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Master Plan Update Improvements
Seattle-Tacoma International Airport
Comments on Biological Assessment
12/17/99

General comments:

The final Habitat Rule for Puget Sound chinook critical habitat is expected early in 2000.

Be advised that Coho are a candidate species and may be proposed for listing at any time. If Coho become a listed species re-initiation of consultation will be required unless the information and analysis in the BA is complete with respect to Coho and the effect call is concurred with by the NMFS.

Also be advised that Pacific herring (*Clupea harengus pallasii*) is currently in status review by NMFS.

The information contained in Appendix F, Preliminary Comprehensive Stormwater Management Plan, needs to be incorporated in the Biological Assessment (BA). Information in other appendices such as the EIS and other documents may also need to be incorporated in the main body of the BA. Construction plans, construction sequencing, timing and referenced BMPs and TESC practices need to be included in the BA for relocation of Miller Creek, the Auburn Wetland Mitigation site and relocation of drainage channels, bridge relocation of Miller Creek at S 156th, construction of retaining walls next to Miller Creek, and any other project action that directly or indirectly affects water bodies with the potential to affect chinook or their critical habitat.

Please provide a comprehensive project description at the beginning of the document including information about the Wetland Mitigation Site in Auburn.

The Biological Assessment (BA) is incomplete in the information and analysis provided in the following areas;

1. Action Area

The action area is all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action [50 CFR 402.02]. The BA states "The action area for the Master Plan Improvement Projects are defined as the immediate area near STIA and the Auburn Mitigation Site that would be directly affected by project construction, and downstream portions of the Miller, Walker, and Des Moines creeks that could be indirectly impacted by the project. The action area also includes drainage channels that connect the Auburn Mitigation Site to the Green River pg. 3-6.

The action area should be determined based on consideration of all direct (including all those areas that are interrelated or interdependent) and indirect effects of the

project e.g. the immediate area near STIA, impacts of surface water to the Miller and Des Moines Creeks and estuaries, the Puget Sound discharge location, onload and offloading sites for fill, the Auburn Wetland Mitigation Site, properties purchased by the Port to reduce surface water impacts etc.

The action area does not have to be contiguous. Please include maps for all locations directly or indirectly affected by the project action.

3. Matrix or Checklist

The matrix or checklist is a tool to document the environmental baseline and the effects of proposed actions on the parameters important for fish survival. Please complete the checklist with the categories listed in the guidance document titled A Guide to Biological Assessment (NMFS) as they are listed (Properly Functioning, At Risk, Not Properly Functioning). The matrix in the BA has been modified and does not provide the information needed for analysis of this project proposal for understanding the baseline conditions and effects of the action.

4. Direct Effects

Direct Effects are the direct or immediate effects of the project on the species or its habitat. Identify and analyze all direct impacts of the project action including the impacts of interrelated and interdependent actions (see handout for definition and discussion of direct effects – analysis for effects of the action, from the Consultation Handbook).

Interrelated and interdependent actions have not been identified in the BA. The sources and transportation of the gravel borrow to the site may be interrelated or interdependent actions? The withdrawal of groundwater is an interrelated or interdependent action that should be analyzed.

Direct effects needing more information and analysis are the Miller Creek relocation (1500 ft), Auburn Mitigation Site, butter enhancement (6500 ft.), relocation of existing bridge over Miller Creek, culvert replacement.

5. Indirect Effects

Indirect effects are those effects that are caused by or will result from the proposed action and are later in time, but are still reasonable certain to occur [50 CFR 402.02].

Potential indirect impacts of the STIA include changes in hydrology or water quality as a result of construction activities and addition of new pollution generating impervious surfaces (PGIS) to the watershed (pg. 3-6).

With regard to changes in hydrology, the Stormwater Effects Guidance Document Criteria (WSDOT, 1999) is not adequate to alleviate adverse impacts from stormwater to stream systems. NMFS is requiring an analysis of the following items (a-i) to analyze the impacts of increase impervious surfaces. Please include the following information in your analysis:

- a. existing baseline relative to impervious surface area in the sub-basin
- b. existing hydrology of the basin (magnitude and frequency of high flow events)
- c. percent forest cover in the basin
- d. conveyance ratios (described in literature by May and Horner)
- e. number and location of stream crossings/continuity of existing buffers
- f. baseline condition of the stream(s)
- g. percent of watershed in wetland cover
- h. permeability of soils on site
- i. width and quality of existing buffers on streams/rivers in the affected basins

An analysis of the impacts of metals, suspended solids, gasoline and oil, glycol etc. to the stream systems (including the estuary) should be made.

An analysis of the impact of filling wetlands (18.33 acres) to the stream hydrology should be done.

An analysis of the impact of removing ground water to supplement the low flow of the creeks during the dry season should be done.

Species such as Pacific sand lance (*Ammodytes hexapterus*) and surf smelt (*Hypomesus pretiosus*), Pacific herring (*Clupea harengus pallasii*) and marine invertebrates that are utilized by Chinook as a food source within the action area (estuary) should be identified and impacts from the proposed action analyzed in the effects analysis.

6. Cumulative Effects

Cumulative effects are those effects of future State or private activities, not involving Federal activities, that are reasonable certain to occur within the action area of the Federal action subject to consultation {50 CFR 402.02}

The BA discusses indirect effects in the following sentence: "Indirect effects or "induced growth" effects on chinook salmon and their habitat are not expected to result from implementation of the Master Plan Update improvement projects, because the species does not occur in the affected watersheds" pg. 5-18. The impacts of "induced growth" are a cumulative effect.

Please refer to the handout "analyses for effects of the action" from the Consultation Handbook for a discussion on indirect effects, cumulative effects and interrelated and

interdependent effects. Identify and analyze all cumulative effects of the project action.