

Staff Questions and Comments Concerning the Willapa Bay Policy Alternatives Analysis and Alternative 2 Policy Directive – Assignment from the Fish Committee, WDFW Fish and Wildlife Commission

Fish Program Willapa Bay Team

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Questions: Summary Descriptions and Analysis of Alternatives (file WBP Alts and Analytical Framework v2.xlsx)

1. Brief Description of Alternative section, Alternative 2 states “Manage for a mix of hatchery and wild fish and meaningful fisheries.” How does this alternative description differ from the Policy, Intent, and General Policy Statement of C-3624? How might “meaningful fisheries” differ from “sustainable economic and stability benefits to recreational, commercial and tribal fisheries”?
2. Wild Fish Management Strategies section, Alternative 2: Additional descriptions of the “ESU-based spawner objectives” and “enhanced wier [sic] operations” are needed to assess this alternative. Enhanced weirs are mentioned several times in red typeface in the Alternative 2 policy directive (file 2_alt_2_wbp_11-2021.pdf). Are the “enhanced weir operations” intended to limit pHOS? Where would these weirs be placed and how many per river? Would weirs be distributed across all tributaries? Has weir efficiency been tested in the Willapa basin? Given that these enhanced weir operations are presented as fundamental to Alt #2’s wild fish management strategy, what is the status of Alternative #2 until the enhanced weir operations are in place?
3. Hatchery Program Size Goal section, Alternative 2, Fall Chinook: what is meant by “+” associated with Forks Creek and Naselle? What’s the level of uncertainty?
4. Hatchery Program Size Goal section, Alternative 2, Fall Chinook: Nemah is listed as TBD here, but below in the “Hatchery programs in 2022 and beyond” section Nemah is listed as 3.3 M. Is the program size goal TBD or 3.3 M? Also, for Naselle, the “+” is not included in the “Hatchery programs in 2022 and beyond” section.
5. Miscellaneous, Alternative 2: Clarification is needed concerning the “[e]xperimental approach for wild hatchery fall [C]hinook mgmt.” No experiment is described in the Alternative 2 policy directive. What are the hypotheses being tested, the experimental controls, the experimental duration, the planned analyses, and the expected use of results? Since these program size goals are temporary, as per C-3624, will the experiment last for less than two Chinook generations? Once the experiment is completed what is the strategy for managing fall Chinook in the Willapa Bay basin, or will a new policy be required?

6. Miscellaneous, Alternative 2: What is meant by “new Alt gear approach”?

Questions: Alternative 2 policy directive (file 2_alt_2_wbp_11-2021.pdf)

7. Guiding Principles #1 – Red typeface: What is meant by “ESU health and population structure given historical abundance and current profile in comparison to original genetic characteristics”? In particular, what is meant by “original genetic characteristics”?
8. Guiding Principles #4 – Red typeface: What is meant by “fresh approach to the development of alternative commercial fishing gear”?
9. Below Guiding Principle #11 – Red typeface: What is meant by “mitigation for unrecoverable habitat losses”? C-3624 defines mitigation hatchery programs as those that are “implemented in accordance with *existing* agreements and programs” (emphasis added). What are the existing mitigation agreements and programs in the Willapa Bay watershed?

Initial Comments on Alternative Analysis and Alternative 2 policy write-up

1. The “Summary Descriptions and Analysis of Alternatives” document does not provide a balanced set of descriptions across the three alternatives. In particular, Alternative 3 is portrayed as largely uncertain. However, several elements in Alternative 3 are very well characterized. We provide a replacement set of descriptions for Alternative 3 in file WBP Alts and Analytical Framework v2_Staff_Alt3revised_kw220224.xlsx.
 - a. In the original draft of the summary document, Alternative 3 was described as deferring to C-3624 for wild and hatchery fish management and “near” to Alternative 1 for fishery management. Alternative 3 can be more accurately described using language taken from C-3624: “*Operate hatcheries in a manner that optimally achieves conservation and recovery of wild fish while providing sustainable and stable fisheries.*” This description and the description for Alternative 2 (*Manage for a mix of hatchery and wild fish and meaningful fisheries*) are both general in nature and do not offer clearly defined objectives. However, Alternative 3, through C-3624, provides a pathway to those objectives and to specifics as to how those objectives will be achieved. In neither the summary nor the policy directive documents does Alternative 2 provide a pathway to specific objectives and the means to achieve them. For example, in the policy directive document, staff are instructed to “[r]e-write with language describing a purpose of managing for a combination of hatchery and wild salmon production goals so as to enhance fisheries in comparison to the 2015 Policy 3622 language.” No additional information is provided.

- b. For the wild fish management strategies, the original draft of the summary document indicates that Alternative 3 defers to C-3624 process. Instead of stating simply that Alternative 3 defers to C-3624, it is more informative to state that the wild fish management strategy for Alternative 3 is to “*balance between minimizing genetic and ecological risks to wild populations and providing for the ecological and societal benefits of hatchery production.*” That balance will be established through a transparent decision process making use of a risk assessment model. The wild fish management strategy for Alternative 2 is an undefined “*ESU-based spawner objectives with enhanced wier [sic] operations.*”
 - c. As with the previous sections the hatchery program size goals section for Alternative 3 was characterized with the uninformative “deferred to 3624.” C-3624 provides clear direction as to setting temporary hatchery program size goals until the required Hatchery Management Plans (HMPs) are developed. One option for the Willapa Bay hatcheries is to use the *status quo*. That is, the current (2021) hatchery production goals can be used at the Willapa Bay hatchery programs until HMPs are developed. In the staff’s revision to the Alternatives summary document, we replaced “deferred to 3624 process” and “unknown” with the *status quo* hatchery production goals. The Alternative 3 goals are known definitively. However, in all cases the hatchery production goals for Alternative 2 are expressed either as an approximation (e.g., 3.5+ M) or TBD.
2. The summary document directs staff to compare the three Alternatives based on estimated future states – average take from fisheries starting 5 years from policy implementation and the status of wild population in year 2033. Staff have several concerns about this comparison.
 - a. Since the comparison is based on predictions of a futures states, the comparison requires models. These models will need to be developed in a short timeframe. The future status of wild populations is a subject of the technical procedures document (TPD), as a required component of C-3624. The TPD will not be completed until late 2022, but the Fish Committee is now requiring staff to postpone development of the TPD in order to develop an *ad hoc* model designed for Willapa Bay. That is, the Fish Committee is now requiring two models to be developed for the same purpose.
 - b. The comparison will require consideration of environmental and programmatic uncertainty, and therefore it will require stochastic models to account for the uncertainty. Although the environmental uncertainty can be considered a constant across the three alternatives, the programmatic uncertainty differs across the three alternatives. In particular, Alternative 2 relies on the development of alternative gear and enhanced weir operations, both of which are undefined and undeveloped. In the absence of well-defined bounds on these

elements, staff anticipate that it will not be meaningful to generate point estimates for average take from fisheries and future status of wild populations.

- c. The success of any management plan or policy should be measured against the objectives of the plan or policy, and these objectives must be explicit and specific enough to allow quantitative evaluation using performance measures. Developing a system whereby alternatives are compared based on their outcomes and policy objectives is the subject of the TPD of C-3624. Staff developed the draft policy that is now being labeled as Alternative 3 with the requirements of C-3624 in mind. It is unclear to us the basis of the comparisons among the three alternatives. In fact, given the descriptions of the three alternatives in the original draft of the summary, it would appear that the Fish Committee thinks that the three alternatives may have different objectives. If so, how do you compare three alternatives when they are attempting to achieve three different objectives – that is, are trying to do three different things? For example, using the two required metrics – average take and status of wild fish populations, it is likely that Alternatives 2 and 3 may successfully achieve their specific objectives but with different combinations of take and status. Both alternatives would be equally successful. What is the mechanism to choose between the two alternatives? Also, it would be incorrect to measure the “success” of any alternative using the objectives of another alternative; for example, comparing the average take and status of wild populations in Alternative 2 and 3, using the objectives of Alternative 2 only.
 - d. The time and effort to completion and the required environmental review (SEPA) are key issues to be considered when comparing these three alternatives. Policy language for Alternative 3 has already been written. The temporary hatchery program size goals are *status quo*, while the fishery management objectives are modifications to the existing policy. The environmental review for the non-temporary hatchery program size will be part of the review based on C-3624. SEPA may not be needed for Alternative 3, although that decision must be made in consultation with AG’s Office. In contrast, policy language for Alternative 2 has yet to be written (see below). This alternative is calling for a wholesale overhaul of the existing policy (Alternative 1) for both the hatchery program size goals and fishery management objectives. Alternative 2 will require SEPA, and the uncertainty for many of its components and the “experimental status” of the overall program may make the environmental review complex.
3. Alternative 3 reflects the requirements of C-3624. Staff has concerns that Alternative 2 may sidestep C-3624. These concerns are based on both the original summary and Alternative 2 policy directive documents. There are no statements or footnotes in the alternative summary document indicating that the hatchery program size goals for

Alternative 2 are temporary until hatchery operational plans, goals and objectives are developed in program specific HMPs, as per C-3624. In the High-Level Analysis of Alternatives section, the hatchery program goals are defined as from “2022 and beyond,” and the status of the wild fish populations metric date is 2033, which would assume that the hatchery program goals are a constant through the analysis window. Finally, Alternative 2 is described as an “[e]xperimental approach for wild hatchery fall chinook mgmt.” Although the summary document doesn’t state the length of the experiment, it would seem nonsensical to deliberately design and implement an experiment of four or fewer years (approximate time for the production of Willapa Bay HMPs) for fall Chinook in Willapa Bay with generation times of 3-4 years. As with the summary document, the directives in the Alternative 2 policy directive document are written with no hint that the hatchery operational plans, goals and objectives are temporary (see red typeface Hatchery Programs sections for Fall Chinook Salmon, Coho Salmon, and Chum Salmon). The Fall Chinook Salmon red typeface Natural Production section, subsection “f” states that staff should develop a goal concept for “[l]ong term evaluation of wild/hatchery parentage, comparing no-hatchery production rivers with weired rivers” (emphasis added). This section is followed by section 2 (Hatchery Programs), subsection “b” where hatchery numerical goals are explicitly stated, without reference to C-3624’s requirements. In fact, C-3624 is mentioned only once in the Alternative 2 policy directive document, and that mention was associated with the requirement to mass-mark hatchery fish, and the suggestion to note the same requirement in “Policy C-3624, *if/as appropriate*” (emphasis added). The fact that the Alternative 2 policy directive document mentions C-3624 in association with mass-marking, and not with hatchery goals suggests that Alternative 2 is sidestepping the requirements of Guideline 4 in C-3624.

4. As noted above, the Fish Committee’s specific goals and objectives for Alternative 2 are not yet stated explicitly, leaving staff to guess the intent of the Fish Committee. Without specific guidance for each section, staff will not be able to capture appropriately the Fish Committee’s intent when drafting language for Alternative 2.