Independent Multidisciplinary Science Team (IMST)

State of Oregon

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February 27, 2015

The Honorable Kate Brown
Governor of Oregon
State Capital Building
Salem, Oregon 97301

Dear Governor Brown,

As the Chair of the Independent Multidisciplinary Science Team (IMST) for the Oregon Plan for Salmon and Watersheds (Oregon Plan), I am writing to you for two reasons. First is to introduce you to the IMST and its purpose in Oregon and secondly to issue eight recommendations to you and your Natural Resources Office (GNRO) regarding scientific review in Oregon (Attachment 1).

The IMST is an impartial scientific review panel established in 1997 and charged with advising the State of Oregon on matters of science related to fish recovery, water quality improvements, and enhancing watershed health (Oregon Revised Statute (ORS) 541.914) within Oregon. The Team provides independent, scientific analysis and evaluation of state actions and policies under the Oregon Plan. The charge of the Team is to focus on science, maintain its independence, operate by consensus, and report its findings and conclusions in written reports and reviews. By statute (ORS 192.610) the IMST is a governing body, however, it does not make or enforce rules or policies. The IMST is strictly a scientific advisory board. And unlike many Oregon boards, commissions, and task forces, the members of the IMST are not chosen to represent a particular region, agency, commodity, special interest group, or political point of view. Members of the IMST are scientists from universities, federal agencies, or the private sector. Members are jointly appointed by the Governor, Speaker of the House, and Senate President.

The goals of IMST activities are to foster:

- Enhanced credibility of the Oregon Plan through recognition that actions taken under the Plan are based on best available science.
- Improved design, implementation, and monitoring of actions by Oregon Plan partners to achieve specific outcomes related to Plan goals.
- Increased exposure to and understanding of relevant science on the part of salmonid and watershed restoration communities.

One of the ways IMST meets its goals is through a hallmark of ORS 541.914 that allows IMST to direct recommendations to state agencies and entities and requires the recipient to respond, in writing to the recommendations (Attachment 2). Over the past few biennia, the IMST's workload has decreased because of changes in agency priorities, decreased funding, and long delays in replacing IMST members or reappointing those willing to remain on the Team. We feel that Oregon cannot risk losing the many benefits a scientific review board can provide the State in its management of our vast natural resources. Based on recent discussions at a workshop held by the IMST (a copy of the report is enclosed), the submission of Senate Bill 202 (which abolishes the IMST in 2017) by the GNRO to the legislature, and the combined experience of current and past IMST members , we are directing recommendations to you and the GNRO regarding establishment of a new and broader focused science review board in Oregon.

We would be pleased to discuss our recommendations with you and your staff. You may contact me at 541-737-1961 or carl.schreck@oregonstate.edu.
Sincerely,

Carl Schreck
Chair IMST

Cc
Enclosures

Peter Courtney, Senate president
Tina Kotek, Speaker of the House
Chris Edwards, Senate Committee Environment and Natural Resources
Richard Whitman, GNRO
Lauri Aunan, GNRO

IMST Recommendations to the Governor of Oregon and the Governor's Natural Resources Office

Recommendation 1. IMST recommends that The Governor's Natural Resource Office (GNRO) propose legislation that creates an independent, multidisciplinary review process for science relevant to Oregon's natural resource issues. The operating process should be modelled after the National Academy of Sciences (NAS).

Because it is essential for Oregon to have a sound system for review of science underpinning state agency policies and actions, we recommend that the Governor's Office propose legislation to create a process that is:

> **Independent.** The review system must be (1) free from conflicts of interest (of direct benefit, monetarily or otherwise, to a team member) and from a perception of conflict of interest as much as possible, (2) free to decide if requested reviews from state agencies, the GNRO, and/or the state Legislature are appropriate for review or not, and (3) free to conduct reviews deemed appropriate by the review team.
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> **Multidisciplinary.** The review system must be capable of reviewing information from diverse scientific disciplines, including both natural and social sciences, relevant to the state's natural resource issues. Given that the state's natural resource issues change through time, the expertise represented by the review team must be capable of changing as appropriate.
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> **Meaningful.** The review system must be created such that findings of the review process will be considered and, if called for by the outcome of the review, responded to in writing by state governmental bodies in a timely fashion. Costs associated with an ignored review are effectively a misallocation of state resources.

Recommendation 2. IMST recommends that the GNRO and Legislature establish a scientific review process consisting of a standing board of a minimum of five (5) members of appropriate expertise. Ad hoc members can be added as more diversity in expertise is needed on a case-by-case basis. This board would replace the Independent Multidisciplinary Science Team, which would be abolished. The new board would be called the Oregon Independent Multidisciplinary Science Board (hereafter OIMSB).

> There is agreement amongst scientists that have served on both standing and ad hoc review boards that standing boards function better than ad hoc boards (which may function well for specific short-term issues) because of a lack of institutional memory and of consistency of review processes in the latter. Because it is impossible for a standing board to have all expertise that could be needed in the future, it is important that the board have the flexibility to add outside reviewers on a case by case basis. In many situations it would be desirable for the board to work closely with other Oregon state entities such as the Institute of Natural Resources (INR) and potentially contract with those entities for some services.

Recommendation 3. IMST recommends to the GNRO and Legislature that the OIMSB not be housed within any standing state agency to preserve its true independence, both in terms of administrative control and financial independence.

It is critical that the review board be independent for scientifically valid reviews and projects. While funding for a review system may necessarily need to pass through an appropriate state agency, university, or the GNRO, the appropriation of funding should not be tied to the function of any state agency. Similarly, operation of the review system should not depend on a "pay for service" approach. Therefore, it would be inappropriate to house the OIMSB within the INR, or alternatively the INR within the OIMSB, for example. Administrative oversight of the OIMSB should rest with the GNRO, not with any state agency or other entity. This condition is to ensure against any actual or potential conflicts of interest.

Recommendation 4. IMST recommends to the GNRO and Legislature that reviews provided by the OIMSB be meaningfully considered by the receiving agency or body by requiring a timely response in writing to the GNRO and to the OIMSB.

To ensure that independent science reviews serve a purpose other than "review for reviews sake" and are taken seriously for the purpose for which they are intended, some form of accountability is needed. This is to ensure that state agencies or bodies meet their objectives in the most scientifically defensible manner possible. It also is important that the expenditure of state resources for reviews actually do some good and that there is genuine and good-faith communication between the OIMSB and the state entity. As a special case, if the recommendation is that a response is needed from the GNRO, it is expected that the GNRO will respond to the OIMSB in writing as well.

Recommendation 5. IMST recommends to the GNRO and Legislature that a pool of candidates for OIMSB membership be first vetted by the state's natural resources agencies, a scientific body such as the NAS and/or other appropriate scientific professional organizations to ensure that the most highly qualified scientists possible participate.

Occasionally over the past 10 years, the functions and operations of the IMST were hampered by poorly qualified or inappropriate members. This led to substantial wastes of time and resources. It is important that such roadblocks to high quality scientific review be precluded in the selection process.

A detailed process for implementing an effective selection process can be established by the first OIMSB or the current IMST, but it should involve an open call for applications (cover letter, resume, biases, and potential conflicts of interest) to professional scientific societies, with those applications being forwarded to the NAS and other scientific professional organizations for screening of scientific credentials if a they have a mechanism to accommodate such assistance. A ranked list of perhaps 10 to 20 finalists could then be submitted to the GNRO and Legislature for final vetting and selection (similar to the hiring process of university professors or of senior personnel in agencies). Subsequent recommendations regarding those applicants by state natural resource agencies could add insights for the GNRO and Legislature.

Recommendation 6. IMST recommends to the GNRO and Legislature that members of the OIMSB be appointed by the Governor, the President of the Senate, and the Speaker of the House (collectively, Appointing Authorities). Further, any member of the Appointing Authorities can accept or reject an applicant. Further, if a scientist has been nominated for appointment, if there is no rejection of that nomination within 45 days after nomination, then that person becomes appointed. Further, if a vacancy on the OIMSB has not been filled by the Appointing Authorities within 90 days of the beginning of the vacancy, then the vacancy will be filled by the OIMSB directly. Members should serve four-year terms, with time of appointment being staggered after the original board has been formed.

The function and operation of the IMST has been hampered greatly by the current appointment process. Current vacancies have been left unfilled for years. It even has been very difficult to reappoint current members. Those vacancies and the uncertainty created by not having a clear reappointment process have hindered completion of extant projects as well as planning for future reviews and projects. This is a substantial disservice to the science needs of state government and has also contributed to fiscal inefficiencies. Nonetheless, it is important that State governmental leaders be vested in the scientific review process by being involved in the final selection of OIMSB scientists.

Recommendation 7. IMST recommends to the GNRO and Legislature that funding for the OIMSB should be appropriated in the amount of $600,000 per biennium initially and increased appropriately with inflation and as additional expertise becomes needed for reviews and projects not yet anticipated.

Appropriate funding is necessary because completely voluntary review systems tend not to work well or efficiently. Funding is also necessary to cover costs for staff and operations of a review board. Based on nearly 30 years of collective experience with IMST and other review panels, we believe that $600,000 per biennium, plus future COLA adjustments to account for inflation, is sufficient to allow for a fully functioning team of five plus costs for outside reviews, staff, administrative overhead, and operating expenses. If the expertise needed to review future subjects becomes broader in the future, then additional funds may need to be added.

Recommendation 8. IMST recommends that the Governor reestablish a Natural Resources Core Team following the model developed by former Governor Kitzhaber during his first term in office. Further, there needs to be a Core Team Coordinator.

There are inherent conflicts within and among state agencies regarding resource management, and there is a tendency for compartmentalizing management issues, versus viewing human, resource, and watershed management as a complex interacting whole. In particular, adaptive management and standard methods of monitoring, data management, and public reporting of key ecological indicators are needed. The loss of an effective Natural Resources Core Team has hindered rational, ecologically effective, and fiscally responsible natural resource management—as well as effective IMST interactions and scientific progress. Reestablishment of a Natural Resources Core Team together with a more

scientific review panel would indicate that the GNRO and Legislature are truly concerned about conserving Oregon's natural resources in a sustainable manner. Additionally, members of the OIMSB should be invited to participate in Core Team meetings at least twice a year to help ensure that the relevancy of the review process remains sufficiently connected to the natural resources policy needs and priorities of the Executive Branch. To provide a broader view of issues in Oregon, the Core Team could include representatives from federal and tribal natural resource agencies.

Independent Multidisciplinary Science Team (IMST)
Recommendations. Adopted by the IMST on January 25, 2006

The IMST creates several types of reports[1]. The largest reports are created in response to the IMST's continuing evaluation of the State's science needs necessary to pursue the mission and goals of the Oregon Plan for Salmon and Watersheds (Oregon Plan). These reports are generally topic-oriented and often called "landscape-level reports". An example of this type of report is Technical Report 2002-1, *Recovery of Wild Salmonids in Western Oregon Lowlands*. The landscape-level reports present IMST's independent evaluation of the state of the science regarding the resources being considered and support the evaluations with a comprehensive scientific literature review. These reports also receive extensive peer and technical review[2].

A second type of report the IMST generates is in response to specific requests by the Governor's Office, Legislature, state agency, or other entity to either provide guidance or to review draft reports or proposals involving topics related to the Oregon Plan. An example of this type of report is our 2005 evaluation of the State of Oregon's draft *Viability Criteria and Status Assessment of Oregon Coastal Coho*, the draft *Policy to Evaluate Conservation Efforts (PECE) analysis*, and the draft *Synthesis of Viability Analysis and Evaluation of Conservation Efforts*. A third type of report is called a "letter report" that may be prepared in response to specific questions, such as IMST's 2002 report addressing issues related to instream aggregate (gravel and sand) mining regulated by the Oregon Division of State Lands and how operations may affect salmonid habitat.

In the second and third types of reports, the IMST is often asked whether the scientific approach, analyses, and/or interpretations are credible and consistent with accepted scientific standards, and whether the assumptions and uncertainties are reasonable and accurately characterized. In both of these two types of reports, the IMST generally evaluates the scientific literature being used to support the agency's or State of Oregon's draft report or proposed actions, rather than produce a comprehensive review of available scientific literature.

Depending on the nature of the report being generated (more commonly contained in the landscape-level reports), the IMST may develop a series of scientific questions and answers that help to organize the report and to aid a reader's understanding of the topic. The scientific questions are created by the IMST and are judged to be relevant and useful to understanding the issues, resources or subjects being analyzed. In general, IMST develops and answers each science question, then summarizes its findings and conclusions for each question. Next, the IMST develops recommendations from specific findings and conclusions or from a synthesis of several findings and conclusions. The

[1] All three types of reports are an undertaking of the entire Team, although subcommittees often are assigned leading responsibilities; subcommittee composition is based on Team member expertise and interest with topic areas. Minority opinions may be appended or incorporated within any IMST report.
[2] Although technical reports may be subject to technical and peer review, release of draft documents is restricted by the IMST in order to insure accuracy of content prior to release to a wider audience. IMST's policy is stated in the Team's Charter and Operating Guidelines: http://www.fsl.orst.edu/imst/charter.pdf

recommendations are often grouped into broad subject areas for convenience and the order does not imply priority. The IMST considers each recommendation important to accomplishing the mission and goals of the Oregon Plan.

Recommendations are based on IMST's assessment of the best available science pertaining to salmonid recovery, watershed function and the management of Oregon's natural resources. Recommendations are directed to one or more agencies (or entities) that have the ability to implement, or alter management actions or regulations that are needed for implementation. **The IMST emphasizes that it looks beyond the State's *current* ability to implement the recommendations because current legal, regulatory, or funding situations may need to be modified over time.** The IMST's believes that if an agency (or entity) agrees that a recommendation is technically sound and would aid the recovery of salmonid stocks and watersheds, the agency (or entity) would then determine what impediments might exist to prevent or delay implementation and work toward eliminating those impediments. The IMST also assumes that each agency (or entity) has the knowledge and expertise to determine how best to identify and eliminate impediments to implementation and to determine appropriate time frames and goals needed to meet the intent of the recommendation. The IMST also recognizes that an agency (or entity) may already have ongoing activities that address a particular recommendation; therefore, inclusion of such an "overlapping" recommendation should be seen as reinforcement for the continuation of such actions.

Formal Responses to Recommendations

Oregon Revised Statute (ORS) 541.914, which created the IMST, specifies that agencies are to respond to the recommendations of the IMST, stating "(3) If the Independent Multidisciplinary Science Team submits suggestions to an agency responsible for implementing a portion of the Oregon Plan, the agency shall respond to the Team explaining how the agency intends to implement the suggestion or why the agency does not intend to implement the suggestion". State agencies are expected to formerly respond to IMST recommendations within six months after a report is issued.

Once formal responses are received, the IMST reviews the scientific adequacy of each response and determines if further action or consideration by the agency (or entity) is warranted. Ultimately, each recommendation response is assigned to one of four general categories:

- **Adequate** means that the IMST supports the decision of the agency
- **Intermediate** means that the IMST does not fully support the agency decision because the decision will decrease the likelihood of accomplishing the goals of the Oregon Plan in a timely manner, but not doom it to failure. IMST notes its concerns but stops short of suggesting that the recommendation be reconsidered.
- **Inadequate** means that the IMST feels the decision by the agency will seriously detract from achieving the goals of the Oregon Plan, and the IMST strongly suggests that the decision be reconsidered.
- **Indeterminate** means that IMST cannot tell what the agency decided to do with the recommendation, or lacks sufficient information to fully evaluate the response.

IMST believes that the key characteristics of a good response are:

- It includes a short, clear statement that the agency (or entity) (a) accepts or agrees with the recommendation or (b) that it rejects or disagrees with it. In some cases, an agency (or entity) may be reluctant to agree or accept a recommendation because it sees significant difficulties in implementing it. However, IMST believes if the recommendation is sound, then the agency (or entity) should work towards eliminating the impediments to implementation that it sees.
- It provides short, clear descriptions of what the agency (or entity) intends to do to implement recommendations it accepts (including how it might remove impediments) or, as required by ORS 541.914, that it provides specific reasons why it rejects the recommendations. Discussions between agency or legislative staff and Team members at IMST meetings should also help clarify agency (or entity) and IMST perspectives, and most importantly, advance the mission and goals of the Oregon Plan.

Responses that include these characteristics will be more easily characterized by IMST as ***Adequate, Intermediate*** or ***Inadequate***, avoiding the use of ***Indeterminate.***

The IMST evaluations of the responses are then delivered to each responding state agency (or entity) and the agency (or entity) has an opportunity to discuss the IMST evaluations of their responses. Agencies (or entities) are also encouraged to update the IMST their progress on implementing recommendations.

Finally, IMST includes any formal responses to recommendations and IMST's evaluation of the responses in its reports to the Governor and the State Legislature (e.g., Joint Committee on Salmon and Stream Enhancement or other natural resource committees as appropriate).