DEPARTMENT OF ECOLOGY
State of Washington

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Errata

Pend Oreille River Temperature Total Maximum Daily Load: Water Quality Improvement Report

October 2011

On April 6, 2011, the Washington State Department of Ecology sent the Pend Oreille River temperature Total Maximum Daily Load (TMDL) to the Environmental Protection Agency (EPA) for approval. During EPA's review and prior to its final approval, affected parties Seattle City Light (SCL) and the Pend Oreille Public Utility District No. 1 (PUD) initiated Ecology's dispute resolution process. The dispute resolution process is a mechanism by which a local entity or citizen can request reconsideration of final TMDLs developed by Ecology, and/or bring a dispute of a procedural step in the TMDL development process. Among the outcomes of the dispute resolution process Ted Sturdevant, the Director of Ecology, decided to amend the TMDL with the following minor changes:

- The TMDL needs to clarify that the compliance path for the Pend Oreille Public Utility District (PUD) is the compliance schedule outlined in the Water Quality Standards [WAC 173-201A-510(5)]. This is the same path as that used for all dams going through Federal Energy Regulatory Commission (FERC) re-licensing.

- The temperature reduction target in the Boundary Dam forebay needs to reflect the temperature signal from the PUD's Box Canyon Dam. The required temperature reduction in the Boundary forebay should be 0.76^{o}C, not the 0.88^{o}C listed in the TMDL. However, SCL's allocation remains unchanged at natural conditions + 0.12^{o}C. The distinction is that the PUD's efforts to implement the TMDL will result in reduced temperatures flowing into Boundary Dam's forebay. Therefore, the cumulative temperature reduction from both the PUD and SCL is a temperature reduction of 0.76^{o}C in the Boundary Dam forebay.

Ecology intends to make these and possibly other minor changes (noted in underlined and strike-out text) in the following locations in the online version of the TMDL (Ecology publication number 10-10-065) following review and comment by affected parties:

- Page xii, **Allocations**:

  Hydroelectric facilities: When natural condition river temperatures are greater than 20^{o}C (July and August), load allocations have been set equivalently at 0.12^{o}C above the natural temperature condition for the Box Canyon and Boundary facilities due to the inter-relationship of the temperature impacts and the associated cumulative impacts in the watershed. The temperature reduction required to achieve the load allocations for Box

Canyon and Boundary is 1.13°C and 0.76°C, respectively, based on 2004 results. These reductions apply during July and August in the forebays of the dams, which are the areas of maximum temperature impairment.

- Page xiii, **Planning and implementation to achieve criteria**, first paragraph:

  The Pend Oreille Public Utility District (PUD) and Seattle City Light (SCL) own and operate Box Canyon Dam and Boundary Dam, respectively. As part of their Federal Energy Regulatory Commission (FERC) license, these utilities will complete actions in their 401 Water Quality Certifications to achieve the temperature criteria for the Pend Oreille River. Specifically, Seattle City Light and the Pend Oreille PUD will follow the dam c*ompliance schedule outlined in the state water quality standards [WAC 173-201A-510(5)]*. In addition, Pend Oreille River watershed residents and landowners are called upon to reduce water temperature by increasing the number of native trees and shrubs along the Pend Oreille River and its tributaries.

- Page 79, second paragraph is modified with the following:

  Given the interrelationship in the temperature impacts of Box Canyon and Boundary facilities and their associated cumulative impacts, the load allocations have been set equivalently for both at 0.12°C above the natural temperature condition. This totals 0.24°C of the 0.3°C allowance, which is the greatest equitable temperature that leaves a sufficient temperature reserve for future economic growth in the watershed. Based on the forebays, the most impacted reaches within the study area, 2004 results indicate that the level of temperature reduction required to achieve this load allocation for Box Canyon and Boundary is 1.13°C and 0.76°C, respectively (Table 15). {*paragraph break*}

  ~~These temperatures are~~ The 1.13°C temperature reduction target for the Box Canyon Dam forebay is derived by taking the 1.25°C maximum temperature differential for the Box Canyon Forebay from Table 6 and subtracting 0.12°C. ~~level of exceedence for the forebay found in Table 11 and adding 0.18°C. [Because in Table 11, the exceedence is the temperature above 0.3°C. However, the allocation is for 0.12°C above natural conditions, so the level of exceedence must be increased by the difference between 0.12°C and 0.3°C (0.3 – 0.12 = 0.18).]~~

  The 0.76°C temperature reduction target for the Boundary Dam forebay is calculated by subtracting 0.12°C for the PUD's allocation and 0.12°C for SCL's allocation from the 1.00°C maximum temperature differential for the Boundary Forebay in Table 6. [Boundary forebay maximum impairment (1.00°C), minus the PUD's allocation that is passed downstream (0.12°C), minus SCL's allocation (0.12°C), equals the temperature reduction required in the Boundary forebay (0.76°C).]

- Page 80, Table 15. Hydroelectric facilities load allocations.

Reaches Requiring Temperature Reductions		Temperature Reduction Level Required to Achieve Criteria	
		Part 1 **Natural Condition + 0.12°C** **Summer Critical Period (July – August)**	**Part 2** **Fall Critical Period (September – October)**
Box Canyon	Box Canyon Forebay	1.13°C	=====
Boundary	Metaline	====	0.14°C
	Slate	====	0.24°C
	Forebay	0.76°C	0.61°C
	Tailrace	====	0.53°C

- Pages 86-88, Nonpoint sources, **Box Canyon and Boundary dams**:
  - Page 86, second paragraph

    The Pend Oreille PUD received their 401 certification from Ecology in 2003, and a new FERC license for Box Canyon Dam in July 2005. **A condition of the Pend Oreille PUD's 401 certification states that the provisions in the TMDL's WQIP will supersede the water temperature conditions in their 401 certification.*** Seattle City Light is in the process of relicensing Boundary Dam (the license expires in 2011).

    **Bold text was originally struck in September 2011 errata and added back in response to comments.*

  - Page 87, second paragraph

    The approach the Pend Oreille PUD and Seattle City Light will use to meet the load allocations in this TMDL will be consistent with requirements found in the state water quality standards [Washington Administrative Code (WAC) 173-201A-510(5)], which assigns a ten-year compliance schedule to dams. This rule requires dam owners to develop a Water Quality Attainment Plan. The water quality attainment plan provides a detailed approach for achieving compliance and must contain five elements specific to temperature:

    - A schedule to achieve compliance that does not exceed ten years.
    - The identification of all reasonable and feasible improvements that could be used to meet standards, or if meeting the standards is not attainable, then achieve the highest attainable level of improvement.
    - A description of the methods used to evaluate the reasonable and feasible improvements.

- A plan to conduct water quality monitoring after activities are implemented with appropriate adaptive management steps.
- The benchmarks and reporting requirements that will be used to track the progress of implementing the water quality attainment plan and meeting water quality standards.

o Page 87, fifth paragraph

After the Water Quality Attainment Plan is implemented, Ecology and the dam operator will decide what the next steps are (whether completed actions meet water quality standards; another compliance schedule is appropriate; or surface water quality standards should be changed). **If after the Pend Oreille PUD or Seattle City Light complete all reasonable and feasible improvements under WAC 173-201A-510(5)(g), and their load allocation is still not met by the timeline set in this TMDL, then the dam owner would take the following steps to achieve compliance with the standards:**

- **Evaluate new reasonable and feasible technologies or other options.**
- **Develop a new compliance schedule to evaluate and incorporate any new technology.**
- **If no new reasonable and feasible technologies are identified, propose other alternatives as allowed by WAC173-201A-510.***

**Bold text was originally struck in September 2011 errata and added back in response to comments.*

- Page 92, paragraph four, *Pend Oreille Public Utility District (PUD)*:

Pend Oreille Public Utility District (PUD): The Pend Oreille PUD is responsible for implementing provisions of their license for Box Canyon Dam that FERC issued in July 2005. In February 2003, Ecology issued a water quality certification which is included as part of the FERC license.

Pend Oreille PUD reached a settlement agreement and amended their FERC license on February 19, 2010. The settlement agreement was between the Department of Interior, United States Forest Service, the Kalispel Tribe of Indians, and Ponderay Newsprint. Article 406 of the FERC License requires Pend Oreille PUD to implement a Trout Habitat Restoration Program (THRP). The THRP calls for the restoration and maintenance of 164 miles of tributary habitat, of which 66 miles will occur in the first ten years, 66 in the second ten years, and 32 in the remaining five year period. The THRP will include a combination (some or all) of the following measures that will also make up parts of the Pend Oreille PUD's Temperature Water Quality Attainment Plan:

- Channel improvements (limited to geomorphologic improvements and barrier removal)
- Floodplain restoration
- Riparian corridor restoration

- Conservation easements and/or purchases

Similar to Seattle City Light's Water Quality Attainment Plan (see next bulleted item),, Ecology will use current actions from Pend Oreille PUD settlement agreement as evidence demonstrating that the PUD is moving toward meeting applicable temperature criteria. We will also require monitoring to inform us on what steps need to take place at the end of the ten-year compliance schedule.

The Pend Oreille PUD should keep the public; Kalispel Tribe; Idaho DEQ; Ecology; the Tri-State Water Quality Council; and the EPA informed of the status of the project. A copy of the license for Box Canyon Dam can be found on the PUD's website: www.popud.com/license.htm.

- Page 93, second paragraph, *Seattle City Light*:

  Seattle City Light: Seattle City Light is working on relicensing Boundary Dam. Studies conducted to identify and understand the environmental and other effects of the dam will help identify water quality conditions that may be incorporated into Ecology's 401 certification. Seattle City Light will be responsible for implementing requirements of its water quality attainment plan and provisions of its new FERC license.

  Seattle City Light has a settlement agreement that was signed on March 23, 2010, by the Bureau of Indian Affairs; National Park Service; United States Fish and Wildlife Service; Untied States Department of Agriculture Forest Service; Washington Department of Fish and Wildlife; Washington Department of Ecology; Kalispel Tribe; Public Utility District No. 1 of Pend Oreille County; Washington; American Whitewater; Selkirk Conservation Alliance; and the Lands Council. Seattle City Light developed a temperature Water Quality Attainment Plan that Ecology approved. The plan will rely on all actions in the settlement agreement that may improve temperatures in the mainstem and tributaries. The first ten years of the 401 compliance schedule includes the following activities:

  - Mill Pond Dam Removal and Stream Channel Restoration.
  - Stream and Riparian Improvements in Sullivan Creek North Fork Sullivan Creek.
  - Large woody debris placement and Road improvements in Sullivan Creek and selected tributaries upstream of the confluence with Outlet Creek.
  - Habitat protection, riparian improvement, and stream channel enhancement in Sullivan Creek.
  - Cold water release structure at Sullivan Dam.
  - Mainstem large woody debris at tributary deltas; two at Sullivan, one at Sweet, Slate, and Linton Creeks.
  - Mainstem erosion control measures and riparian plantings.

  Monitoring will be required in the tributaries where improvements are expected and in the mainstem of the river.

  Seattle City Light should keep the public; Kalispel Tribe; Ecology; the Tri-State Water Quality Council; and the EPA informed of the status of its progress in addressing specified water quality conditions. The format and venue for sharing information

regarding compliance may be detailed in the water quality attainment plan. Information about Seattle City Light's relicensing efforts is available on the Web at: www.ci.seattle.wa.us/light/news/isssues/bndryRelic/br_document.asp.