State of Washington
Department of Fish and Wildlife

Mailing Address: 600 Capitol Way N, Olympia WA 98501-1091, (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia WA

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Clallam County Department of Community Development
Attn: Steve Gray
223 East 4th Street, suite 5
Port Angeles, Washington 98362
Puyallup, WA 98374

SUBJECT: *Comments regarding the Draft Shoreline Inventory and Characterization Report for Portions of Clallam County Draining to the Strait of Juan de Fuca*

Dear Mr. Gray:

The State of Washington Department of Fish and Wildlife (WDFW) would like to thank Clallam County for the opportunity to review and comment on the Draft Inventory and Characterization Report (ICR) for WRIAs 17-19. We may wish to provide additional comments and recommendations at a future date. The comments below are presented for your consideration.

General Comments

The ICR provides an excellent overview of the level of existing and possible future development in the shoreline jurisdiction. This information should greatly assist in focusing the planning effort into the areas where development is presently affecting ecological processes or may do so in the future.

As a baseline of existing ecological conditions for the No Net Loss (NNL) element of the SMP update, we have concerns that the information in the report does not provide sufficient detail at the reach scale to use for a comparison to future conditions. WDFW may be able to provide a source of information to help solve that issue. The agency is currently developing a habitat assessment project called Watershed Characterization. The assessment can provide important information on current conditions, as well as help inform land use planning decisions. The WDFW portion of the project is scheduled for release in early 2012, after the peer review process has been completed. It may not be ready in time for the Clallam County ICR anticipated finalization date. However, a placeholder in the report may be appropriate so that the assessment can be added before the completion of the SMP. Alternately, WDFW can immediately provide Clallam County with the GIS datasets that were used in the characterization. SMP staff can then use the datasets to better inform the ICR, with the assistance of WDFW staff as needed. These

datasets contain information that is not readily available for planning efforts, such as commercial catch records. They also contain information that has been "cleaned up" so that it is in a more usable format. WDFW is happy to provide the GIS data as part of its technical assistance program. Please contact Theresa Nation to discuss the details. Her contact information can be found at the end of this letter.

We would like to see restoration opportunities included either in the reach sheets or in the reach summaries. These can be brief, but right now there is almost no information on restoration opportunities in the ICR, and few specifics about degraded areas. Detailed explanations can be saved for the restoration plan, but the SMP Guidelines specify that opportunities should at least be identified in the ICR (WAC 173-26-201(3)(c)(iii)).

1.0 Background and Purpose of the Report

On page 1-3 in the blue box with definitions and terminology, the shoreline jurisdiction is identified to include associated wetlands and river deltas, but we have located little information on these areas in the draft report. We recommend more detailed coverage of these habitats, as they are the sites of many crucial biological functions.

3.1.2 Evaluation of Marine Nearshore Processes along the Strait of Juan de Fuca

Page 3-6 lines 25-29: Clallam County is fortunate to have low levels of nearshore morphological degradation along the Strait of Juan de Fuca, as determined by the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP) analysis. However, the low levels of degradation do not necessarily represent an opportunity for increasing shoreline development. The baseline for NNL is the current condition, therefore shorelines should be managed to ensure that degradation does not increase above the current level.

We agree that the PSNERP analysis is at a coarse scale that may not be suitable for use at the individual project level. However, it is a useful tool for supporting management decisions and general prioritization of restoration work, and we are pleased to see it included in the ICR.

3.2 Establishing a Baseline to Measure and Track Marine Ecological Functions

Page 3-8: We are concerned that the available information used to describe the baseline conditions in the report is insufficient to accurately reflect individual shoreline segments. A useful tool may be to describe, in general, the range of possible existing conditions within any portion of the shoreline. The descriptions can then inform development of requirements if those actual conditions are encountered during a future SMP decision, such as the example in the report where the construction of a bulkhead may impact forage fish spawning. The mapping of forage fish spawning beaches will always be a moving target, but the rubber meets the road when forage fish spawning is actually encountered and an SMP decision must be made.
This comment also applies to section 5.3.

Page 3-10: The existing sources of data are not identified in Table 3-2. We recommend adding a column that lists existing/potential data sources for the indicators. Reliable data sources need to be established that can inform indicators, or else it will be very difficult to track the indicators

over time. We highly recommend that the county thoroughly examine the feasibility of potential indicators to be sure that they are achievable goals, both in the sense of available data, and in the sense of relevance to ecosystem health. This comment also applies to section 5.3. With regards to the metrics listed in the table, we would like to see the aquatic vegetation and tree canopy metrics contain reference to native vegetation. Native vegetation has qualities that may not be present in non-native vegetation, such as suitability for perching or nest building. We would also like to see some metrics related to biological functions, such as acres of forage fish spawning area by reach, or fish and wildlife species composition and/or diversity. WDFW is glad to assist in determining appropriate data sources for indicator metrics.

Page 3 -19 lines 4-5: Because of the diversity of shoreforms identified in the report, the overall percentage of bulkheaded shoreline in Clallam County does not well demonstrate impacts to ecosystem processes or ecological function. (Although it is an interesting statistic, and appropriate to include.) Tracking armoring and shore forms at the reach level is much more important. Figure 3-8 provides a better picture of hard armoring in Clallam County. From the table, it can be seen that in some reaches large percentages of the shoreline have been hard armored. These are the sort of values, when considered along with the information in tables 3-6 and 3-8, that will be most useful when considering ecological conditions and establishing conservation and restoration goals.

Page 3-24: Table 3-11 does not explain how the values for total aquatic area were calculated. This should be included. Is it the area of potential habitat, or some other value? Please recall that the SMA shoreline jurisdiction includes all marine waters in the Strait of Georgia out to the county's in-water jurisdictional boundary, which equates to considerably larger aquatic areas than shown in the table. For more information on marine jurisdiction, please see Chapter 5, page 3, in Ecology's Shoreline Master Program Handbook. Available at: http://www.ecy.wa.gov/programs/sea/shorelines/smp/handbook/index.html

Page 3 - 27 line 17: We can find no citation for the Point No Point Treaty Council assessment of riparian cover for Clallam County's shorelines within the report.

We support the use of riparian vegetation as an indicator of ecological function and recommend, if feasible, using width, age and species composition criteria. This will allow the differentiation of young uniform stands from older, more complex and more ecologically functional stands. A 20-year-old closed canopy forest does not support ecosystem processes to the same level or provide the level or complexity of ecological function as a late succession mature forest. As identified in the reach inventory (Page 4-7 line 37, page 4-17 lines 5 an 6, page 4-19 line 28, page 4-21 lines 36 and 37, page 4- 26 lines 7 and 8) there are areas of the shoreline that are natural shrub and herbaceous vegetation. A description of that plant community will provide information that can be used for comparison with future conditions.

Lines 23 -25: We agree that re-vegetation of areas where forest cover has been removed is an excellent goal for the SMP update.

For more information on marine riparian habitat, please see:

Brennan, J.S. 2007. Marine Riparian Vegetation Communities of Puget Sound. Puget Sound Nearshore Partnership Report No. 2007-02. Published by Seattle District, U.S. Army Corps of Engineers, Seattle, Washington. Available at: http://www.pugetsoundnearshore.org/technical_reports.htm

For more information on freshwater riparian habitat, please see:

Knutson, K. L., and V. L. Naef. 1997. Management recommendations for Washington's priority habitats: riparian. Washington Department of Fish and Wildlife. Olympia, Washington. Available at: http://wdfw.wa.gov/publications/00029/

Knight, K. 2009. Land Use Planning for Salmon, Steelhead and Trout. Washington Department of Fish and Wildlife. Olympia, Washington. Available at: http://wdfw.wa.gov/conservation/phs/mgmt_recommendations/

3.3.1 Key Management Considerations

Mitigation sequencing is an important tool for informing SMP decisions at the project level. We would like to see it included in this section. Clallam County will need to develop guidelines for mitigation sequencing in order to ensure that it is applied appropriately.

Page 3 – 33 lines 1-6: We are pleased to see an acknowledgement of the importance of riparian vegetation to upland habitat as well as aquatic. Shoreline vegetation also serves as an important movement corridor for wildlife even when vegetation further upland has been altered.

Page 3 – 33 line 9-11: Please specify that the tradeoff for streamlined permitting is that shoreline armoring not be included in the project.

Page 3 – 33 line 17: Mixing shoreline stabilization and spawning beaches is difficult at best. On accretion beaches, common armoring impacts include loss of sediment, an increase in the size of sediment, and loss of riparian vegetation, all of which affect forage fish spawning. It will be important to be clear in SMP policy that any form of armoring has a negative impact and should only be used when other options have been exhausted.

Page 3 – 33 line 32: It is unclear that limiting the length, location and design of in-water and overwater structures will prevent negative impacts to aquatic vegetation, sediment transport and fish species. We agree that the siting of these structures should consider the above processes and resources, but recommend that the structures be precluded where they have a negative impact on them.

4.0 Marine Reach Inventory

4.1.1 Page 4-1 line 27: A wide array of aquatic vegetation including eelgrass and algae provide the substrate for herring spawning.

Page 4 - 4 line 26: Management considerations here and throughout the ICR should include future sea level rise, as it has the potential to have a strong impact in certain areas.

Page 4 - 4 line 27 and 28: Soft armoring techniques still have the potential for negative impacts to natural erosion and sediment processes. Requiring a full mitigation sequence that emphasizes avoidance of armoring structures is an effective way to help preserve ecological functions to the maximum extent possible. Soft armoring is best applied when lower-impact options have been ruled out. This comment applies to all Management Issues and Opportunities sections that mention soft armoring.

Page 4 - 13 line 39 and 40 and page 4-14 line 1: This is another example of where mitigation sequencing could be mentioned as a management tool. Over 50 percent of the Kulakala reach shoreline has the potential for future development. The reach will benefit from a full mitigation sequencing process for new development and actions relating to existing structures

Page 4 - 19 lines 19 -29: The City of Port Angeles industrial water line located at the base of the bluff east of the mouth of Dry Creek and west of the City of Port Angeles has a significant and long-term negative impact to the sediment supply to Ediz Hook.

5.2 Processes Affecting Freshwater Shorelines

Page 5-3 Section 5.2: This section would be clearer with a table listing the processes forming freshwater stream channels. They are discussed within the text but not listed. The list could include hydrology, sediment including woody material as sediment, floodplain processes, channel processes, water quantity and water quality.

Page 5-3 Figure 5-2: This figure is too small to be readable. Moving it to the map folio would allow for a larger format.

Page 5-4 line 3: Runoff rates in forested environments are also influenced by forest stand structure and rain on snow events.

5.3 Establishing a Baseline to Measure and Track Freshwater Ecological Functions

Please refer to the first two comments for section 3.2. They also apply to section 5.3.

Page 5 -9 lines 19 through 21: (This comment was prepared before the Partnership changed its website. The comments are still relevant to the SMP discussion, but the link in the ICR no longer connects to the dashboard indicators.)

From the list of Puget Sound Partnership Dashboard indicators (listed below) that are referenced in the report, we feel that water quality, water quantity, shoreline armoring, and land use/ land cover could be useful to Clallam County as measurable indicators. Although the other indicators are good ones, they are difficult to track or are outside the ability of Clallam County to track with existing resources. Even water quantity and water quality will present a challenge to the county to track over time. Any measurable indicators incorporated into the NNL element of an SMP are

meaningless without the framework and resources to track them over time. For this reason we recommend measurable indicators that are straightforward and within Clallam County's ability to implement. We encourage the inclusion of other indicators from the list, but only if a reliable data source can be identified.

The 20 indicators on the Puget Sound Dashboard of Ecosystem Indicators Include:

Natural science measurements

- Marine water quality. Marine water quality index, as measured by the Department of Ecology.
- Freshwater quality. Freshwater quality index, as measured by the Department of Ecology.
- Water availability. Percent of monitored stream flows below critical levels.
- Salmon abundance. Wild Chinook salmon population counts with distribution.
- Orca Abundance. Southern resident killer whale population trends.
- Pacific Herring. Pacific herring spawning biomass - status & trends.
- Birds. The abundance, breeding and counts for a composite variety of key Puget Sound bird species, as measured by numbers per sampled area.
- Shoreline armoring. Percent of freshwater and marine shorelines armored with hard bulkheads.
- Eelgrass. Extent of eelgrass, measured in acres, in greater Puget Sound.
- Toxics in fish. Specifically, Pacific herring, English sole and salmon.
- Toxics in sediment. Health of sediments with respect to 1) concentrations of toxics, 2) degree of toxicity, and 3) community structure of sediment-dwelling organisms.
- Land use/Land cover. Percent of land use/land cover; percent of impervious surfaces; extent and condition of land cover by type.

Page 5-10 Table 5-1: We recommend using measurable indicators that are directly affected by Clallam County decision making and can be tied to ecological functions. We suggest not using salmonid stock status as an indicator. Salmonid stock status is influenced by too many factors and entities outside of Clallam County jurisdiction or control. Closed canopy forest is a useful indicator provided it is defined by meaningful criteria. As mentioned above, we would like to see a definition based on native species, width, and age. The ecological function of a riparian forest is heavily influenced by all three factors. Percentage of stream channels with levees and revetments is a useful indicator, but could simply be lineal length. We understand the SMP is limited to the shoreline jurisdiction, but percent of impervious surface must be assessed throughout an entire watershed to assess hydrology impacts; the shoreline jurisdiction is only a small part of the watershed. Perhaps a better indicator would be percent impervious surfaces with the Clallam County jurisdiction within the watershed, although that means using a metric that extends beyond just the shoreline jurisdiction.

Page 5-15 Table 5-4: It is unclear how acres and numbers of revetments and levees relate to ecological function. We suggest using the lineal feet of these structures, as well as information that qualifies the structures in relation to their location within the channel migration zone (CMZ) and floodplain. For example, a structure that prevents lateral channel migration placed at a point

in the middle of the CMZ can have far greater negative impact to channel processes than one on or near the margin of the CMZ.

5.4 General Management Considerations for Freshwater Shorelines

Page 5-18 line 6: The ecological impact from soft armoring can be as great as hard armoring in some cases. Soft armoring may not have as long of an impact life, but it still impedes natural channel processes.

6.0 Freshwater Reach Summary

Page 6 -2 lines 21 -23: The wetland habitat that has been altered in the floodplain of the lower Dungeness River represents a restoration opportunity.

Page 6 -4 lines 10 – 13 and lines 34 -37: We would appreciate greater clarity on how land and structures within the Dungeness River CMZ, levees, and dikes are identified for restoration opportunities and incorporated into the SMP update.

Page 6 -5 line 12: Some elaboration or examples of what it means to remove flood hazards in the CMZ would be helpful.

Page 6 – 15 lines 25 – 27 and page 6 -17 lines 15 and 16: The outlet structure on Lake Sutherland has had its screens removed some years ago and no longer has any affect on fish passage or lake level.

Page 6 -17 lines 17 – 19: There is no conclusive evidence that conditions at the outlet of Lake Sutherland are contributing to flooding along the lake. Lake levels naturally rise and fall with hydrologic events. A more appropriate management consideration within the SMP process would be to place buildings and infrastructure above the high water limits, and construct docks so that they can rise and fall with the level of the lake.

Page 6 -18 lines 27-28: We would like to point out that future zoning changes and conversion of timber land to residential development (as noted on page 6 -18 and other locations in the draft) has the potential to effect large portions of the shoreline within Clallam County. This issue needs to be clearly identified as a management consideration within the draft.

8.0 References

Schlenger, et al (2010) is missing in the references, but is credited for figures and in-line citations. There are several other omissions that we noticed, but will not list them here because of the information at the beginning of the chapter that the section will be updated. Please be sure to document all sources of information as part of the public record.

Washington Department of Fish and Wildlife, 2004: Priority Habitat Species (PHS) database information. It is important for the ICR to contain the most current data available. If the county's PHS dataset is from 2004, then the county needs to request an updated dataset from

WDFW. Because our database is continually updated with new species observations, we recommend users request digital updates every six months. Please contact Theresa Nation for help with expediting a data release.

The report makes reference to PHS data, but does not rely upon the information published in the PHS List. The PHS List provides information about the purpose and goals of the PHS program and details about each species or habitat, which are important to understand when using the PHS data. The list can be downloaded at: http://wdfw.wa.gov/conservation/phs/list/. We recommend adding a brief description of PHS and its relevance into the ICR. This will help provide context for the PHS data as well as increase understanding. Another PHS product that will be useful as the SMP update proceeds is our collection of management recommendations. There are publications for species as well as habitat types. They can be found at: http://wdfw.wa.gov/conservation/phs/mgmt_recommendations/. We have cited some of these publications earlier in this letter.

We did not find any evidence that PSNERP publications were used to produce this ICR. The PSNERP technical reports are an excellent source of current information on a variety of subjects, including forage fishes, kelp and eelgrass, beaches and bluffs, management measures, and many others. We recommend examining these documents and integrating relevant information into the ICR. They are available at: http://www.pugetsoundnearshore.org/technical_reports.htm

9.0 Abbreviations and Glossary

Page 9-16: The Priority Habitats definition includes a direct excerpt from WAC 173-26-020(28) except that "important marine mammal haulout" has been omitted as an attribute. We recommend either reinserting this attribute, acknowledging the omission, or noting if it has been included under another term. Also, the excerpt is incorrectly cited as WAC 173-26-020(24).

The Priority Species definition is confusing because it is vague. The WDFW definition should either be spelled out here (with reference), or an explicit reference given to where it can be found. It is not clear whether this term refers to Priority Species as defined in the Priority Habitats and Species List, or whether it refers to the State Species of Concern List, which is not as comprehensive as the PHS List. WDFW recommends using the PHS List definition. It will allow consistency with the information provided in the reach sheets. The priority species definition can be found on page 5 of the PHS List. Available at: http://wdfw.wa.gov/conservation/phs/list/

The State Species of Concern List can be found here: http://wdfw.wa.gov/conservation/endangered/

Reach Sheets

The Habitats and Species section on the freshwater and marine reach sheets should be revised for clarity. It is defined on pages 194 and 323 as containing information from the WDFW Priority Habitats and Species program as well as other sources. However, the terminology used in the

actual reach sheets is inconsistent with PHS terminology, which may lead to confusion. In one example, the Brownes Creek reach on page 200 states:

> *"There are no priority wildlife habitats mapped within the reach. This reach provides spawning habitat for steelhead trout (93%) and Chinook (100%) and coho salmon (100%). The presence of chum salmon is also identified in the reach."*

In the first sentence, the term "priority wildlife habitats" is used. However, that term is never used in the PHS List or in the PHS database. The PHS List contains priority habitats and priority species. A species may be considered a priority for all occurrences, or in certain areas, such as where they are spawning or nesting (see definition of "Priority Areas" on page 6 of the PHS List). The PHS mapped data depicts where Priority Areas for a species are known to occur. WDFW priority habitats have a completely separate definition, and should not be confused with the habitat of a single species. In the excerpt above, the phrase "There are no known occurrences of a terrestrial priority species within the reach" would be accurate.

The Canyon Creek reach sheet on page 204 contains another example where clarification is needed. The Habitats and Species section reads:

> *"Designated priority habitats mapped within the reach include elk (89%) and harlequin duck (6%). The presence of resident cutthroat and rainbow trout is mapped within the reach."*

In this case, elk is not a habitat, and neither is harlequin duck. A better phrasing might read, "Priority species areas mapped within the reach include. . ."

Somewhere in the reach sheets (perhaps in the freshwater and marine Data Descriptions and Sources, pages 194 and 323) a statement is needed that clarifies that the PHS data should not be considered comprehensive. It represents known habitat and species occurrences that have been formally documented. A lack of data does not equate to a lack of species or habitat. It is also important to note that there are several categories of habitat that are not mapped at all. These categories include riparian habitat and all the aquatic habitat categories. Please see the PHS List for more information.

The Washington Department of Fish and Wildlife wishes to thank you again for the opportunity to provide comments on the Draft Shoreline Inventory and Characterization Report for Portions of Clallam County Draining to the Strait of Juan de Fuca. The report is off to a good start, and we sincerely hope that you will find these comments constructive. Please do not hesitate to contact either one of us with any questions you may have about this letter.

Sincerely,

Chris Byrnes
Watershed Stewardship Biologist
WA Department of Fish and Wildlife
332 E 5th St, Suite 100
Port Angeles, WA 98362

Phone: (360) 417-1426
E-mail: Chris.Byrnes@dfw.wa.gov

Theresa Nation
Land Use and Environmental Planner
WA Department of Fish and Wildlife
600 Capitol Way North
Olympia, WA 98501-1091

Phone: (360) 902-2562
E-mail: Theresa.nation@dfw.wa.gov

cc: Jeffree Stewart, Shoreline Planner, WDOE
Steve Kalinowski, Regional Habitat Program Manager, WDFW
Katie Knight, Land Use Policy Lead, WDFW
Bob Burkle, Watershed Stewardship Biologist, WDFW
Michael Blanton, Watershed Stewardship Biologist, WDFW
Hugo Flores, Environmental Planner, WDNR