

# MEETING SUMMARY

## Hatchery Scientific Review Group WestCoast Hotel, Silverdale, Washington January 17–19, 2001

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**Agenda:** The purpose of this meeting was to continue planning for a regional review of the Puget Sound and Coastal Washington hatchery system including preparing a benefit/risk tool, operational guidelines, and monitoring and evaluation criteria for use in that review; to receive presentations on conservation hatcheries and growth patterns; to review FY2001 research preproposals and select those from which to request a full proposal; to revise the HSRG's policies and procedures; and to elect officers for 2001.

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### **In Attendance:**

- HSRG members John Barr (vice chair), Lee Blankenship (vice chair), Don Campton (except the morning of January 17), Trevor Evelyn, Connie Mahnken, Lars Mobernd (chair), Robert Piper, Bill Smoker and alternate Paul Dorn.
- Facilitation team members Kathy Hopper, Michael Kern, Bj Mirk and Jim Waldo (Jim and Bj were not in attendance on January 18 or the afternoon of January 19). Barbara Cairns was in attendance on January 17.
- Tom Flagg and Walt Dickhoff of the National Marine Fisheries Service (NMFS) attended specific agenda items to make presentations, at the request of the HSRG (see below).

### **Discussions/Presentations:**

Jim Waldo welcomed Hatchery Scientific Review Group (Scientific Group) members to the meeting and reviewed the agenda.

Michael Kern and Jim Waldo provided a Hatchery Reform Project communications update. Michael said that the Scientific Group's Scientific Framework was completed and made available from the project's web site. Framework reviewers were notified of this via email. The project background sheet and web site were updated. Jim and Barbara Cairns will be in Washington, DC in early February to update Congressional and Administration officials on the project. The Washington State Department of Fish and Wildlife recently made a presentation on salmon recovery and hatcheries to the Washington State House Natural Resources Committee.

Lars Mobernd led the Scientific Group in a discussion of the 2001 Hatchery Reform Project work plan and budget it approved at its December meeting. The group decided that the approved work plan is still appropriate and asked Lars to communicate this at the Hatchery Reform Coordinating Committee meeting on January 22. The group also asked Lars to find out from the Coordinating Committee who from the agencies will be available to provide expertise and timely feedback during Regional Review preparations, especially for the Benefit/Risk Tool and Operational Guidelines task teams.

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Jim Waldo led the Scientific Group in a discussion about the upcoming Regional Reviews. The group modified the list of pilot regions. It now includes (in chronological order) the Eastern Straits, South Sound, and Stillaguamish/Snohomish River. The group also decided to devote two months to each pilot region, instead of one (see revised meeting dates and locations in Upcoming Meetings section). The Scientific Group requested that briefing books containing regional information be developed and provided prior to meeting with managers in a particular region. The Scientific Group identified key questions and sources for each category of information it would need and assigned task teams to develop an instruction sheet for each category. The group agreed to the following revised steps for the regional review process:

1. Identify regional management goals for conservation, harvest, stock status, and habitat.
2. Apply the benefit/risk tool to assess goals and programs for the region.
3. Verify and refine results with the best available regional data.
4. Apply the benefit/risk tool and the operational guidelines to a particular program and assess the current program's likelihood of achieving the goals and appropriately addressing risks.
5. Address both hatchery operations and appropriate levels of hatchery production.
6. Make recommendations at the regional level, and program and facility level, as to whether the management goals and program goals are needed, ways to improve production, and what is the appropriate level of production (program goals or operations may change based on these recommendations).
7. Review all related programs within a region to determine if hatchery goals are complementary within a region.
8. Where goals conflict between managing entities, identify the disparities and explain why they need to be addressed. It will be the managers' responsibility to resolve these conflicts.
9. Over time, apply monitoring and evaluation to determine future success in meeting regional goals and addressing risks.

The Scientific Group agreed on the following format for the pilot reviews:

*Day 1*—Informational session with experts and Scientific Group to review and discuss the data provided from the region and identify informational gaps needed to make informed decisions.

*Day 2*—Tour of regional facilities within the basin.

*Day 3*—Meet with managers, individually or in groups, to clarify goals, habitat benefits or constraints, hatchery programs, and stock status if necessary; review regional context of hatchery management goals; and review individual facility programs.

*Day 4*—Determine actions needed within a region.

*Day 5*—Provide informal recommendations to individual hatchery managers and policy representatives, if requested; begin reviewing information and identifying additional information needs for the next region.

Walt Dickhoff of NMFS made a presentation to the Scientific Group on growth rate modulation in hatchery smolts. He compared the traditional hatchery growth model (based on ponding date, fish size at tagging, density in ponds, and size at release) to the emerging model of growth rate modulation. This model mimics a natural life history, with winter dormancy and high growth rate in the spring. Walt demonstrated that growth rate is a better predictor of migratory performance in the spring than size.

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Walt also discussed the trade-off between natural phenotype (smaller smolt) and large hatchery smolts. He pointed out that in the example of the Redfish Lake sockeye salmon re-introduction, the large hatchery smolts provided the most adult returns per parent family. He also related some information about winter dormancy. There are many positive aspects of winter dormancy—it matches the growth pattern of wild fish, is more efficient, does not promote obesity in hatchery fish, and may reduce the incidence of Bacterial Kidney Disease. Walt said that growth rate modulation can affect the critical decision period for maturation in salmon. There appear to be two critical periods where body size of the fish is important—in the fall of the first year of growth and in the spring of the second year. He showed results of studies that indicate early maturation is affected by body size and growth rate during these periods.

Tom Flagg of NMFS made a presentation to the Scientific Group on a conceptual framework for conservation hatchery strategies. He said the purpose of a conservation hatchery is to sustain a threatened population of wild fish. He outlined eleven components of a conservation hatchery and added that there are follow-up actions needed to make the transition from a conceptual framework to a reality—basic scientific research, applied research and field testing, and monitoring and evaluation. The eleven components include:

- 1) Inbreeding, outbreeding, domestication selection, and other genetic considerations,
- 2) Broodstock sourcing,
- 3) Broodstock maturation and reproduction,
- 4) Enriched environments,
- 5) Growth rate modulation,
- 6) Rearing density,
- 7) Anti-predator conditioning,
- 8) Release size,
- 9) Release time and volitional release,
- 10) Imprinting and homing,
- 11) Habitat carrying capacity.

Michael Kern led the Scientific Group in a discussion of administrative issues. He presented the group with a set of suggested revisions to their policies and procedures. After discussion and further revision, Lee Blankenship moved, and Bob Piper seconded, that the Scientific Group adopt the revised policies and procedures. The motion carried unanimously. Michael explained that the policies and procedures direct the Scientific Group to elect a set of officers each year. Lars Mobernd expressed willingness to serve another term as Chair, as did Lee Blankenship as Vice Chair. Lars suggested that John Barr be elected a second Vice Chair, since Lars relies on John for assistance in conducting Scientific Group affairs to a similar degree as he does Lee. No other names were presented for nomination. Don Campton moved, and Trevor Evelyn seconded, that the Scientific Group re-elect Lars Mobernd as Chair and Lee Blankenship as Vice Chair, while also electing John Barr as a Vice Chair. The motion carried unanimously.

The Scientific Group reviewed the 51 pre-proposals received for the FY2001 Research Grant Program and selected 19 from which to request full proposals. The group decided that these proposals will have a due date of early March 2001, to be reviewed at the March Scientific

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Group meeting. The group affirmed that it could not consider a pre-proposal that was submitted well past the January 5, 2001 deadline.

The Scientific Group assigned task teams to continue developing the Benefit/Risk Tool and the Operation Guidelines. The group also further developed a set of monitoring and evaluation criteria and assigned a task team to continuing developing these criteria.

The Scientific Group agreed on the following revised dates and locations for upcoming 2001 meetings:

- February 12–14, NW Science Center in Seattle (research review)
- March 19–21, downtown Seattle
- April 16–18, Olympia
- May 16–18, Port Angeles or Sequim (regional review)
- June 13–15, Port Angeles or Sequim (regional review)
- July 18–20, Olympia (regional review)
- August ??, Olympia (regional review)
- September ??, Everett (regional review)
- October ??, Everett (regional review)