

(9/22/06)

The White River Water Right for a Water Supply Project

I. Adaptive Management Flow Proposal

A. Interim Period

The interim period of time subsequent to issuance of the water right for the proposed Water Supply Project (WSP), but prior to operation of the WSP is referred to herein as the "Interim Period". As further described below, Ecology, the recipient of the water right, (the Permit Holder), the Puyallup Tribe of Indians (Tribe) and other interested parties shall use the Interim Period to study the affects of the flows and conditions prescribed in the Record of Examination (ROE) on the development of fish habitat in the Bypass Reach and the maintenance of water quality standards (WQS) in Lake Tapps, the White River and the Lower Puyallup River.

B. Flows During the Interim Period

1. For the first three (3) years following the issuance of the water right, the Permit Holder shall conduct the Flushing Flow Study according to Section _____ [of the ROE]. It is presumed that no flushing flows need be diverted into Lake Tapps for the purpose of maintaining WQS in Lake Tapps (Flushing Flows). If the Flushing Flow Study determines that Flushing Flows are not required to maintain WQS in Lake Tapps, the Flushing Flows shall be dedicated to instream flows at the conclusion of the study period. If the Flushing Flow Study determines that some or all of the Flushing Flows are necessary to maintain WQS in Lake Tapps, the Permit Holder may be permitted to divert that portion of the Flushing Flows necessary to maintain WQS in Lake Tapps, up to the total amount of the Flushing Flows. The balance of any unused Flushing Flows shall be dedicated to instream flows.

2. During the Interim Period, the Permit Holder shall operate the diversion according to the terms and conditions prescribed in the ROE, provided that, actual flows in the Bypass Reach, during the Interim Period, shall be equivalent to the Agreed Flow Proposal and Operation Rules provided to Ecology by the Tribe in consultation with the Cascade Water Alliance (CWA), Puget Sound Energy (PSE) and the Muckleshoot Indian Tribe (MIT) and attached as Exhibit A. In addition, as noted above in B.1., it is presumed that the Flushing Flows shall be dedicated to instream flows at the conclusion of the Flushing Flow Study. The actual flows in the Bypass Reach during the Interim Period are referred to as the Interim Flows.

C. Bypass Reach Study

1. To study the effects of the Interim Flows on wetted habitat the Permit Holder, in consultation with Ecology, and the Consulting Agencies shall develop and implement the following studies below. (The Tribe, the Washington Department of Fish and Wildlife (WDFW), the National Marine Fisheries Service (NMFS), and the MIT are collectively referred to as the "Consulting Agencies.")

a. Characterization of the lower White River and lower Puyallup River, and the geographic scope of the Project, or "Study Area" including channel conditions, cross sections,

sediment transport, and geomorphology (which shall include channel-forming processes necessary for overbank flows and recharge of groundwater/hyporheic zone);

- b.** Determination within the Study Area of functional impacts of completed and proposed wetland/habitat areas;
- c.** Determination within the Study Area of surface water connectivity to off-channel wetland/habitat areas;
- d.** Determination within the Study Area of residence time salmonids and growth within wetland mitigation/habitat projects;
- e.** Monitoring within the Study Area of water quality and determination of impacts to thermal regimes, dissolved oxygen concentrations, pH, and other water quality parameters in the White River and the Puyallup River;
- f.** Monitoring fish returns within the Study Area;
- g.** Additional studies within the Study Area to be determined, as necessary.

2. Each entity or consultant that is conducting a study or studies pursuant to Section C.1. above shall contemporaneously provide each of the Consulting Agencies, with copies of the data generated on wetted habitat, fish returns, and water quality during the Interim Period.

D. Panel of Experts

1. Within one (1) year following the issuance of the water right, the Permit Holder, shall establish a panel of scientific experts (the Expert Panel) to first study and then make a recommendation to Ecology regarding the minimum instream flow that should be set by Ecology, within the Bypass Reach, for the month of August.

- 2.** The Expert Panel shall consist of qualified experts selected as follows:
- a.** The Consulting Agencies and Ecology shall each appoint one fishery expert;
 - b.** The Permit Holder, the Tribe, and the MIT shall each appoint one hydrologist;
 - c.** The Permit Holder, the Tribe, and the MIT Tribe shall each appoint one water quality specialist;
 - d.** Pierce County shall appoint one representative.

3. Recommendation of the Expert Panel

a. Twenty-four(24) months prior to the operation of the WSP , the Expert Panel shall assemble all data collected as a part of the Bypass Reach Study, noted above in paragraph C.1., and shall use best efforts to reach a consensus on the recommended in-channel flow for the month of August. (Expert Panel Recommendation). In the event that consensus cannot be reached, a majority and a minority report may be sent to Ecology. The Expert Panel Recommendation shall be delivered to Ecology no later than eighteen (18) months prior to the operation of the WSP.

b. The Expert Panel Recommendation shall include, but not be limited to the following criteria: impacts of the Increased Flows on the Bypass Reach, including, but not limited to, wetted habitat, deep pools, side channels, spawning beds, gravel, sediment, woody debris, and water quality criteria; impact of flows on the level of Lake Tapps; and efforts taken, in accordance with the Lake Maintenance and Enhancement Plan described further below in Section G.2. to enhance the recreational opportunities at Lake Tapps.

c. Any time during the Interim Period, the Expert Panel may, in its discretion, make recommendations to the appropriate entities regarding the following:

- (1)** potential habitat enhancement and restoration projects in the White and Puyallup Rivers;
- (2)** point source and nonpoint source pollution controls along the White River and Lake Tapps;
- (3)** enhancements to Lake Tapps to improve recreational opportunities.

E. Ecology Review of Panel Recommendation

1. Based upon its review of the Expert Panel Recommendation, Ecology shall establish the minimum instream flows in the Bypass Reach for the month of August (August MIF). The August MIF shall be set at a number no lower than 500 cfs and no higher than 650 cfs.

2. In establishing the August MIF, Ecology shall consider the following criteria within the Study Area:

- a.** Functional impacts of the wetland/habitat areas created during the Interim Period;
- b.** Surface water connectivity to off-channel wetland/habitat areas created by the Increased Flows;
- c.** Water quality impacts to the White River and the Puyallup River, including impacts to thermal regimes, dissolved oxygen concentrations, pH, and other water quality parameters;
- d.** Fish returns;
- e.** Economic benefits to region due to improvements to fishery related to the Increased Flows;
- f.** Impacts on recreational levels of Lake Tapps.

F. Lake Enhancement and Maintenance Plan

a. The water level of Lake Tapps affects the ability of the public to safely use Lake Tapps for recreational purposes. Increased flows in the Bypass Reach o benefit fisheries, the operation of the WSP and recreational use of Lake Tapps can all be obtained as a result of activities to be undertaken in and about Lake Tapps that will contribute to improving and maintaining the Lake. The Lake Enhancement and Maintenance Plan is intended to accomplish these goals and objectives.

b. The Permit Holder, in conjunction with Pierce County and the Lake Tapps Homeowners, shall, within twenty-four (24) months after issuance of the water right, submit to Ecology and the Consulting Agencies a Lake Enhancement and Maintenance Plan (Lake Enhancement Plan). The Lake Plan shall provide for:

(1) designation of priority treatment areas (PTAs) within Lake Tapps within which, annual deepening of the PTAs may be conducted during the winter draw-down or at other times agreeable to Ecology;

(2) designation of areas within Lake Tapps where removal of tree stumps, that pose a hazard to boaters, swimmers and others recreating in Lake Tapps (Removal Areas). Activities within these designated Removal Areas shall take place during the winter draw-down or at other times agreeable to Ecology. To the extent feasible, suitable clean materials removed from the Lake Tapps' Removal Areas shall, with the approval of the Consulting Agencies, be placed in the White River, below the Diversion Dam, to enhance fish habitat;

(3) the enforcement of the Boat Management Plan developed by the Lake Tapps Boat Management Plan Team (LTBMP Team). The LTBMP Team was established by Pierce County Council Resolution 2004-91.

c. Pierce County shall develop, implement and enforce a non-point source management plan, for the Lake Tapps area to address and mitigate current and future impacts of non-point source discharges in and about Lake Tapps and the resulting direct and indirect impact on the water quality of Lake Tapps.

Exhibit A

AGREED FLOW PROPOSAL

A. Agreed Flow

1. The Diversion Dam shall be operated so as to provide:
 - a. An in-channel minimum surface flow (“MF”) below the Diversion Dam in accordance with Rule 1;
 - b. Inflow to the Lake Tapps Reservoir by operation of the Diversion Dam in an amount not to exceed 400 cfs in accordance with Rule 2 (“Minimum Reservoir Inflow”);
 - c. Additional inflow to the Lake Tapps Reservoir by operation of the Diversion Dam to provide inflow in amounts not to exceed maximum reservoir inflows established by Rule 3 (“Maximum Reservoir In Flow”); and
 - d. Sufficient water for beneficial uses by maintaining target reservoir levels established by Rule 4 (the “Target Reservoir Levels”).
2. The MF, the Minimum Reservoir Inflow, the Maximum Reservoir Inflow and the Target Reservoir Levels are collectively referred to herein as the “Agreed Flow.” The Agreed Flow shall be provided subject to and in accordance with an agreed flow monitoring plan (the “Agreed Flow Monitoring Plan”). Rule 1, Rule 2, Rule 3 and Rule 4 (collectively, the “Rules”) shall be applied and administered in accordance with the Agreed Flow Monitoring Plan.
3. Rule 1. No water shall be diverted to the Lake Tapps Reservoir by operation of the Diversion Dam unless the in-channel minimum surface flow of the White River below the Diversion Dam exceeds the minimum in-channel surface flow set forth below (the “MF”):

<u>Time Period</u>	<u>MF</u>	<u>Time Period</u>	<u>MF</u>
January 1-14	650 cfs	July 1-14	800 cfs
January 15-31	525 cfs	July 15-31	800 cfs
February 1-14	550 cfs	August 1-14	500- 650 cfs
February 15-29	500 cfs	August 15-31	500 - 650 cfs
March 1-14	550 cfs	September 1-14	500 cfs
March 15-31	725 cfs	September 15-30	500 cfs
April 1-14	775 cfs	October 1-14	500 cfs
April 15-30	825 cfs	October 15-31	500 cfs
May 1-14	875 cfs	November 1-14	500 cfs
May 15-31	875 cfs	November 15-30	550 cfs
June 1-14	800 cfs	December 1-14	550 cfs
June 15-30	800 cfs	December 15-31	600 cfs

4. Rule 2. When the in-channel surface flow of the White River below the Diversion Dam exceeds the MF, but does not exceed the in-channel surface flow set forth below, the Diversion Dam may be operated to provide inflow to the Lake Tapps Reservoir in an amount not to exceed 400 cfs (“Minimum Reservoir Inflow”):

<u>Time Period</u>	<u>Rule 2 Flow</u>	<u>Time Period</u>	<u>Rule 2 Flow</u>
January 1-14	1100 cfs	July 1-14	1400 cfs
January 15-31	1100 cfs	July 15-31	1275 cfs
February 1-14	1100 cfs	August 1-14	1150 cfs
February 15-29	1150 cfs	August 15-31	1050cfs
March 1-14	1200 cfs	September 1-14	975cfs
March 15-31	1250 cfs	September 15-30	500 cfs
April 1-14	1300 cfs	October 1-14	500 cfs
April 15-30	1350 cfs	October 15-31	500 cfs
May 1-14	1400 cfs	November 1-14	500 cfs
May 15-30	1400 cfs	November 15-30	550 cfs
June 1-14	1400 cfs	December 1-14	1000 cfs

<u>Time Period</u>	<u>Rule 2 Flow</u>	<u>Time Period</u>	<u>Rule 2 Flow</u>
June 15-30	1400 cfs	December 15-31	1050 cfs

5. Rule 3. When the in-channel surface flow of the White River below the Diversion Dam exceeds the in-channel surface flow stated by Rule 2 above, the Diversion Dam may be operated to provide additional inflow to the Lake Tapps Reservoir, but the amount of such additional inflow shall not exceed the maximum reservoir inflow to the Lake Tapps Reservoir stated below (the “Maximum Reservoir Inflow”):

<u>Time Period</u>	<u>Maximum Reservoir Inflow</u>	<u>Time Period</u>	<u>Maximum Reservoir Inflow</u>
January 1-14	650 cfs	July 1-14	800 cfs
January 15-31	650 cfs	July 15-31	800 cfs
February 1-14	2000 cfs	August 1-14	800 cfs
February 15-29	2000 cfs	August 15-31	800 cfs
March 1-14	2,000 cfs	September 1-14	800 cfs
March 15-31	1,000 cfs	September 15-30	800 cfs
April 1-14	1,000 cfs	October 1-14	800 cfs
April 15-30	1,000 cfs	October 15-31	800 cfs
May 1-14	1,000 cfs	November 1-14	650 cfs
May 15-30	1,000 cfs	November 15-30	650 cfs
June 1-14	1,000 cfs	December 1-14	650 cfs
June 15-30	1,000 cfs	December 15-31	650 cfs

6. Rule 4. The Diversion Dam may operated, subject to Rules 1, 2 and 3 above, with the further objective of providing sufficient water for beneficial uses by maintaining the target reservoir levels set forth below (the “Target Reservoir Level”):
- a. Between December 1 and February 1 the Lake Tapps Reservoir target water surface elevation is 530' msl;
 - b. Between February 2 and April 30 the Lake Tapps Reservoir target water surface elevation may increase to 541.5 to 543' msl;
 - c. Between May 1 and September 6 the Lake Tapps Reservoir target water surface elevation is 541.5 to 543' msl; and

- d. Between September 7 and November 30 the Lake Tapps Reservoir target water surface elevation may decrease to 530' msl.