PUGET POWER

February 7, 1991

Ms. Tina Miller, Wetland Scientist
King County Building and Land
3600 - 136th Place Southeast
Bellevue, WA 98006-1400

RE: File No. L90SH009 - White River Hatchery
Wetland Report

Dear Ms. Miller:

Thank you for taking the time to meet with Puget Power on February 4, 1991 to discuss the wetland report for the White River Hatchery Project. As explained in the meeting, the wetland report was requested by King County Sensitive Areas as part of the review of the Application for a Shoreline Substantial Development Permit which was submitted by Puget Power on January 18, 1990. The permit would allow the construction of a surface water intake at the hatchery to withdraw water from the White River for hatchery operations. As a result of that meeting, you requested additional information to clarify some of the issues regarding the project and the wetland. The following is provided to address our discussion.

HYDROLOGY

The existing hydrology of the White River hatchery area represents a complex interaction of surface and groundwater from a total drainage area of about 204 acres; some 80 acres being low river bottom land and the balance upland slopes and agricultural lands on the Enumclaw plain. The aquifer underlying the site is also supported by hydraulic continuity with the White River. This latter connection appears to fully charge or recharge the aquifer when the flows in the White River exceed 1000-1500 cfs. At flows less than this threshold full hydraulic continuity is not present and recharge is limited. During the late summer recharge from this source is almost non-existent.

The average precipitation at the site is estimated to be 48.7 inches a year based on the 69 year record at the Buckley 1 NE station located at the White River Project intake across the river from the hatchery. Assuming that 75% of this is converted to runoff the annual water yield at the hatchery site would be 0.86 cfs. As a check on this the proration by area of the Boise Creek streamflow record for 1977-1989 would yield a annual runoff of 0.7 cfs over the 204 acres. Based on the streamflow record the site water yield during the drier months of July-October would average 0.2 - 0.3 cfs with an instantaneous minimum of 0.07 cfs.

The observed well field, river and wetland/pond elevation data are in good agreement with these estimates. Sustained pumping rates of 0.5-1.0 cfs during the late summer are capable of producing drawdown of the local