

Project Name	SA 6: Cowlitz Monitoring & Evaluation Plan
Date Proposal Summited	10/29/2024
Date of Requested Decision	12/3/2024
Requested By	Scott Gibson
Date of Decision¹	12/3/2024

¹ Decision will become final if committee members who were not present at this meeting do not oppose this proposed decision within 7 days.

FTC Decision and Justification
<p>The FTC will adopt the Cowlitz Monitoring and Evaluation Plan, which incorporates FTC comments received during the 30-day FTC review and discussed at the 11/20/2024 M&E sub-group meeting.</p> <p>FTC representatives present: Trout Unlimited, NOAA Fisheries, Ecology, Washington Department of Fish and Wildlife, and Tacoma Power.</p>

Proposed Decision for Consideration
<p>The Monitoring and Evaluation (M&E) subgroup recommends that the FTC adopts the Cowlitz Monitoring and Evaluation Plan (Cowlitz M&E Plan). The M&E Plan is designed to provide the information needed to track population status toward recovery objectives and for the Annual Program Review (APR) decision process. The Cowlitz M&E Plan will be reviewed annually and will be updated as needed.</p> <p>A draft was distributed for 30-day FTC review on October 7, 2024. The final Cowlitz M&E Plan will be attached to this Decision Document and posted to the FTC public website.</p>

Background
<p>The Cowlitz River Hydroelectric Project Settlement Agreement (SA; Tacoma Power et al. 2000) outlined a Fish Monitoring Plan to be developed (Article 6) to assess the Fisheries and Hatchery Management Plan (FHMP). The emphasis of the SA is restoration and recovery of wild indigenous salmon runs to harvestable levels (excerpted from the SA, Article 6.1.1: Tacoma Power et al. 2000):</p> <p><i>“The emphasis of this agreement is ecosystem integrity and the restoration and recovery of wild indigenous salmon runs, including ESA-listed indigenous and unlisted stocks to harvestable levels.”</i></p> <p>The SA further specifies fish passage requirements, habitat restoration, and artificial production implemented under an adaptive management framework (SA, Article 6.1.2: Tacoma Power et al. 2020):</p> <p><i>“Fisheries obligations will be met through a combination of effective upstream and downstream passage, habitat restoration and improvement, an adaptive management</i></p>

program to restore natural production coupled with continued artificial production program to compensate for unavoidable impacts at levels consistent with ESA recovery, and providing fish production for sustainable fisheries.”

Although harvest and fisheries are important, recovery of wild populations is paramount (SA, Article 6.1.6: Tacoma Power et al. 2020):

“Maintenance of a recreational fishery is important. Implementation of the wild salmonid recovery measures shall allow for the continued support of a recreational fishery on the Cowlitz River, including the production of non-indigenous stock, provided this is consistent with the priority objective to maximize the recovery of wild, indigenous salmon stocks.”

The Cowlitz M&E Plan was developed collaboratively by the M&E subgroup, including individuals from WDFW's Fish Science Division and Tacoma Power's Science and research programs as well as support from Four Peaks consultants. This Plan is designed to provide the information needed to track population status toward recovery objectives and for the Annual Program Review (APR) decision making process. The Plan builds upon previous work elements and descriptions of monitoring and evaluation (M&E) work in past FHMPs (Tacoma Power 2011, 2020) and the Fish Monitoring Plan (Tacoma Power 2014) and includes the following details:

- Descriptions of the baseline and directed studies that have been identified to assess the population and management actions in the Cowlitz Basin
- Details regarding the necessary data and analyses required to perform the assessment
- Updated methods, priorities, and work elements to address data gaps
- Characterization of the critical data necessary to assess status and trends associated with the recovery phases of the populations

This Plan will be reviewed annually as part of the Annual Program Review process to ensure that the most efficient methods are being implemented to obtain unbiased and precise estimates, and that the methodologies used to collect and analyze these data will remain flexible to enable practitioners to adapt to shifting priorities and advances in fisheries science technology and analytical methods. Analytical methods and data collection will be updated as necessary based on current management and assessment needs and field protocols. Changes to the Plan will be made following a predetermined procedure.

The Plan has the following objectives:

- Provide a framework for monitoring, analyses, and protocols to generate key information to inform management decisions.
- Track the status and trends of populations toward FHMP and recovery objectives.
- Evaluate performance relative to goals and expectations and adjust conduct of hatchery programs and recovery actions according to the adaptive management plan. Indicators of program success include abundance, productivity, distribution, composition of naturally produced populations, and benefits to fisheries.
- Test key assumptions and adjust the assumptions accordingly.
- Provide critical information to set management targets and decision rules

Decision rules (Tacoma Power 2020) will be used to assess the findings from analysis in terms of management decisions and population status. Decision rules use established management targets to determine the efficacy of management strategies or the status of a population. Often these targets are structured on a tiered or sliding scale based on population size. The key decision rules address management targets for natural escapement abundance, spawner composition (proportion of hatchery-origin spawners [pHOS]), harvest, hatchery broodstock

collection and composition (proportion of natural-origin broodstock [pNOB]), or other targets determined appropriate through the APR process. The 5-year mean of the metrics in this Plan will be compared to management targets to determine future required actions. The decision rules and management targets are designed to drive the system toward management, recovery, or harvest objectives. Given resource management goals and the objectives therein, this Plan focuses on metrics designed to evaluate the performance of management strategies and population status to determine if progress is being made (i.e., status and trends) toward meeting management objectives, recovery, or harvest goals. In addition, this Plan focuses on critical uncertainties that have been identified to better understand and manage the populations. The metrics included in this Plan are based on a set of key assumptions that are consistent with current scientific knowledge and the available information. The sensitivity of the expected outcomes of management actions and the uncertainty of the underlying assumptions are the drivers to prioritize M&E priorities that most directly affect management decisions.

Coordination Need

The Cowlitz M&E Plan will be reviewed annually as part of the Annual Program Review process to ensure that the most efficient methods are being implemented to obtain unbiased and precise estimates, and that the methodologies used to collect and analyze these data will remain flexible to enable practitioners to adapt to shifting priorities and advances in fisheries science technology and analytical methods. Analytical methods and data collection will be updated as necessary based on current management and assessment needs and field protocols. Changes to the Plan will be made following a predetermined procedure.

Summary of Potential Changes

The Cowlitz Monitoring and Evaluation Plan is designed to provide the information needed to track population status toward recovery objectives and for the Annual Program Review (APR) decision making process. The Plan builds upon previous work elements and descriptions of monitoring and evaluation (M&E) work in past FHMPs (Tacoma Power 2011, 2020) and the Fish Monitoring Plan (Tacoma Power 2014). The M&E Plan will be reviewed annually and updated as needed.