112	295	252	0	131	0	127	164	635	615	60	110	183	59	167
3	325	845	85	163	191	565	39	305	229	0	118	0	189	157	565	535	295	100	158	0	203
4	365	885	31	172	175	555	34	325	259	0	140	33	132	154	465	505	243	85	121	0	375
5	465	915	52	156	138	525	23	315	278	0	162	41	79	153	435	465	0	75	80	0	285
6	465	1,065	5	125	46	465	23	345	285	35	108	15	73	425	345	475	445	120	0	0	179
7	444	1,200	164	510	196	560	249	560	403	254	215	181	291	1,040	438	630	420	346	161	142	332
8	333	970	206	396	195	480	132	550	385	248	221	234	323	850	460	640	560	406	228	159	356
9	312	890	271	230	158	419	38	530	393	194	257	328	328	630	550	660	580	500	207	148	392
10	327	870	283	215	151	382	89	349	408	144	271	305	310	530	590	640	500	520	266	182	398
11	346	860	337	186	196	342	167	249	480	98	0	182	264	173	560	650	396	480	299	212	362
12	369	880	274	160	227	330	244	238	470	87	0	132	241	207	560	550	295	448	319	194	344
13	417	890	219	126	237	324	307	232	480	72	269	189	255	600	420	520	305	400	295	212	374
14	460	890	250	114	242	288	298	222	398	74	277	158	271	330	340	520	350	436	262	212	230
15	414	940	244	126	221	239	199	275	295	37	262	79	227	330	305	520	275	470	183	170	680
16	265	860	199	109	170	254	125	330	218	0	242	42	188	300	315	430	240	450	177	218	560
17	168	760	141	178	139	245	168	352	205	3	264	32	144	160	366	380	235	394	162	266	236
18	108	710	86	125	144	267	212	341	260	60	148	33	147	104	330	345	230	322	259	188	205
19	89	650	54	76	145	260	155	335	198	102	146	47	165	334	255	310	245	310	88	153	175
20	118	630	59	75	86	277	78	280	260	101	139	67	160	198	205	280	340	265	111	148	120
21	188	620	34	76	62	246	51	248	460	208	116	0	160	69	205	270	420	170	62	194	145
22	221	580	34	83	0	197	0	313	437	219	111	0	156	26	240	260	355	135	76	236	200
23	209	570	13	83	0	224	0	196	261	184	148	0	134	0	245	285	290	155	109	142	180
24	146	570	0	61	0	216	0	120	188	76	186	480	112	0	185	260	265	220	423	65	326
25	115	500	0	54	0	228	0	52	162	32	198	59	120	0	140	235	265	155	65	60	356
26	101	510	0	45	23	173	0	19	100	20	201	89	165	0	145	215	270	62	58	76	170
27	89	530	25	15	0	168	0	35	80	29	223	66	241	434	230	205	225	30	183	164	110
28	102	436	870	20	13	160	0	217	88	4	223	9	332	620	250	235	180	6	41	131	55
29	144	377	218	25	0	133	0	358	150	0	230	67	309	67	160	305	140	50	0	126	55
30	146	340	236	20	0	139	0	375	289	5	164	83	195	110	150	540	125	110	0	142	140
31	127	320	144	0	0	134	0	243	208	0	121	0	126	14	130	530	78	54	232	109	308
Avg	**266**	**736**	**156**	**129**	**109**	**319**	**93**	**287**	**289**	**74**	**177**	**98**	**194**	**269**	**351**	**441**	**297**	**242**	**163**	**137**	**261**
Max	485	1,200	870	510	242	565	307	560	480	254	277	480	332	1,040	655	675	580	520	423	266	680
Min	89	320	0	0	0	133	0	19	80	0	0	0	50	0	130	205	0	6	0	0	55
SFD	8,248	22,803	4,834	3,997	3,384	9,875	2,889	8,899	8,944	2,286	5,483	3,033	6,014	8,340	10,874	13,685	9,192	7,499	5,043	4,251	8,089

9 yrs. in 21 years (43 %) will lower the lake level for an extended period in Aug.

Attachment D sheet 4

Lake Tapps Computation Inputs (in cfs) for Max. WR Withdraw

Date/any Yr		Lake Tapps Lake Level Computation Inputs (in cfs)					
From	To	WR Min Flo	Fish Screen	Lake Loss	CWA Draw	Outlet Leak	Total Lk Out
31-Dec	13-Jan	650	30	65	0	5	100
14-Jan	30-Jan	525	30	65	0	5	100
31-Jan	13-Feb	550	30	65	0	5	100
14-Feb	End of Feb	500	30	65	0	5	100
28-Feb	13-Mar	550	30	65	0	5	100
14-Mar	30-Mar	725	30	65	0	5	100
31-Mar	13-Apr	775	30	65	0	5	100
14-Apr	29-Apr	825	30	65	0	5	100
30-Apr	30-May	875	30	65	0	5	100
31-May	29-Jun	800	30	65	0	5	100
30-Jun	22-Jul	800	30	65	0	5	100
23-Jul	30-Jul	650	30	65	0	5	100
31-Jul	5-Aug	650	30	65	117	5	217
6-Aug	30-Aug	500	30	65	117	5	217
31-Aug	29-Sep	500	30	65	117	5	217
30-Sep	30-Oct	500	30	65	0	5	100
31-Oct	13-Nov	500	30	65	0	5	100
14-Nov	29-Nov	550	30	65	0	5	100
30-Nov	13-Dec	550	30	65	0	5	100
14-Dec	30-Dec	600	30	65	0	5	100
			Average CWA Draw/yr		17.55		

The above are the listed inputs (in cfs) for the lake input analysis for 20+ years

* The old outlet leakage has been a much higher number than that which is shown. This number is using an input from CWA & adding a factor.

** Ltr M.A. Gagliardo (CWA) to T. Loranger (State of WA) dated Aug. 12, 2008

***Assumes that CWA draws water at a max. rate from Lake Tapps in Aug.

****The lake losses used are those derived for the Community Council by Castile and match the losses used by PSE in earlier model exercises

Area of Concern

WR Min Flo
is that minimum flow which will be allowed to protect the the fish runs on the White River (Tribal Agreement**)

Fish Screen
Is that amount of water which is diverted from the inlet to provide for the fish which are diverted back to the river by the fish screens****

Lake Loss
is the total amount of water lost to evaporation, leakage and stream outflow from the lake****

CWA Draw
is the total amount of water withdrawn from the lake by Cascade Water Alliance***

Outlet Leak
is the total amount of water which leaks through the old power station to the outlet*

Total Lk Out
The sum of Fish Screen, Lake Loss, CWA Draw & Outlet Leak

KWC

Attachment Packet 5

White River Flow Data (Station No. 12098500)

WATER AVAILABLE FOR DIVERSION — Assumes 5 cfs outlet leakage from the lake.

Divert Flow = **715** Tribe flows (Aug 1 - 6) = **650** 10% — **Ave. CFS = 338**

Divert Flow = **550** Tribe flows (Aug 7 & on) = **500** 10%

(add gage tol.) (Gage Tol.)

Assume the lake demand as: 117 cfs (WR), 95 cfs (lake + fish screen) then any demand under 217 cfs will lower lake level.

Flow under 217 cfs printed in red

Aug.	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
1	485	885	165	119	106	535	146	295	365	0	192	0	50	161	655	675	565	115	215	143	71
2	385	855	135	154	123	545	112	295	252	0	131	0	127	164	635	615	60	110	183	59	167
3	325	845	85	163	191	565	39	305	229	0	118	0	189	157	565	535	295	100	158	0	203
4	365	885	31	172	175	555	34	325	259	0	140	33	132	154	465	505	243	85	121	0	375
5	465	915	52	156	138	525	23	315	278	0	162	41	79	153	435	465	0	75	80	0	285
6	465	1,065	5	125	46	465	23	345	285	35	108	15	73	425	345	475	445	120	0	0	179
7	444	1,200	164	510	196	560	249	560	403	254	215	181	291	1,040	438	630	420	346	181	142	332
8	333	970	206	396	195	480	132	550	385	248	221	234	323	850	460	640	560	406	228	159	356
9	312	890	271	230	158	419	38	530	393	194	257	328	328	630	550	660	580	500	207	148	392
10	327	870	283	215	151	382	89	349	408	144	271	305	310	530	590	640	500	520	266	182	398
11	346	860	337	186	196	342	167	249	480	98	0	182	264	173	560	650	396	480	299	212	362
12	369	880	274	160	227	330	244	238	470	87	0	132	241	207	560	550	295	448	319	194	344
13	417	890	219	126	237	324	307	232	480	72	269	189	255	600	420	520	305	400	295	212	374
14	460	890	250	114	242	288	298	222	398	74	277	158	271	330	340	520	350	436	262	212	230
15	414	940	244	126	221	239	199	275	295	37	262	79	227	330	305	520	275	470	183	170	680
16	265	860	199	109	170	254	125	330	218	0	242	42	188	300	315	430	240	450	177	218	560
17	168	760	141	178	139	245	168	352	205	3	264	32	144	160	366	380	235	394	162	266	236
18	108	710	86	125	144	267	212	341	260	60	148	33	147	104	330	345	230	322	259	188	205
19	89	650	54	76	145	260	155	335	198	102	146	47	165	334	255	310	245	310	88	153	175
20	118	630	59	75	86	277	78	280	260	101	139	67	160	198	205	280	340	265	111	148	120
21	188	620	34	76	62	246	51	248	460	208	116	0	160	69	205	270	420	170	62	194	145
22	221	580	34	83	0	197	0	313	437	219	111	0	156	26	240	260	355	135	76	236	200
23	209	570	13	83	0	224	0	196	261	184	148	0	134	0	245	285	290	155	109	142	180
24	146	570	0	61	0	216	0	120	188	76	186	480	112	0	185	260	265	220	423	65	326
25	115	500	0	54	0	228	0	52	162	32	198	59	120	0	140	235	265	155	65	60	356
26	101	510	0	45	23	173	0	19	100	20	201	89	165	0	145	215	270	62	58	76	170
27	89	530	25	15	0	168	0	35	80	29	223	66	241	434	230	205	225	30	183	164	110
28	102	436	870	20	13	160	0	217	88	4	223	91	332	620	250	235	180	6	41	131	55
29	144	377	218	25	0	133	0	358	150	0	230	67	309	67	160	305	140	50	0	126	55
30	146	340	236	20	0	139	0	375	289	5	164	83	195	110	150	540	125	110	0	142	140
31	127	320	144	0	0	134	0	243	208	0	121	0	126	14	130	530	78	54	232	109	308
Avg	**266**	**736**	**156**	**129**	**109**	**319**	**93**	**287**	**289**	**74**	**177**	**98**	**194**	**269**	**351**	**441**	**297**	**242**	**163**	**137**	**261**
Max	485	1,200	870	510	242	565	307	560	480	254	277	480	332	1,040	655	675	580	520	423	266	680
Min	89	320	0	0	0	133	0	19	80	0	0	0	50	0	130	205	0	6	0	0	55
SFD	8,248	22,803	4,834	3,997	3,384	9,875	2,889	8,899	8,944	2,286	5,483	3,033	6,014	8,340	10,874	13,685	9,192	7,499	5,043	4,251	8,089

10 yrs. in 21 years (48 %) will lower the lake level for an extended period in Aug.

Attachment D Sheet 6

Responses to Comments from Kenneth W. Castile

Response to Comment No. 8

No changes were made to the EIS in response to this comment.

A comprehensive analysis of the White River and Lake Tapps Reservoir system was performed by Aspect Consulting, Inc. This analysis assessed the key hydrologic processes affecting Lake Tapps Reservoir using the best science and data available. It included the canal inflow, tailrace release, and the proposed water supply withdrawal, as well as smaller gains and losses from the lake. Specifically, Aspect's model and analysis included the following lake loss factors:

1. Precipitation

2. Evaporation

3. Storm water inflows

4. Seepage to groundwater

5. Seepage through the dikes

6. Releases from Lake Tapps Reservoir to Bowman Creek

A presentation of the analysis of lake loss factors was provided by Aspect during multiple half-day workshops with various stakeholders (one of which was the Lake Tapps Community Council) conducted as part of Cascade's overall SEPA outreach process. Representatives of the Washington State Department of Ecology, Cascade Water Alliance, and HDR Engineering also participated in the workshops. Where appropriate, the analysis was refined based on these discussions for use in performing the final model runs that form the technical basis for the Draft EIS.

Approximately eight half-day workshops were held during January through March 2009. The express purpose of these workshops was to have an open dialogue regarding the White River–Lake Tapps system, the overall approach used to model this complex hydrologic system, the numerical model that was used to model the system, and the various lake loss factors (and other assumptions and data) contained within the numerical model. Through these workshops a common understanding of the hydrologic system, the modeling approach, the numerical model, and lake loss factors was achieved. These workshops and analysis supported the negotiation of the 2009 Agreement and the drafting of the Draft EIS.

Aspect then ran the system model for the various project alternatives and scenarios. The results of these runs are contained in the report titled *Water Quantity and Water Quality Analyses for the Lake Tapps Water Rights Applications,* prepared for the Washington State Department of Ecology by Aspect Consulting, Inc. (draft report dated December 31, 2009, and final report dated May 5, 2010). Section 3.2.1.4, Local Losses and Gains in Lake Tapps, of Aspect's final report provides a comprehensive and detailed discussion of how Aspect assessed and established values for the various lake loss factors used in the model.

Response to Comment No. 9

No changes were made to the EIS in response to this comment.

Cascade concurs with the author of this comment letter that in light of future uncertainties associated with global climate change, "It would be wise for Cascade to incorporate adaptive management measures into the project to allow for adaptation to the potential impacts of climate change." Section 12.3 of the Draft EIS describes potential elements of an adaptive management process.

Additionally, the 2010 DROE for the Lake Tapps Reservoir Water Rights and Supply Project prepared by Ecology contains 22 provisions and conditions relating to adaptive management.

Response to Comment No. 10

No changes were made to the EIS in response to this comment. Comment noted..

Response to Comment No. 11

No changes were made to the EIS in response to this comment.

Authority for flood control on the White River has been and remains the exclusive responsibility of the U.S. Army Corps of Engineers as authorized by the U.S. Congress. Cascade has no authority to provide flood control for the White River by means of changing the operation of the Project. Further, the Project was not planned, designed, or constructed to be a flood conveyance or flood storage project. It is not possible for Cascade to convert the Project into a flood control facility from a regulatory, operational, and practical basis.

Response to Comment No. 12

No changes were made to the EIS in response to this comment.

The comment refers to the Force Majeure provision contained in the White River Management Agreement, dated August 6, 2008, among Cascade, the Puyallup Tribe of

Indians, and the Muckleshoot Indian Tribe. This provision is one provision of a complex settlement; it is not appropriate to change this provision.

Response to Comment No. 13

No changes were made to the EIS in response to this comment.

Cascade is confident in its ability to achieve this based on the extensive modeling performed by Ecology's consultant, Aspect Consulting. See the response to Comment No. 8.

Response to Comment No. 14

No changes were made to the EIS in response to this comment.

See the response to Comment No. 6.

Response to Comment No. 15

No changes were made to the EIS in response to this comment.

The comment refers to the Judicial Review provision contained in the White River Management Agreement, dated August 6, 2008, among Cascade, the Puyallup Tribe of Indians, and the Muckleshoot Indian Tribe. This provision is one provision regarding the enforcement of a complex settlement; it is not appropriate to change this provision.

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Linda Moreno

From: Renay Bennett [renaybennett@msn.com]
Sent: Tuesday, March 16, 2010 9:59 AM
To: Contact
Subject: Comments on the DEIS

I am extremely concerned about the water safety of Lake Tapps for drinking and personal use purposes.

There are many human pharmaceuticals in the lake and will make their way to our drinking water and no long term study on what they will do to us.

16 The vast majority of homes on Lake Tapps use septic systems - with drainfields that go directly into the lake.

How can anyone think that this water supply will be a "safe, high quality" source for us to drink?

Please don't approve this project. Our health depends on it!
Renay Bennett

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Response to Comments from Renay Bennett

Response to Comment No. 16

No changes were made to the EIS in response to this comment.

When you compare the waters of Lake Tapps Reservoir to other source waters used for water supply across the United States of America, the waters of Lake Tapps are of a high and acceptable quality. Once treated through a state-of-the-art water treatment plant yet to be designed and built, the potable water produced by the plant will meet or exceed all federal drinking water requirements as regulated by the U.S. Environmental Protection Agency (USEPA). Under the Safe Drinking Water Act (SDWA), USEPA sets legal limits on the levels of certain contaminants in drinking water. The legal limits reflect both the level that protects human health and the level that water systems can achieve using the best available technology. Besides prescribing these legal limits, USEPA rules set water-testing schedules and methods that water systems must follow. Cascade remains confident that the waters of Lake Tapps will be safe and of high quality when placed into service at some future date.

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Linda Moreno

From: Chris Mantell [cmntl@yahoo.com]
Sent: Monday, March 15, 2010 10:16 AM
To: Contact
Subject: Lake Tapps

17 I am concerned about the water quality in a lake that is used for power boating. I am also concerned about fertilizer, chemical run off, storm drain run off, and septic systems nearby flowing into the storage area for our drinking water.
Chris Mantell
Bellevue

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Response to Comments from Chris Mantell

Response to Comment No. 17

No changes were made to the EIS in response to this comment.

See the response to Comment No. 16.

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Michael Gagliardo

From: Chris Paulucci on behalf of Contact
Sent: Friday, April 09, 2010 8:21 AM
To: Michael Gagliardo
Cc: Linda Moreno
Subject: FW: Lake Tapps Draft EIS Comments
Attachments: Lake Tapps Sewer Timeline SC.pdf

Importance: High

From: Dan Fishburn [mailto:dfishburn@q.com]
Sent: Thursday, April 08, 2010 4:28 PM
To: Contact
Cc: tlor461@ecy.wa.gov; cand461@ecy.wa.gov
Subject: Lake Tapps Draft EIS Comments
Importance: High

Attached are not my comments; rather they are comments, recommendations, warnings, from dozens of engineers, the Cities of Kent, Auburn, Bonney Lake, Seattle, Bellevue, King County, Pierce County, Tacoma-Pierce County Health Department, Washington State Department of Health, Washington State Department of Ecology, Washington State Pollution Control Board, Muckleshoot Indian Tribe, Puyallup Indian Tribe, FhA, Federal Economic Developmental Association and others about Lake Tapps can never be developed without sanitary sewers.

Turning a cesspool into drinking water will shock the conscience of Washingtonians---when they find out there are over 2,000 failed septic systems draining raw sewage into Lake Tapps daily.

If you have any questions, I may be reached at 206-604-7872.

Thanks you

Dan Fishburn
206-604-7872

Online Contact Form Submission:

Monday, March 1, 2010

First Name: Dan
Last Name: Fishburn
Email: dfishburn@q.com

Questions/Comments: How are you going to treat the water from a contaminated cesspool? There are over 2,000 houses with failed on site septic systems that drain into the lake daily!

In the MOW with Pierce County how can Pierce maintain water quality of the lake? The east side of the lake is not in an urban growth area and therefore it is illegal for Pierce to run sewers. The same is true for the West side of the lake. Although it is in the City of Bonney Lake's sewer coverage area, it is not in an Urban Growth Area and according to Pierce never will be. So how can Pierce do anything to improve water quality in the lake?

Since Cascade will not drain the lake annually what happens to all the contaminants? Last year the lake was choked with millfoil; excess nutrients from failed septic systems and to kill it temporarily the lake was again drained. How will Cascade avoid having the entire lake 303(d) listed from millfoil and algae?

18

The image of a father and son holding hands looking out over the water on this site is disturbing! Little does that father know that the water he is looking at and his son drank while in the womb or while nursing may have been the cause of his testicular cancer, pituitary gland cancer, low sperm count, obesity, diabetes, ADD, ADHD and the list goes on.....

How can Lake Tapps possibly become a source of public water?

What do you think is going to happen to Cascade and its members when the news of the contamination is above the fold front page news week after week after week.

I have spent 18 months going over 30,000 documents that demonstrate Lake Tapps is literally a cesspool. Now that you own the cesspool, at least for now, how will you deal with that?

19 Finally I am most disappointing Cascade paid the Puyallup's amost $9 million dollars and the Muckleshoot Indians almost $7 million to stop fighting for what was right and sign your agreement.

20 Speaking of fighting, I almost forgot, how will Cascade deal with the Municipal Water Right Law if the Washington State Supreme Court upholds the trial courts ruling? The speed in which DOE (who is opposed to turning Tapps into drinking water behind closed doors) issued (3) brand new water rights within 10 days of Governor Locke signing the bill into law. 10 days!

See Attachment 1 of this appendix for a document provided by Dan Fishburn.

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Responses to Comments from Dan Fishburn

Response to Comment No. 18

No changes were made to the EIS in response to this comment.

See the response to Comment No. 16.

Response to Comment No. 19

No changes were made to the EIS in response to this comment.

This comment refers to provisions of the Natural Resources Enhancement Agreement between the Puyallup Tribe of Indians and Cascade Water Alliance, dated August 6, 2008, and the Lake Tapps Reservoir Water Rights Settlement Agreement, dated August 6, 2008, in which Cascade agrees to fund implementation of fishery enhancement activities. These provisions are part of a complex settlement; it is not appropriate to change these provisions.

Response to Comment No. 20

No changes were made to the EIS in response to this comment.

This comment relates to the potential impact of litigation contesting certain parts of the 2003 Municipal Water Law (MWL). The litigation is currently pending decision at the State Supreme Court, *Lummi Indian Nation v. Dep't of Ecology* (No. 87809-6). A principal issue in that case is the legality of a provision regarding a class of water right certificates that Ecology issued in years past under a prior administrative policy. None of the Lake Tapps water rights is the type of water right certificate addressed by the MWL provision that is contested in the litigation. The water rights to be issued for Lake Tapps will be new permits for municipal water supply purposes that are not expected to be affected by the Supreme Court's decision in the MWL case.

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City of Seattle

Seattle Public Utilities
Ray Hoffman, Acting Director

April 30, 2010

RECEIVED
MAY 3 2010
CASCADE WATER ALLIANCE

Michael Gagliardo
Director of Planning
Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue WA 98004

Dear Michael,

We have reviewed the Draft Environmental Impact Statement (EIS) for the Lake Tapps Reservoir Water Rights and Supply Project prepared by the Cascade Water Alliance (Cascade). This EIS does a good job of reviewing alternative supply options for Cascade and clearly determines that Lake Tapps is the only single source of supply that offers sufficient certainty for development to meet Cascade's future growth. As such, I want to assure you that Seattle Public Utilities (SPU) is supportive of Cascade's goals in this future endeavor.

21 I would like to clarify the statement made on the second paragraph of page 3-11 that starts with "These cities are unwilling to provide additional water supply… ". This statement mischaracterizes the agreement entered into by Seattle and Cascade in 2004 and choices made by Cascade prior to that agreement. SPU offered Cascade the same full service and supply contract terms as our other wholesale customers throughout the negotiation process. Cascade, though, chose a contract term that limited supply in order to pursue an independent source of future supply.

Since Cascade made its decision to pursue Lake Tapps, SPU's long-term planning incorporated the reduction in demand associated with Cascade's gradual departure from our Seattle system. These changes to our demand forecast thereby extend our existing water supplies well into the future. It would be correct to say that SPU has, as such, relied on Cascade's intent to become independent in terms of our water supply extending further. I just want to be clear about the historical choices made leading to the basis for Lake Tapps now being the preferred alternative.

Again we wish Cascade success as it pursues the development of Lake Tapps as a source of drinking water supply for its members.

Sincerely,

Ray Hoffman
Acting Director, Seattle Public Utilities

ss:rh

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Response to Comments from Ray Hoffman, Seattle Public Utilities

Response to Comment No. 21

No changes were made to the EIS in response to this comment.

Cascade has proposed that, as a mitigation measure, it will seek to defer the development of Lake Tapps Reservoir as a regional municipal water supply to the extent that regional wholesale supplies are able to meet Cascade's forecast demands. Discussions with the major regional wholesale suppliers (Seattle and Tacoma) indicate that recent trends in water demand are resulting in these suppliers having supply that exceeds forecast demands further into the future than anticipated even just a few years ago. It is therefore practical and appropriate for Cascade to explore utilizing existing supplies (and infrastructure) to the fullest extent practicable before developing new supplies (i.e., the Project) and associated infrastructure. Cascade's water supply and transmission planning process is evaluating the option of additional wholesale purchases (both in amount and term) in addition to development of the Project based on the current wholesale contract terms.

Cascade's planning process continues to be based on Cascade's ultimate policy objective to develop an independent supply of water for its Members and the preferred alternative for that supply is Lake Tapps Reservoir. The planning process also acknowledges that the 2004 Block Contract (amended in 2008) with Seattle requires Cascade's gradual departure from the Seattle system.

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Michael Gagliardo

From: Monthie, Dave [Dave.Monthie@kingcounty.gov]
Sent: Friday, March 26, 2010 2:44 PM
To: Michael Gagliardo
Subject: Comments on Lake Tapps EIS

Thank you for the opportunity to comment on the January 29 draft Environmental Impact Statement for Cascade's Lake Tapps Reservoir Water Rights and Water Supply Project.

The document appears to be thorough and straightforward. We are pleased with the progress that Cascade has made over the past several years, particularly with tribal governments, local governments, and state and federal agencies, to address multiple resource management issues potentially associated with this project, and to move the project forward as part of a regional water strategy.

King County has the following brief comments on the draft EIS.

22 (1) King County has long had an interest in the disposition of the 2500 acres of land owned by Puget Sound Energy and held—per FERC requirements--as an important riparian wildlife corridor along the Reservation Reach of the White River. Roughly 1100 acres of this land is in King County. King County did a study several years ago with regard to the potential acquisition or preservation of the County's portion of the land. Given that PSE has sold its hydropower facility to PSE, and neither PSE nor Cascade is any longer pursuing a FERC license, the County has an interest in the plans for maintenance of this land—by either PSE or Cascade, or some other party--as a riparian corridor. We did not see this discussed in the draft EIS under either Earth impacts (chapter 4), or Plants and Wildlife impacts (chapter 8). This may have been addressed in another SEPA document. Could you discuss current plans for the 2500 acres, and the effect that the Lake Tapps project and/or the water right (which as we understand it will convert the existing hydropower right to a municipal water right, with other environmental purposes) on this riparian corridor? If already discussed in another environmental document, and there are no changes from that discussion, please provide a reference to the earlier document.

23 (2) We note with approval Cascade's inclusion of the studies from the University of Washington on the potential effects of climate change on the White River/Lake Tapps water supply project, including maintenance of instream flows for fish, in the discussion of Climate Change in Chapter 12. We support the inclusion of this analysis in the EIS, and would also support its inclusion in future Cascade water supply planning.

24 (3) King County has noted in previous comments on Cascade's Lake Tapps documents that as the planning for the Lake Tapps project moves forward, they should respect relevant planning processes prescribed in statute (e.g., the Public Water System Coordination Act, chapter 70.116 RCW), and the identification of reclaimed water as an alternative source of supply in Cascade's planning. We would like to note with appreciation Cascade's support for the regional water planning process initiated by King County in 2005, and the inclusion by Cascade of reclaimed water as a potential source of supply in both its initial Transmission and Supply Plan (TSP) and the current TSP update. We suggest including the potential use of reclaimed water in the future as a potential mitigation measure to be added in Chapter 1.4.

Thank you for the opportunity to provide these comments. Please feel free to contact me if you have any questions.

Dave Monthie
Regional Water Policy Analyst
206.296.3782
206.296.3749 (fax)
Note that my email address is now dave.monthie@kingcounty.gov

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Responses to Comments from Dave Monthie, King County

Response to Comment No. 22

No changes were made to the EIS in response to this comment.

As part of Cascade's Asset Purchase Agreement with Puget Sound Energy (Puget), Puget was required to arrange for the preservation of 500 acres of riparian corridor (owned by Puget) along the Reservation Reach of the White River. In the alternative, Puget could transfer title to this corridor to Cascade. Puget has recorded restrictive covenants on the land, ensuring that it will be preserved when it is sold.

Response to Comment No. 23

No changes were made to the EIS in response to this comment.

Cascade plans to incorporate global climate change into future water supply planning efforts conducted by Cascade.

Response to Comment No. 24

No changes were made to the EIS in response to this comment.

Cascade will seek to defer the development of Lake Tapps Reservoir as a municipal water supply to the extent that regional wholesale supplies are available to meet its forecast demands. The water supply and transmission planning process currently underway is evaluating options that could result in Cascade obtaining other supplies so that the development of Lake Tapps Reservoir can be deferred. The other supplies being considered include reclaimed water.

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To:- Michael A. Gagliardo, Director of Planning
Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, WA 98004

Subject:- Response to Lake Tapps Draft EIS Water Supply Project. Date:- March 15, 2010

Dear Mr Gagliardo,

In Section 1.2 of the Lake Tapps Draft EIS you state that the object of the project is to allow Cascade to provide" ... a cost- effective and in an economically responsive manner a safe, high quality municipal water supply that will ... meet the current and projected demands ... for short term use and long term use ..."

The United States 2000 Census on population and growth states in part as it relates to the City of Bellevue that "...when Bellevue reaches the extent of its Potential Annexation Area, population growth in the city will likely slow substantially ...and with only a small fraction of Bellevue's potential area left to be annexed the growth in the number of Bellevue residents is likely to slow substantially in the future...". 25

As you are aware Bellevue was the prime mover in establishing the Cascade Water Alliance and refused to allow its citizens the opportunity to bring the issue of the Water Alliance before it's citizens through the citys' Initiative process. It is therefore inappropriate for Bellevue citizens to bare a disproportionate portion of the cost and risk of developing this water supply (estimated at over $1 Billion dollars). In reviewing the foregoing United States Census information CWA appears not to be meeting the [future] projected demands in an economically responsive manner. This is apparent when one reads from the 2003 website of the HDR company that states in part:-

Because HDR had worked closely with PSE in the past they were aware of the organization's licensing challenge and because of direct involvement in water supply issues in the state HDR was also familiar with the goals of CWA. HDR approached PSE with the idea of using a percentage of the water diverted from the White River for a regional water supply. The vision was then carried to CWA, and a partnership was born.

To date, HDR has created a reconnaissance report for the project and has helped in the preparation of the state's water right application.

The HDR partnership is aware that Lake Tapps is a popular recreational lake surrounded by over 2,000 homes many on septic systems. The U.S. EPA is concerned in the increase in Pharmaceutical and Personal Care Products (PPCP's) in the environment and of the risk to human health. PPCP's are a class of substances that include prozac, viagra, birth control, clofibric acid, beta-blockers, antibiotics, analgesics and antiseptics. The U.S. EPA is in the process of studying the fate and transport of these compounds in the environment. While water treatment plants can remove some biodegradable pollutants, they cannot remove all synthetic pollutants or medications and is a reason why the City of Seattle has refused to allow Lake Tapps water into its water transmittion lines. 26

(continued)

The HDR partnership has failed to communicate with the public on the role the DOE plays in issuing the water rights for the project. Many citizens have the understanding that when the DOE issues the permit for the project the water is considered suitable for human consumption. The partnership further fails to acknowledge the lack of lake security and of its vulnerability from terrorist manipulation. In a recent e-mail to the undersigned the DOE states in part:-

> Hello Mr. Bidwell, Chris forwarded your e-mail to me. The Department of Ecology is the agency with authority to issue the water right for the project. We don't consider PPCP levels when we issue these rights. The State Department of Health has authority over contaminant levels in drinking water and enforces regulations regarding drinking water standards. I know there are regular water quality testing protocols enforced by the Department of Health for these large water supply projects.

And in an e-mail to the undersigned the Washington State Department of Health, Office of Drinking Water states in part:-

> Dear Mr. Bidwell,
>
> I have attached a list of the surface water sources that are used in the NW region of the state. The document indicates the relative risk of the activities that occur in the various watersheds. Please note that the cities of Anacortes (Skagit River), Arlington (Stillaquamish River), Marysville (Stillaquamish River), Lynden (Nooksack River), and Ferndale (Nooksack River)have surface water supplies from watersheds that have been characterized as high risk. In addition the City of Bellingham obtains its drinking water from Lake Whatcom which has a moderate ranking.

With a follow up e-mail the Washington State Department of Health, Office of Drinking Water indicates a water quality risk of 15 to 19 :-

> Dear Mr. Bidwell,
>
> We haven't rated it yet but I would expect the score could be as low as 15 or as high as 19 depending upon the quality of the water that enters the treatment plant.

The HDR partnership should inform the end user community that the future water supply will be inferior to the existing pristine water supply from the Tolt and Cedar rivers as purchased through the City of Seattle. The partnership should also explain why the City of Mercer Island refused to participate as a CWA member and instead has made plans to purchase water under a 60 year lease with the City of Seattle.

27

For the CWA to claim that it will deliver a cost-effective and in an economically responsive manner a safe, high quality municipal water supply is not evident by the facts. The CWA should abandon its attempt to produce an inferior drinking water product from Lake Tapps at high risk and cost and instead participate in a long term agreement with a quality, economically and safe predictable water supplier.

Sincerely

Geoffrey J. Bidwell

Geoffrey J. Bidwell
1600 109th Ave S.E.,
Bellevue, WA 98004

Responses to Comments from Geoffrey J. Bidwell

Response to Comment No. 25

No changes were made to the EIS in response to this comment.

Cascade is currently in the process of updating its 2004 Transmission and Supply Plan. In doing so, Cascade evaluated over 20 alternative supply sources, examining all aspects of each source, including quality and cost. This evaluation process concluded that Lake Tapps Reservoir was the preferred option for providing a long-term, safe, reliable, and high quality source of supply for Cascade Members. As part of the planning process, Cascade also conducted a detailed demand forecast for the period 2010 – 2050, which included an analysis of potential impacts of climate change. Based on this demand forecast, Cascade reduced the maximum annual amount of water requested for diversion from the White River by 25%. These activities are more fully discussed in Section 3.4 of the Draft EIS.

Response to Comment No. 26

No changes were made to the EIS in response to this comment.

See the response to Comment No. 16.

Response to Comment No. 27

No changes were made to the EIS in response to this comment.

See the responses to Comment Nos. 16 and 25.

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Attachment 1

Document provided by Dan Fishburn.

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Decades of turning a blind eye to the health hazards at Lake Tapps

A timeline of the expanding septic disaster in and around the lake

> *Bonney Lake's sewer system has a history that is convoluted, contentious and colorful. It includes tales of political fratricide and financial brinksmanship. ~ City of Bonney Lake*

1911 Lake Tapps is created by raising of four small pre-existing lakes--Church, Kirtley, Tapps and Crawford to create one large storage reservoir to produce hydroelectric power.

1939-1942 U.S. Geological Survey maps the western third of the Lake Tapps quadrangle.

1953-1957 U.S. Geological Survey completed Geologic mapping of the Lake Tapps quadrangle.

1963 The U.S. Geological Survey Publishes a Geological Survey Professional Paper 388-A entitled "Surficial Geology and Geomorphology of the Lake Tapps Quadrangle Washington. Finds two geological formations around Lake Tapps that limits its development without sewers. The two geological formations surrounding Lake Tapps are the Vashon Drift that is: "Till in the Vashon drift is a very compact unsorted and unstratified concrete like mixture." The second is the Osceola mudflow that is characterized as "the mudflow are very poorly drained, owing to its fine-grained, nearly impermeable matrix and its nearly flat upper surface; shallow ditches have been excavated in many areas to improve surface drainage." *Exhibit 101*

October 1968 Pierce County Sewerage Study. "Vashon Till--This material is generally an unsorted mixture of clay, silt, sand, gravel and boulders which is compact and essentially impermeable."

"Mud Flow Deposits---They consist principally of clay, silt, sand, and gravel that is compact and nearly impermeable like the till. Percolation capacity is very low and groundwater is either perched or found below the mud flow formation."

"It is evident from Plate 6 that many areas of Pierce County have low permeability soils. Experience has verified that many areas are unsuited for individual waste disposal systems as could be predicted from the soil characteristics of the particular area. Also, an increase in the number of septic tank drainfields in a local area can overload marginal soil formations where scattered septic tanks have previously functioned adequately."

"Since septic tank effluent is undisinfected, continued septic tank operation becomes a public health concern when effluent rises to pollute surface waters. Evidence also indicates that there is also serious concern regarding the fate of effluent that does not rise to the surface. When domestic water is obtained from groundwater that underlies an area of individual waste disposal system drainfields, there is always the possibility of contamination from waste effluent."

"Recreational waters are also often polluted by adjacent septic drainfields. Studies have shown that underground travel of contaminated groundwater can be extensive and difficult to predict until evidence after the fact has been obtained." *Exhibit 102*

February 19, 1970 Surveyors, Ruskin Fisher transmits comments to Washington State Water Pollution Commission. "This is to confirm our discussion of January 9, 1970 concerning the proposed sewerage system at Lake Tapps. A map (Tapps Island) is enclosed outline the approximate area being considered for a deluxe trailer development. Temporary treatment and effluent disposal methods being considered are: 1. Secondary treatment with effluent discharge to the White River. 2. Secondary treatment with spray irrigation of effluent in the area of the southwest quarter of Section II. 3. Secondary treatment with drain field disposal of the effluent in the area of southwest quarter of Section II. 4. Tertiary treatment with effluent discharge to Lake Tapps." *Exhibit 103*

March 16, 1970 Ecology writes Ruskin Fisher.
"Utilization of a spray field or sub-surface drainfield effluent would be acceptable as an interim method only, if at all. " *Exhibit 104*

April 16, 1970 Department of Health comments on Ruskin Fisher proposal for Tapps Island. "We have inspected the area of the proposed Lake Tapps Sewerage System and would consider a satisfactory report that involved secondary treatment to the White River."

"The use of spray irrigation is not, in my present judgment, a satisfactory alternative--however, I would consider a proper community drainfield disposal system as an Interim answer."

"Tertiary treatment is not developed enough, in my judgment, to be considered economic or practical alternative." *Exhibit 105*

April 6, 1970 Water Pollution Control Commission on Ruskin Fisher Plan for Tapps Island. "In advance of that plan the only feasible method of development would appear to provide for a normal Sanitary Sewer Collection System on the Island to be carried to an interim disposal system on the mainland with the eventual provision to tie to trunk line located in the North Tapps Highway. Your number three proposal providing for Secondary Treatment with drainfield disposal of the effluent appears to fall within the present interim program being carried out by Pierce County. However, at this time the Water Pollution Control Commission has not been prone to approving of such an interim facility unless there is an approved General Plan for the Basin which calls for the installation of a Collecting Sewage System within a five year period of time." *Exhibit 106*

January 1, 1972- August 29, 1973 Tacoma Pierce County Health Department conducts Coliform Sampling of Lake Tapps. It reports Total Bacteria up to 32,000/100 ml in Lake Tapps. *Exhibit 107*

October 1972: Sleavin-Kors Professional Engineers transmits Comprehensive Water Plan for Rural Pierce County to Pierce County Board of County Commissioners.

"The Lake Tapps area to the north represents a tremendous growth area to the City of Bonney Lake. The lake and views of the mountains represent an appealing attraction to new residents. Existing problems with sewage disposal now hinder further development of lakefront property." *Exhibit 108*

June 1974: Consoer, Townsend And Associates transmit to Pierce County its Engineering Report Puyallup river Basin Water Quality Management Plan

"As shown in Map No. 3 two things become immediately apparent. First of all, less than 25 percent of the land area is suitable for septic tank development."

"The Town of Bonney Lake and the surrounding unincorporated areas are presently served by individual septic tanks and drainfields , Much of the area is unsuitable for septic tank and drainfield installation and there is a possible danger of eutrophication of the surrounding lakes from the septic tank seepage."

"Future development of the area will be restricted without adequate wastewater collection and treatment facilities." *Exhibit 109*

1974 City of Bonney Lake Completes Washington Future Funding Questionnaire" for Washington's Future Fund Grant of 15%

"Project Benefits Measure The City of Bonney Lake and the surrounding unincorporated areas are presently being served by individual septic tanks. About sixty percent of the area within the Bonney Lake Service Area has severe restrictions for septic tank usage. The City's lakes are a valuable part of their environmental resources. Bonney Lake, Debra Jane Lake, Church Lake and a portion of Lake Tapps is situated in the Bonney Lake Service Area. Because of the unsuitable soil conditions for septic tank and drainfield installations, there is a danger of pollution the surrounding lakes from septic tank seepage. At times during the summer these lakes have had to be closed to swimming because of the danger to public health."

"The Department of Ecology has established water quality standards for bodies of water in Washington. The lakes in the City of Bonney Lake area are classified as lake class. A part of the water quality criteria for this classification is that the total coliform organisms shall not exceed median values of 240 with less than 20% of the samples exceeding 1,000. The Tacoma-Pierce County Health Department has conducted coliform sampling in Lake Tapps. In the southern part of Lake Tapps the total coliform bacteria per 100 ml . ranged from an average value of 681 at the southeast corner of Inlet Isle to 2,455 at Church Lake. In the north end of Lake Tapps the average values ranged from 490 at Tacoma Pt. to 2,275 at the County Park. In a three and a half month monitoring period of Bonney Lake the average coliform count was 5,066. The average coliform count for Debra' Jane Lake was 1,315. Lake Tapps, Church Lake, Debra Jane Lake and Bonney Lake have coliform counts which exceed the Lake Class standards."

"The City of Bonney Lake is supplied water from springs. Also, the City of Sumner is supplied water from springs to the northwest of the City of Bonney Lake. As future growth in the area increases, the danger of contamination of these water supply sources will I also increase."

"The overall benefits derived from the implementation of a sewer program are twofold. First, it will "clean up" the lakes by alleviating the septic tank seepage into the surrounding lakes. secondly, it will lessen the danger of watershed contamination of the City's water supply."

"Identify Organizational And Citizen Support For This Project. The City of Bonney Lake has recognized the need for a sewer program. For the past five years a citizen's Sewer Committee has met periodically with the City's Consulting Engineer. The Mayor of Bonney Lake proposes to utilize the City's Planning Commission as a part of the citizen's involvement in the Bonney Lake Sewer Facilities Plan. In the past some of the developers in the area nave contributed to sewer studies. Residents have concurred in a program of interim minimum improvements of City streets until sanitary sewers are installed."

"Describe The Multi-Purpose Potential Of This Project. This project will eliminate the existing pollution of Bonney Lake, Debra Jane Lake, Church Lake and Lake Tapps. It will restore the recreational potential of these lakes and provide for their development for parks, fishing, boating

and other purposes. It will enable the development for housing and commercial uses land now limited for improvement due to improper drainage." *Exhibit 110*

December 3, 1975: Tacoma Pierce County Health Department, Recommendations for Lake Tapps. "The soils in the Bonney Lake - Lake Tapps area are characterized by permeable soils generally to a depth of twenty four to forty eight inches underlaid by semi-compact hardpan and are regarded by the Tacoma-Pierce County Health Department as "marginal" for septic tank sewage disposal."

"In the winter season, the rate of rainfall exceeds the ability of the semi-compact hardpan to absorb the rain, consequently the ground water table rises in some instances, flooding into the ground area where the septic tank drainfield is located."

"It has been been necessary for the Health Department to deny septic tank applications in numerous locations and areas around Lake Tapps and in Bonney Lake because of soil topography and ground water conditions. These sites will not be buildable until sewers are available." *Exhibit 111*

May 5, 1975 Tacoma-Pierce County Health Department to Pierce County Planning Department, Island A Environmental Impact Statement

"We have requested the owners to develop a skeleton backup sewer plan which could connect with the Pierce County - Bonney Lake Sewer, when it is available. The Pierce County - Bonney Lake plan is now being engineered by Botch and Associates. This Island A plan, would be coupled with an 'Agreement of Non-Protest to sewers' which would be entered into by each buyer."

"In engineering the individual septic tank installations, the District Sanitarian in the area has encouraged the drain field installations in the front yards where possible. The front yard area is normally lawn and scientific studies have shown that vegetation 'picks up' up to 85% of the nitrates and phosphates deposited by the septic tank effluent. These fertilizing compounds are 'villains' when deposited in water (promoting algae growth) but are a real asset in fertilizing laws and other vegetation." *Exhibit 112*

February 18, 1975 Pierce County Resolution No. 17799 is signed:

"Whereas the Board of Pierce County Commissioners deem; it to be in the interest of the public health safety and welfare of the residents of Pierce County to enter into an agreement with the City of Bonnev Lake and the South Hill Sewer District to cooperate in the preparation of a sewer facility plan for the subject area so that the sewerage disposal needs of the residents therein may be adequately taken care of." *Exhibit 113*

May 2, 1975: Washington Department of Social and Health Services sends memorandum to Department of Ecology, Tacoma Pierce County Health Department, Pierce County planning Commission. "The project proposes to withdraw ground water by shallow wells to supply potable water. Since there is a potential of contaminating the ground water by the high density

septic tank system within the enclosed perimeter of Island A, a potential heal hazard cannot be discounted."

"Further upgrading of the design standards for the design of the water and sewer system are necessary." *Exhibit 114*

May 5, 1975: Ecology Environmental Review Section, Water Quality Comments, Lake Tapps Island A (Tapps Island) EIS. "Establishment of a sewer fund and a water quality monitoring program are good ideas. There is some question as to whether septic tanks and absorption trenches will operate satisfactorily over an extended time period in the soil types present and whether septic tanks and drainfields are the proper disposal method."

"The sealing of wells does not prevent ground water pollution."

"Sewage disposal via septic tank and absorption fields may not be the best or even a viable method."

"The percolation data shown indicates that in comparison to current Rules & Regulations of the State Board of Health for On-Site Sewage Disposal Systems Minimum Lot Sizes for Subdivisions I approximately 60% of the soils are classified as poor or worse for on-site disposal. Minimum lot sizes for these soils is 18,000 square feet. (Compare to 10,000 square foot lot size proposed.)"

"Surface water was observed running off into the lake from only a few low marshy areas." What is important is how big of an area drains into these low marshy areas and hence how much drainfield effluent will end up there."

"Page 119 indicates that no significant sewage pollution problems have resulted from septic tank systems around Lake Tapps area. In fact there are problem areas that are known and it is suspected that problems may exist where septic tanks and drainfields have been placed near the lake in fast percolation soils."

"Septic tanks and drainfields are recognized as a non permanent solution to sewage disposal. The environmental impact of installing the collection systems that will be required for eventual interception will obviously be much less if the systems are installed during development. It is, therefore, evident that a permanent sewage disposal system should be installed at this time."

"Conclusion:

The Department of Ecology is opposed to on site disposal via individual septic tanks and drainfields as proposed.

Recommendations

1. A permanent sewage disposal system be installed.

2. *If* septic tanks and drainfields are to be used for sewage disposal, lot sizes should be in accordance with WAC 248-96-090 METHOD 1.

The retention time (12) days for Lake Tapps is too short to classify it in the Lake Class. However, the lake has a very patchy distribution of nutrients indicating incomplete circulation. The flow pattern suggests that the areas both north and south of Island A (Tapps Island) would be areas of decreased circulation, and hence, areas of greater potential primary production. (Due to greater retention time and increasing water clarity).

It is entirely possible that development of Island A could result in increased phytoplankton production in the "bays" to the north and south of the island. This would be due to increased runoff, fertilization and septic tank effluents reaching the lake." *Exhibit 115*

May 9, 1975: U.S. Farmers Home Administration. "We agree that the Lake Tapps area is a unique and valuable environmental resource and that it's protection from sewage is a high priority."

"In fact, we have already taken steps to provide this protection. Recently, the City of Bonney Lake requested our assistance in preparing a sewage facilities plan for the Bonney Lake/Lake Tapps area. In April we issued a grant to cover 75 percent of the cost of the study." *Exhibit 116*

May 9, 1975 Complaint filed with EPA for Farmers Home Administration (FmHA) sponsored housing contaminating Lake Tapps. "Soil Conservation Service reports that soils in the Lake Tapps area have very slow permeability." *Exhibit 117*

May 12, 1975: Ecology transmits a letter to Pierce County Planning Department. "Our primary concerns relate to the desirability of septic tank and drain field sewage disposal in this area. The Puyallup River Basin Water Quality Management Plan indicates the whole Lake Tapps area, including Island A, has soils that have severe limitations for this type of disposal. The geological information presented indicates that the groundwater on the island is isolated from the lake water and is recharged through precipitation and runoff. It follows that septic tank effluent may pond in the groundwater causing a buildup of contaminants."

"If would be helpful if the "Alternatives" section considered an alternate sewage disposal system. The environmental impact of installing collection systems that will be required for eventual interception may be minimized if the systems are installed during development. Septic tanks and drainfields are not seen as permanent solution to sewage disposal for this area."

"If septic tanks are chosen as an interim solution, the lot size should be increased. The percolation data shown indicates approximately 60% of the soils are classified as poor or worse for on-site disposal systems. Minimum lot size for these soils is 18,000 square feet, rather than the proposed average lot size of 10,000 square feet." *Exhibit 118*

August 5, 1975: Pierce County Planning Department on Lake Tapps Island "A" (Tapps Island) Environmental Impact Statement On-Site Sewage System. "This office has given an in-depth review of the on-site septic tank sewage disposal system. The completion of the proposed

project will involve a drastic change in land usage of the approximately 260-acre Island. The development will have 687 residential homes, with on-site permanent population of nearly 2,000 persons. Due to other recreational features of the proposed area, it is anticipate that the population projection will nearly double on weekends and legal holidays. This influx of population on land with marginal soil conditions and, at some locations, having only 22-inches to 24-inches of ground cover over hardpan, will cause septic tank and drainfield failure, thereby creating a potential health problem. The high amount of effluent disposal on postage-stamp sized lots will lead to failure of the leaching field of the septic-tank disposal systems. In leaching systems (on the basis of initial infiltration rates higher than the ultimate low rate) this leads to the failure of systems such as designed for this development."

"It has been documented in the report that the subsurface aquifers from which the proposed potable water wells will draw water supply is confined. Hence the majority of the recharge water win the wells will originate from surface flows which will infiltrate through permeable soils. The ponding of effluent in the substrata , and/or breakthrough of contaminants to the ground surface, will severely pollute the runoff and eventually the source of water supply." *Exhibit 119*

August 18, 1975 City of Bonney Lake relative to the Development of Island "A" (Tapps Island) in Lake Tapps. "We question the adequacy of provision for dispersal of storm and surface water runoff. Throughout our City are developments where all the land was sold off without provisions for normal, natural drainage. This is a serious problem for the City and it appears to us that the same problem is inherent in the proposed development of Island A.

"We feel sure that the ultimate per lot investment by the ultimate owners of Island "A" will be substantial, so much so that to correct the deficiencies noted herein will be proportionately almost trivial. If it is not done now, upgrading will cause much additional expense and will be the source of community dissent and resultant unhappiness on the part of the residents involved. (This concern has been realized. Bonney Lake offered to by the purveyor of the Tapps Island water system recently and quoted the homeowners $60 - $80 thousand dollars per lot to upgrade the Islands "temporary" water system."

"We cannot believe that full development of Island "A" can occur without pollution of Lake Tapps. There is presently a sewer study being made, co-operatively by the City of Bonney Lake, Pierce County, and South Hill Sewer District. This project is being funded 90% by Federal and State funds, the remaining 10% to be paid by local funds. This project, if built will accommodate this development. To our knowledge, no effort have been put forth by the developers to lend support to this effort. The potential for pollution in this development is greater than anything presently existant." *Exhibit 120*

December 22, 1976 Washington Operations Office (U.S. EPA) Environmental Impact Appraisal

"Beneficial Serving South Hill Sewer District will alleviate occasional problems with odor and surfacing leachate at the District's community septic tank drainfield system. Serving the areas east and south of Bonney Lake (Ponderosa Estates & Rhododendron Park) will alleviate Bonney

Lake official's concerns that septic tank systems in these areas may contaminate the town's water supply source. Serving the Bonney Lake area will remove septic tank leachate contribution to eutrophic Debra Jane Lake and polluted Bonney Lake and South Lake Tapps. Serving the west and northwest shore of Lake Tapps will alleviate the concerns of many residents and state and local officials that septic tank leachate from current future development will pollute Lake Tapps."

"The long term potential for, and concern over, contamination of Debra Jane Lake, Bonney Lake, Lake Tapps, and the Town of Bonney Lake's water supply by septic tank leachate will be removed. The orderly development of undeveloped lots in the sewered areas can continue without undue disruptions due to difficulties in obtaining septic tank permits."

"The future development pattern of east Lake Tapps cannot be defined in absolute terms in advance. However, it is possible to subjectively evaluate the probability of alternative development patterns. If major deviations from the region's current development pattern are probable because of the existence of sewers, then they can be said to have a significant secondary impact on the area."

"The special analysis of development patterns provided in the plan addendum provides convincing evidence that portions of east and north Lake Tapps will develop in a similar manner to the rest of the region. The maps in the addendum show that a substantial portion of this area has already been platted as residential subdivisions at similar densities to those in the rest of the region. Comparison with Plat 13B indicates well over half of the east Lake Tapps ultimate service area has been platted. Island "A" has been zoned residential according to Plat 4. The lots in these plats have been sized to utilize septic tanks as the waste disposal method. Therefore, their development should not depend upon the existence of sewers."

"From these factors it is clear that portions of the east side of Lake Tapps will probably be developed in the same manner and at the same densities as the rest of the region. The minimal additional capacity provided in the Bonney Lake interceptors is a necessary contingency for the future time when the septic tanks in east Lake Tapps developments begin to fail as they have in west Lake Tapps."

"The environmental assessment identified the existence of endangered osprey on the south end of Island B" The sewage system proposed for construction will not extend to the Island B area. To avoid impacts on endangered species from future construction, Island B has been excluded from the ultimate service area and no capacity. has been provided for development on Island B."

"The immediate physical disruption of local ecosystems and neighborhoods when sewers are constructed are being offset by long-term prevention/reduction of septic tank drainfield seepage into local lakes. For the areas being served, current and future hassles with the permitting, installation, operation, maintenance, repair and replacement of septic tank drainfield systems will be replaced by a long-term commitment to make regular sewerage service payments for the operation, maintenance, and repair of a public sewerage system. There exists in the area a nagging concern that future septic tank sewage may inevitably pollute and destroy the water

resources critical to the local ecosystems and lifestyle. This concern is being removed through the public expenditures necessary to construct a sewage system."

"The major agricultural, wildlife, open space, and other areas unsuitable for urban development in the Lake Tapps region excluded from the sewer service area. These are discussed in the plan Addendum."

"Within the designated sewer service area future wastewater management options are effectively limited to a sewage system. Areas outside the designated service area are probably committed to on-site disposal systems due to the high expense of constructing small sewage systems, limited capacity in the Bonney Lake/Lake Tapps system, and regulatory limitations on serving these areas." *Exhibit 121*

May 16, 1976 Department of Ecology to Bonney Lake/Pierce County's sewer consultant; Philip M. Botch & Associates.

"Certainly the citizens within the proposed sewerage collection area, upon review of your report, should realize the vast effort put forth by you in obtaining, analyzing, compiling, and presenting all the pertinent information needed in such a study."

"I was quite surprised in noting that the quality of the lakes, streams, and river within the study area had deteriorated to the condition listed. I think this shows in itself the need for the sanitary facilities which you propose."

"Hopefully the property owners will realize the cost will never get any less and furthermore, they will realize the need for the system from a health and a water quality standpoint." *Exhibit 122*

May 27, 1976: Ecology Letter 201 Sewer Facilities Plan Lake Tapps Sewerage Project

"The proposed sewer facilities plans outlined In the April 1976 study, as stated above, will serve one of the fastest-growing area; In Pierce County. There Is an Imminent need for proper disposal of wastewater to protect the quality of groundwater which has been extensively used In the project study for water supply."

"The rapid growth In Lake Tapps Island "A", Bonney Lake, and other areas In the vicinity has resulted in a surban sprawl which presently disposes of all wastewater by the conventional septic tank drainfield method. On-Site sewage disposal system failures have resulted In excessive coliform counts and algae growth In the lakes In the area and algae growth in road side ditches during summer months."

"The proposed sewerage facilities plan will definitely enhance the quality of the groundwater which will be in great demand for the water supply needs as the population expands in this area."

"This office supports the project, and the long term Impact will be beneficial to the health and well-being of the people residing In this northeast part of Pierce County." *Exhibit 123*

May 19, 1976 Mayor of Bonney Lake sends out a letter to the Citizens of Bonney Lake. "If we are to maintain the special kind of life that we have here, which offers so much in the way of water recreation, it is extremely necessary that we act now to preserve and improve our number one asset--our land."

"The construction of a sewer system to benefit our area can only be good for us. It is inevitable that sewers will be a necessity in the near future to preserve our lakes, therefore it is to our advantage to begin now, before costs rise, before the federal and state governments will no longer contribute to this type of improvement and especially while we have positive citizen involvement working towards improving our community. "

"The projected costs to the property owners are reasonable now--they may not be 10 or 15 years from now." *Exhibit 124*

May 20, 1976: Letter to U.S. EPA from Lake Tapps Resident, Lake Tapps 201 Sewer Facilities Plan.

"We definitely recognize the need for installation of sewers at this time. The cost is a consideration, of course, but it is minimized when we realize that upkeep of septic tanks is also very expensive and completely frustrating. we have had first-hand experience living with septic tanks and seeing the disastrous results of pollution, both of air and water quality. We are willing to participate to the fullest to prevent such conditions in this area." *Exhibit 125*

May 20, 1976 Letter to U.S. EPA Lake Tapps 201 Sewer Facilities Plan

"Neither must we tell you that in major areas around the lake, sewers are badly needed. You are aware of this need."

"The majority of residents who have lived "On the lake more than five years are in favor of sewers being constructed. They are the 'silent majority' who think they need not attend meetings to become convinced. They already know." *Exhibit 126*

May 20, 1976 Letter to U.S. EPA Lake Tapps 201 Sewer Facilities Plan

"Our lake and our septic systems are in trouble already. We are late in getting a sewer program initiated." *Exhibit 127*

May 20, 1976 Letter to U.S. EPA Lake Tapps 201 Sewer Facilities Plan

"I have been a resident of Lake Tapps for 13 yrs. For the past 7 yrs. I have been having septic problems. My neighbors are also experiencing the same difficulty." *Exhibit 128*

May 27, 1976 Pierce County Water Supply & Waste Section to Department of Ecology; "201 Sewer Facilities Plan, Lake Tapps

"There is an imminent need for proper disposal of wastewater to protect the quality of groundwater which has been extensively used in the project study for water supply."

"The rapid growth in Lake Tapps Island "A", Bonney Lake, and other areas in the vicinity has resulted in a suburban sprawl which presently disposes of all wastewater by the conventional septic tank drainfield method. On-site sewage disposal system failures have resulted in excessive coliform counts and algae growth in the lakes." *Exhibit 129*

June 24, 1976 Philip M. Botch & Associated, Inc. Letter:

"The immediate areas of West Tapps and Bonney Lake have needed sewers for some time, both from a water quality and urban sprawl standpoint. There are growing sings of need. Pollutional indicators show a problem. Septic tank failures are on the increase and the cost of proliferation of other utilities accommodate urban sprawl are much more costly than a controlled growth situation. Costs associated with the "No Project" plan can in fact be extremely costly, more costly than sewers themselves." *Exhibit 130*

June 21, 1976: Pierce County, City of Bonney Lake South Hill Sewer District issue Lake Tapps Sewerage Facility Plan

"Almost all of the soils in the study area are classified by the U.S. Soil Conservation Service as having moderate to severe limitations for use as septic tank drainfields. The Lake Tapps area is underlain by semicompacted glacial hardpan with low permeability. The soils above the hardpan are generally permeable but the existence of the hardpan layer renders the area marginal as far as on site disposal units are concerned. Localized areas are experiencing septic tank failures. This is especially serious after heavy rains. Alternate drainfield sites are being sought in several cases due to failure of the original field. As development increases and vacant lots are occupied, alternate drainfields will become more difficult to obtain; hence on-site disposal problems may become acute and the I likelihood of correction may be more remote."

"Septic tanks are acceptable for areas designed for permanent on-site disposal installations, if the population density is low and drainage characteristics of the soil are satisfactory. However, where soils have marginal drainage characteristics, it is only a matter of time before failures begin to appear. The appearance of these problems is increasing for the project area."

"The search for areas that meet on-site disposal standards is a major cause for sprawl. Further development in the Lake Tapps area in the pursuit of developable property, must be curtailed in the future due to lack of suitable sites."

"Lake Tapps has violated state standards on several occasions. Water use has not been restricted, however, because the enforcing agency, Pierce County Health Department, has been enforcing a less stringent coliform bacteria standard than the controlling state standards enforced by the Department of Ecology."

"3) Soils within (he study area have poor drainage characteristics. Many areas are developed as much as 80 percent. The permitted use of septic tanks has possibly contributed to an uncontrolled

sprawl in many poorly drained, developed areas. As densities near saturation development, septic tank failure rates will likely increase. The likelihood of locating replacement drainfields will become more critical as development continues to intensify. These problems are showing signs in localized areas."

"4) Water quality in Bonney Lake, Lake Tapps, and adjacent lakes has frequently violated the State of Washington water quality standards and criteria developed by the National Technical Advisory Committee (NTAC) of the National Academy of Sciences. Providing sewers in the study area would prevent further deterioration of surface and groundwater pollution and assist in restoring lakes within the project area to satisfactory water quality levels and assuring a high quality groundwater." *Exhibit 131*

August 1976: A Public Opinion Poll, conducted by the City of Bonney Lake with assistance of the University of Washington was sent out. "A threat to water quality in the lakes was recognized by the people in the public information poll. It is the opinion of City officials that monthly sewer bills will offset costs already paid citizens for maintaining septic tanks and it should not pose no problem. It appears monthly sewer rates will fall between $7-$10 per month. This rate is similar to those on many project EPA has participated in. The only other costs to local residents should be a hookup fee of $50.00 to raise initial operating funds and the cost of a side sewer to the collection system, estimated by the consultant at $200-$500. Side-sewer costs could be substantially less if homeowner constructed." *Exhibit 132*

October 28, 1976 Ecology to EPA, Lake Tapps Sewage System

"We have fully supported this sewerage project for the Bonney Lake area and it has a high ranking in the statewide priority listing." *Exhibit 133*

October 1976 Pierce County, City of Bonney Lake South Hill Sewer District issue Addendum: Final Report Lake Tapps Sewerage Facility Plan

"Individual soils characteristics were taken from the soil survey of Pierce County updated to 1975. These agricultural soils are the Buckley, Orting, Kapowsin 0-6%, and Puyallup sons. Each of these soil types has been designated Class II or III agricultural soils by the Soil Conservation Service. **Occurrence of these soils is along the eastern shore of Lake Tapps** continuing south of the City of Bonney Lake in a mile-wide strip continuing into the Puyallup Valley."

"General characteristics of the agricultural soils include slow permeability, high water capacity, low to medium erosion potential and 0-6% slopes."

"Pollution of the lake will occur in areas where flushing action is low." *Exhibit 134*

January 07, 1977: Utilities Department Interlocal Agreement, Pierce County and the City of Bonney Lake, The South Hill Sewer District and Pierce County of the Development of Sewerage Design and Construction

"NOW, THEREFORE, BE IT MUTUALLY AGREED AS FOLLOWS: 1. The City District and County agree to participate in the development of a regional sewerage system for the Lake Tapps area in accordance with PL 92500." *Exhibit 135*

January 24, 1977 U.S. EPA "You also stated you don't think the area's problems warrant a sewage system at this time. Particularly important in EPA's determination of which projects have a justifiable need for our grants is a special priority list which is submitted to us by the Department of Ecology. Each potential project is "rated" by the Department of Social and Health Services and given points depending primarily upon public health and water pollution considerations. The more points assigned to the project, the higher it's standing on the priority funding list. At the time that it was rated, the Bonney Lake project was well into the upper half of the statewide list of priority needs. Clearly the state public health and water pollution control officials are very concerned about the current conditions in the area and have an important priority on the need for sewers." *Exhibit 136*

February 1, 1977 Addendum To Bonney Lake Environmental Impact Appraisal

"Probable service area for the Lake Tapps project was identified in an Addendum, Lake Tapps Sewerage Facilities Plan issued September 30, 1977. This study effort, carried out with cooperation of Pierce County Planning Department , identified physical, social, and economic constraints to continued development of the region. It proposed three probable scenarios for future development, depending upon degree of control that might be imposed upon future' growth. Conclusions of the study indicated the area would continue to grow at a high rate irrespective of sewer construction. This growth would be an urban-sprawl nature. Present established land-use density of about 9-11 people per acre, would prevail. A sewer system was needed to serve existing platted lots and for a limited growth adjacent to the platted areas. And, a Land Use Plan together with a sewer system would provide residents with necessary safe guards to insure the quality of life residents were seeking."

"An inventory of land and soil character was made both in the Facilities Plan and Addendum to the Facilities Plan. Slide areas, flood plains, wetlands, etc., were identified as areas of high physical constraint. Most of these lie within the County portions of the service area and are distributed in small pockets. Development is prohibited in most of these under provision of the County's General Use zoning which restricts use of hazard areas."

"Statements made showed a concern for water quality in the local lakes and an actual experience with septic tank failure. The north Lake Tapps region appeared to be more in favor of sewers than Bonney Lake. Of the group that favored a sewer program, almost all favored a regional approach so that the total Lake Tapps water quality problem could be addressed immediately." *Exhibit 137*

February 1, 1977 U.S. EPA Addendum to Bonney Lake Environmental Impact Appraisal. "The original project for the Bonney Lake area included a major interceptor from Bonney Lake to the southeast corner of Lake Tapps. The general belief is that areas within the Mt. Rainer mud flow (East Lake Tapps Osceola Mudflow) will remain agricultural. This land use planning effort will enable the County to implement an administrative and supervisory program for land use."

"Elimination of the interceptor for East Lake Tapps combined with restriction of the service area eliminated potential impacts on the sensitive wildlife area on Island B and the extensive agricultural areas east of the lake."

"An inventory of land and soil character was made both in the Facilities Plan and Addendum to the Facilities Plan. Slide areas, flood plains, wetlands, etc., were identified as areas of high physical constraint. Most of these lie within the County portions of the service area. Development is prohibited in most of these under provisions of the County's General Use zoning which restricts use of hazard areas."

"The EPA has reviewed the design concept extensively and is convinced following procedures and requirements noted under "Sewer Construction" about should adequately safeguard the lake. Although some individuals still express concern, most appear to understand the design concepts and the protections they provide the Lake." *Exhibit 138*

February 2, 1977 EPA Negative Declaration

"The proposed project is intended to serve the Bonney Lake-Lake Tapps-South Hill service area, located in the northeasterly part of Pierce County, Washington, approximately 12 miles east of Tacoma and 5 miles southeast of Auburn. The Bonney Lake-Lake Tapps area consists of hilly, forested upland terrain draining to Lake Tapps, a 2,300 acre reservoir. Steep slopes rise from the west and east edges leading to the White and Puyallup River Valleys. Lake Tapps has a very long shoreline with many narrow inlets and a number of islands. There are several smaller lakes in the study area."

"The accelerated growth of the area combined with poor soil conditions for adequate septic tank functioning has led to this project. There is concern over septic tank leachate contamination of groundwater and of the lakes in the area. Surfacing septic tank effluent also poses a health problem."

"The elimination of this part of the project; however. does not preclude service to this area sometime In the future when the existing development and septic tank problems reflect a need. At that time any project proposed for east Lake Tapps will have to undergo a separate and independent environmental review In accordance with the requirements of the National Environmental Policy Act."

"At these meetings, some participants expressed a concern for water quality in the local lakes. and identified septic tank problems in the area." *Exhibit 139*

February 20, 1977: Lake Tapps Sewerage Facility Plan is submitted and approved by the U.S. EPA and Ecology.

"Almost all of the soils in the study area are classified by the U.S. Soil Conservation Service as having moderate to severe limitations for use as septic tank drainfields. The Lake Tapps area is underlain by semicompacted glacial hardpan with low permeability. The hardpan layer renders

the area marginal as far as on site disposal unites are concerned. Localized areas are experiencing septic tank failures. This is especially serious after heavy rains. Alternate drainfield sites are being sought in several cases due to failure of the original drainfield. As development increases and vacant lots occupied, alternate drainfields will become more difficult to obtain; hence on-site disposal problems may become acute and the likelihood of correction may be more remote."

"Septic tanks are acceptable for areas designed for permanent on-site disposal installations, if the population density is low and drainage characteristics of the soil are satisfactory. However, where soils have marginal drainage characteristics, it is only a matter of time before failures begin to appear. The appearance of these problems is increasing for the project area."

"Further development in the Lake Tapps area in the pursuit of developable property, must be curtailed in the future due to lack of suitable sites."

"Lake Tapps has violated state standards on several occasions. Water use has not been restricted, however, because the enforcing agency, Pierce County Health Department, has been enforcing a less stringent coliform bacteria standard than the controlling state standards enforced by the Department of Ecology."

"Soils within the study area have poor drainage characteristics."

"Water quality in Bonney Lake, Lake Tapps, and adjacent lakes has frequently violated the State of Washington water quality standards and criteria developed by the National Technical Advisory Committee (NTAC) of the National Academy of Sciences. Providing sewers to in the study area would prevent further deterioration of surface and groundwater pollution and assist in restoring lakes within the project area to satisfactory water quality levels and ensuring a high quality groundwater."

"Sprawl associated with the pursuit of developable property will continue under the "No Action" plan. The "No Action" plan is in itself an action due to the expenditure of capital for septic tank systems to the year 2000. The development of an area to meet future criteria for on-site sewage disposal is an an expense that can exceed that of common sewer service. Areas that meet septic tank requirements are identified and developed, leaving areas with marginal soils vacant. The committal of land resources to vacant status for an alternate drainfield in case of failure or because of unsuitable drainage for septic tanks added to the cost of septic tanks and the cost of providing other services to larger and larger tracts of land proves to be the most expensive alternative."

"The conclusion of Washington State Department of Social and Health Services Technical Review Committee with regard to alternate household treatment units is: "Composting, aeration and transpiration units have no advantage over conventional tank/drainfield systems. These systems only accommodate fecal and urinary wastes with no collection and treatment of household grey water (bathing water, sink and wash water). They are more susceptible to shock loading, and they are subject to frequent maintenance and monitoring."

"The system will be constructed to eventually make sewerage service available to East Lake Tapps."

"In recognition of the need for sewers, a committee comprised of six citizen members was formed in 1966 to study pollution problems in the City of Bonney Lake and report their finding to the City Council."

"The need for a comprehensive plan for sewerage system for the proposed service area became apparent due to the following existing and imminent problems:

2. Excessive coliform counts and algae growth in the various lakes
3. Presence of algae growth in roadside ditches
4. Septic tank failures
5. Subdivision of marginal areas into larger and larger tracts, thereby avoiding sanitary restrictions
6. Septic Tank denials"

"Due to continual growth, the need for a sewer program has become more acute during the past year."

"The drain filed itself can be expected to last about ten years. In the study area there are a number of problems associated with septic tanks. First, there are only limited areas in the basin that are suitable for septic tank drain fields. In some areas the soils have low percolation rates, and in others the water table is near the ground surface. A second problem is that most people do not realize that the drain field will eventually fail and provisions must be made for the installation of a second field. In many instances, lots are not large enough to support a second field."

"Problems arise from poorly operating septic tanks are ponding of the effluent on the surface, contamination of the groundwater, which is very important where domestic wells are in the area, and degradation of surface water quality. The public health hazard from these is very serious since pathogenic organisms in the sewage are not destroyed in a septic tank."

"It is generally agreed that septic tank systems are best suited for use on properties where the population density does not exceed one family per acre."

"In areas where it cannot be determined beforehand if a septic tank drain field will operate properly, the county denies septic tank permits for permanent residences. However, conditional use permits are granted for mobilehomes, with the understanding that if the drain field does not work, the mobilehome will be removed from the lot."

"In several areas along 195th Avenue near South Tapps Drive, topsoil was removed for highway fill. The remaining hardpan is too impermeable to allow the use of septic tanks."

"There are many locations in the Lake Tapps area where septic tanks cannot be used at all."

"The existence of the impermeable hardpan layer makes downward percolation of septic tank leachate impossible."

"Leachate can introduce pathogens to the water that are capable of causing disease."

"Development of the Lake Tapps area is growing rapidly, increasing the number of septic tanks accordingly. Accompanying the increase of septic tanks is the threat of surface and groundwater contamination."

"The Rainer State School for the retarded in Buckley releases secondary effluent into the White River upstream from the diversion dam."

"The Washington State Department of Ecology classifies the flume as a Class AA stream. However, the flume does not meet the water quality standards for a Class AA stream due to high coliform counts."

"Water chemical data taken by the U.S. Department of the Interior at two locations in Lake Tapps show values for nitrate-nitrogen and phosphate phosphorus to be as much as 20 times higher than values recommended by NTAC for impoundments."

"According to the Washington State Department of Ecology (DOE) standards, Lake Tapps has violated total coliform standards. Water use has not been restricted, however, because the enforcing agency, Pierce County Health Department, has adopted coliform limits that are higher (less restricting) than those of DOE."

"Island "A" (Tapps Island) located in the northeast corner of Lake Tapps was recently subdivided with the foresight of being developed by 1980. Individual septic tanks will be utilized on lots that meet standards enforced by Pierce County Health. Those lots that fail to meet septic tank requirements of Pierce County Health will be required to route septic tank effluent to a suitable disposal site."

"A sewer fund has been established for Island "A" to help finance the local share of an eventual sewer system. Similar funds have also been in existence for quite some time for developments to the west of Lake Tapps." *Exhibit 140*

February 24, 1977 City of Bonney Lake, City Engineer, Septic Tank Drainfield Problems, City of Bonney Lake

" The Pierce County sanitarium for the Lake Tapps region and I recently (1/26/77) inspected septic tank problems along the western shore of Lake Tapps. Our inspection included a look at Driftwood Point, Lakeridge Ranchettes and Church Lake. Areas of interest included lots denied building permits for violating County percolation requirements and outright failure of existing drainfields. Permit denials are due to either high groundwater conditions or impermeable soil conditions. Lots with drainfield failures were similarly caused by high groundwater, impermeable soil and also clogging of soil pores in the immediate vicinity of the drainfield."

"Those lots where building permits were denied are indicated with the symbols on Map 1. Each subdivision has a number of denials. Due to more stringent County regulations for on-site disposal units, denials will presumably become more widespread as permits are requested. The requirement for 24 inches of permeable top soil cover is either not obtained or just meeting the minimum cover in the majority of cases. The soils along the Lake comprise the Alderwood series, underlain by an impermeable or semi-impermeable glacial till, or hardpan. Typically, as septic tank leachate passed through the thin topsoil and reaches the compacted glacial till, the waste water flows laterally toward roadside ditches and the Lake."

"The newness of the development along the west side of the Lake is the major reason the area has not experienced chronic septic tank failure problems. The useful life of a septic tank/drainfield is typically from 5-10 years. 10,000- 20,000 square feet lots do not offer sufficient space for drainfield replacements. If a field should clog and require replacement, many residents will be faced with a critical disposal problem. The majority of the developed property along the Lake can only obtain a permit for a select location on the property to meet the minimum requirements for on-site disposal."

"Several residents, owning multiple parcels, have uti-lized their vacant lots for replacement of drainfields. Lots where drainfields have been replaced are shown with an "R" on Map 1.The majority of homes built in the Lake area require French drain systems to bypass storm water runoff. The saturation of drainfields resulting from rooftops, pavement and other impervious surfaces, requires runoff bypass structures to reduce the likelihood of drainfield failure and prolong the life of the tank in the Lake area. Mr. Sharley pointed to several lots where runoff was not diverted resulting in surface breakthrough of drainfield leachate. The ultimate replacement of these drainfields will be just a matter of time."

"The sanitarian further pointed the potential for lateral flow of drainfield leachate to adjacent properties. The undulating terrain of the Lake area lends itself to subsurface flow of septic tank leachate to homes at low elevations."

"If additional information is needed concerning the area outside the city limits Mr. Sharley or Mr. Manke of the Pierce County Health Department should be consulted. Mr. Sharley inspects all the septic tank installations in this area, Mr. Manke has made the coliform counts on a regular basis for this area."

"There are many areas of the city where septic tank drain fields are not approved for installation by the Pierce County Health Department. These are areas of high ground water and areas of poor percolation due to the partially cemented glacial Till which is the subsoil of most of the city."

"The following areas in the City of Bonney Lake have experienced septic tank drainfield problems, to my knowledge, in the years of 1975 and 1976."

"7019 Myers Road, poor percolation drained to a depression in a pasture.
7417 &7419 Old Vandermark, Springs and high ground water carry sewerage to roadside ditch.
5610 560 St. High ground water carries effluent to Lake Tapps. 6712 193rd Ave, High ground water carries effluent to roadside ditch and on to stream draining Debra Jane Lake.

6812 193rd Ave, High ground water carries effluent to roadside ditch creating an odor problem.
6816 193rd Ave, High ground water carries effluent to roadside ditch and to creek causing an odor problem.
7001 West Tapps Highway, Apartment House complex drainfield effluent drains to Lake Tapps and through stream in city park. discharge near swimming and boat launch area.
5412&19411 68th St. Loop, High ground water carries effluent to roadside ditch and to intermittent stream, standing scummy water.
18211 74th Street, High ground water in filled land on Bonney Lake.
18310 74th Street, Thin soil, poor percolation, effluent runs into Bonney Lake.
4726 197th Ave., Poor percolation, steep slope, effluent runs into Lake Tapps.
18703 82nd St. House in depression, flooded occasionally when it rains hard.
4915 to 4921 N. Vista Drive, High ground water carries effluent to roadside ditch, very noisome condition.
4727 N. Island Drive, poor percolation, water stands in depression over drainfield.
6360 S. Island Dr. High ground water carries effluent to Lake Tapps.
5426 South Vista Dr. High Ground water, roadside ditch odor.
4932 N. Island Dr. High Ground water, Effluent carried to Lake Tapps.
9518 204th Ave. Drainfield covered by flood water, sewer backs up into house.
20608 97th St, High ground water next to creek, high algae growth and odor indicate leaking drainfields,
20304 69th St. Springs flood drainfield carrying effluent into Lake Tapps
20405 70th Street, Springs carry effluent to roadside ditch.
9503 208th Ave. High ground water causes effluent to go to roadside ditch, and on to intermittent creek.
20807 92nd St. High ground water in depression causes malfunction of drainfield.
9510 206th Ave. High water in creek causes effluent to back up under house
4933 N. Vista Drive, Poor percolation causes effluent to flood neighbors yard."

"In the following locations seepage from septic tank drainfields cause odor, high algae growth, and high coliform counts.

Pond, 18249 Old Buckley, Odor and Algae
Pond, Fir Retreat, Odor and Algae
Bonney Lake, Algae, High Coliform count, oil slick
Debra Jane Lake, High Coliform counts, Algae Bloom.
Lake Tapps, Church Lake Park, High Coliform counts near swimming beach and boat launch area.
Lake Tapps at Causeway Road, soap suds floating on water.
Creek through Cederview between 206 & 208th Ave has bad odor problem when it drys up in the summer.

"Septic Tank Drainfield problems in the Lake Tapps area outside of the City Limits have not come to my attention as much as the ones inside of the city limits. The places I know of are:
18807 590 St E. Spring in septic tank drainfield area.
Rod and Gun club, Driftwood Point area, bad smell in road side ditches.

R.E. Knull residence, Drainfield will not take normal residential use. It has to be pumped regularly." *Exhibit 141*

February 28, 1977 EPA to Bonney Lake Approving Facility Plan:

"The Facilities Plan for the Bonney Lake, South Hill Sewer District, and West Lake Tapps areas has been certified by the Department of Ecology as meeting applicable requirements set forth in 40 CFR 35.917-7. The Plan has been reviewed by the Environmental Protection Agency and, in accordance with provisions of 40 CFR 35.917-8, is hereby approved, subject to the following condition." *Exhibit 142*

April 18, 1977 Sewer consultant, Philip M. Botch & Associates to Pierce County Utilities Director the anticipated costs for residents of West Lake Tapps to hook up to a conventional sewer design.

"Average estimates for assessable parcels in the Lake Tapps Sewer Service Area, based on Pierce County's procedures, are as follows:

1. Area Charge.....$ 0.013/square foot
2. Frontage Charge..... $ 17.50/front foot
3. Equivalent Capacity Charge.....$213.23 per connection
4. Connection Charge .....$325.00 per connection" *Exhibit 143*

July 22, 1977 Pierce County Public Works to Board of Pierce County Commissioners

"Pierce County and the property owners within the Lake Tapps Sewerage Facility Plan boundaries have a great deal at stake in the subject Land Use Permit Approval request."

"Pierce County, the Town of Bonney Lake and the South Hill Sewer District are involved in a joint effort to establish a suitable construction site for a Regional Sewage Treatment Plant. Following the 1974 County and. State approved Puyallup River Basin Water Quality Management Plan, Bonney Lake as the lead agency along with Pierce County and South Hill Sewer District have completed a required Sewerage Facility Plan. This Plan studied a multiplicity of alternate plans and proved that the least costly plan for the resulting Treatment Plant location was in accordance with the site under consideration in the subject Hearing. This Treatment Plant site is in complete accordance with the foregoing Plan which as indicated was previously approved by the Pierce County Planning Commission and the Board of Pierce County Commissioners in 1974. The. Town of Bonney Lake, in it's application, is in every instance only following the guidelines previously approved and established by the Pierce County Government." *Exhibit 144*

July 26, 1977 Pierce County Resolution No. 19903 passes; "undermines (7) years of work and approvals by denying Bonney Lake an Unclassified Use Permit to build the agreed sewage treatment plant."

"The Board having duly considered said application and appeal and all evidence present both for and against the proposed amendment, FINDS that the granting of an Unclassified Use Permit for a sewage treatment facility in a "G" General Use zoned district on the aforesaid property in the Bonney Lake area is NOT reasonably necessary and requisite in the interest of public health, safety, morals and the general welfare and that said Unclassified Use Permit will NOT permit the advantageous and economic development of the community and the county without unduly injuring adjacent and surrounding property, and the proposed amendment should be denied." *Exhibit 145*

October 1977 Pierce County Prosecuting Attorney, Pierce County Deputy Prosecuting Attorney, South Hill Sewer District, The City of Bonney Lake; Stipulation of Facts:

"Because of special and serious problems of sewage disposal and pollution which represent a recognized health hazard, the Sub-area was listed near the top of the State of Washington priority rating list after the facts developed in the Basin Plan."

"Population has grown from 1,423 in 1960 to 7,429 persons in 1975 and is expected to rise to 27,694 persons in the year 2000. Septic tanks and drainfields are exclusively used throughout the Subarea, yet almost all of the soils are classified as having moderate to severe limitations for drainfields."

"Septic system failures have become too common and are expected to increase."

"In addition, the lakes in the Subarea have violated State water quality standards for coliform bacteria. For example, total coliform count for Debra Jane Lake is in gross excess of State standards. The Puyallup River is designated Class A in the Subarea due to continual violation of standards relating to coliform bacteria and turbidity."

"Said Plan reviewed and analyzed eight alternative methods of reacting to the recognized need for the treatment of sewage in the Subarea in order to solve the serious pollution hazards."

"EXHIBIT B

The Town of Bonney Lake is considering the development of a sanitary sewer collection and waste water treatment system. The development of the area combined with the soils in the area which are generally unsuitable for septic tank and drainfield installation have made many of the residents aware of the need for municipal treatment facilities." *Exhibit 244*

November 29, 1977 Judge Stanley W. Worswick rules City of Bonney Lake does not need an unclassified use permit nor a shoreline substantial use permit:

"I conclude that neither an unclassified use permit nor a shoreline substantial use permit nor a shoreline substantial use permit is necessary under the facts of this case and the law applicable thereto. Plaintiffs" motion for summary judgment will be granted in the form of a declaratory judgment to this effect." *Exhibit 146*

December 2, 1977: Pierce County Prosecuting Attorney to Board of Commissioners

"The Honorable Superior Court Judge Stanley W. Worswick, held that South Hill Sewer District and the City of Bonney Lake are not required to obtain an Unclassified Use Permit nor a Shoreline Substantial Development Permit from Pierce County in order to construct the sewage treatment plant near Alderton. Written findings of fact and judgment will be entered in this case in the near future."

"We would appreciate your advising us whether you would like to appeal this decision." *Exhibit 147*

June 21, 1978 Washington State Court of Appeals, South Hill Sewer District & City of Bonney Lake v. Pierce County:

"Mr. Gubenik sent me a copy of the essential documents which were before Judge Worswick when he entered Summary Judgment on January 26, 1978."

"I have reviewed those documents; and, together with some minimal personal research effort, I conclude that it is most unlikely appellate panel of this court would disturb Judge Worswick's ruling. Accordingly, I must advise you of my personal opinion that further pursuit of this appeal by the responsible officials of Pierce County will undoubtedly result in a waste of the time and talents of the county's lawyers and --- in view of the financing arrangements of the project and the likelihood of a continued inflationary spiral of construction costs -- a substantial increase in the cost of the project to the taxpayers of Pierce County." *Exhibit 148*

July 6, 1978 Pierce County Prosecuting Attorney to Board of Pierce County Commissioners

"We agree that it is questionable whether the County will be successful in this appeal. The legal reasoning presented by Judge Petrie is. as he says. probably the way the full panel of judges will decide the case. "

"In view of Judge Petrie's letter. we would recommend that this appeal be dismissed." *Exhibit 149*

July 28, 1978 Department of Ecology; Pierce County Commissioners West Lake Tapps Interceptor

"The Department of Ecology asks that Pierce County request to have the subject project removed from the 1978 grants priority list in view of the decision made by the Pierce County Commissioners on July 25, 1978 regarding the continuance of the appeal of the land use permit requested by Bonney Lake." *Exhibit 150*

July 28, 1978 EPA to Mayor Stephen Flaherty; Clarifications of Comments Made at Pierce County Commission Meeting of July 25, 1978

"Our Agency will participate in construction of the most cost-effective alternative. Based upon the cost-effective analysis submitted to us by you, this would be Alderton (Koperski) alternative. However, if shown to be environmentally sound, we can participate in the land treatment alternative because its cost is within 15 percent of that of the most cost-effective solution."

"The Pierce County Commissioners' decision on Tuesday, July 25, 1978, to continue their appeal regarding the Alderton sewage treatment plant site, will result in our initiating the Environmental Impact Statement (CIS) process for the land treatment alternative shortly after August 15, 1978 unless action is taken by the County Commission." *Exhibit 151*

August 7, 1978 Pierce County Public Works Director Sewage Treatment Plant--Pierce County Bonney Lake

"In light of the determination by the Environmental Protection Agency that the alternate site is most cost effective, and further, in light of the fact that the Department of Ecology and the Environmental Protection Agency has said that if the Board continues its appeal of the Alderton Unclassified Use Permit decision, the funds will be removed from the priority array for construction for 1978, and, in light of potential legal problems that might exist should existing contracts between Pierce County, the City of Bonney Lake, and the South Hill Sewer District, cannot be implemented; this office strongly recommends that the Board hold another hearing on August 14, 1978 to reconsider your decision to appeal the Superior court decision on the rejection of the Unclassified Use Permit for the Alderton site and to consider whether to allow the implementation of the Alderton site as the the most cost effective site for a treatment plant in order that matching funds be made available to the county, the City of Bonney Lake, and the South Hill Sewer District for construction of the Plant to proceed at this time." *Exhibit 152*

September 12, 1978: EPA to City of Bonney; Bonney Lake-Lake Tapps Sewer District

"The purpose of this letter is to request that the Board of County Commissioners give to the Environmental Protection Agency, in writing their reasons for not proceeding with the Bonney Lake sewer project at the original Kopenski (Alderton) site. If possible we would like this information by September 15. 1978." *Exhibit 153*

September 14, 1978: Pierce County responds to EPA for its decision to renege on its prior agreements. County Commissioners testimony who voted against keeping prior agreements:

"So I have consistently this last year, said they're no feathers, there's no doubt, there's a need for sewers,--we must move in that direction as quickly as we possibly can." *Exhibit 154*

December 1978 Pierce County, City of Bonney Lake, South Hill Sewer District Addendum III Lake Tapps Sewerage Facility Plan is published by support from Grant No. C530653-01 from the United States Environmental Protection Agency, the Department of Ecology, Washington Futures Program and local participation."

"This chapter reviews the reasons why the Bonney Lake/Lake Tapps area is in need of sewerage service. A detailed explanation can be found in the Lake Tapps Sewerage Facility Plan (June 1976)"

"The study area is underlain by semicompacted, glacial hardpan with low permeability that lies at a depth of 24 to 48 inches. The existence of this hardpan, the hilly topography, and a shallow groundwater table makes most sites in this area unsuitable for septic tanks."

"Inoperable drainfields and unbuildable parcels due to drainage limitations of the soil comprise a significant portion of the service area."

"Inadequately treated leachate has been instrumental in causing eutrophication of Lake Tapps. This is caused by excessive nutrient loadings."

"A definite health hazard exists. Improperly operating on-site systems are contributing to high bacteria levels encountered in service area lakes. At times, beaches of service area lakes have been closed to water sports because of coliform contamination of lake waters. Groundwater, used as the drinking water supply for the area, is also being contaminated by septic tank leachate."

"The Pierce County Health Department has denied on-site disposal permits due to impermeable soils, high groundwater conditions, and topography limitations." *Exhibit 155*

June 21, 1978 Washington State Court of Appeals judge Harold J. Petrie reviews City of Bonney Lake vs. Pierce County trial court ruling.

Judge Petrie writes, "I conclude it is most unlikely an appellate panel of this court would disturb Judge Worswick's ruling. Accordingly, I must advise you of my personal opinion that further pursuit of this appeal by the responsible officials of Pierce County will undoubtedly result in a waste of time and talents of the county's lawyers and --in view of the financing arrangements of the project and the likelihood of a continued inflationary spiral of construction costs---a substantial increase in the cost of the project to the taxpayers of Pierce County." *Exhibit 156*

August 12, 1978 Prosecuting Attorney writes letter to three Pierce County Commissioners outlining the reasons the Council should not appeal the lower court's ruling:

" On January 26, 1978, Superior Court Judge Stanley Worswick on a motion for summary judgment decreed that the plaintiffs were not legally obligated to obtain an unclassified use permit regardless of zoning laws and that plaintiffs could proceed with the sewage treatment plant at the designated site."

"On February 6, 1978, Pierce County filed notice of appeal. On June 21, 1978, following a pretrial conference, Appellate Judge Harold Petrie issued a letter (copy attached as Exhibit "A") in which he stated that he was convinced that Judge Worswick's decision would be affirmed. He indicated as follows:"

"....further pursuit of this appeal by the responsible officials of Pierce County will undoubtedly result in a waste of time and talents of the County's lawyers and -- in view of the financing arrangements of the project and the likelihood of a continued inflationary spiral of construction costs -- a substantial increase in the cost of the project to the taxpayers of Pierce County."

"On July 28, 1978 the Department of Ecology, State of Washington wrote a letter (copy attached as Exhibit "B") to the County indicating that the County should ask for removal from the 1978 grants priority list by August 15, 1978 or that the Department of Ecology would take action to release the funds to other state agencies. The letter reasoned that the County was continuing its appeal of land use case, and therefore, this action was necessary."

"On July 28. 1978 the United States Environmental Protection Agency wrote a letter (copy attached as Exhibit "C ") to the City and the County stating that the Alderton site was, most cost effective--$9,850,242 but that because the County was continuing its appeal of the land use case, an environmental impact statement process would commence for land treatment shortly after August 15. 1978. Land treatment cost was estimated in the letter as being $1,300,000 higher than Alderton and substantially higher than any other alternative but was required by cost effective guidelines. "

"Officials have stated that land treatment would be the only method (alternative) considered unless it was proven environmentally unsound. If land treatment ultimately (approximately one year) was found environmentally unsound, officials of the EPA have stated that the various alternatives, including Alderton, would again be examined for cost effectiveness.
This would mean that on cost effectiveness the Alderton site could again be selected."

"In considering the question of whether or not to dismiss the appeal of the Alderton land use case, your attention is directed to the following:"

"(a) Judge Petrie's letter which states the decision of Judge Worswick will be affirmed and the County should dismiss its appeal.
(b) The letters of EPA and DOE which indicate that a continuation of the appeal will cause a loss of allocated sums of monies set aside for an approved project, and further, that the priority for treating these wage will change to land treatment, which alternative (or possibly some other alternative if land treatment is environmentally unsound) may be funded if it appears the project will commence in 1979.
(c) The possibility of lawsuit s for monetary damages against the County alleging breaches of the interlocal cooperation agreements.

"In view of the above considerations the Prosecutor's office recommends a dismissal of the appeal." *Exhibit 157*

August 22, 1978 Ecology letter to Pierce County Commissioners; Westlake Tapps Interceptor Adjustment to FY 78 Project List:

"The above referenced project is not proceeding in a timely manner (it is not expected to be awarded a grant before the end of this fiscal year and therefore being removed from the FY 78 fundable portion of the project list." *Exhibit 158*

February 1979: Pierce County, City of Bonney Lake, South Hill Sewer District; Addendum III Lake Tapps Sewerage Facility Plan

"The study area is underlain by semicompacted, glacial hard-pan with low permeability that lies at a depth of 24 to 48 inches. The existence of this hardpan, the hilly topography, and a shallow groundwater table makes most sites in this area unsuitable for septic tanks."

"Inoperable drainfields and unbuildable parcels due to drainage limitations of the soil comprise a significant portion of the service area. Ponding leachate from drainfields has been observed at several locations throughout the City of Bonney lake."

"This leachate has surfaced without adequate treatment in roadside ditches and as ponding above and near the drainfield. Inadequately treated leachate has been instrumental in causing eutrophication of Lake Tapps. This is caused by excessive nutrient loadings."

"A definite health hazard exists. Improperly operating onsite systems are contributing to high bacteria levels encountered in service area lakes. At times, beaches of service area lakes have been closed to water sports because of coliform contamination of lake waters. Groundwater, used as the drinking water supply, for the area, is also being contaminated by septic tank leachate."

"The Pierce County Health Department has denied on-site disposal permits due to impermeable soils, high groundwater conditions, and topography limitations. This latter condition is due to terrain drains and pockets that flood in the winter." *Exhibit 159*

February 27, 1979 Washington State Court of Appeals affirms The judgment of the trial Court." It writes, "In essence, it was agreed that since early 1970, Pierce County has been concerned with water-quality management in the Puyallup River Basin. By its action, the County commissioners repudiated their actions. Bluntly put, they reneged, and although we do not base our decision on this action, it is clear that in so doing, they jeopardized seven years of planning, study and design, during which, large sums of taxpayers' money had been spent under the supervision of Bonney Lake as the agreed-upon lead agency."

Pierce County abandon's running sewers to Lake Tapps, citing the reduction in grant monies as the sole reason. *Exhibit 160*

March 9, 1979 City of Bonney Lake passes Ordinance Number 454.

"Whereas, the City Council of the City of Bonney Lake, Washington, deems that the public interest, welfare and convenience and the health of the inhabitants of the City require, and it is advisable, that an adequate system of sewerage be constructed and acquired."

"Whereas, the City has heretofore entered into an Interlocal Agreement with South Hill Sewer District and Pierce County whereby the parties agreed to participate in the development of a regional sewerage system serving the Lake Tapps area with the City being the "responsible authority" for such project, which agreement was executed by the City on February 23, 1977." *Exhibit 161*

March 26, 1979 Interlocal Agreement for Construction and Management of Waste Water Treatment Facility. City of Bonney Lake, Pierce County, South Hill Sewer District, City of Sumner.

"Whereas, the Protection Agency of the United State and the Department of Ecology of the State of Washington nave prioritized funding for a treatment facility at the aforementioned Sumner location." *Exhibit 162*

January 18, 1980 Board of Pierce County Commissioners Signs final Intergovernmental Contract for Wastewater Facilities Management.

"Bonney Lake, as the lead agency; has through the adoption of the approved facility;, plan provided for the Count;, the division of these costs and the time frame in which the County must participate in order to continue a timely program of development. Following application of 75% Federal Grant Share und 15% State Grant Share, Pierce County's proportion of participation in the remainder of the cost has been established as follows"

"In accordance with the County's commitment to participate in this program in anticipation future sewerage needs in the County areas surrounding Lake Tapps, Bonney Lake and South Hill Sewer District, it is suggested that the Board consider at this time the advisability of authorizing the 1980 sale of General Obligation Bonds in an amount of approximately 1170,000 to finance the immediate obligation shown above for the y ears of 1979 and 1980, as detailed This leaves a remainder of approximately $475,000 to be raised by the same General Obligation Bond authorization method in late 1980 or early 1981 to complete this project." *Exhibit 163*

March 17, 1980 Sewer Consultant Botch to Director of Pierce County Public Works Department "an updated estimate for West Lake Tapps sewer connection costs:

Connection Charge..... $465.50" *Exhibit 164*

February 6, 1981 Tacoma Pierce County Health letter to Pierce County Public Works, On-Site Sewage Disposal Status in the "Lake Tapps" Area:

"The purpose of this letter is to assess the status of on-site sewage disposal, in the Lake Tapps area from the West Tapps Hwy North to the King-Pierce County boundary,"

"The soils in this area consist mainly of Alderwood Gravelly Sandy Loam. The soil conservation manual states, "in areas of moderate to high population, on-site sewage disposal systems often fail or do not function properly during periods of high rainfall..... " The reason for the premature

failures are the restrictive layers of weakly cemented and and compacted referred to as glacial till or in the extreme, hardpan. The water table perches above this layer during periods of heavy rainfall causing failures or potential ground water pollution, The Lake Tapps area universally, is underlaid by this compacted strata often in the upper four feet of the soil. These marginal soil conditions have limited the area for development using on-site sewage disposal. careful and often costly engineering is being utilized at this time to improve the wastewater treatment, but it is not a panacea for all the problems."

"Throughout this area, in particular; the Lakeridge Subdivisions, Deer Island, Driftwood Point, and Tacoma Point, the los were platted a number of years ago. Lot sizes are inadequate in instances. Often, after the homes are built and the initial system is put in, no room is available for replacement in the event of failures. In many cases, sewage effluent is surfacing or running into roadside ditches creating a nuisance and potential health hazard."

"A special area of concern is the water quality in lake Tapps itself. Dense development along the shoreline has caused us to focus our attention on effluent traveling along compacted layers and into the lake without adequate treatment. Data on the quality of lake Tapps is limited, but tray be an area which should be studied. The value of this lake front or view property has escalated considerably. The trend of those purchasing lots is to built larger dwellings which decrease usable absorption area and generally increase the waste water flows, thus, magnifying the problems."

"The close proximity of King County makes the potential for future growth significant. We feel, municipal sewers would well serve this area, freeing a large amount of previously unsuitable property for development and thus, returning it to the tax rolls."

"It is our opinion that careful study of this area should be made in light of the potential growth of the area and the marginal soils." *Exhibit 165*

March 9, 1981 West Lake Tapps Sewer District, News Update

"The FHA has said it will not insure loans for the sale of property on Driftwood Point as of September 1980. Most of the property is sold FHA."

"Construction has been curtailed for the lack of perk tests - only winter tests are being, done. Eight have been tried this winter and all have failed." *Exhibit 166*

March 31, 1981 West Lake Tapps Sewer--Public Meeting

"In the absence of a representative from the Health Department Mr. Hagestad read from 2 letters sent to the Department of Utilities; 1) regarding the septic tank disposal systems now being used by the nearly 2.000 homes With nearly 7.000 people living in the area and 2) from the City of Puyallup regarding effects of septic tank effluent into Lake Tapps and its resulting degradation of their main source of water supply." *Exhibit 167*

March 31, 1981, West Lake Tapps-Public Meeting:

"Read Health Dept. letter and City of Puyallup letter regarding effects of septic tank effluent into Lake Tapps and its resulting degradation of their main source of water supply." *Exhibit 168*

April 1, 1981 City of Bonney Lake, City Attorney, to Pierce County Utilities Director

"I enjoyed your presentation to the citizens of West Lake Tapps at the Lake 'Tapps elementary school on the evening of March 31, 1981. It was gratifying to see that the County is taking at least some steps to complete the Lake Tapps Sewer Project."

"I would appreciate being kept informed regarding your progress, if any, with the West Lake Tapps ULID. Inasmuch as the sewer project has as its objective the betterment of the water quality of Lake Tapps, we are always hopeful that our neighbors in the County will take steps through their elected representative to solve their sewage problems." *Exhibit 169*

April 7, 1981 Pierce County Public Works Director, letter to City of Bonney Lake

"I appreciated your letter regarding my presentation to the citizens of West Lake Tapps. You may be sure that Pierce County has always had concerns about the need for a sewer project in that area." *Exhibit 170*

April 8, 1981 Citizens around lake Tapps form West Lake Tapps Steering Committee

"After confirming that there is enough interest shown from the open meeting of March 31, 1981 at the school to justify further exploration. we discussed feedback from the community. Mr. Hagestad is willing to assist us in any way he can to secure help from State/Federal or local agencies, but we must have a representative organization who represent the various improvement clubs or maintenance corporations with whom he can work." *Exhibit 171*

June 1, 1981 Lake Tapps Improvement Association, To All Residence of the North and West Lake Tapps Unincorporated Area Association sends out questionnaire approved by the Pierce County Public Works Department regarding septic systems.

"We know that the longer we wait, the more pollution is apt to enter the lake and the more it will cost to correct the problem. We have more and more septic tank failures all the time. The above funding is available for our use. If we fail to take advantage it, the monies will go to other areas." *Exhibit 172*

June 12, 1981 Pierce County sends letter to West Lake Tapps Property Owners; Lake Tapps Sewer System Information. "

"This system could be available for service in 1982, about 11/2 years away:"

"Pierce County through a State and Federal grant combination is only paying 10% of the cost of the interceptor and the treatment plant expansion portion to serve Lake Tapps. This means that a sewage collection system could be constructed through the means of a Utility Local Improvement District to utilize the system being built by 90% Federal/State grant funds. The

County is paying approximately $650,000 for this trunk and treatment plant system, which would mean that for the approximate 2,000 property owners in Lake Tapps, that portion of their sewage system costs would be less than $500 each. The cost for a sewage collection system would be paid in addition through the formation of a ULID with property owners allowed 20 years to pay the $500 plus the collection costs."

"The sewer system is proposed as the only permanent solution to the wastewater disposal problem increasing because of the population expansion on the west side of Lake Tapps."

"Pierce County's Health Department indicated that building sites are seldom approved for new septic tank installations."

"FHA has expressed concern about guaranteeing loans in the future in this area without an acceptable sewage disposal system. Many existing systems are showing increased failure rates." *Exhibit 173*

June 16, 1981 City of Bonney Lake Mayor, John Pedroso, Speech

"This action causes grave concern to the City as it seriously jeopardizes the completion of the Lake Tapps Sewerage System. Bonney Lake desperately needs an operating sewer system to correct the septic tank pollution problems affecting the health of the populace and the water quality of local lakes. The City's water system is experiencing a growth rate of 12 percent a year and significant industrial growth is proposed This growth is contributing to the already severe pollution problem. The Lake Tapps project is necessary to prevent further water quality degradation in local lakes and to safeguard human health."

"Completion of our sewer project is of the utmost importance." *Exhibit 174*

June 30, 1981 Sewer Questionnaire for Lake Tapps Results:

"All areas except Island 21 and Deer Island indicated problems such as improper absorption of effluent in the drainfield, water standing during wet weather, noticeable runoff into the lake, odor of sewage in roadside ditches and restrictions in use of sanitary facilities."

"56.4% of those returning survey questionnaires expressed the opinion that the sewage disposal problems of the area justify installation of a sewage disposal system to preserve the environment and the property values of the community."

"The results of the survey, information from the Pierce County Planning Department concerning population growth, and from the Health Department concerning marginal soil conditions, plus the chance that bacterial invasion into drinking water sources of nearby communities indicate a definite need to pursue the matter further."

"The Steering Committee is therefore preparing a Resolution to present to the County Council outlining the problems and requesting a study of alternatives and costs of a sanitary sewer

system. This study will enable the property owners of the area to make an informed decision as to whether or not they desire the formation of a Utility Local Improvement District."

"A public meeting of the concerned residents of the community will be set sometime in September to report progress and to hear your comments. In the meantime, questions or input should be directed to members of the Steering Committee listed below, or to the officers of your local improvement clubs." Exhibit 175

July 20, 1981, Washington State Governor, John Spellmen, writes to the Mayor of Bonney Lake, John Pedroso. "In checking with the Washington State Department of Ecology (WDOE), I found that the Bonney Lake project has a very high commitment for funding; I understand that you are the fifth highest priority project in the entire state." *Exhibit 176*

August 1981: Lake Tapps Improvement Association Proposed Resolution To Go To the County Council

"Be it resolved the the membership of the Lake Tapps Improvement Association along with the Tacoma Point Improvement Club, the Driftwood Point Maintenance Company and the West Tapps Maintenance Company, as well as Bankers Island, Deer Island, and Island 21, do hereby request that the Pierce County Council implement the undertaking of a study required to determine the costs and feasibility of installing a sanitary sewer system in the West Lake Tapps area of the County."

"The reasons for seeking this study include the following: Whereas, the preservation of Lake Tapps as a recreation facility in Pierce County requires that every action be taken to preserve the water quality by eliminating pollution of Lake Tapps."

"Whereas, the increase of 63-1/2% in the population during the past 10 years in the area which is totally dependent upon on-site sewage disposal tor wastewater has resulted in the increased instances of failures. Marginal soil conditions contribute to contaminated runoff from drainfields. Projected population growth for the year 2000 is 350% increased over 1970, 190% increased over 1980. (Documented by figures from the Pierce County Planning Department)"

"Whereas, an increase in coliform and bacteria counts in the lake water and evidence of sedimentation increase from algae on the bottom when the Water is down is significant. When the flumes are closed, preventing normal flow of water in and out of the lake, this may contribute to fungus infections in swimmers."

"Whereas, the lack of adequate soil drainage for successful perk tests has severely restricted the ability to develop properties which are otherwise suitable for building sites. HUD/FHA has requested a review of all septic tank systems where loans are requested. In instances where the system has failed and evidence exists that sewage effluence is surfacing, the property will be ineligible for FHA mortgage insurance. (Letter to Public Works Dep't. April 27, 1981.)"

"Whereas, pollution of drinking water in the City of Puyallup is possible due to increased coliform counts in 80% of their source, Salmon Springs, which flows from aquifers under the Lake Tapps area. (Letter of June 13, 1980.)"

"Whereas, because of restrictions placed upon residents living on marginal property and without means of replacing drainfields, our market values are not keeping pace with surrounding values."

"Therefore, it is requested that the Pierce County Council take immediate action to implement a study of alternatives and costs of a sanitary sewer system in the West Lake Tapps area in order to provide suitable cost information for property owners to consider formation of a Utility Local Improvement District to install a sewer system." *Exhibit 177*

April 27, 1981 Department of Housing and Urban Development, Inquiry Concerning HUD/FHA Policies in Marginal Septic Tank Areas

"In all cases where septic tanks are used, HUD/FHA policy is to request a review by the local health department. They will provide information as to current condition and any history of failures in the immediate area. In instances where the system has failed and evidence exists that sewage effluence is surfacing, the property will be ineligible for FHA mortgage insurance. In marginal septic tank areas such as Lake Tapps, the possibility of failure increases as the population density increases." *Exhibit 178*

April 29, 1981 Steering Committee Sewer Project Minutes

"A letter from Jane Hedges, Environmental Health Specialist, from the Pierce County Health Dep't. was submitted for our records. This letter recounts the poor soil conditions, the small lots, building of increasingly larger homes which decrease usable absorption area, the potential future growth of the area. General discussion around the room recounted various problems known to us. It was suggested we prepare and send out a questionnaire to be returned listing certain conditions."

"Sandy Anderson reported on her talk with Chief Appraiser, Max Rice, who confirmed the claim that FHA was not approving some loans in the Lake Tapps area, particularly Driftwood Point and a few in Lakeridge. The application is automatically turned down on an individual basis, but the applicant can renegotiate if health department officials inspect and assures the septic tank functions properly. Sandy will submit this statement for documentation. Some lots arc too small to permit room for an adequate drainfield so are permitted to use the greenbelt." Exhibit 179

February 2, 1982, U.S. Environmental Protection Agency "The accelerated growth of the Bonney Lake area combined with poor soil conditions for adequate septic tank functioning has lead to this project. There is concern over septic tank leakage contamination of groundwater and of the lakes in the area. Surfacing septic tank effluent also poses a health problem, therefore, the Washington Department of Ecology (WDOE) rated this project high on its priority list." *Exhibit 180*

May 20, 1982: Department of Ecology review of grant money options to Bonney Lake. "The State is prepared to offer a 75 percent grant to Bonney Lake to continue the project. Pierce County has informed Bonney Lake that they are unable to share in the local costs of a 75 percent grant as opposed to a 90 percent funding situation." *Exhibit 181*

October 18, 1982: Ecology to Mayor of Bonney Lake advising it of Ecology's Referendum 39 grant offer for "your sewage treatment plant" for 75% of the cost a sewage treatment plant. "Federal 201 - Signed contract when Federal funds available. Funding arrangements 90 percent of the TEC." *Exhibit 182*

December 1, 1983 Washington Department of Ecology (Ecology) writes Bonney Lake's mayor, Whisler. It advises the Mayor that the "City's grant of $11 million will be canceled if the City of Bonney Lake has not contractually obligated itself to complete the scope of work described in the grant by March 1, 1984. We are concurrently notifying our enforcement office that there is a high likelihood this project will not proceed to completion and they should take whatever steps necessary to prevent degradation of the surface and ground water quality in Bonney Lake." *Exhibit 183*

April 20, 1983, Puyallup River Basin, Letter to Pierce County Council

"The Review Committee resolved that the Lake Tapps area should be sewered and supports the Bonney Lake Wastewater Treatment Facility as a means of doing so." *Exhibit 184*

April 20, 1983, U.S. EPA writes to the Mayor for the City of Bonney Lake, John Pedroso. "It has come to our attention that the City of Bonney Lake may be considering not completing its sewer project."

"As you know, the sewer project was originally conceived to correct failing septic tanks contributing to pollution of Lake Tapps. At this time, the Environmental Protection Agency (EPA) has contributed $3.8 million to assist correct this problem and the Washington Department of Ecology has contributed $760,000. An additional $5-million has been contributed by the Economic Development Administration (EDA)."

"Failure to carry this project to completion would have serious environmental as well as economic consequences. Problems with Lake Tapps and failing septic tanks would not be corrected and could actually get worse." *Exhibit 185*

June 13, 1983 EPA writes Mayor John Anderson of Bonney Lake. "We continue to receive information that indicates the City of Bonney Lake may be considering not completing its sewer project. I have written concerning this matter previously, but am writing again to make EPA's position clear for you and the people of Boney Lake who will be affected by this decision."

"As you know, the sewer project was originally conceived to correct failing septic tanks, some of which were contributing to pollution of Lake Tapps, and others creating localized health problems. The Environmental Protection Agency (EPA) has contributed $3.8 million to assist in correcting this problem and the Washington Department of Ecology (WDOE) has contributed

$760,000. An additional $5-million has been contributed by Economic Development Administration (EDA)."

"We understand that the City's estimate for completing the project, using the State's criteria, is $5.5 million. This would provide a new sewage treatment plant for the city. Cost to the City would be a total of $4,260,000 and the environmental problem would still be there." *Exhibit 186*

August 10, 1983 Environmental Protection Agency writes Bonney Lake Mayor Carle Whisler and demands "repayment of $3,458,118 in grant monies. Both the U.S. Environmental Protection Agency (EPA) and the Washington Department of Ecology (WDOE) have encouraged the City to complete the project, which so far has cost more than $9 million. Completion of the project would assure that this capital investment was not wasted and that the outstanding water quality and public health needs for the project would be resolved." *Exhibit 187*

August 31 1983: U.S. EPA writes to Pierce County Councilmember Moore on the need for sewers to Lake Tapps. "A review of the rating list for this project indicates that the rating was based on excessive coliform bacteria, algae, slime, bacterial growth, aesthetics and for potential human contact with sewage due to failure of septic tanks." *Exhibit 188*

October 5 1983 Economic Development Administration (EDA) sends letter to the City of Bonney Lake. "Please advise me concerning the City's plan to complete the portion of the sewer project funded by EDA as well as its plans for completing the entire system."

"I wish to point out that the award of the EDA grant for this project was based on the request by duly elected officials and was predicated upon the anticipation of completion of the entire systems. Your failure to complete the project would result in the waste of Federal tax dollars. Accordingly, if the City persists in its refusal to complete the project, I will order an immediate and thorough audit of the project EDA will also take whatever actions it deems appropriate to limited to recovery of all or part of the $3,732,235.25 previously disbursed on this project." *Exhibit 189*

June 14, 1984 Pierce County Prosecuting Attorney to Environmental Protection Agency: "Pierce County intends to resist the motion of Bonney Lake for the inclusion of Pierce County as third party defendant in the Appellate proceedings before the Environmental Protection Agency." *Exhibit 190*

June 14, 1984 Pierce County Prosecuting Attorney to Environmental Protection Agency:

"This will advise of the decision of Pierce County to withdraw its request to participate in the instant grant appeal pending before the Board of Assistance Appeals." *Exhibit 191*

June 29, 1984 U.S. Environmental Protection Agency to its Board of Appeals supporting the EPA's position to have Pierce County joined as a third party defendant for repayment of grant monies. "EPA views the interlocal agreement between Bonney Lake/Pierce County to run sewers to Lake Tapps as a joint venture. "A joint venture such as that created here by the interlocal agreements is in the nature of a partnership." EPA adds, "Pierce County simply

cannot assume it can thumb its nose at this proceeding and then be able to have these issues reheard." *Exhibit 192*

July 3, 1984 U.S. Environmental Protection Agency responds to Grant Appeal of Bonney Lake to Bonney Lake and Pierce County. "As I have informed you both on several occasions, the Region's position is that completion of the Lake Tapps Sewer Project is necessary to avoid serious environmental problems which could affect the health and welfare of the residents of the area. Completion of the sewer project would help ensure that the water quality of Lake Tapps and public health are protected. Project completion would also avoid waste of the sizable capital investment already made. Region 10 has made every effort possible to cooperate with Bonney Lake and Pierce County in reaching a solution which will require completion of the Lake Tapps Sewer Project. We sincerely hope that those efforts have not been made in vain." *Exhibit 193*

"The U.S. EPA maintains it is willing to "enter into a preliminary agreement to agree which must be signed by all parties to the renewed Lake Tapps Sewer Project no later than July 16, 1984 to avoid the repayment of grant monies given to the City of Bonney Lake and Pierce County to run sewers to Lake Tapps. 1. Statement of commitment from all parties to the renewed sewer project which express the parties intent to complete construction of and operate the sewer project." *Exhibit 194*

July 11, 1984 U.S. Environmental Protection Agency enters an Order joining Pierce County to an additional party to the EPA's attempt to recover $3,458,118 in grant monies issued to Bonney Lake/Pierce County to run sewers to Lake Tapps. "EPA looks at Bonney Lake's alleges the Lake Tapps Sewage Treatment project failed because of Pierce County's breach of certain interlocal agreements, the Board would have the authority to modify the Regional Administrator's final decision and require Pierce County and not Bonney Lake to return the grant funds." *Exhibit 195*

July 17, 1984 Pierce County Council approved Resolution R84-159; Resolution of the Pierce County Council, Declaring Pierce County's Intent to Complete Construction of the Lake Tapps Sewer System, Conditioned Upon Participation By Other Governmental Units:

"WHEREAS, Pierce County based its refusal to proceed with the sewer project on a decrease in funding from ninety percent (90%) of the eligible costs, under combined grant funding by the United States Environmental Protection Agency. (EPA) and the State of Washington, department of Ecology (DOE) to funding of seventy-five percent (75%) of eligible costs, under Washington Referendum 39; and"

"WHEREAS, the EPA administratively annulled the design and construction grants in August, 1983, for the project, requiring Bonney Lake to return $3,500,000.00 in grants previously awarded to and spent by the City, as lead agency; and"

"BE IT RESOLVED by the Council of Pierce County:

Section 1. Pierce County hereby pledges a good ,faith effort to complete the Lake Tapps Sewage Treatment facilities on a regional basis, including an expanded sewage treatment plant located at Sumner, Washington." *Exhibit 196*

July 17, 1984 Pierce County Appeal of EPA's decision to join Pierce County in repayment of grants, Witness Statements:

"I . HAROLD HAGESTAD Mr. Hagestad was the Utilities Director for Pierce County from the formation of the utility in 1967 and, therefore, was responsible for all sewer utility matters until Mr. Roy Peterson was hired in 1978. Mr. Hagestad remained with the sewer utility until his retirement in 1983."

"He would be expected to testify, if called, on the following matters:
(a) He would testify on the history of the project from the point of view of the Pierce County utilities Department, which is responsible for planning, designing, operating and maintaining all sanitary sewer facilities owned by Pierce County under RCW 36.94."

"(b) He would testify on the need for sanitary sewers in the unincorporated areas of Pierce County adjacent to the City of Bonney Lake and in the vicinity of Lake Tapps."

"(g) He would testify that, through his familiarity with the project, he had a good faith doubt as to Bonney Lake's financial capability and political ability from a voter-approval standpoint to complete this sewer project as the lead agency."

"II. ROY H. PETERSON, Jr. Mr. Peterson was the Assistant Director of Public Works for Utilities with Pierce County from 1978 until 1983. In that position he was responsible for managing the sewer utility of Pierce County. Mr. Hagestad worked directly under Mr. Peterson during those years."

"(e) He will testify that, through his familiarity with the project, he had a good faith doubt that the City of Bonney Lake could have completed this project at any time given the financial restrictions and the political realities in the City of Bonney Lake."

"(g) He will conclude that the reason for the County's withdrawal from the project was solely related to the unanticipated cancellation of 90% grants and the reduction of out-standing funding to 75%."

"III. BEVERLY TWEDDLE Mrs. Tweddle is currently an assistant to Booth Gardner, the Pierce County Executive. Prior to being named to that position in 1983, she was an Administrative Assistant for the Utilities Department for approximately 7 years."

"(b) Based upon her familiarity with the project through discussions with Messrs. Peterson and Hagestad, she will testify as to her opinion that the City of Bonney Lake had neither the financial capability nor the political acceptance of the people of Bonney Lake for this sewer project at any time."

"IV. BOOTH GARDNER Booth Gardner is the elected County Executive for Pierce County and has served in that capacity since May 1, 1981. As County Executive, he became familiar with the Bonney Lake sewer project after taking office."

"He will testify, if called by Pierce County, as follows: (a) He will testify that Pierce County withdrew from the project primarily because of the termination of 90% federal and state funded water pollution control grants. He believed Pierce County should fulfill its good faith commitment to complete the project."

"(c) During the time of his familiarity with the project, he had a good faith doubt as to the financial capability of Bonney Lake to complete the project as lead agency." *Exhibit 197*

July 18, 1984 Bonney Lake letter to EPA, Letter of Intent to Execute Preliminary Agreement:

"This letter is intended to advise both of you that the Pierce County Council has now passed a resolution, which has been approved by the Pierce County Executive, authorizing the County sewer utility to continue to completion the Bonney Lake area sewer project. Pierce County proposes that the project be completed with Bonney Lake as the lead agency by constructing interceptors to the City of Sumner treatment plant, which would be expanded as a part of the project." *Exhibit 198*

July 20th, 1984 Pierce County and Bonney Lake sign an out of court settlement with the U.S. Environmental Protection Agency.

"The parties shall enter into a Preliminary Agreement no later than September 3, 1984. The Preliminary Agreement shall include, at a minimum, the following: (1) Statements of commitment from all project participants, including the City, County and City of Sumner, that the participants intend to complete construction of and operate the Lake Tapps Sewer Project. The statements shall be subject to approval by the Region." *Exhibit 200*

September 4, 1984 Pierce County passes "a resolution of the City of Bonney Lake and Pierce County pledging themselves to complete the project." *Exhibit 201*

January 11, 1985 Ecology sends a letter to Pierce County Health Department notifying them "Ecology investigated a call about a failing drainfield at Lake Tapps. I investigated and noted a twelve-inch concrete pipe that was causing a white growth on the bottom of the lake. I used a field kit for MBAS on the discharge. The test was positive. This pipe was placed by the county some time ago to direct storm water from the highway. It also appears to collect drainfield water from the immediate area. During major storm events, the pipe appears to carry a lot of drainfield water." *Exhibit 202*

September 21, 1990; Ecology transmits a letter to the Pierce County Executive, Joe Stortini. Ecology notifies Stortini that "approximately $20 Million in Federal Wastewater Construction Grant Funds must be obligated in grant awards to local governments by September 30, 1990 or it will be lost to the state for use as grant funds. A project for an interceptor to provide sewer service for West Lake Tapps was rated and ranked on the Federal Wastewater Construction Grant Program's FY 90 Final Project Priority List that was published on September 15, 1989."

"Based on our most current information, the project is not ready to proceed with construction."

"The Federal Wastewater Construction Grants Program is now being phased out with limited remaining funds. All federal grant funds must be obligated by September 30, 1991."

"As you may know, the Centennial Clean Water Fund (CCWF) Program is also administered by Ecology and can provide grants for 50 percent of eligible wastewater project costs." *Exhibit 203*

February 15, 1991 City of Auburn relating to Lake Tapps Estates (Tapps Island) to Pierce County Planning Department.

"As you are aware the City of Auburn has expressed concerns about the proposed project and the potential irreversible adverse impacts it could have on groundwater and thus, a major source of our City's drinking water supply."

"The increasing trend of nitrate concentrations in Auburn's Coal Creek Springs is statistically significant."

"Our understanding that the proposed project is planning to use conventional soil infiltration systems which does not constitute "....all known, available, and reasonable methods of prevention, control, and treatment prior to entry."

"As we have stated on other occasions, the protection of our water supply is crucial; contamination is irreversible." *Exhibit 204*

February 28, 1991 Ecology reviews the independent consultants report to develop Tapps Island, Analysis of Potential Septic System Impacts to Groundwater on the Lake Tapps Upland. Ecology gives County (4) options because "mitigation measures should be seriously considered for the development of rural communities in areas vulnerable to ground water contamination, especially in Wellhead protection Areas. The four options include 1. Construct or link up to a regional sewer system. 2. Require all new subdivision development to install small package wastewater treatment plants (with full time operator). 3. Require on-site disposal to be limited to either non-discharging systems , or systems which will treat the discharge to meet the Ground Water Quality Standard (i.e., composting toilets with discharging grey water.) 4. Determine a septic density specifically for each area based on site specific characteristics." *Exhibit 205*

March 8, 1991 EPA requested by the Washington Department of Health, Environmental Health Program to review the methodology and conclusions of Analysis of Potential Septic System Impacts to Groundwater on the Lake Tapps Upland. The report was prepared by an independent consultant, Robinson and Noble at the request of a Tapps Island developer.

"Pierce County has chosen a non-conservative minimum lot-size requirement for septic tanks, and will thus need to thoroughly evaluate many requests for on-site sewage systems in order to protect water quality."

"High-quality hydrogeologic reports may be expensive and time consuming to produce. Consultant's reports should be critically evaluated by qualified professionals who work for the responsible regulatory agency." *Exhibit 206*

March 18, 1991 Pierce County Planning Department requests help from Department of Ecology for Tapps Island Development. "Following our conversation on March 13, 1991, I understand that the Department of Ecology does not wish to make this determination. Pierce County Planning must make a decision on whether the on-site septic systems proposed for this subdivision are likely to cause a significant adverse environmental impact. Therefore, we would appreciate it if the Department of Ecology could assist us in making this determination." *Exhibit 207*

March 19, 1991 Ecology internal memo concerning the City of Auburn's concern that the development of Lake Tapps Estates (Tapps Island) will contaminate Auburn's wells. "Coal Creek Springs is a major source of the City of Auburn's water supply. Therefore, the City of Auburn is greatly concerned about possible ground water degradation and impacts to their water supply."

"Ecology conducted a joint site investigation with *Bill Creveling* and Brad Horp of TPCH." *Exhibit 208*

March 19, 1991 Ecology transmits its comments on the Analysis of Potential Septic System Impacts to Ground Water on the Lake Tapps Upland.

"On January 17, 1991, Ecology and TPCH staff conducted a field investigation in the north-central portion of the proposed Lake Tapps development. Area consists of heavy vegetation, trees and wetlands in the low area of development between Lots 29 through 77. We examined eight test holes between Lots 29-33. We were not able to inspect Lots 72-77 because they were under water."

"Five of the eight test holes contained water. The three dry holes were located 25-30 feet from standing surface water. In some areas, ground water in the test pits were within 6 inches of the ground surface."

"The Robinson and Noble Report did not address this section of the development which we found to be unsuitable for on-site sewage systems."

"The proposed Lake Tapps Upland development is in a hydraulically-sensitive area being located upland from Coal Creek Springs which is a major water supply source for a neighboring city."

"Recommendations

1. Require the developer to install community septic systems with ground water monitoring plans.
2. Place restrictions on lot sizes for on-site systems.
3. In the county is going to allow the area to be developed, consider installing sewer lines to the area and pipe effluent to the nearest sewage treatment plant.
4. Have the area identified as a Special Protection Area." *Exhibit 209*

June 12, 1991 City of Auburn request the Pierce County Hearing Examiner "to reconsider your decision on the Preliminary Plat of "Lake Tapps Estates."

"The City of Auburn has since May 21, 1990 expressed concerns to Pierce County with regard to this project."

"It is historically apparent that the City is extremely interested in this project, primarily with the concerns of impact to water quality. Yet, the City of Auburn was not given a formal notice of the public hearing on the preliminary plat. It would seem from our interest that the City should have been properly notified of the hearing."

"The City did not become aware of the hearing until 4:23 p.m. May 13, 1991. At that time, David Swindale, Pierce County Planning, left a phone message. Since the hearing was at 10:31 a.m. May 15, 1991 there was not time for all parties to prepare." *Exhibit 210*

July 6, 1992 Ecology transmits a letter to Pierce County Hearing Examiner, Stephen Causseaux requesting he reverse "the mitigated determination of nonsignificance until a detailed hydrogeologic investigation of the proposed site has been adequately performed." The Hearing Examiner approved the 103 lot development on Tapps Island.

"The applicant has not substantiated their claims. If the burden is on the applicant to establish that there will be no ground water degradation, then that demonstration has not been made. The prudent approach would be to require an investigation to adequately determine the potential impacts or require more substantial mitigative measures. The mitigative requirement to use pre-drain sand filters with each system will not reduce the contaminant loading to the aquifer with respect to chemical contaminants, only biological contaminants. It is equally important to protect the ground water from chemical contamination."

It is true that the Department of Ecology does not have jurisdiction over residential on-site sewage systems, however, Ecology does have the responsibility to protect ground water quality statewide. Therefore, these comments are relevant and should be given further consideration."

"It is more cost effective to prevent ground water contamination from occurring rather than to remediate ground water after contamination has already occurred. A proactive approach is necessary to protect ground water since discharges from residences are not easily redirected, reduced or eliminated once ground water contamination has occurred." *Exhibit 211*

June 16, 1995 Pierce County Planning Land Services Department Memorandum East Lake Tapps Sewer Amendment

"In addition, sewers can no longer be extended into the rural areas of Pierce County. Both the Pierce County County-Wide Planning Policies and the Pierce County Comprehensive Plan set forth this requirement."

"The provision of urban services and accompanying population growth to this area would

have a number of potentially adverse environmental impacts. The existing transportation system is inadequate to accommodate the growth which the East Lake Basin amendment would spawn."

"Some prime agricultural lands would be converted to other uses, in conflict with Comprehensive Plan policies which require preservation of important agricultural lands."

"The development of the area could have significant impacts on surface and groundwater quality. Important fish and wildlife habitat could also be threatened, including the White River elk herd. The Muckleshoot tribe has expressed great concerns over urban development in this area because of the potential impacts to fish and wildlife habitat and water quality."

"In summary, to consider providing sewer service within this basin area will allow for increased densities that will, in turn, create increased demand for other urban facilities and services which will result in significant changes to the environment." *Exhibit 212*

April 7, 1998 Pierce County Public Works and Utilities, Memorandum: Lake Tapps Facilities Plan: Federal Grant Responsibilities

"As requested, attached is a chronological outline of the history surrounding the Lake Tapps Facilities Plan, Amendments, and subsequent Inter-local Agreements. The outline contains no conclusions, only factual information. The outline was originally created in an attempt to answer the question, "In accepting federal funds in the development of the Lake Tapps Facilities Plans and related construction projects (EPA Construction Grants***) is Pierce County mandated to provide sewer service to those areas within the 1984 Inter-local Agreement Area?"***

"The outline was compiled from existing Pierce County Sewer Utility correspondence files and project files. The "official" files which were maintained by the Department's legal counsel, were destroyed as part of a routine record purge. I was able to obtain additional copies of documents through Gray & Osborne, one of the engineering firms working on the project at the time."

"Transmitted with this document are the attachments noted within the outline. A separate file named "Lake Tapps: EPA Grants" contains additional documentation used to create the outline." *Exhibit 213*

April 1990 "The future of Lake Tapps was threatened when Puget Sound Energy (PSE) suggested it would have to close down hydroelectric operations due to financial handcuffs proposed during re-licensing of the White River. Without a new source of revenue, the utility said it would have to abandon its permit to operate its hydroelectric plant that uses diverted White River water, a move that eventually could drain much of the popular lake." *Exhibit 214*

May 1999 "PSE needs a subsidy of $3 million annually to keep the project going. U.S. Army Corps of Engineers and the State of Washington subsidize the project until a solution is found." *Exhibit 215*

May 05, 2000: Department of Ecology/Senator Pam Roach e-mail, House Judiciary Committee Hearing on Lake Tapps. *Exhibit 216*

June 20, 2000, Department of Ecology, Lake Tapps Water Supply Proposal:

"Were the Project to be retired, the reservoir would no longer be filled, and the waters of "Lake Tapps" would recede to their natural state. This would result in an approximately 40-foot reduction of the lake level."

"If the project were to be retired, the Corps would need to immediately invest upwards of $30 million to provide an alternative method of fish passage for Mud Mountain Dam."

"The Pierce County Assessor's Office has estimated that retirement of the Project, and the corresponding loss of the reservoir, would result in a diminished value of properties around the reservoir in amounts of somewhere between $130 million to $180 million. This substantial loss of tax revenue would negatively affect local and regional public services."

"Operation of the project maintains water quality in the reservoir. Were the Project to be retired, many of the residential communities surrounding Lake Tapps would need to modify septic systems, or in some cases, construct sewers. Costs associated with construction sewers to serve these residents are unknown but could be in the tens of millions of dollars."

"The reservoir also provides substantial aquifer recharge for nearby communities that rely upon the aquifer for domestic water purposes." *Exhibit 217*

July 25, 2000 Pierce County to Governor Gary Lock letter, Lake Tapps/White River and Puget Sound Energy's Potable Water Right Application. "We formed the Lake Tapps Task Force in April 1999 in response to the possibility of losing Lake Tapps, a valuable regional resource. Under conditions placed on the White River/Lake Tapps hydroelectric project by a proposed Federal Energy Regulatory Commission license, Puget Sound Energy would lose between $35 million and $80 million over the first 20 years of operation. It is difficult to see how PSE could justify maintaining Lake Tapps to operate with these revenue losses." *Exhibit 218*

August 16, 2000: 31st District Representative Christopher Hurst and Mike Stensen; letter to Governor Gary Locke: "In late February 1999, the citizens of the Lake Tapps community began to work to find a solution to a real threat to their homes and businesses - the draining of the Lake Tapps reservoir."

"At the heart is a request is an amendment to agency rule (WRIA 10) which addresses the Puyallup river basin; and a new water right. These changes allow this proposal to move forward for further consideration. Without these changes we will be unable to pursue this option, inhibiting the opportunity to place more water in the rivers, preserve a now established ecosystem with Lake Tapps, and potentially decimate the value to he property and industry which surrounds the Lake. Elimination of the lake would also dramatically impact local schools and fire districts within the community which rely on current levy levels for construction and maintenance of their systems." *Exhibit 219*

August 23, 2000, 31st District Representative Christopher Hurst and Mike Stensen send letters to the Director of Ecology, Office of the Governor, Pierce County Council, Pierce County Executive and others to "confirm a meeting for interested parties to meet to discuss an application to the Washington State Department of Ecology for a water right. This meeting will take place on August 29, at 2:30 PM." *Exhibit 220*

August 28, 2000 Ecology Puget Sound Energy Water Right Application Briefing Paper. "Ecology informed Puget the agency does not currently have the staff to support all these activities. Puget proposed that the company provide financial support under a cost recovery agreement. Unfunded litigation stemming from water rights processing has remained an unresolved issue. Even if funding were available, Ecology staff has many concerns about committing resources to this project, including:" *Exhibit 221*

August 29, 2000 Director of Ecology talking points for Puget Sound Energy Water Rights Application, Key Messages. "Given the current workload and budget of the agency, we need to get our costs covered for: Analyzing and processing Puget's application as well as those that precede it; Attorney's costs; and Rule amendment. We need a request from the company to investigate this option further. This is a new process for Ecology, and we are still developing protocols. (We believe this will be costly)." *Exhibit 222*

September 14, 2000: Puget Sound Energy files a petition, PETITION FOR ADOPTION, AMENDMENT, OR REPEAL OF A STATE ADMINISTRATIVE CODE RULE (RCW 34.05.330) "PSE requests WAC 173-510 which closed the White River system to be opened for PSE and water rights." *Exhibit 223*

September 29, 2000: Muckleshoot Tribal Administration letter to Governor Gary Locke and Joe Dear: "The Muckleshoot Indian Tribe has learned that you intend to speak at a public meeting Monday, October 1, 2000, and publicly support the Puget Sound Energy ("PSE") water right applications recently submitted to the Department of Ecology ("Ecology") for processing."

"Although we understand you may support the PSE proposal, we believe it is unnecessary -- and inappropriate -- for you to give any assurances prior to Ecology's proper processing of PSE's water right applications under the legal requirements of the Water Code. We understand your empathy for the Lake Tapps residents and desires to support efforts to save the lake. However, your public support and assurance of issuance of water rights is going too far. We urge that you follow the correct legal process for processing water right applications and not intervene in that process or imply that the process can be avoided or truncated."

"Premature public support for PSE's proposal may have Endangered Species Act implications and consequences." *Exhibit 224*

October 02, 2000: Department of Ecology, Director Thomas Fitzsimmons, Ecology internal e-mail. "Char Naylor, the water manager for the Puyallup Tribe, called about the Puget Sound Energy's soon-to-be pending application for increased water use of the Puyallup River. The completed application is now sitting in Ecology's Office and the 30 day clock will be running soon. The Puyallup Tribe has huge concerns about the surface water quality, water flows and the

fisheries of the Puyallup river flowing through the reservation. The Puyallups will be holding an emergency meeting on Monday and they will be faxing a letter over about noon on Monday. Needless to say, the Puyallups are going to the wall to fight an new appropriations of water." *Exhibit 225*

October 2, 2000 Puyallup Tribe letter to Governor Gary Locke; Puget Sound Energy, White River/Lake Tapps Diversion, Surface Water Permit Application No. S2-29921. "Tom, Laurie & Sue got copies - it may come in as executive correspondence."

"Our Tribe has learned that you intend to commit the State (including the Department of Ecology) to support of the referenced water right application at a public meeting in Sumner on October 2, 2000."

"Instead, we are moving toward confrontation. Although we have a strong governmental interest in addressing PSE's proposal and have offered intergovernmental cooperation as an alternative to litigation, we are concerned that you are about to close the door on us. Please also understand that the Tribe considers the State, not the applicant, to be the appropriate contact for addressing intergovernmental concerns. We wish to work with Ecology in a process that is not tainted by premature decision making or political expediency."

"The Puyallup downstream of the White is also over-appropriated and water-quality-impaired."

"We urge you to take that opportunity, not foreclose it by committing the State before either government has received enough information to take the next step." *Exhibit 226*

October 3, 2000 "Governor Gary Locke announced Monday night that his office will push a single solution to save Lake Tapps without assessing property owners millions of dollars. Locke said the state will initiate a preliminary permit process that eventually could give Puget Sound Energy, the lake's owner, the right to withdraw and sell Lake Tapps water for drinking." *Exhibit 227*

October 9, 2000 "Governor Gary Locke said Monday that he had to exercise some restraint last week when he publically supported a solution to save Lake Tapps." *Exhibit 228*

October 10, 2000 "The Puyallup and Muckleshoot Indian Tribes are questioning why the Governor has intervened in a permitting process that the State Department of Ecology normally handles under the state water laws." *Exhibit 229*

November 17, 2000: Department of Ecology to Puget Sound Energy, Rulemaking Petition: "This letter is in response to the Puget Sound Energy (PSE) petition for rulemaking, which was received by the Department of Ecology (Ecology) on September 19, 2000. The petition proposes that Ecology amend Chapter 173-510 WAC to create a limited exception to WAC 173-510-040(3), which closed the White River to further consumptive appropriations."

"After carefully considering this petition, its objectives, and other alternatives for addressing those objectives, I have decided to deny the petition at this time, as provided for in RCW 34.05.330(1)(a). This decision is based upon: 1) the unanticipated administrative costs

associated with rulemaking and the need to divert staff from already prioritized activities, and 2) that we believe there is a more appropriate approach for addressing the proposal." *Exhibit 230*

December 1, 2000 Department of Ecology to Muckleshoot Indian Tribe; Stay of Reserve Allocations for BOD5 and Ammonia. "One of the main purposes of the May 17, 2000, meeting was to discuss implementation of a monitoring program for dissolved oxygen to in the MOU. Data from this monitoring would establish a baseline water quality information essential for implementing provisions of the MOU."

"Ecology and the Puyallup Tribe deployed Hydrolab continuous monitors at two sites in the Lower Puyallup River four times during August and September 2000. Resulting date from September indicated that water quality standards for dissolved oxygen were violated on several days." *Exhibit 231*

December 5, 2000 Puyallup Tribe of Indians to Governor Gary Locke; Puget Sound Energy - White River/Lake Tapps Diversion. "On October 2, I wrote you and suggest that you not commit the State to the Puget proposal until our Tribe has had a chance to work with the Department of Ecology. Since that letter PSE's Notice to Appropriate Public Waters was developed by the state and subsequently published by PSE in the Tacoma News Tribune on October 5 and 12, 2000." *Exhibit 232*

December 15, 2000 Puget Appeals Ecology's decision not to amend Chapter 173-510 WAC to Governor Locke; Appeal of Denial of Rule Making Petition Filed by Puget Sound Energy. "Ecology has stated that there may be an opportunity for PSE to request Ecology to process the application under the standard of 'overriding considerations of public interest.' Based upon decisions by the Pollution Control Hearing Board and our interpretation of this legislative policy, we believe that it is not a reasonable alternative means. See attached Pollution Control Hearings Board decision, Attachment C. There are no established standards for applying overriding considerations of public interest, which is very narrowly applied under specific facts of each individual case. Without further assurance that this is a viable option for PSE, it cannot be considered 'a reasonable alternative.'" *Exhibit 233*

December 19, 2000 Perkins Coie/Puget Sound Energy; Puget Sound Energy, Inc.'s Petition for Rule Making and Appeal Thereof. "As you know, Puget Sound Energy, Inc., ("PSE") has appealed to the Governor the Washington State Department of Ecology ("Ecology") denial of PSE's petition for a rule making with respect to water rights in the Puyallup River Basin. In order to resolve this appeal and allow for possible further discussion between PSE and Ecology about this matter, we have in coordination with Brian Faller, Assistant Attorney General, developed the following settlement agreement. Please mail and fax the Governor's Office and me a copy of the countersigned original if you choose to execute this letter agreement." *Exhibit 234*

December 21, 2000 Washington Attorney General, Governor Locke, Department of Ecology internal email. "By now, Tom should have a fax from Perkins Coie that describes an agreement whereby Puget Sound Energy's appeal of our denial of their rulemaking petition will be dismissed. The original should go to the Gov's Office to Everett Billingslea, and a copy back to

Perkins Coie. I will need a copy; and so will Brian Faller. And I need to know when Tom signs it so I can communicate to others." *Exhibit 235*

December 21, 2000 Perkins Coie/Puget Sound Energy; Withdrawal of Settlement Offer Regarding Appeal to Governor. "The settlement offer made by Puget Sound Energy, Inc. ("PSE"), in my letter dated December 19, 2000, faxed to you that same date is hereby withdrawn. PSE has chosen to proceed with its appeal to the Governor. This decision was based on the Department of Ecology's decision not to issue the preliminary permit for the Lake Tapps water rights." *Exhibit 236*

January 10, 2001 Muckleshoot Indian Tribe letter to Ecology, Additional Concerns with Puget Sound Energy's Water Right and Storage Applications: #S2-299920, #S2-29934, and #R2-29935

"Water Quality Impacts. The Tribe is concerned that the withdrawal of water from the White River will adversely affect water quality and ecosystem functioning of the lower White and Puyallup rivers. Specifically, we have concerns regarding the affect reduced flow will have on the diurnal pH cycle, nutrient loads (total phosphorus, soluble reactive phosphorus, total nitrogen, ammonia, and nitrates), dissolved oxygen levels, 5-day BOD, water temperatures, and residual chorine. Flow reduction impacts would also affect the Total Maximum Daily Load (TMDL) stay of reserve allocation for 5-day BOD and ammonia in the lower Puyallup River. The stay is a result of violations of the state standard for dissolved oxygen that were found in the lower Puyallup River on several days in September of last year (please refer to Attachment D). In addition, the water withdrawal from the White River could adversely affect pH levels downstream of the Lake Tapps return by providing less dilution of instream nutrient levels and possibly less volume of water for scour of algae. As acknowledged in the White River pH TMDL, currently under development by Ecology, violations of the pH standard upstream are due to excessive algal growth. " *Exhibit 237*

January 17, 2001 Department of Ecology Email Speaker Chopp Urgent Request--Lake Tapps "Speaker Chopp phoned me this afternoon & **has asked me to get back to him tomorrow a.m. regarding a plan to save Lake Tapps**, which is Rep. Hurst's district. The Speaker said that the Governor made some type of commitment on the issue to a room of 500-600 people, which Frank heard, and that the Governor needs to follow through. It has something to do with an Ecology preliminary permit. Frank says a bureaucratic response by the department will not be acceptable in light of the Governor's commitment. He wants to know what the Governor will do to keep his promise?"

"Governor did promise that Ecology would issue a preliminary permit, and begin to process Puget's application. However, they ran into a snag, with the Puyallups, who have a special situation involving Lake Tapps, and Ecology does not want to override without working through the Puyallups."

"Tribe brought in WQ (water quality) info that may make a difference."
"Further review suggest there probably is on some days a WQ problem." *Exhibit 238*

January 29, 2001 Perkins Coie/Puget Sound Energy, letter to Governor Gary Lock; Appeal of Denial of Rulemaking Petition Filed by Puget Sound Energy to Amend WAC 173-510. "Puget Sound Energy ("PSE") hereby withdraws its appeal in the above referenced matter. PSE appreciates your continued support of its water supply project and looks forward to working with the Department of Ecology." *Exhibit 239*

January 29, 2001 Ecology internal e-mails Lake Tapps. "Tom's weekly alert did say that Ecology is organizing a meeting with Puget, and Puyallups and Ecology - to get things back on track. But as far as I know, Puget's appeal to Governor is still in our court.

"Sit down and reassure Puget we are still supporting this proposal moving forward for them to hear it at the highest level would be something useful." *Exhibit 240*

May 10, 2001 Ecology to Federal Regulatory Commission; White River Project, FERC No. 2494: Support for Extension of Stay. "I am writing to convey the support of the Washington State Department of Ecology (Ecology) for an extension of the current stay of the Commission's White River Project license order. Puget Sound Energy and the Lake Tapps Task Force have requested a two-year extension through June 2003."

"We also seek to understand and ensure operation of the project in a manner that protects and restores downstream water quality in the Puyallup River." *Exhibit 241*

November 8, 2001: Bonney Lake purchases the remaining capacity Pierce County has at the Sumner WWTP for $1,030,000 and Bonney Lake will provide service (sewer) to County's existing customers in the Bonney Lake area and to provide service to properties within County's UGA (Urban Growth Area) that qualify for sewer service. Lake Tapps is not, nor will it ever be within the County's Urban Growth Area (UGA). It is illegal for Bonney Lake to plan for or to run sewers to Lake Tapps because it is not in a UGA. *Exhibit 242*

November 16, 2001 Pierce County Council Member Shawn Bunney emails Department of Ecology for Theoretical sewering in Lake Tapps.

"Thanks for the Electronic Version. In Chapter 90.48 the only place where DOE has teeth. Can your attorney give me a few more cites (WACs, Cases, Federal Law, TMDL's)? which could be used by the State to protect the Water of the State? It's not just the sewer question. Its the issue of whether citizens should be addressing the problem proactively to avoid a regulatory nightmare. Sinc. Shawn." *Exhibit 243*

November 2001: Pierce County Unified Sewer Plan Issues Paper

West Lake Tapps Area (Rural Reserve). In 1983, the County was ordered by the U.S. Environmental Protection Agency (EPA) to "help construct an expansion of the Sumner WWTP sufficient to provide treatment capacity for the West Lake Tapps area and continue plans to provide sanitary sewer service to this area."

"In the mid-1970's the EPA water quality planning documents identified West Lake Tapps as part of the Lake Tapps service area needing sanitary sewers. This was due to the large number of urban density lots next to the west shore of Lake Tapps and the prevalence of surfacing sewage from failed on-site sewer systems in the area."

"The rural service area contains 2,279 parcels; only two parcels have been connected to sewers."

"There are no binding sewer agreements. In this area, 71% (1,610 parcels) of the 2,279 parcels designated rural are less than ½ acre in size and are located closest to the lake."

"If the County withdraws its West Lake Tapps sewer service area, the County could face legal challenges based on contractual obligations to the EPA." *Exhibit 244*

January 14, 2002 Ecology Directors notes, "Preserving Local Government's Interests. The Lake Tapps residential and commercial area has been developed over the last 100 years as a result of the existance and desirability of the White River Hydroelectric Project's Lake Tapps Reservoir. This region has become an important tax base for the local governments as growth and land values have increased, and the Lake Tapps Reservoir significantly enhances local property values and therefore the local tax base." *Exhibit 245*

March 29, 2002 City of Bellevue Cascade Water/Lake Tapps Issues Grant/Tapps "This is all getting very interesting and leading to a few showdowns. I'm not sure our friends in Seattle play by the same rules as we do....."

"Can PSE "broker" the Tapps water right to Seattle? Tacoma? To Pierce County? Are there any agreements in place that preclude these possibilities. Yes, if our current arrangements with Puget lapsed, then Puget could broker the deal to others in the same manner as they have worked with Cascade. The better question might be who would want it and for purposes. Seattle might be interested in it to make sure it doesn't happen. Smaller jurisdictions in Pierce County would be interested, but aren't big or sophisticated enough to pull it off. Pierce County could potentially."

"The issue with Seattle is not selling them source, but rather using their transmission system. The alternative we have explored is to build an independent transmission system. The concept would be to extend the Tacoma north branch line north from Lake Youngs up to Issaquah."

"Are we/you aware of any discussions on-going between Seattle and Tacoma? Seattle and Pierce County? Between PSE and anyone other than Cascade regarding the water right or Cascades role? There are discussions between Seattle and Tacoma with regards to water quality. We met the Tacoma folks yesterday. Tacoma is ticked off. Seattle is holding the project hostage until they get a change in water quality provisions. We suggested that they may have to think about a political strategy and we layed out several courses of action. Frankly, they haven't been in this kind of a pickle before, and I don't think they know how to proceed. We did suggest that they should give Seattle an ultimatum...sign the agreement or they will look to others to pick up their share of the deal. If we dropped Lake Tapps, then Pierce County and others may have problems.....As far as I know Seattle is not strategizing this issue with anyone

else (no one else trusts them) and I am unaware of any discussions between PSE and others.....Frankly, other than Seattle (who Puget dislikes) there is no other market than Cascade."

"I understand that PSE is studying the "value" of the Tapps water right. Is Cascade doing the same evaluation? Would Tacoma, Pierce County and/or Seattle "value" the water right in the same or similar manner? Yes, Puget has some folks looking at what they might value the right and the project at. Even though they want more money than less, they know they have a huge political liability that won't go away without commitments to keep the lake. There needs to be a market to sell the water. Seattle doesn't need it (because they are focusing on existing supplies and conservation), and others don't need as big an increment of supply. So, I don't see any other market than Cascade."

"Regarding the "value" of the water right, is there any statutory guidelines for determining "value"? The issue with Tapps is that PSE wants its money now and will not put off development of the project indefinitely if it means they don't get $$$. I have indicated this dilemma. If we are successful in getting a block from Seattle and the Tapps water right comes through, our strategy is to put of the development as long as possible until we actually need new sources to avoid costs." *Exhibit 246*

June 14, 2002 City of Seattle letter to Tacoma Public Utilities Proposed Second Supply Project Agreement. "This brings me to the topic of Lake Tapps as a potential water supply project. The proposal, as it stands, would have water from an unprotected source with recreational and septage activities (Lake Tapps) introduced into Seattle's Lake Youngs. The proposed Second Supply Project with Tacoma and other partners would allow this water transfer to occur without Seattle's concurrence. This water would be then be "sold" to eastside communities (Cascade Water Alliance). In reality, because of the design of Seattle's regional transmission system, this water could be consumed by the citizens of Seattle and wholesale customers other than the Cascade Water Alliance. The CWA, which proposes purchasing the water, would in actuality continue to use water from our Tolt watershed (a protected source). In the last five years Seattle and its wholesale customers have invested nearly $250 million in source protection measures (Tolt filtration, Cedar Ultraviolet Treatment and Ozonation and the Cedar River Habitat Conservation Plan). In light of these investments and in light of the efforts to maintain and enhance a protected source for 1.3 million customers, I cannot, in good conscience, assign future decisions over water quality to other jurisdictions."

"In all of the negotiations regarding the Second Supply Project, all the proposed project partners felt confident, based upon extensive independent analysis, that they could accept water from the Green River into their own water supply systems. I feel the same approach should be applied to any future proposed supplies - that is, that all project partners receiving "additional water" into their systems need to agree on the suitability of proposed additional water sources. As the proposed agreement stands now, some project partners would be able to vote to introduce water into a supply system other than their own without necessarily taking that water themselves. It is unacceptable to the City of Seattle to delegate the decisions regarding the quality of water in its regional water supply system to others --either today or in the future." *Exhibit 247*

January 21, 2003 "House Bill 1338, Introduced by Rep. Kelli Linville, (D-Bellingham)(D) on January 21, 2003. This bill was a special request of Governor Locke." Bill deals with Water Rights (Water Rights that benefit Puget Sound Energy) *Exhibit 248*

June 20, 2003 "HB 1338 Signed by Gov. Gary Locke. HB 1338 becomes known as the 'Municipal Water Law.'" *Exhibit 249*

June 20, 2003 "The Ecology Department granted three new interrelated water rights to Puget Sound Energy (PSE) that allow the utility to continue diverting water from the White River and store it in the Lake Tapps reservoir. The water rights gave PSE new authority to maintain the lake as a public water-supply reservoir, and withdraw a portion of the water-up to 64.5 million gallons a day-from Lake Tapps as long as it is intended from public supply use." *Exhibit 250*

August 12, 2004: Washington State Pollution Control Hearings Board, Puyallup Tribe of Indians Muckleshoot Indian Tribe, City of Auburn, City of Buckley and Robert Cook vs City of Algona, City of Pacific, Washington Department of Ecology, Puget Sound Energy, Cascade Water Alliance, Lake Tapps Community Council, King County:

"Cessation of hydropower operations and uncertainty about future flow regimes also raises concerns over water quality in Lake Tapps and the lower White and Puyallup Rivers. Undisputed evidence demonstrates certain water quality issues commonly occur in Lake Tapps during the summer months including thermal stratification. (Declaration of Char Naylor, pp. 6-8). Any water quality deficits in the Lake are passed on to the White and Puyallup Rivers by discharges from the Lake. The ROEs do not contain any analysis of the water quality implications of the hydropower closure." *Exhibit 251*

August 2, 2005: Memorandum of Understanding on Management of Lake Tapps for Public Water Supply and Recreation Between the Cascade Water Alliance and Pierce County:

"The County will: A. Protect and enhance water quality in Lake Tapps and the White River Basin and minimize discharges into Lake Tapps and from Lake Tapps back into the White River through regulation of storm water, on-site wastewater systems and other point and non-point sources."

"In the event that Cascade in unable to develop a public water supply project at Lake Tapps for any reason, the County and Cascade will work cooperatively to preserve the lake. Negotiations will be carried out with a view to transferring ownership of the lake to an appropriate entity for operation as a recreational lake for the benefit of the public, and to establish a method of compensating Cascade commensurate with the price it paid for Lake Tapps and other related properties and assets." *Exhibit 252*

November 1, 2006: City of Kent comments on the Cascade Water Alliance idea which is to turn Lake Tapps into drinking water. "The City of Kent has concerns about the potential of any water from Lake Tapps being moved through the City water facilities due to the presence of contaminants such as pharmaceuticals and endocrine disruptors from a sewer treatment plant and other contaminant sources upstream of Lake Tapps. The City of Kent is concerned about

potential impacts of contaminants such as pharmaceuticals and endocrine disruptors on water quality and the potential health impacts to Kent' customers." *Exhibit 253*

November 22, 2006: City of Auburn comments to Director of Ecology regarding the Cascade Water Alliance idea of making Lake Tapps a source of municipal potable water.

"Ecology essentially has abdicated its regulatory role in ensuring responsible development of regional water supply sources and allowed Cascade Water Alliance ("Cascade") to dictate unilaterally."

"Review in an artificial vacuum--Ecology concludes that "overriding considerations of public interest" justify allowing Cascade to tap water from a closed river system and export it out of its basin of origin. Shorn of its window dressing, the ROE simply acquiesces in a political decision by this consortium of east-side cities to break their ties with established water suppliers with the capability to serve far into the future, such as the City of Seattle, so that Cascade member can build their own empire."

"The water quality data in the ROE is not complete. It does not address chemical, petroleum and biological contamination of the Lake itself. " *Exhibit 254*

August 23, 2007, Tacoma Pierce County Health Department Approves an on-site septic system installation on Lake Tapps despite the Health inspectors comments that the approved design was for a three bedroom house, "not the 4 bedrooms advertised." In addition the Health Department approved the reserve drainfield location which is in the 100 foot neighbors private well setback. The house was marketed and sold as a 5 bedroom, 5 bathroom, 7,853 square foot house on 12/24/2008 for $1,975,000."

"Insure as build indicates 3 bedrooms only."
"Well horizontal separation note: The reserve OSS is located 80 feet from an existing well."
"Final Inspection; Designed for 3 bedrooms, not the 4 advertised."
Inspector pulls Real Estate brochure and notes "Bedrooms 4+ --Septic Design for 3 bedrooms only. 8/23/2007 called Robbin Clifford (realtor) and disclosed size and capacity of septic system." *Exhibit 255*

June 11, 2008 "King County Superior Court Jim Rogers struck three sections of the Municipal Water Law. One section concerns water rights, and the others provide definitions of the terms "municipal water supplier" and "municipal water supply purposes." *Exhibit 256*

February 2009 City of Bonney Lake; City of Bonney Lake Comprehensive Sewer System Plan.

"A final array of activities that influences Bonney Lake's need to assess its sewer system planning revolve around the conversion of Puget Sound Energy's White River Project from a power generation project to a potable water supply. This long-term project spearheaded by the Cascade Water Alliance (CWA) could affect the amount, manner and timing of diversions from the White River into Lake Tapps (the primary water body adjacent to Bonney Lake). These

potentialities raise questions related both to water quality (potential substandard septic systems along Lake Tapps) and water quantity (supplemental flows to maintain lake levels)."

"Also in 2000, RH2 Engineering, Inc. prepared another report that considered the feasibility of wastewater reuse via the construction of a new treatment plant on the plateau. This effort was spurred in part by Puget Sound Energy's (PSE) announcement that it would likely abandon its power generation plant that is supplied by Lake Tapps. Since then, PSE has finalized its decision to abandon the White River Project (as it is formally named) opening a new chapter regarding water resource issues in the basin. This includes the possibility of purchase of the project (and its associated water rights) by the Cascade Water Alliance as a source of drinking water for its members. This development is one of many that also drive the need for development of a new sewer plan for the City of Bonney Lake."

"A final array of activities that influences Bonney Lake's need to assess its sewer system planning revolve around the conversion of Puget Sound Energy's White River Project from a power generation project to a potable water supply. This long-term project spearheaded by the Cascade Water Alliance could affect the amount, manner and timing of diversions from the White River into Lake Tapps (the primary water body adjacent to Bonney Lake). These potentialities raise questions related both to water quality (potential substandard septic systems along Lake Tapps) and water quantity (supplemental flows to maintain historic lake levels in during periods of peak water demand)."

"**Bonney Lake's sewer system has a history that is convoluted, contentious and colorful. It includes tales of political fratricide and financial brinksmanship**."

"It is also the planned destination for projected future flows for at least the next ten to fifteen years (see Chapter 5). There are seven other wastewater treatment plants within 20 miles of Bonney Lake. Their general locations are shown on Figure 2-3. None of these other seven plants currently represents a reasonable alternative for treatment of wastewater from Bonney Lake's sewer service area. Bonney Lake's unincorporated sewer service area that lies outside the Urban Growth Boundary (the "North Service Area, see Chapter 5) is largely developed with suburban single-family homes along and near the west shores of Lake Tapps. This service area is a legacy service area transferred by the county to the City in 2002. Service to this area is required as a consequence of contracts and agreements entered into between Pierce County and state and federal agencies in the 1980's. (See the Pierce County Unified Sewer Plan for a more extensive discussion of this topic.)"

"Bonney Lake also acquired its North Sewer Service Area with the execution of the transfer agreement with Pierce County (Appendix A). In contrast to the South Sewer Service Area, the North Sewer Service Area lies primarily outside the Urban Growth Boundary. Sewer service to the North Sewer Service Area is mandated by a 1983 U.S. EPA Order (Appendix D). This Order from the EPA to Pierce County was part of a directive to Pierce County to assist with the expansion of the Sumner Wastewater Treatment Plant. The Order required that sufficient capacity in the expanded Sumner Treatment Plant be provided to service what was then called the 'West Lake Tapps Area.'"

"In the mid-1970s, the EPA water quality planning process identified the West Lake Tapps area (Bonney Lake's current North Service Area) as part of the Lake Tapps service area requiring sanitary sewer service. This was due to the large number of urban density lots next to the west shore of Lake Tapps and the prevalence of surfacing sewage from failed on-site sewer systems in the area. This service area contains 2,401 parcels; only two of which are currently connected to sewers. The majority of these parcels are less than ½ acre in size and are located close to the lake. Figure 5-2 shows the limits of Bonney Lake's North, Core and South Sewer Service Areas."

"Augmentation of Lake Tapps
At the present time the future of Lake Tapps is somewhat clouded by Puget Sound Energy's decision to abandon the White River Power Project. Lake Tapps was created by PSE as the source of water for the White River Project. PSE has entered into an agreement with the Cascade Water Alliance (CWA) to sell a portion of its water rights for the White River Power Project to the CWA for the purpose of creating a new drinking water source for the region. However, the quantity of water that the CWA has acquired is only a small fraction of the water used for the power project, raising the possibility that diversions to Lake Tapps might be curtailed and the lake level drop."

"One possible response to this potentiality is to treat and discharge wastewater to Lake Tapps to augment the volume of water in the lake and maintain lake levels. RH2 conducted an analysis of this option in 2000. From this analysis, it appears that the quantities of wastewater that could be generated for this purpose would be insufficient to make any measurable difference in the level of Lake Tapps. For context, potential wastewater flows would be only a small fraction of the amount of water known to be lost from Lake Tapps due to bed leakage and evaporation. Further pursuit of this option may be warranted if the CWA was interested in participating. However, at this time pursuit of augmentation of Lake Tapps is not recommended."

C. Augmenting Lake Tapps
Properly treated wastewater could be discharged into Lake Tapps. However, the Cascade Water Alliance (CWA) may develop Lake Tapps as a drinking water reservoir, though that is not likely to happen in the next several years. If, or when, this does happen, discharge of wastewater effluent to the Lake would not be easily accepted by the public. An extensive public relations and public education effort would be necessary for this application."

"Unknowns
It is unknown what effect the development of Lake Tapps into a drinking water reservoir will have on individual septic systems near the lake. It is possible that CWA would have some authority under the Safe Drinking Water Act to reduce or eliminate the drainfields in areas that affect the water quality of Lake Tapps. With this option, there would be multiple sites of individual drainfields (both existing and proposed), and it is likely that some of them would fall into areas affecting Lake Tapps' water quality. However, as stated previously, if Lake Tapps becomes a drinking water reservoir, it would not be for several more years."

"North Sewer Service Area

The City of Bonney Lake's North Sewer Service Area includes the area that was delineated for sewer service in the 1984 agreement, which was a condition of Federal Funding for the construction of the WWTP located in Sumner. Roughly, this area is located along the western and northern shores of Lake Tapps and is delineated in Figure 5-2."

"Service options for the future North Sewer Service Area parallel the first two options for the South Sewer Service Area. That is, there are fundamentally two options: 1) transmit the flows to an existing treatment plant or site; and 2) construct a new WWTP to serve the North Service Area."

"In March 2005, a preliminary report was prepared to begin addressing the issues associated with providing sewer service to the North Sewer Service Area. This report is included at the end of this document and ranks the alternatives by the various criteria. As more information is obtained, and if permitting and environmental regulations change, the variables and the rank of each alternative should be reevaluated.
Three options for serving the North Sewer Service Area are discussed in this section.

- ✓ Metro/King County Wastewater Treatment Plant (WWTP)
- ✓ Bonney Lake/Sumner WWTP
- ✓ New Bonney Lake WWTP

Metro/King County is currently planning a new treatment plant to serve south Snohomish County and north King County. The new Brightwater Treatment Plant is necessary to expand Metro/King County's treatment capacity and will be located northeast of Woodinville. Regardless of the treatment option selected, the proposed Brightwater plant will not likely be treating flows from the Bonney Lake area. However, the addition of the plant will free capacity in Metro/King County's Renton plant, potentially benefiting residents within the Bonney Lake sewer area. Due to the existing capacity restrictions, if the new plant is not built by 2010, a system-wide building moratorium may be imposed to Metro/King County's service area."

"**New Bonney Lake WWTP**
This option involves the construction of a new wastewater treatment plant to serve the Bonney Lake area. The *Bonney Lake Wastewater Reclamation Preliminary Feasibility Report* from 2000 discusses this option in further detail by evaluating potential participants, wastewater discharge or use alternatives, potential treatment plant locations and project costs and timing. For this analysis, the proposed treatment plant will serve only the North Sewer Service Area and will be located on the west side of Lake Tapps, as shown in Figure 5-6d."

"Advantages. Building a new treatment plant to serve the Bonney Lake service area would allow the City of Bonney Lake to control costs and timing of future expansions. This option would also give the City full control over how quickly growth can occur within its service area. Other benefits include retaining the water on the plateau rather than transferring it to another basin, maintaining a high level of control over water quality and being able to use the reclaimed water."

"Recommended Option. This plan recommends pursuit of the Bonney Lake WWTP option for the North Service Area. The initial step in this option should be completion of a conceptual fatal

flaw analysis as to whether there are regulatory, environmental or other similar factors that would prevent implementation of this option." *Exhibit 257*

February 2, 2009 Washington Department of Health, Tacoma-Pierce County Health Department agree to meet me at my Snag Island House for an inspection, an inspection of a new 100 acre development in a wetland and finally to review the installation of a new septic system installed within 34 feet of Lake Tapps on what Pierce County Planning and the Assessor's office called a "no perk" lot on Island 21 on Lake Tapps. The lot is 88 feet deep, bordered on both sides by Lake Tapps and dissected by a road. The useable portion of the lot is 8,806.16 square feet--survey in Health's file.

Washington Department of Health, "I'm glad we had the opportunity to meet and talk earlier this month. I attached a copy of the State Board of Health's on-site sewage rules and regulations (WAC 246-272A). Section -0210(4) (page 39) provides the local health officer authority to reduce the horizontal setback to surface water from 100 feet to 75 feet.

Section 0420 (page 60) additionally gives the local health officer authority to grant waivers from specific requirements of the rule. Consequently, the local health officer may grant a reduction to the minimum 75 feet distance through the waiver process.

The information that I obtained from Tacoma-Pierce County Health Department (TPCHD) regarding the property of Island 21 indicates the lot size is 13,290 square feet. The file contains a water availability letter from the City of Bonney Lake Water Company. During my site visit to the property on February 2nd, the distance that I measured from the installed drainfield to surface water (measured from closest point of the bulkhead) was greater than 50 feet. (Bulkhead is not the property line) As you are aware, TPCHD has not provided a final approval of the on-site sewage system installation on this lot." *Exhibit 258*

February 5, 2009 Tacoma-Pierce County Health Department Onsite Review Report On Island 21 No Perk lot; "No as-built construction drawings has been submitted for this site. Due to additional information noted on this site, it may be necessary to submit additional justification for the primary drainfield installed and/or reserve drainfield area prior to final approval for use.

The Pierce County Building Department has been requested to hold issue of the building permit until the as-built construction drawing has been accepted and the system has been approved for use by the Tacoma-Pierce County Health Department."

Health obtained a copy of the Assessor's property information on 02/02/2007 that the lot is "RES NO PERK VAC LND REQ DOC." Health approved On-Site System Design Application on 5-8-2007. Health put a hold on development on 12/11/2008 because of "calls."

The property is now listed in foreclosure on the Pierce County Assessor's website. *Exhibit 259*

May 8, 2009 E-Mail to United States Geological Survey Requesting Information on Testing Lake Tapps Water Quality "Are there any Water Quality Tests Fecal Coliform, Nitrates, Pharmaceuticals, Endocrine Disruptors the USGS has performed on Lake Tapps."

"If the water has not been tested; cannot find any tests by Pierce County Health, Department of Ecology while it is not tested that "undisputed evidence demonstrates certain water quality issues commonly occur in Lake Tapps" Washington Pollution Control Board."

How can I get the USGS to test Lake Tapps?" *Exhibit 260*

May 20, 2009 U.S. Geological Survey e-mail Testing Lake Tapps

"Thanks for your email. Although I did not find any water-quality data collected by the USGS from Lake Tapps, I did find a Washington State Department of Ecology report on the topic at http://www.ecy.wa.gov/biblio/0603006.html .

The USGS can study the quality of water in a waterbody in cooperation with another governmental entity, such as a city, county or state. If you would like more information about establishing a USGS cooperative water-quality study, please contact Gary Turney, associate director, at 253-552-1626, glturney@usgs.gov." *Exhibit 261*

June 4, 2009 Request to Department of Ecology Director, Jay Manning, to sponsor U.S. Geological Survey Study on Lake Tapps
"I really enjoyed watching your interview with PBS in its special "Poisoned Waters." One particular question and answer rung a bell for me:"

" *SO YOU ARE ABLE TO STEP IN AND TAKE THE LEAD IN INVESTIGATING AND THEN PUSHING THE CLEANUP ON THIS SITE BECAUSE YOU'VE GOT THE POWER AND THE MONEY TO DO IT?*
THAT'S RIGHT: WE HAVE THE STATUTORY AUTHORITY TO DO IT. AND BECAUSE THE ACCOUNT THAT SUPPORTS THIS PROGRAM IS VERY HEALTHY RIGHT NOW, WE HAVE THE RESOURCES. WE CAN ACTUALLY PAY CONTRACTORS TO GO OUT AND DO THIS WORK FOR US, NOT FOR THEM. ..."

"Does DOE have the statutory authority, money and resources to investigate and cleanup sites? If so I have been researching the history of Lake Tapps and find it most disturbing. Specifically the history of failed septic systems around the lake. The last test I could find for fecal coliform was completed in the 1970's when only 30% of the lake was developed. The results had fecal coliform counts as high as 18,000 fecal coliform/100ml of water. Now the lake, including the East side which was never to be developed, is approaching 100% development density. Tapps Island water supply consistently fails water quality tests. The water on the island comes out of the taps green. The water closets, bathtubs and sinks in these homes are actually tinted green. At times so much chlorine is added to "treat" the water it turns peoples hair green."

"The City of Bonney Lake has given Tapps Island several options to provide the Island with potable water. The first is to provide water to the Island as a wholesaler at a cost of ~$8,000 per lot. Bonney Lake cautioned Tapps Island that even if it were to supply water the condition of the existing temporary infrastructure would contaminate the water before it entered the houses. It is a temporary systems designed to temporarily supply water to temporary trailers. The trailers were temporary because the buyers agreement contained a provision that the trailers would have to be removed when their septic systems failed. The second option is to be the purveyor of the water system. This requires an entirely new infrastructure designed and installed to meet current codes. According to Bonney Lake, Tapps Island is choosing to install a "band aid to get passed DOE for the next few years."

"Besides your interview, the segment on Endocrine Disruptors and Pharmaceuticals in drinking water was equally well done and most freighting. Thinking about the 1,500 people on Tapps Island drinking lake water contaminated by, according to Pierce County, EPA, and DOE over 2,000 failed septic systems shocks the conscience. Indeed the number of failed septic systems overshadows the concern the City of Kent expressed about the WWTP discharging sewage into the intake for Lake Tapps. Kent cited Endocrine Disruptors and Pharmaceuticals as the reason it will not allow Cascade Water Alliance to send water to Kent."

"Finally the program featured the equipment USGS is using to test water for Endocrine Disruptors and Pharmaceuticals. I have been in contact with Region 10 USGS office and they will "study the quality of water in a water body in cooperation with another governmental entity, such as a city, county or state."

"Because DOE has "the statutory authority to do it. And because the account that supports this program is very healthy right now, we have the resources." Will you agree to cooperate with USGS to study Lake Tapps for water quality: fecal coliform, nitrates, phosphates, Endocrine Disruptors and Pharmaceuticals?" *Exhibit 262*

July 16, 2009 Puyallup and Muckleshoot Tribes paid $16.8 million to stop fighting the Cascade Water Alliance and agree to "settle all the issues between Cascade and the Muckleshoot and Puyallup Tribes."

"The agreement also stated Cascade will pay the Muckleshoot Indian Tribe a $6.8 million mitigation fund for, "fishery mitigation purposes and activities benefiting the White River watershed, including but not limited to the hatchery capital expenses..."

"Cascade will pay the Puyallup Tribe of Indians $8.5 million, with $1.5 million paid as a reimbursement for past cost and the balance as an "operations payment."' *Exhibit 263*

January 10, 2010 Court papers of Kenneth M. Dull. "In or around 1979, I built a home on Deer Island, which is on the west side of Lake Tapps in Pierce County. I lived in that home until early 1990s."

"In the early 1980s, I was a member of the Steering Committee for the Lake Tapps Improvement Association. At that time, the Steering Committee was in involved in an effort to get sewers

installed to service the homes around Lake Tapps. A letter that was prepared by the sewer committee in 1981 and sent to the area property owners regarding our effort to get sewers built. The survey that our Association had taken revealed many problems related to the increasing development of the area and the use of septic systems along Lake Tapps. These problems included improper absorption of the effluent in drainfields, standing water during wet weather, noticeable runoff into the lake, odor of sewage in roadside ditches, and the restrictions in the use of public sanitary facilities. (Deer Island is at a higher elevation than much of the rest of the area around Lake Tapps, which is likely why there were no problems reported by survey respondents from that island."

"At the time, there were federal funds available to help finance a sewer system, and given this available funding and the increasing problems problems with septic systems on Lake Tapps, we hoped that immediate action would be taken by Pierce County to install sewers." *Exhibit 264*

January 12, 2010 "The Washington State Supreme Court heard oral argument in Lummi Indian Nation et al. v. State of Washington, et al, Supreme Court Cause No. 81809-6 a facial constitutional challenge to the 2003 Municipal Water Law (MWL)." *Exhibit 265*

June 25, 2009 E-Mail to Ecology Director Jay Manning requesting Ecology Sponsor U.S. Geological Survey study on Lake Tapps: "Congratulations on the Department of Ecology announcement that it received stimulus-funded clean water projects totaling, when combined with state funds, more than $140 million."

"Now you have more money than you did when you were interviewed for Poisoned Waters, will DOE agree to co-sponsor a study with U.S.G.S. to test Lake Tapps for water quality?" *Exhibit 266*

October 15, 2009 E-Mail to Washington Department of Ecology Water Quality Division Manager Requested Ecology Sponsor U.S. Geological Survey Study of Lake Tapps:

"I'm studying potential water quality problems in Lake Tapps. I note my vast 18 bankers boxes of documents spanning four decades I find few current reported studies of the Lake Tapps Water Quality. Neither Pierce County or the City of Buckley test the water at their public beaches or the lake. Missing are recent studies for your standard run of the mill problems such as fecal coliform to the more worrisome pharmaceuticals, POP's, endocrine disruptors, etc. The USGS will study, for free, the pharmaceuticals in Lake Tapps and in the Tapps Island Water supply, they just need a public sponsor. So if your records are sparse relating to Lake Tapps, or if you tell me the data simply doesn't exist, I would appreciate DOE sponsoring a current study."

"Will the Department of Ecology sponsor a study by the USGS testing Lake Tapps and the Tapps Island water supply for pharmaceuticals?" *Exhibit 267*

January 12, 2010 Court papers of Richard Kern, Engineer for Philip M. Botch who's name appears in most of the communication for the sewer project to Lake Tapps:

"As detailed in the text and maps in the Facilities Plan, it was well known by the mid 1970s that the soils around Lake Tapps are not suitable for widespread use of septic tanks, and that the consequences of allowing continued use of on-site septic systems in that area could be devastating. For example, our report noted:"

a. Localized areas are experiencing septic tank failures. This is especially serious after heavy rains. (p. 1-2)
b. Further development in the Lake Tapps area in pursuit of developable property must be curtailed in the future due to lack of suitable sites. (p. 1-3)
c. In some areas the soils have low percolation rates, and in others the water table is near ground surface. A second problem is that most people do not realize that the drain field will eventually fail and provision must be made for the installation of a second drain field. In many instances, lots are not large enough to support a second filed. (p. 3-5)
d. Problems that arise from poorly operating septic tanks are ponding effluent to the surface, contamination of the groundwater, which is very important where domestic wells are in the area, and degradation of surface water quality. The public health hazard from these is very serious since pathogenic organisms in the sewage are not destroyed in a septic tank system (p. 3-5).
e. Lake Tapps has violated state standards on several occasions. Water use has not been restricted, however, because the enforcing agency, Pierce County Health Department, has been enforcing a less stringent coliform bacteria standard than the controlling state standards enforced by Department of Ecology (p. 1-3)."

"All of this information was common knowledge among Pierce County's government agencies. For example, in December 1975, R. Clifton Smith, director of the Environmental Health Division at Tacoma-Pierce County Health Department, wrote me a letter (see copy attached hereto as Exhibit B) confirming that his department regarded the soils in the Bonney Lake - Lake Tapps area as "'marginal' for septic tank sewage disposal." He noted problems with rising groundwater table flooding septic drainfields in the winter, and the department's denial of septic tank applications in numerous locations, and he confirmed that these sites "will not be buildable until sewers are available." *Exhibit 268*

February 4, 2010, Cascade Water Alliance Executive Director, Chuck Clarke in an interview with Auburn Reporter on Lake Tapps:

"Clarke added that the parties give up their right to sue again as long as the DOE issues the water right consistent with the agreement. 'We think Ecology would be insane not to. We created a very difficult box around Ecology. At the end of the day, they were getting the crap beat out of them for years by the homeowners and by the four cities. And now, they don't even get any calls any more,'" Clarke said. *Exhibit 269*

February 5, 2010 Cities of Auburn, Bonney Lake, Buckley and Sumner sign an agreement with Cascade Water Alliance. *Exhibit 270*

March 3, 2010 In an email Auburn's Mayor, Pete Lewis, clarifies the Cities will not obtain any water from Lake Tapps. The agreement requires water to the Cities be supplied out of the City of Tacoma's water pipeline that obtains water from the Green River:

"The four cities got:

- Use of in-stream water to mitigate for future water rights
- Right to buy unused blocks of water from Cascade out of Tacoma Water pipeline
- Replacement water at no cost if Auburn wells are affected by any decisions made by Cascade
- On seat for the four cities on an advisory board for the lake management" *Exhibit 271*

March 4, 2010 City of Auburn's Mayor Pete Lewis comments on the Cities of Auburn, Bonney Lake and Sumner plans to annex Lake Tapps into their cities for running sewers to Lake Tapps.

"...long ago the three cities of Auburn, Bonney Lake and Sumner got together and looked at how the lake could look in the future. The cities approximated lines with Bonney Lake coming up to Snag Island on the east, Sumner coming up from the south and west to the flume and Auburn on the west side and around to Tapps Island. This is for long term planning and could be another generation before implemented," *Exhibit 272*

March 5, 2010 City of Auburn's Mayor outlines what would be required for the City of Auburn to annex Lake Tapps so it could run sewers to Lake Tapps to protect the Cities wells from contamination from Lake Tapps:

"I really do not want to dampen your spirits but there are a number of barriers to overcome."

"First, Auburn's city council would have to want to accept any petition to annex. In these difficult times with little commercial base that area, because of some higher residential values might get closer to break even but only just."

"Second, much of the area is outside the GMA (Growth Management Area) line and would take a vote at Pierce County with approval by the four county Puget Sound Regional Council."

"Third, there would need to be a petition by the people of the area, then a popular vote to annex and then an acceptance to annex by Auburn."

"Fourth, East Pierce Fire District would then lose the area if annexed and they have told us if their concerns."

"Finally do keep in mind a sewer utility is an enterprise fund segregated from the city's General Fund so it is no looked at as a revenue producer."

"So, those are the steps and the obstacles. Pete" *Exhibit 273*

March 9, 2010 Email to Washington State Department of Ecology Director Requesting Ecology Sponsor U.S. Geological Survey Study on Lake Tapps. *Exhibit 274*

March 9, 2010 E-mail to Washington State Department of Ecology Director, Department Heads;

"Executive Director of Cascade Water Alliance, Chuck Clark, on Department of Ecology issuing the water rights for Lake Tapps:

"'We think Ecology would be insane not to. We created a very difficult box around Ecology. At the end of the day, they were getting the crap beat out of them for years by the homeowners and by the four cities. And now, they don't even get any calls any more,' Clarke said."

Chuck Clarke On Ecology Being "Insane not to" Issue Cascade Lake Tapps Water Rights

"Since when does business dictate what Ecology does? Especially when Ecology has been against turning the contaminated Lake Tapps into drinking water? Ecology has noted its files stating it opposes turning Lake Tapps into drinking water. The only reason for working with Cascade was a result of the then Governor Locke opening his mouth at a press conference claiming Ecology would issue the water rights necessary to save the lake. In addition to the formal letter of direction I have a flurry of emails from Ecology staff after the news conference seeking direction; Locke's position opposed Ecology."

"As far as "getting the crap beat out of them for years" Ecology and Cascade have no idea what getting beat up is really like. Soon all will have a very good idea what "getting the crap beat out of them" for years is all about. Soon everyone will know that it was "insane" to believe you could turn a cesspool into drinking water."

"I plan to file an Intent to Sue the U.S. EPA, Washington State Department of Ecology, Pierce County and Tacoma Pierce County Health Department under the Clean Water Act. For Ecology's part in the mess:

1. Ecology ranked running sewers to Lake Tapps as the 5th highest priority project in the State of Washington. Sewers were never run. The City of Bonney Lake considers the problem now as "unmanageable."
2. In the 1970's and early 1980's Ecology granted Bonney Lake/Pierce County 15% of taxpayer funds to run sewers to West Lake Tapps. Sewers were never run.
3. Knowing the contamination of Lake Tapps from failed septic systems Ecology again in 1990 offered Pierce County Grant money to run sewers to West Lake Tapps. Sewers were never run.
4. In 1983 the U.S. EPA Ordered Pierce County to run sewers to Lake Tapps. Sewers were never run.
5. In 1984 Ecology brokered an Out of Court Settlement where Pierce Consented to run sewers to West Lake Tapps. Sewers were never run.
6. Ecology failed to enforce the Consent Agreement. Pierce continued the unfettered development of Lake Tapps with homes built on lots that were not suitable for on-site septic systems.

7. Ecology made dozens of trips to Lake Tapps at the request of the EPA, Pierce County, Tacoma Pierce County Health and the State of Washington's Department of Health to review proposed developments. Each time Ecology stated the proposed developments around Lake Tapps could not be developed without sanitary sewers. To get to the next proposed development Ecology had to drive through (twice) the just completed development that Ecology stated could not be developed without sewers.
8. Ecology had known for decades the soils around Lake Tapps were not suitable for on-site septic systems yet it did not issue a building moratorium until sewers were run. Ecology was driving past development after development it said could not be developed without sanitary sewers. Now there are over 2,000 houses on Lake Tapps with failed septic systems, (U.S. EPA, U.S.G.S., DOH, Pierce County, Tacoma Pierce County Health and dozens of engineers stated on-site septic systems would fail) that drain raw sewage into the lake daily.
9. The former Director of Ecology, Mr. Manning, refused over six requests I made for Ecology to Sponsor a U.S.G.S. test of the water quality of Lake Tapps. U.S.G.S. would conduct the tests which included testing for emerging contaminates for free, they just needed a government sponsor.
10. Ecology has failed to enforce the Clean Drinking Water Act on Tapps Island. Over 1,000 people drink contaminated water daily.
11. Ecology has failed to enforce the Endangered Species Act. Water that flows out of Lake Tapps poisons not only the wells of the Cities of Auburn, Sumner and Bonney Lake, it also poisons the Salmon and Bull Trout. The contaminated water and fish also contaminate the protected Bald Eagle. The Tribes were paid more than $15,000,000 to shut up and sign the agreement with Cascade.
12. Ecology in its recent estimate if Lake Tapps were drained included a $40,000,000 line item to build a Waste Water Treatment Plant and run sewers to the houses that ***were*** on Lake Tapps. Ecology stated the sewers were necessary because while the lake dilutes the sewage somewhat it would be dangerous to have people, pets and animals walk in raw sewage from the failed septic systems. From that Ecology believes it's acceptable for people to swim in, play in, bath in, shower from and drink from a contaminated lake!
13. If Ecology believes it is unacceptable for people, pets and animals to walk in raw sewage it should take a trip to Tapps Islands outer Island. This is one of those developments Ecology said could never be built without sewers. In Ecology's report it found a dozen of the proposed lots were under water, test pits that were full of water, test pits within 30' of the lake and hardpan soils at the surface. Well there are multi-million dollar homes on properties that were under water that are served by an on-site septic system in a community septic system area. In this area, on Tapps Islands outer Island, there are over 50 failed drainfields. You can see the sewage, smell the sewage, watch it drain into the lake and watch dogs running in it and drinking from it. The Homeowners Association has built berms around the sewage in an attempt to slow the sewages drainage into Lake Tapps. You can walk the Tapps Island golf course and see, smell, touch and walk through raw sewage from failed drainfield after failed drainfield."

"For my edification, WHERE IS ECOLOGY? Is Ecology truly beholding to Cascade and the politicians? Or does Ecology truly understand its charter? I understand that making things safe is costly but sometimes you don't have a choice. Attached is a press release that went out today. If Ecology does not have the file where it noted it is against turning Lake Tapps into

drinking water, please let me know, I will make copies. If Ecology still cannot find the EPA Order or Consent Agreement, let me know, I finally obtained them." *Exhibit 275*

March 11, 2010 Cascade Water Alliance to Hold public meeting on milfoil in Lake Tapps " Cascade Water Alliance is holding a public meeting 6-8 p.m. March 31 to discuss milfoil in Lake Tapps, answer questions from the community and take public comment. The meeting will be held at North Tapps Middle School, 20029 12th St. E, Lake Tapps."

"Cascade has hired an environmental consultant, Tetra Tech, to research the current milfoil condition in the lake and to recommend strategies for milfoil eradication. At the meeting, the Tetra Tech will share its findings, talk about the pros and cons of treatment options, and answer the public's questions. Public comment also will be received."

"Milfoil poses environmental and maintenance challenges for a healthy lake. According to the Washington State Department of Ecology, milfoil starts spring growth earlier than native aquatic plants and can out shade these beneficial plants. Because it is widely distributed and difficult to control, DOE says milfoil is considered the most problematic plant in Washington State." *Exhibit 276*

March 25, 2010 Washington Department of Ecology Water Quality Division responds to my October 15, 2009 e-mail requested Ecology Sponsor a U.S. Geological Survey study of Lake Tapps. "I work in the Environment Assessment Program of the Dept of Ecology. Our program is responsible for statewide water quality monitoring programs. We have done some sampling on Lake Tapps in the past, though not for pharmaceuticals. I am writing to ask for additional information about the publicly-sponsored USGS study you mention below. Can you refer me to someone at the USGS that I can follow up with?" *Exhibit 277*

March 29, 2010 Washington Department of Ecology e-mail regarding U.S. Geological Survey Study of Lake Tapps; "...here is some additional information that I tracked down after our telephone conversation last Thursday:"

"Regarding the USGS study, they are looking into doing some work in Lake Tapps later this year, but that study will not include pharmaceuticals or waste-water indicator compounds. As far as Ecology sponsorship of a free study, they could do additional work in Lake Tapps if Ecology provided at least 50% of the funding, but they would not do additional work for free. (I also found out that Gary Turney has retired since you spoke with him.)"

"Regarding our 2008 water quality assessment, Lake Tapps is listed twice, once as a water-of-concern for fecal coliform bacteria in the diversion, and also as a water-impaired-by-a nonpollutant (milfoil). This latter listing is in Category 4c of the assessment, which means that Ecology would not do a TMDL study to address this listing (TMDLs are done for Category 5 listings only)."

"Regarding testing of lakes for bacteria, Ecology does not have a statewide program to monitor freshwater swimming beaches for public health (bacteria)." *Exhibit 278*

March 29, 2010 E-Mail to Washington Department of Ecology Again Requesting Ecology Sponsor a U.S. Geological Survey test of Lake Tapps for Water Quality: "1. Why is the USGS looking at studying Lake Tapps? If they are not testing for pharmaceuticals or waste-water indicator compounds what are they testing for? Ecology received a great deal of money under the Economic Recovery package so funding 50% of the cost of a pharmaceutical study shouldn't be an issue, especially considering the condition of the lake and then intended use of the lake. Is Ecology going to fund the test and work with USGS? I was concerned last year the USGS program funding may change which is why I requested Ecology's director, Jay Manning, agree to participate; he declined."

"2. Do you have a copy of the 2008 water quality assessment for Lake Tapps? I cannot find the study that shows it is a "water-of-concern for fecal coliform bacteria in the diversion." The diversion was listed as adding fecal coliform (Washington State Rainer School's Waste Water Treatment Plant) but the majority of the fecal coliform the scientist have always said comes from Lake Tapps and the failed septic systems."

"3. So what good is legislation without enforcement? The Washington Administrative Code requires testing for fecal coliform to monitor the safety of water for human contact. As far as I know every county, except Pierce, has a beach monitoring program that tests for fecal coliform."

"Please let me know what steps Ecology is going to take to make certain Lake Tapps is made safe. There are currently over 1,000 people on Tapps Island (Ecology said couldn't be developed without sewers for decades) that obtain their drinking, bathing and cooking water directly from Lake Tapps. Considering Ecology ranked running sewers to Lake Tapps as the 5th highest priority project in the State of Washington AND provided millions of taxpayer dollars to fund the project that was never built, I think Ecology owes a duty to protect the safety and health of the citizens it is currently poisoning, no?"

"Or should I work with the U.S. Environmental Protection Agency, who promises enforcement of Clean Water Act violations, to ensure they are paid back their (taxpayer) monies it granted Pierce to run sewers and to enforce the Clean Water Act?"

"Who should I talk to at Ecology to see that Lake Tapps is made safe?" *Exhibit 279*

March 30, 2010 Tapps Meadows, A development of (11) 5.0 acre to 17.34 acre parcels are for sale with an average asking price of a little over $500,000. The property, known as the "Van Der Hoek" property has been issued one Correction Notice/Cease and Desist Order after another. These correction notices were issued for filling in wetlands.

One was issued August 5, 1999 for a "Wetland Violation. Placing fill piles and grading into buffer of Category II Wetland. Approximately 2,000 Cubic Yards of fill. Please do not issue any permits or approvals until this violation has been resolved."

Another was issued on September 17, 1999 for importing 500 cubic yards of fill material. "Wetland violation. Placing fill piles and grading into buffer of category II wetland. Violation

confirmed." The correction notice was closed; "Problem closed by wetland due to agricultural exemption. Doug will follow suit and leave alert in DIC's on --FJB 5/4/2004."

Despite years of filling, the property is still so wet the developer couldn't find a single suitable location on any of the (11) lot's for the on-site septic systems and their drainfields. They were required to install a "community drainfield" which happens to be within 100' of the designated wetland and in a wetland itself. The developer actually filled in the Category II wetland with this fill so they could eliminate the wetlands so they could install septic tanks and drainfields. The community septic tanks and drainfields have been installed. Two lots have sold and a third sale is pending.

Because of the fill and the water, the new owners of these new houses will have settling problems, water problems, mold problems, and septic system problems. That is (11) families, just like mine who will suffer the same fate of Pierce County's "frontier mentality," almost to the same extent me and my family have suffered. *Exhibit 280*

Appendix B: Revised Chapter 6 Pages

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water is too low, the water cannot sustain fish and other forms of aquatic life (WOW 2007). DO concentration is related to temperature – colder water can hold more dissolved oxygen than warmer water, and is thus more optimal for fish.

pH. The pH of water determines the solubility and availability of constituents such as heavy metals (lead, copper, cadmium, etc.) and nutrients (phosphorus, nitrogen, and carbon). For heavy metals, the degree to which they are soluble determines their toxicity. Metals tend to be more toxic at lower pH because they are more soluble (the lower the pH, the more acidic the water, and the higher the pH, the more basic the water). For nutrients, an increase in pH may increase the solubility of a nutrient such as phosphorus, making it more available for plant growth and resulting in a greater long-term demand for DO (WOW 2007).

Additional Characteristics. Additional measurable water quality characteristics are turbidity, total dissolved gas, bacteria, nutrients, toxics, and radioactive substances. Ecology also identifies water quality characteristics that are difficult to specify, but that offend the senses (for example, color and odor). These additional characteristics are not addressed in this Draft EIS because the Proposed Action would not affect them.

6.1 Affected Environment

The specific affected environment for the Lake Tapps Reservoir Water Rights and Supply Project can be generally defined as the surface water bodies (and land areas adjacent to them) that are downstream of the diversion dam located on the White River at River Mile (RM) 24.3. These areas may receive more or less water (or water at a different time or of different quality) under the operation of the Proposed Action or the No Action Alternative. For this project, the four potentially impacted water bodies are listed here and shown on Figure 6-1:

- White River Reservation Reach
- Lower White River
- Lower Puyallup River
- Lake Tapps Reservoir

Table 6-1 summarizes the state water quality standards for temperature, DO, and pH that apply to the water bodies listed above. In addition to state standards, the Puyallup Tribe of Indians has established surface water quality standards for sections of the Lower Puyallup River (RM ~~0.0 and~~ 1 to 7.3) (Puyallup Tribe 1994); these standards have been ~~adopted~~ approved by the U.S. Environmental Protection Agency (USEPA). State standards do not apply in these reaches.

Table 6-1. Surface Water Designations and Water Quality Criteria

Water Body	Reach	Approximate RM Designation	Aquatic Life Designated Uses	Maximum Temperature Criteria (°C) (1,2)	Minimum Dissolved Oxygen Criteria (mg/L) (2)	pH
Washington State Water Quality Standards						
White River	Reservation	24.0 to 4.0 (3)	Core summer habitat (3)	16 (7-DADMax)	9.5	6.5 to 8.5
	Reservation	24.0 to 4.0 (3)	Spawning and incubation areas (3)	13 (7-DADMax from Sept. 15 to July 1)	NA	NA
	Lower	4.0 to 0.0	Spawning / rearing	17.5 (7-DADMax)	8.0	6.5 to 8.5
Puyallup River	Lower	10.1 to 7.3	Core summer habitat	16 (7-DADMax)	9.5	6.5 to 8.5
	Estuary	1.0 to 0.0	Rearing/migration only	17.5 (7-DADMax)	6.5	7.0 to 8.5
Lake Tapps Reservoir	NA	NA	Lake	May not increase the 7-day average daily max temperature more than 0.3 °C above natural conditions.	May not decrease DO conc. More than 0.2 mg/L below natural conditions.	NA
Puyallup River	Estuary	1.0 to 0.0(6)	Class B (water supply, salmonid spawning, migration, rearing, etc.)	21	6.5	6.5 to 8.5
Puyallup Tribe Water Quality Standards (4)						
Puyallup River	Lower (fresh water)	7.3 to 1.0	Class A (water supply, salmonid spawning, migration, rearing, etc.)	18	8	6.5 to 8.5
	Lower (marine)(5)	7.3 to 1.0	Class A	16	6.0	6.5 to 8.5

1. 7-DADMax = 7 Day Average Daily Maximum Temperature.
2. Ecology – Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-201A WAC. Amended November 20, 2006 (Ecology 2006c).
3. The core summer habitat and spawning and incubation areas' designated uses and corresponding water quality criteria apply only to the non-Muckleshoot Indian Tribe Reservation areas of this reach. The USEPA exercises jurisdiction under the Clean Water Act over water quality within the Muckleshoot Indian Reservation (approximately RM 9 to RM 15.8).
4. Puyallup Tribe – Water Quality Standards: Water Quality Standards for Surface Waters of the Puyallup Tribe (Puyallup Tribe 1994).

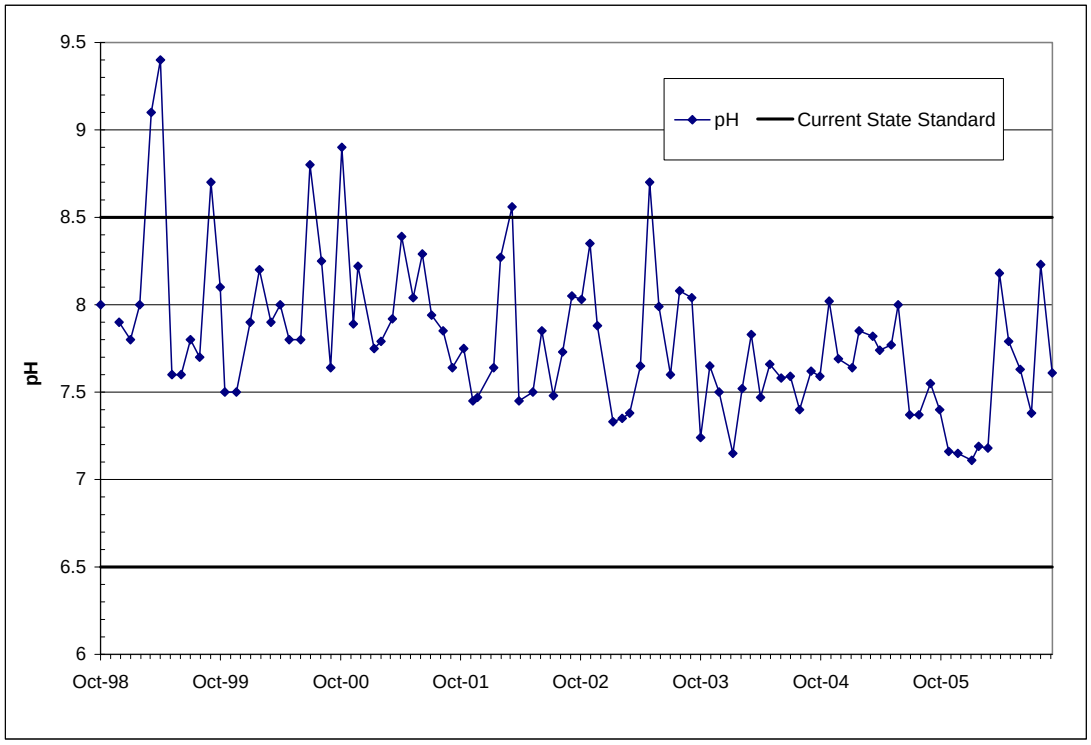

Figure 6-9. Periodic pH Measurements at White River RM 1.8 in 2006

Source: Ecology 2008c

Water Quality Status

In Ecology's Water Quality Assessment Report for 2002–2004, the White River downstream of the diversion dam was listed as impaired for instream flow, temperature, pH, and fecal coliform (bacteria that are considered indicators of fecal contamination).

6.1.2 Puyallup River

Puyallup River Water Quality Standards

As indicated in Table 6-1, under state standards, the Lower Puyallup River is designated as rearing/migration habitat from its mouth (RM 0.0) to RM 1.0. The applicable temperature criterion is 17.5°C and the DO criterion is 6.5 mg/L. ~~The reach from RM 1.0 to the confluence with the White River (WR RM 10.4) is designated as core summer habitat. The applicable temperature criterion is 16°C and the DO criterion is 9.5 mg/L. The Puyallup Tribe also has federally accepted standards for the Puyallup River that vary somewhat from state standards, but that have jurisdiction with respect to the Clean Water Act~~ The Lower Puyallup River reach from RM 1.0 to 7.3 is designated as Class A with an applicable temperature criterion of 18° C and dissolved oxygen criterion of 8.0 mg/L. The USEPA approved the Tribe's surface water quality standards in 1994. The reach immediately adjacent to the

upstream Reservation boundary is designated as core summer habitat with an applicable temperature criterion of 16° C and 9.5 mg/L (see Table 6-1).

Physical Environment

The Puyallup River and its hydrology are described in Chapter 5. The lower portion of the Puyallup River is a saltwater estuary and is tidally influenced. The less-dense fresh water from the river generally flows over the deeper and denser salt water found in Commencement Bay. The salt water wedge extends upstream about 2.5 to 3 miles, depending on tides and river flow rates. For the purposes of this study water quality impacts on the Puyallup River Estuary are assumed to be identical to impacts described for the Lower Puyallup River.

Similar to the White River, the Puyallup River flow peaks twice: once in the winter from precipitation storms and again in summer from snow/glacial meltwater. The average-monthly flow downstream of the White River is 4,400 cfs in December and 2,900 cfs in July. The Puyallup River, like the White River, is turbid during the glacial meltwater period in the spring and summer because of fine sediment from melting Mount Rainier glacial water (Ebbert 2002).

Previous Studies

Ecology has conducted water quality monitoring for temperature, pH, dissolved oxygen, and nutrients in the Puyallup River.

Temperature

Limited temperature data are available for the Lower Puyallup River. Temperature monitoring was conducted during the fall in the Puyallup River at RM 11.8, located about 1.4 miles upstream of the confluence with the Lower White River at RM 10.4. The Puyallup River 7-DADAvg temperature at RM 11.8 ranged up to about 13°C in 2004, as shown in Figure 6-10. In 2006, 7-DADAvg temperature at RM 11.8 ranged from 15°C to 16°C, and was below the state water quality criterion of 16°C and the Puyallup Tribe standard of 18 °C (see Table 6-1), as shown in Figure 6-11. Figure 6-12 shows that the 7-DADAvg temperature at RM 2.9 in 2006 was below 15°C. The 2004 and 2006 monitoring data indicate that the 7-DADAvg temperature was below the state water quality criterion of 16°C and the Puyallup Tribe standard of 18 °C (see Table 6-1). Ecology water quality publications also indicate that the Puyallup River temperature is below the state water quality criterion (Ecology 2005, 2008c).

and pH levels in the two reaches providing inflow to this reach (the White River Reservation Reach and Lake Tapps Reservoir tailrace canal) would not be expected to change, the Proposed Action would not be expected to adversely affect pH in the Lower White River.

Results – pH

The Proposed Action would not be expected to adversely affect pH in the Lower White River (see Table 6-8).

Table 6-8. Summary of Lower White River pH Impacts

Water Body	Approximate RM Designation	State Standard	Baseline Value	In or Out of Compliance	Proposed Action Effect	In or Out of Compliance
Lower White River	4.0 to 0.0	6.5 to 8.5	7.0 to 8.3	In	No Change	In

6.2.1.2 Puyallup River

Lower Puyallup River streamflow conditions under the Proposed Action are based on STELLA model results, as documented in Chapter 5. No relevant analytical water quality tools are available to simulate or otherwise predict the effects of the Proposed Action on Lower Puyallup River water quality. Water quality impacts were, therefore, qualitatively estimated based on the expected change in flow in the reach and on changes in water quality of the water entering the reach from the Lower White River, as summarized in Section 6.2.1.1.

Puyallup Tribe Standards

~~The Puyallup Tribe of Indians has established surface water quality standards for sections of the Lower Puyallup River (RM 0.0 to 1.0 and 1.0 to 7.3)~~ The Puyallup Tribe has federally-approved surface water quality standards in the Lower Puyallup River (RM 1.0 to 7.3) (Puyallup Tribe 1994). These standards are identical to state standards for pH, but differ for DO and temperature. Puyallup Tribe water quality standards are summarized in Table 6-1.

Analysis Method – Temperature

Historical monitoring summarized in Figure 6-12 indicates that the Lower Puyallup River meets state and Puyallup Tribe standards for temperature. The potential impact to temperature in the Lower Puyallup River due to the Proposed Action could only be caused by changes in flow or temperature in the water entering the reach from the Lower White River.

Appendix C: Revised Chapter 13 Pages

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Chapter 13: Lake Tapps Regional Reserved Water Program

13.1 Introduction

The municipal and industrial water rights applications submitted for this Project in 2000 were for average annual and peak instantaneous consumptive flows of 100 cfs (64.6 mgd) and 150 cfs (100 mgd), respectively. Through further tracking and analysis of future demand projections, Cascade has been able to significantly reduce its projected average and instantaneous future demands to 75 cfs (48.5 mgd) and 135 cfs (87.3 mgd), respectively.

Four municipalities located in the Lake Tapps Region that provide water to their respective service areas – the cities of Auburn, Bonney Lake, Buckley, and Sumner (Four Cities) – have been engaged in long-running discussions with Cascade focusing on their own future water demands and Cascade's municipal and industrial water rights applications. These discussions have resulted in the development of a mechanism to assist the water suppliers located in the Lake Tapps Region to meet their projected future demands for water supply consistent with Cascade's water rights applications, the Lake Tapps Reservoir Water Rights and Supply Project, and the mitigation steps identified in this Draft Environmental Impact Statement (Draft EIS). This mechanism is referred to as the "Lake Tapps Regional Reserved Water Program." The Lake Tapps Regional Reserved Water Program provides for a portion of the municipal and industrial water rights applications, as originally submitted in 2000, to be reserved for the use by the Four Cities to mitigate impacts on the White River of the Four Cities' new water rights or changes to existing water rights.

The Lake Tapps Regional Reserved Water Program designates the following portion of the flows requested in the 2000 water rights applications and refers to these flows as the "Regional Reserved Water": Qa (res) = 7 cfs (4.5 mgd) and Qi (res) = 10 cfs (6.5 mgd). The Regional Reserved Water would be available to the Four Cities to utilize as mitigation water for their own applications for new water rights or changes to existing water rights that would be submitted to and processed by Ecology independent of the Lake Tapps Reservoir Water Rights and Supply Project. The Regional Reserved Water would only be available for use by the Four Cities when minimum flows in the White River were being met, as measured downstream of Cascade's diversion to Lake Tapps Reservoir.

As explained below, the inclusion of the Lake Tapps Regional Reserved Water Program in the Proposed Action analyzed in this Draft EIS would not result in any additional impacts beyond those analyzed in Chapters 1 through 12 of this Draft EIS (see analysis of the environmental impacts of fully utilizing the Regional Reserved Water in Section 13.6). The Regional Reserved Water would not be authorized for diversion or withdrawal from the White River by the Lake Tapps Reservoir Water Rights and Supply Project. The Regional

Beneficial use of the Regional Reserved Water would commence as required by the conditions of a Report of Examination (ROE) issued by Ecology approving a specific water right to one of the Cities. Cascade would, on behalf of such a City applicant, allow the specific quantity of Regional Reserved Water identified in an ROE to flow down the White River. Cascade contemplates that any such ROE issued to any of the Four Cities would contain a development schedule for the beneficial use of its water and a portion of the Regional Reserved Water. Any portion of the Regional Reserved Water ~~not authorized for use in a water right by December 31, 2030, would revert to Cascade.~~ that has not been allocated in conjunction with a water right approved by Ecology shall be cancelled on January 1, 2031[1].

13.6 Environment Impacts

NOTE: *This section has been added to the Final EIS based on comments received on the Draft EIS.*

The Regional Reserved Water Program would allow for mitigation of possible impacts to the White River associated with potential future water right applications from the Four Cities. The use of the Regional Reserved Water would have the potential to affect flow, water quality, and habitat in the White River Reservation Reach, Lower White River, and the Lower Puyallup River.

The potential environmental impacts of the Regional Reserved Water Program were simulated by adding a diversion from the White River representing the full quantity of Regional Reserved Water (5,060 acre-feet per year, 10 cfs instantaneous maximum) conservatively located immediately downstream of the diversion dam (this is conservative because it is unlikely that the future Four Cities' applications would require full use of the Regional Reserved Water at a point this far upstream). The diversion was assumed to have a seasonal pattern with a peak diversion of 10 cfs in July and August and a minimum diversion of 5.7 cfs in winter. This seasonal demand pattern is the same as the demand pattern assumed for the Project. Operating rules were added to allow diversion of Regional Reserved Water only when both the recommended flow in the White River and the Puyallup River minimum instream flow (MIF) were met. The Regional Reserved Water Program was simulated assuming that the Project was also operating at the same time and was assigned a lower priority than diversions into Lake Tapps Reservoir.

The effects of the Regional Reserved Water Program on flow, water quality, and habitat in the affected reaches of the White River and Puyallup River were evaluated using the analytical approaches developed for the Project and are presented in the following sections.

[1] See Draft Report of Examination Application No. S2-29920(B): https://fortress.wa.gov/ecy/wrx/wrx/fsvr/ecylcyfsvrxfile/WaterRights/ScanToWRTS/hq4/06533375.pdf.

Surface Water Hydrology

Full use of the Regional Reserved Water Program would reduce flows in the Reservation Reach, Lower White River, and Lower Puyallup River by 5.5 cfs on average, and up to 10 cfs during peak months. The average reduction is less than 7 cfs because Regional Reserved Water would not always be available.

The change in average flows at various points in the White and Puyallup River system is shown in Table 13-1. As shown in the table, full use of the Regional Reserved Water Program would not affect operation of Lake Tapps or Cascade's water supply. The reduction in flow would uniformly affect all downstream reaches.

Table 13-1. Change in Flows with the Regional Reserved Water Program

Scenario	Average Flows in cfs (WY 1988-2002)					
	Reservation Reach	Canal Diversion	Tailrace Release	Lake Tapps Water Supply Withdrawal	Lower White	Lower Puyallup
Project	1,330	132	40	71	1,523	3,159
Project + Regional Reserved Water Program	1,325	132	40	71	1,518	3,153
Difference	-5.5	0	0	0	-5.5	-5.5

There are portions of each year when Regional Reserved Water would not be available for use, because the use of Regional Reserved Water is subject to the recommended flow for the White River and the Puyallup River MIF, and Regional Reserved Water is a lower priority than diversions into Lake Tapps Reservoir. Model results assessing the availability of Regional Reserved Water in each of the 15 years simulated are shown in Table 13-2.

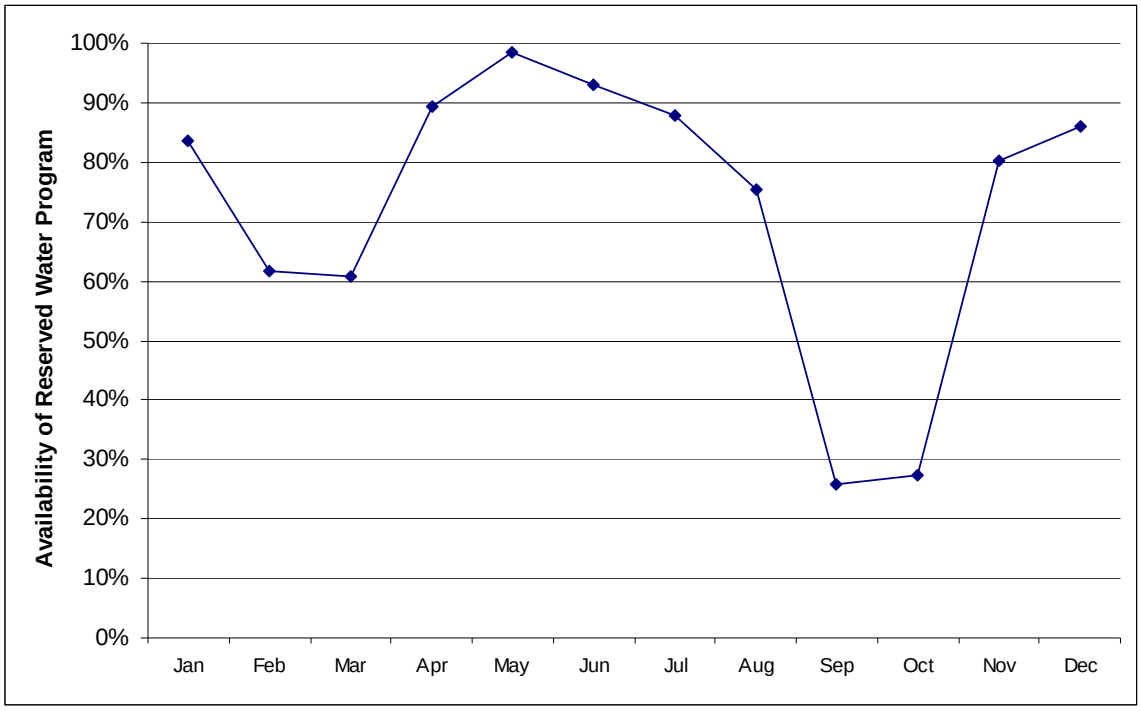
Table 13-2. Availability of Regional Reserved Water

Water Year	Average Available in cfs	Days Not Available Regional Reserved Water is Available	Percent of Time Available
1988	4.48	163	55.5%
1989	5.08	113	69.0%
1990	5.93	79	78.4%
1991	6.55	46	87.4%
1992	3.18	193	47.3%
1993	5.26	118	67.7%
1994	4.52	146	60.0%
1995	5.93	72	80.3%
1996	6.21	56	84.7%
1997	7.00	33	91.0%
1998	5.97	75	79.5%
1999	6.35	66	81.9%
2000	5.91	80	78.1%
2001	3.78	193	47.1%
2002	6.08	71	80.5%
Average	5.48	100	72.6%

Note: Orange shading indicates dry years (1995 and 1996) and yellow indicates drought years (1989, 1992, 1994, and 2001).

Overall, Regional Reserved Water would be available 72.6% of the time, but availability would vary by year from 91% in the best year (1997) to 47% in the worst (1992 and 2001). Availability would be generally lowest in drought years, but would vary based on the specific hydrologic pattern of each year.

Seasonally, Regional Reserved Water would be most available during peak snowmelt in May and June and least available in September and October. The pattern of monthly average availability is shown in the figure below. There would also be a dip in availability in February and March, when larger quantities of water would be diverted into Lake Tapps to refill the reservoir.



Monthly Average Availability of Regional Reserved Water

A separate analysis was performed assuming a constant 10 cfs use of Regional Reserved Water (when available). This analysis indicated that the full annual quantity of 5,060 acre-feet could be diverted in 9 of the 15 years.

Water Quality

Use of the Regional Reserved Water would have the potential to affect water quality in the Reservation Reach, Lower White River, and Lower Puyallup River by reducing flows. The effects on temperature in the Reservation Reach were evaluated quantitatively using the regression equations (see Section 6.2.1.1 in the Draft EIS) that relate water temperature to flow in the river. The effects on water quality in lower reaches were evaluated qualitatively based on the results for temperature in the Reservation Reach.

The Regional Reserved Water Program would have a minimal effect on 7-DADMax temperatures, as shown in Table 13-3. On average, the 7-DADMax temperature would increase relative to the Project by 0.01 °C from July 1 to September 14, and there would be no change from September 15 to October 15. There would be no change in the percent of time in either period that water temperatures would be above the State Standard.

Table 13-3. 7DADMax Temperatures in the Reservation Reach with Regional Reserved Water

Scenario	Average 7-DADMax Temperature in °C		Percent of Time above Standard	
	RM 4.9	RM 15.5	RM 4.9	RM 15.5
July 1 to September 14 (Temperature Standard = 16 °C)				
Project	17.27	15.40	85%	32%
Project + Regional Reserved Water Program	17.28	15.41	85%	32%
Difference	0.01	0.01	0%	0%
September 15 to October 31 (Temperature Standard = 13 °C)				
Project	14.62	13.44	77%	62%
Project + Regional Reserved Water Program	14.62	13.45	77%	62%
Difference	0.00	0.00	0%	0%

Given the minimum changes in water temperature in the Reservation Reach with the Regional Reserved Water Program, there would be no detrimental impact to DO concentrations. Of the many factors that affect DO concentration in water, temperature is the only factor that the Regional Reserved Water Program has the potential to change. However, a 0.01 °C increase in temperature would not realistically have the potential to affect DO concentrations.

Because the Regional Reserved Water Program would have a negligible effect on temperature or DO in the Reservation Reach, and would not cause any change in the operation of Lake Tapps, it is reasonable to conclude that there would be negligible effects to water quality in the Lower White River and Lower Puyallup River.

Aquatic Habitat

By diverting water from the White River, the Regional Reserved Water Program would cause a reduction in wetted area in the Reservation Reach, Lower White River, and Lower Puyallup River on days when minimum flows were met. The magnitude of the reduction in aquatic habitat was quantified using the relationships between flow and wetted area developed by Herrera for the Reservation Reach and by R2 Resource Consultants for the Lower Puyallup River and Lower White River as described in (see Section 9.2.3 in the Draft EIS).

On average, full use of the Regional Reserved Water would reduce wetted area by about 1 acre, as shown in Table 13-4. This represents a 0.15% decrease in wetted area compared with the Project, mostly in the Reservation Reach. The reduction in the Lower White River and in Lower Puyallup River would be negligible.

Table 13-4. Percent Change in Wetted Area in Acres by Reach with Regional Reserved Water

Scenario	White River Reservation Reach	Lower White	Lower Puyallup	Total
Project	442.3	46.24	112.59	601.1
Project + Regional Reserved Water Program	441.4	46.22	112.57	600.2
Difference	-0.9	-0.02	-0.02	-0.94
Percent Difference	0.2%	0.04%	0.02%	0.15%

The Regional Reserved Water Program would not have a significant impact on aquatic habitat because the change in wetted area would be small and would occur at non-critical times of year. There would be no reduction in wetted area caused by use of the Regional Reserved Water when flows were below either the Recommended Flows in the White River or the Puyallup River MIF. Further, even if minimum flows were met, Regional Reserved Water typically would be less available for use in the lowest flow months of September and October.

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Appendix D: Distribution List

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CASCADE WATER ALLIANCE
LAKE TAPPS RESERVOIR WATER RIGHTS AND SUPPLY PROJECT

NOTICE OF AVAILABILITY
FINAL ENVIRONMENTAL IMPACT STATEMENT

DISTRIBUTION LIST

CASCADE WATER ALLIANCE MEMBERS[1]

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

LOCAL GOVERNMENTS

King County DNR/P – Water Policy[1]
Seattle and King County Public Health[2]
City of Auburn[2]
City of Kent[2]
Pierce County Office of the County Executive[3]
Pierce County Planning and Land Services[2]
City of Buckley[2]
City of Bonney Lake[2]
City of Sumner[2]
City of Pacific[2]
City of Algona[2]
City of Enumclaw[2]
King County Executive[3]
Pierce County Councilmember Shawn Bunney[3]

STATE OF WASHINGTON

Department of Ecology SEPA Register[1]
Department of Ecology Northwest Regional Office[1]
Department of Ecology Southwest Regional Office[1]
Department of Health[2]
Department of Archaeology and Historic Preservation[2]
Department of Natural Resources[2]
Department of Transportation[2]
Department of Fish and Wildlife[2]
Parks and Recreation Commission[2]
Utilities and Transportation Commission[2]
Puget Sound Clean Air Agency[2]

Interagency Committee for Outdoor Recreation[2]
Office of the Attorney General[1]
State Senator Roach[3]
State Senator Kauffman[3]
State Representative Roach[3]
State Representative Hurst[3]
Senator Murray[3]
Senator Cantwell[3]
Representative Inslee[3]
Representative McDermott[3]
Representative Reichert[3]
Representative Smith[3]
Representative Dicks[3]

FEDERAL AGENCIES[2]

U.S. Army Corps of Engineers, Seattle District
Bureau of Indian Affairs
U.S. Environmental Protection Agency, Region 10
Federal Emergency Management Agency, Region 10
U.S. Fish and Wildlife Service
U.S. Geological Survey
NOAA Fisheries - National Marine Fisheries Service
Natural Resource Conservation Services

TRIBES

Muckleshoot Indian Tribe[1]
Puyallup Tribe of Indians[1]
Duwamish Tribe[2]
Tulalip Tribe[2]
Snoqualmie Tribe of Indians[2]

LIBRARIES[2]

King County Library System, Redmond Regional Branch
King County Library System, Bellevue Regional Branch
King County Library System, Issaquah Branch
King County Library System, Tukwila Branch
King County Library System, Covington Branch
King County Library System, Auburn Branch
Pierce County Library System, Bonney Lake
Pierce County Library System, Sumner
University of Washington Suzzallo Library

SPECIAL INTEREST GROUPS

Washington Environmental Council[3]
Seattle Audubon Society[3]
Trout Unlimited[3]
Washington Trout[3]
Sierra Club[3]
Lake Tapps Community Council[1]
Citizens for Clean Drinking Water[3]
League of Women Voters[3]
Center for Environmental Law and Policy (CELP)[3]
Church Lake Maintenance Association[2]
Tapps Island Association[2]
West Tapps Maintenance Company[2]
Driftwood Point Association[2]
Inlet Island Homeowner's Association[2]

WHOLESALE WATER PURVEYORS

Seattle Public Utilities[1]
Tacoma Water[2]
East King County Regional Water Association[3]
South King County Regional Water Association[3]

NEWSPAPERS[3]

Daily Journal of Commerce
Seattle Times
Tacoma News Tribune
Bonnie Lake and Sumner Courier Herald
Auburn Reporter
Bellevue Reporter
Kirkland Reporter
Issaquah Reporter
Sammamish Reporter
Renton Reporter
Redmond Reporter

OTHER

Puget Sound Energy[2]
Aspect Consulting, LLC[1]
Perkins Coie, LLP[3]
HDR Engineering, Inc.[1]
GordonDerr, LLP[1]
Eglick Kiker Whited, PLLC[3]
K & L Gates, LLP[1]
Ralph Mason[2]
Cascade Connections Group[3]
Ken Castile[1]
Renay Bennett[1]

Chris Mantell[1]
Dan Fishburn[1]
Geoffrey Bidwell[1]

Notes:

1. These entities on the distribution list have received the Notice of Availability, printed copy of the Final EIS, and a CD copy of the Final EIS.
2. These entities on the distribution list have received the Notice of Availability and a CD copy of the Final EIS.
3. These entities on the distribution list have received the Notice of Availability.