Key Messages to Stakeholders Agreed at Meeting Conclusion
  o The PSSAG is working hard to develop consensus on a long-term vision.
  o We reviewed and improved our objectives for the advisory group.
  o We received two good presentations:
    ▪ Rob Jones, NOAA Fisheries, “What we have learned about managing hatcheries and fisheries for threatened and endangered salmon and steelhead”
    ▪ Barry Berejikian, NOAA Fisheries, “Evaluating the benefits and risks of conservation hatchery programs for steelhead in Hood Canal”
  o It is challenging to develop recovery scenarios, given the current population status and lacking complete DPS and MPG information.

Agenda Items discussed at the meeting:
1) Introduction and Agenda Review
2) Review Summaries of April Presentations
   • Have we captured the key points?
3) Review Draft Objectives
   • Have we captured the objectives (“Success is…”) discussed at our March meeting?
   • Given the additional information presented in April, are any changes needed in the draft objectives?
4) Foundational Information
   • NOAA Evaluation of Hatchery Effects, Rob Jones
   • Assessing the Risks and Benefits of Steelhead Conservation Hatchery Programs, Barry Berejikian
5) Putting it All Together
   • Recovery Scenarios: Does it add up?
   • How does each population contribute to recovery: Primary, Contributing, or Stabilizing?
   • Given a recovery scenario, how do we provide a diversity of fishing opportunities (Catch & Keep, Catch & Release) in the future?
   • Could a hatchery program help achieve our conservation or fishery objectives? If so:
     ▪ Would an integrated or segregated strategy be more effective?
   • How does the HSRG suggest assessing the consistency of hatchery programs with the objective for the population?
6) Hood Canal Steelhead
   • Synopsis: Populations, population status, fishery catches, hatchery programs, habitat
   • What are our conservation and fishery objectives?
   • What hatchery strategies, if any, might we implement to achieve those objectives?
7) External Messages
   • What are the 3-5 messages regarding this meeting that we want to provide to other interested stakeholder?
8) Public Comment
9) Thoughts on Meeting

Advisors Attending
Rich Simms
Jonathan Stumpf
Rob Masonis
Andy Marks
Roger Goodan
Curt Kraemer
David Yamashita
Jamie Glasgow
Derek Day
Gary Butrim

Public Attending
Conrad Gowell
Nick Chambers
Hal Boynton

Presenters
Rob Jones, NOAA Fisheries
Barry Berejikian, NOAA Fisheries

Staff Attending
Jim Scott (co-facilitator), Cole Caldwell (co-facilitator)
Edward Eleazer
Annette Hoffmann
Jennifer Whitney
Mark Downen

Notes from the third meeting per agenda item:

1) Introduction and Agenda Review Notes
   - Documents in the Status Tab were missing the back side of each page. A replacement section will be provided at the next meeting.
   - The Hatchery and Fishery tab has a Federal Register document with yellow highlighting for limits 4, 5, and 6. These sections identify what NOAA Fisheries looks for when WDFW submits a fisheries or hatcheries management plan.
   - Rich Simms requested that the Steelhead Management Plan be provided for reference and added to the folder. We agreed that it was available on the advisory webpage and could be accessed as necessary.
   - Curt Kramer requested that the Department provide the prelisting agreed upon escapement goals to the group.
   - PSSAG members would like feedback and status from the Puget Sound Steelhead Recovery Team, especially after we finish Hood Canal and the Strait of Juan de Fuca.

2) Review Draft Objectives Notes
   - Objective #1: Add “Puget Sound Wild Steelhead”. The group also suggested that the PSSAG plan should be adaptable enough to inform and fit/flex with other plans (add this to objective #1).
   - Objective #2: Specify “recreational fishing opportunities”.
   - Objective #3: Add “sustainable steelhead fisheries” AND add “WA state economics”.
   - Objective #7: Change “highlights” to “identifies, considers, and where possible addresses”.
   - Objective #8: Add “consistent with wild steelhead conservation needs and objectives”.
   - Objective #9: Reference all VSP characteristics.
   - Objective #10: Change “fishers” to “anglers”.
   - Add a “next step” objective that addresses and moves forward with the PSSAG plan (i.e., “promote and take actions necessary to implement plan”).
• Adding something about implementation with co-managers, stakeholders, legislature, NOAA, WDFW commission, WDFW, policy makers, etc.
• Add that PSSAG plan be compatible with and align with goals from Puget Sound Steelhead Recovery Plan.
• Add coordinating “All-H integration” information that aligns with habitat restoration, and protection efforts and plans.
• Add vetting PSSAG decisions through Puget Sound Steelhead Recovery Team.

4) Foundational Information Notes
• “What we have learned about managing hatcheries and fisheries for threatened and endangered salmon and steelhead”, Rob Jones, NOAA Fisheries
  o 25 years of hatchery program experience, across 40 states, and 330 hatcheries.
  o ESA states what managers “Shall do” and this results in accountability.
  o Lessons Learned
    ▪ No action is not an option.
    ▪ Best Available Science is your starting place for every decision.
    ▪ Attack uncertainty, Act-Verify-Adjust, it’s called learning.
    ▪ Adjust up to find the management sweet-spot and avoid damage.
    ▪ Site-specific strategies are favored over traditional landscape management.
    ▪ Reasonable certainty.
    ▪ Show your work.
    ▪ Sequence instead of prioritize.
  o NOAA guidance for designing hatchery programs
    ▪ Say no to broodstocks originating from outside a DPS, develop/use the most local-origin broodstock, avoid transfers.
    ▪ Limit the removal of NOF for hatchery broodstock purposes.
    ▪ Limit gene flow between hatchery fish and fish from natural populations.
    ▪ Establish refuges or reserves with no direct hatchery influence.
  o A key question to ask while making decisions on conservation hatchery program should be: “is the natural population better off with or without a hatchery intervention?”
  o Guidance for designing fisheries
    ▪ Abundance based management - The more natural-origin-fish (NOF), the more fishing – above the critical threshold follow a sliding scale.
    ▪ In terminal areas where there are no hatchery fish and subject to very specific conditions, NMFS has also created a mechanism under the ESA to allow the direct take of a threatened species. Oregon Coast coho are an example, and directed catch-and-release fisheries could also apply for an exemption under this limit.
• “Evaluating the benefits and risks of conservation hatchery programs for steelhead in Hood Canal”, Barry Berejikian, NOAA Fisheries
  o Rationale for conservation hatchery programs
    ▪ Hood Canal steelhead populations depressed
      • Effects of “the 4 H’s” not obvious.
        o Hatchery – no genetic legacy from past stocking efforts
        o Harvest – harvest probably contributed to decline, but not a factor in recent decades
        o Habitat condition – variable (some good, some not so good)
        o Hydropower - minor
      • Populations most likely stuck in a rut
        o Possible depensatory mechanisms
        o Poor marine conditions
Life history dynamics (residency-anadromy)
- Diversity among Hood Canal *O. mykiss* populations includes spawn timing, smolt migration timing, and age at smolting.
- Alternatives to artificial spawning – hydraulic sampling of reds may be advantageous but is best suited to rain-driven systems and summer spawning species.
- Customized rearing and release practices – details of fish culture are incredibly important and can play a major role in success or failure of a program.
- Natural population response to supplementation
  - Hamma Hamma Conservation Hatchery Program – resulted in increase in redd abundance and no loss in genetic diversity.
  - Broader Hood Canal Study – variable results across rivers.

5) Putting it All Together/Hood Canal Steelhead Notes

5a) Suggestions for Report Format
- **Measurable.** Include benchmarks (or trigger points) for all VSP’s and actions that will adapt, react, or be a consequence of these actions. SMART goals are Specific, Measurable, Achievable, Realistic, and Time-bound
- **Economics.** Important to include economic benefits but in a thoughtful way. Do not be overly optimistic in projections, and recognize that economic value can accrue for catch-and-release fisheries. Local anecdotes and personal statements can be as effective as projected economic value.
- **Implementation Costs.** Include costs for new hatchery programs, enforcement, fishery management, and monitoring.
- **Fishery Diversity.** Fishery diversity is broader than catch-and-release and catch-and-keep. A full diversity of fishing opportunities may not occur in each Major Population Group (MPG).
- **Think Outside the Box.** For example, recreational fisheries on rivers may need to be permit-based access/use systems to control fishing effort, ensure timely reporting of catches, and improve information collection.
- **Information Needs.** Be transparent about what we do and don’t know about each river, what we need to know. An assessment of data richness may be a way to accomplish this.
  - PSSAG recommends that the plan be specific about the plans vision is and what amount of monitoring will/would be needed or occur (5 years vs long-term).
  - PSSAG wants each river specific plan to frame out what each conservation criteria is and that they should be provided as bullet points for each river.
- **Defensible.** Need to be able to defend decisions.
- **Conservation.** Need to frame conservation framework upfront.

5b) Development of Hood Canal Recovery Scenario
- The Hood Canal/Strait of Juan de Fuca MPG has eight populations (all winter run). Designating the populations as Primary, Contributing, or Stabilizing creates the conservation framework for Hood Canal.
  - All eight populations are currently below viable status (1-3 levels, 3 = viable) (figure provided)
  - West Hood Canal and Dungeness are at level 2 viability.
  - Four populations have to be at level 3/viable.
  - The geometric mean score for the MPG needs to score 2.2 overall.
- **Considerations in designating populations include the following (table provided):**
  - River specific run types (e.g., summer or winter)
  - Historic population (intrinsic potential) abundance
  - Previous effects of hatchery programs
  - Percent public land
Hydrology should be considered during all decision making processes.

- Groups completed a preliminary designation of populations in Hood Canal

<table>
<thead>
<tr>
<th>Population</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>East H.C.</td>
<td>Stabilizing</td>
<td>Stabilizing</td>
<td>Contributing (-)</td>
<td>Contributing</td>
</tr>
<tr>
<td>South H.C.</td>
<td>Contributing</td>
<td>Contributing</td>
<td>Contributing</td>
<td>Stabilizing</td>
</tr>
<tr>
<td>Skokomish</td>
<td>Primary (-)</td>
<td>Contributing</td>
<td>Primary</td>
<td>Primary</td>
</tr>
<tr>
<td>West H.C.</td>
<td>Primary</td>
<td>Primary</td>
<td>Primary (-)</td>
<td>Contributing</td>
</tr>
</tbody>
</table>

7) External Messages
- The PSSAG is working hard to develop consensus on a long-term vision.
- We reviewed and improved our objectives for the advisory group.
- We received two good presentations:
  - Rob Jones, NOAA Fisheries, “What we have learned about managing hatcheries and fisheries for threatened and endangered salmon and steelhead”
  - Barry Berejikian, NOAA Fisheries, “Evaluating the benefits and risks of conservation hatchery programs for steelhead in Hood Canal”
- It is challenging to develop recovery scenarios, given the current population status and lacking complete DPS and MPG information.

8) Public Comment
- Happy with progress made so far.

(9) Thoughts on Meeting