## The Origin of a CMER Research Project

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## Structure of the Adaptive Management Program

*Schedule L-1 of the Forests and Fish Report (1999) and Appendix N of the Forest Practices HCP (2005) -* Key questions, overall performance goals, resource objectives and performance targets for the Adaptive Management Program. Also, see Chapter 4a-4 of the Forest Practices HCP.

*Performance Goal:* Forest Practices, either singularly or cumulatively, will not significantly impair the capacity of aquatic habitat to:

- Support harvestable levels of salmonids
- Support the long-term viability of other covered species
- Meet or exceed water quality standards

*Resource Objective:* Qualitative descriptions of desired resource conditions; includes environmental variables potentially affected by forest practices, such as water temperature, large woody debris (LWD), organic inputs, sediment and hydrology. For example, provide complex in- and near-stream habitat by recruiting LWD and litter fall to streams.

**Performance Target:** Specific, quantitative measures that define target forest conditions and processes; they are tied to the same environmental variables as resource objectives. For example, Westside in-stream LWD = 85% of recruitment potential for a stand on trajectory towards desired future condition.

*Key Question 1:* Will forest practices prescriptions produce forest conditions and processes that achieve the performance targets in appropriate time frames?

Key question 2: Are the targets the right ones to achieve the resource objectives?

The Adaptive Management Program employs three types of research and monitoring activities to answer the key questions, and one to facilitate rule implementation.

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2/13/08

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- *Prescription/Effectiveness Monitoring*: Are the prescriptions producing conditions and processes that achieve resource objectives/performance targets?
- *Extensive/Status and Trends Monitoring*: How is an environmental variable changing through time and/or space?
- *Validation/Intensive Monitoring*: How are the organisms responding to different forest practice prescriptions, and why are they responding the way they are (causal relationships and cumulative effects)?
- *Rule Tools:* Projects designed to develop, refine or validate protocols, models and targets used to facilitate forest practices rule implementation.

The work in these research and monitoring programs is guided by the key questions and priority research identified for each resource objective/performance target in Schedule L-1.

Priority research identified in Schedule L-1 represents areas of the greatest uncertainty facing the developers of the Forests and Fish Report.

CMER translated the key questions and priority research from Schedule L-1 into research and monitoring programs/projects, and prioritized them based on scientific risk and uncertainty. The CMER work plan originated from this effort.

The CMER work plan is organized by "rule groups." A rule group is a set of forest practices rules relating either to a particular resource, such as wetlands or fish bearing streams, or to a particular type of forest practice, such as road construction and maintenance. There are eight rule groups in the CMER work plan.

Critical questions are identified at the rule group level, and research programs are developed to address those questions. Programs consist of one or more related projects designed to address a set of related questions.

Projects are planned or underway in each monitoring category (prescription, extensive, intensive). Currently, we have about 20 active projects.

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