INDEPENDENT
MULTIDISCIPLINARY
SCIENCE TEAM
(IMST)

October 5, 2001

The Honorable John A. Kitzhaber
Governor of Oregon
State Capital Building
Salem, OR 97310

The Honorable Gene Derfler
Oregon Senate President
State Capital Building
Salem, OR 97310

The Honorable Mark Simmons
Oregon House Speaker
State Capital Building
Salem, OR 97310

State of Oregon

John Buckhouse
Wayne Elmore
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Logan Norris, Chair
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This letter fulfills Independent Multidisciplinary Science Team's (IMST) statutory obligations to annually review the Oregon Plan Monitoring Program. Our charge is to identify where the Oregon Plan warrants change for scientific or technical reasons and make recommendations to appropriate agencies on adjustments that appear necessary. This letter combines our 1999 and 2000 annual reviews. We reported on the 1998 program in a letter dated April 1, 1999.

Report Organization

This report includes the following sections:

- Brief summary our 1998 monitoring program review and the progress the Monitoring Program has made to address our 1998 recommendations.
- Brief discussion of recent institutional changes that should benefit the Program's long-term development and stability.
- A general review of recent reports produced by the various agencies under the Monitoring Program.
- The specific recommendations of the IMST for the Monitoring Program.

1998 Annual Review

In our 1998 review (IMST letter report April 1, 1999) the IMST made 11 specific recommendations to the Monitoring Program, Oregon Plan Manager, and the Salmon Core Team. Earlier this year the IMST evaluated all responses the Team has received from agencies regarding recommendations (IMST 2001). IMST found 36 % of the Monitoring Program's responses or actions to be "adequate" in that the IMST supports the decisions, but 64 % of the responses were "indeterminate". Most indeterminate responses were received favorably by the Monitoring Program, but draft reports or final products were not available for review, and therefore we were unable to fully evaluate those responses.

Implementing some of the recommendations will be a long-term process for the Monitoring Program, as is the case for increasing cooperation and collaboration between State and Federal agencies. However we feel that four of the IMST recommendations are particularly important and should have high priority. Progress on them needs to be maintained. Once these recommendations are addressed, other recommendations will be more easily addressed.

1. IMST recommended that the Monitoring Program develop and document a strategy that addresses and prioritizes key issues, identify the highest priority questions that are to be answered by monitoring in the context of the goals of the Oregon Plan, and to implement actions. This would result in prioritization of effort and a shift in focus from individual tasks in the program to the goals to be attained.

   The Monitoring Program began work on a strategy document to accomplish this recommendation but they were not able to bring it to completion in 2000. Current efforts at finalizing a monitoring strategy document are utilizing a framework similar to Oregon Watershed Enhancement Board's (OWEB) published strategy which outlines work plans, strategies, and target outcomes (OWEB 2001). This direction appears to be helping to focus the Program on the long-term development of a statewide program. IMST has recently become an interactive partner in this process.

   The draft Monitoring Program strategy document was presented to the OWEB Board at their September 2001 meeting, with adoption of the final document expected in early 2002. We consider this a very significant step forward in having a monitoring program that will help accomplish the goals of the Oregon Plan.

   Looking to further refinement of the program, we consider the following points to be important:
   - Monitoring of social aspect needs to be incorporated into the Program's local monitoring efforts with watershed councils and other organizations in order to assess how well technical information is reaching the local level and is being applied, and the quality of data generated.
   - Work still needs to be done on how the Monitoring Program will relate both temporal and spatial scales to salmonid recovery and how oceanic and climatic conditions may affect recovery efforts.

2. IMST recommended that the Monitoring Program define what constitutes a comprehensive report of the monitoring effort for annual reporting. These comprehensive reports would aid scientific and public review of the Program and should include clear objectives, specific questions the Program and agency components are addressing and how they expect to answer them, detailed and specific information on study design, sampling protocols, data analysis, interpretation, and evaluation of efforts to date.

   Currently only individual agency monitoring activities are being reported. No single report has been produced that clearly documents all the monitoring components including complete study designs, how information is expected to be analyzed and how individual components

are expected to support each other, or how they contribute to meeting the goals of the Oregon plan. Documentation of this type of information is critical to the long-term success of the Program and along with the strategy document needs to be placed at the highest priority. We note that the draft monitoring strategy document provides for specific work plans to accomplish specific goals. We feel a work plan could be developed to accomplish the broader, longer-term integrative results of the monitoring effort.

3. IMST recommended that the Monitoring Program provide the IMST with specific questions on which scientific guidance is desired.

   Since our 1998 report, interactions between the Monitoring Program and the IMST have increased substantially. For example, the Monitoring Program sent a request to the IMST in July 2001 seeking guidance on several technical issues they have been encountering. The IMST will provide guidance to the Program on these questions later this fall. We expect to further develop a collaborative relationship with the Monitoring Program. The mutual efforts of OWEB and IMST in this regard have been helpful.

4. The IMST recommended that the Monitoring Program should develop and adopt a strategy to ensure integration and synthesis of monitoring data collected by agencies and relate those results to the goals of the Oregon Plan.

   The Monitoring Program is currently stalled on achieving this recommendation, as clear, quantifiable goals for salmonid population health and watershed condition have not been developed. We expect this task to be aided by the recent passage of House Bill 3002 requiring a task force to develop the State's definition for salmonid recovery.

Recent Institutional Changes

Senate Bills 946 and 945 formally places Oregon Plan accountability with OWEB. Two Oregon Department of Fish and Wildlife positions were also moved to OWEB. These changes place Oregon Plan Monitoring manager, Kelly Moore, and the Monitoring Program in OWEB. We see this move as positive and has the potential to provide strong institutional support.

In the 2001 legislative session the Monitoring Program also gained several new positions that should be integral to the success of the monitoring program by developing information management systems, data analysis and interpretation. While these positions are being developed, IMST is willing to assist Kelly Moore in determining appropriate qualifications and expectations.

Monitoring program reports

As the monitoring program has progressed in developing their strategy and coordination of agency efforts, individual agency programs have produced numerous program reports. We are dismayed at the content of many of the reports and feel that in order for the Oregon Plan to succeed it is imperative that the reports convey results and interpretations easily understandable to a wide variety of audiences. The reports should explicitly state the objectives, study design, methodology used, analyses conducted and if all assumptions were met, and include the scope of inference.

Many reports stop at data summaries and cursory analyses that often do not interpret the numbers generated by analysis, what the information means to the current status of habitat or populations, or how does the information relate to previously reported data (both supportive and contradictive). Each report should also self-evaluate the program results, particularly when several years of data are included. Evaluations should encompass questions such as: Does the information fit into the monitoring goals of the Oregon Plan, if not how should the monitoring component be modified in order to meet the goals? What information and research needs are critical to the monitoring program and which ones can be addressed by agencies or by academic institutions?

Recommendations
Based on our review of the Monitoring Program for 1999 and 2000, the IMST makes the following recommendations.

1. **Monitoring Program should incorporate a social aspect to the local monitoring efforts.** Monitoring local efforts by watershed councils and other organizations should be assessed in order to determine the quality of data generated and how well technical information is reaching the local level and is being applied.

2. **Monitoring Program should adopt reporting standards.** These may differ between annual reports and multi-year reports, each should include enough information on methodology and analysis, and interpretation of results to allow for outside peer review and understanding by administrators, managers, and the public. This will also facilitate bringing the individual components together in comprehensive reports and to determine what modifications may be needed within the Monitoring Program.

IMST will be pleased to clarify or elaborate on the information in this report.

Sincerely,

Logan A. Norris, Chair
Independent Multidisciplinary Science Team

cc IMST
Neal Coenen, Oregon Plan Manager, GNRO
Geoffrey Huntington, OWEB Director
Kelly Moore, Oregon Plan Monitoring Manager

Independent Multidisciplinary Science Team (IMST). 2001. Evaluation of Responses to IMST Recommendations. Administrative Report 2001-1 to the Oregon Plan for Salmon and Watersheds. Oregon Watershed Enhancement Board. Salem, Oregon.

Oregon Watershed Enhancement Board (OWEB). 2001. A strategy for achieving healthy watersheds in Oregon. Oregon Watershed Enhancement Board, Salem OR. 33 p.