W3—The Roles of Hatcheries in Salmon Restoration

Issue Expert Responses to Platform paper:

- We need a paradigm shift----broodstock program must increase in sophistication, integration into habitat.

- Focus should go beyond ESA de-listing and recovery of the fish that are under ESA—all populations need to be increased.

- From a genetic perspective- there should be continuity of gene flow from the wild into the hatchery stock (broodstock). Natural environment must therefore be healthy enough to give up some of the wild stock.

- Proportion of hatchery fish that spawn in the wild must exceed wild fish used for broodstock.

- There is a legal obligation to provide for harvestable fish.

- Create a balanced portfolio of hatchery strategy with habitat/other strategies.

General Discussion:

Integrated / Segregated Hatchery Framework

- Problems of integrated and segregated (semantics in the platform), language implies we must choose one or the other—but by definition they are segregated options, it's that the levels of segregation are different. Too many people are looking at this issue as black and white.

- How is this framework similar or different from HSRG recommendations?

- For the integrated approach, we need to find a way to quantify the integration so we can measure the risk level of the projects.

- Is the integrated/segregated framework being imposed on all? Does it limit flexibility in terms of management?

- Platform doesn't distinguish between integrating/segregating framework as management strategy versus the policy question of what the acceptable level of risk from straying of hatchery fish and wild fish might be.

- There is a continuum of actions that can occur when stocks are integrated, and a trajectory of actions that correspond to getting to a desired state of integration or segregation.

Habitat

- Focus on bringing the habitat and hatcheries in sync so they're moving at the same rate

- It's implied in the document that habitat will not improve overnight, or perhaps not at all. Adaptive management is essential through the entire document. There are different tracks for getting to integration.

- People need to understand that the hatchery solution is relative to the watershed that is under consideration. Each hatchery is uniquely related to its watershed.

- Hatcheries can preserve options while we attempt to fix other threats and factors of decline, (i.e. while we restore habitat to ensure recovery of the wild stock.)

- Hatcheries should not be an excuse to ignore the habitat restoration.

Implementation

- We need technical expertise to align goals, and then have the local level provide the implementation of the goals.

- Ideally when we reach recovery goals, we won't need hatcheries anymore. Practically, hatcheries will need to play a role for some time.

- When dealing specifically with the PS Chinook, we think about what the entire Puget Sound ecosystem needs for delisting, but there needs to be an understanding that each watershed is different in its own way. (This brings us back to the idea that the level of integration is a viable way to weigh the risks vs. the rewards of hatcheries)

- Are we talking about hatcheries as a tool (strategy) and not a policy? What is the interim period (how long do we employ this *strategy*)?

- Focusing on the Puget Sound Chinook, there are aspirations connected to some point in the future that will indicate we are making progress—the time frame is the tough issue we face here

- *Funding*

    - Make funds available for hatchery reform to continue and also for how prioritization among watersheds for recovery planning would impact the needs of hatcheries to either continue to improve hatchery practices as

habitat improves or to mitigate for the lack of commitment to habitat improvement.

- Stakeholders and planners need to focus collectively on salmon, but each have their separate interests, and are competing for funds. The real currency of salmon recovery is trust.

- *What is the relevance and implication of different standards for hatcheries being generated by the HSRG, co-managers, and NOAA for ESA authorizations, funding, enforcement, etc.?*

  - How does this approach relate to or tie in with HSRG recommendations and NOAA's proposed hatchery policy?
  - Constant evolution of hatchery reform is very difficult.
  - Mutuality of the entire strategy keeps the puzzle together.
  - Watersheds vs. farmers, vs. co-managers—this strategy is an attempt to collaborate along all of the different lines. Communication is essential! There will be a need to make constant adjustments to this strategy.
  - Integration needs to be explicit and has to continue over time.
  - This platform does not define "properly integrated," but the HSRG defines it in a way that's not clearly relevant to viability and recovery—this makes some skeptical of adopting it. What does "properly integrated" imply here?

Facilitator's summary and some remaining questions:

- This is a bottom-up approach, and this platform is not an end-all be-all. It's just a platform that outlines how habitat and hatcheries can benefit fish.

- Integrated vs. Segregated it is a conceptual framework and a tool, once you have a goal for your stocks of fish.

- This is not a static project. As habitats and fish stocks alter so do the hatchery programs.

- Hatcheries are not a substitute for habitat restoration.

- What happens if the habitat does not show up?

- What happens if the hatcheries are not living up to the bargain?

- Certain approaches provide a greater or lesser risk in relation to the habitat and the fish stocks.

- Need to ensure throughout that the framework moves forward. Be aware of the role of each interest group and the interactions between them. Doing more between now and June 30th on the question of implementation.

- Need a continued discussion of funding; what are the priorities? Need funding information on the table.

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*Below you will find a summary of additional comments submitted by people in **Summit Comments & Evaluation forms**; (these comments were submitted post-breakout, and may reflect the views and opinions of individuals who did not participate in the breakout session dialogue.)*

- Funding to hatcheries should depend on contribution to recovery of wild stocks and implementation of HSRG recommendations.
- Over-reliance on hatcheries to get populations to "low-risk" status will continue to mask failure of the ecosystem to support self-sustaining populations of salmon and likely other species.
- Eliminating the need for hatcheries should be our goal.
- More & continued research should be focused on impact of hatchery fish on wild stocks (including non-listed species.)
- Integration & segregation are genetic concepts, and not helpful with understanding ecological relationships. Ecological interactions are most important—predation and competition.
- Platform and breakout lacked reference to NOAA fisheries hatchery policy, which has a potentially large role in answering questions raised in workshop. (e.g. Can the naturally-spawning offspring of integrated hatchery fish be considered an equal contributor to recovery goals? Under what circumstances?)
- We must place more emphasis on need for segregated runs in terms of timing of release and spatial segregation.
- HSRG has done a great job. We need to bring a group of scientists together in the future to make sure that hatcheries are doing everything possible to achieve all goals.