



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
1200 Sixth Avenue  
Seattle, Washington 98101**

**JUN - 8 2001**

Reply To  
Attn Of: ECO-083

Colonel Ralph Graves  
District Engineer  
Seattle District, Corps of Engineers  
P.O. Box C-3755  
Seattle, Washington 98124-2255

RE: 1996-4-02325, Port of Seattle

Attn: Muffy Walker, Project Manager

Dear Colonel Graves:

The Environmental Protection Agency (EPA) has completed review of the above-referenced (third) public notice for the Port of Seattle Sea Tac Airport project. We realize these comments are somewhat later than desirable, but we have been coordinating with Muffy Walker, and she has assured us they are still welcome.

The project includes, among other things, the construction of a new third runway, two new Runway Safety Areas, a South Aviation Support Area, new road interchanges and storm water detention facilities. It is expected to require approximately 20 million cubic yards of fill, and will place fill in all or portions of 50 wetlands totaling 18.37 acres, temporarily impact 12 wetlands totaling 2.05 acres, and fill in 980 feet of Miller Creek.

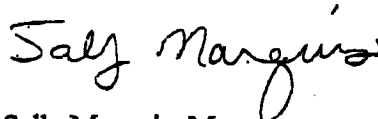
Because the documents are being closely reviewed by numerous other agencies and consultants who are providing detailed in-depth analysis and comments, EPA has chosen to limit its review and comment to the larger wetlands issues and compliance with the Clean Water Act §404(b)1 guidelines.

As part of our review Ms. Joan Cabreza of my staff has visited various areas of the site with the consultant, and have reviewed the Wetland Functional Assessment and Impact Analysis Appendices A-J, the Wildlife Hazard Management Plan, the Natural Resources Mitigation Plan, the Wetland Delineation Report, the Biological Assessment, Essential Fish Habitat Assessment, Biological Assessment Supplement, Property Acquisition and Demolition Biological Assessment, Runway Fill Hydrologic Studies, and a number of consultant analysis reports, including the Columbia Biological Assessments report (water quality), Azous Environmental

Sciences (unmitigated wetland impacts), Sheldon and Associates (unmitigated wetland impacts), Northwest Hydraulic Consultants (stormwater and hydrology), Columbia Biological Assessments (fisheries and water quality), GeoSyntec (fill and embankment wall), and the Bio-Analysis Inc. report (fisheries and water quality). We have also met with both the Port and the Airport Communities Coalition.

We appreciate the opportunity to comment on this project and apologize for the late submittal. We believe all of the issues we have identified in the enclosure regarding this important permit should be carefully reviewed before making your final decision on permit issuance. If you have questions on these comments, please feel free to contact me at (206) 553-0717, or Ms. Joan Cabreza, at (206) 553-7369.

Sincerely,



Sally Marquis, Manager  
Aquatic Resources Unit

Enclosure

cc: USFWS, Nancy Brennan-Dubbs  
NMFS, Dee Ann Kirkpatrick  
Ecology (NWRO), Ann Kenny  
Port of Seattle, Elizabeth Leavitt  
ACC, Kim Lockhard

Issues of concern related to 1996-4-02325, Port of Seattle

1. Hydrological impacts. Accounting for all hydrological impacts is important because if hydrology is assumed when it is not present, wetland loss will be underestimated. The potential hydrologic impact of several factors still appear questionable:

- The Port documents do not discuss the future use of the many acquired and now vacant land parcels in the area between the proposed runway west to Des Moines Drive and SR 509. Given the large area, the Corps needs to factor any reasonably foreseeable future intentions for these parcels into the hydrological picture now, because depending on the parcels' final use there could easily be a large increase in impervious surface or excavation, either of which could change local hydrology. The Port's consultant indicates that except for a TRAY-CON project (apparently something relatively new not mentioned in the reviewed documents), the Port has no projects planned for this area at this time (Kelley, personal communication). But we have seen no statement from the Port to this effect. The Port should clarify their intentions in writing so that the Corps can assure consistency with the 404(b)(1) guidelines, which require single and complete projects.

- As described in the documents reviewed, the assumption that the retaining wall will have no impact on nearby wetland hydrology and Miller Creek appears somewhat speculative, given that many of the wetlands west of the proposed wall are supplied by seeps and shallow groundwater which will need to move through and under the wall to reach the wetlands. If flow does not replicate past flow patterns, timing, and volumes, the hydrologic regime down-wall of the wetlands will be altered, impacting a variety of functions in the receiving wetlands, and possibly affecting Miller Creek as well. We believe that additional more refined analysis is needed. However, we understand that Ecology has recently requested a reworking of the Slice model to provide further information on the expected flow regime. We support this request, and believe it may provide the refinement we are seeking. Because no model is foolproof, however, we also believe that if constructed, it would be prudent to collect baseline data concerning the present location, size, and condition of the wetlands downslope of the wall, delineate the perimeter and monitor the area over the next few years to assure the wall functions as projected. If it does not, additional mitigation should then be required.

- Three borrow pits will excavate approximately 175 acres to provide 6.7 million cubic yards of material (or 6.2 million yards, depending on the page cited). The impact document proposes to avoid impacts to remaining wetlands in the borrow pit areas by avoiding physical excavation of the wetlands, using up-slope buffers of varying widths and retaining 50 foot downslope buffers. We could find no explanation of why a distance of 50 feet was chosen, or the basis for assuming this will be sufficient to maintain hydrology in the borrow pit wetlands.

We feel there is potential for hydrologic impact to wetlands in Borrow area #3, even though they are not directly being excavated. This is supported by the Pacific Groundwater

Group study which states "existing analyses by Hart Crowser do not provide high confidence that water flow to the wetlands would be maintained at their current rate" (pg 74) and indicate they "concur that perched water table depression and reduced flow to wetlands is [sic] likely to occur". Since there is the potential for impact, these wetlands and their functions should be monitored so that if impacts result from excavation of the surrounding area, mitigation can be provided.

- The potential impact of Borrow Pit 1 on nearby Des Moines Creek remains unclear. Although a 200' non-excavated buffer will be left between the west edge of the pit and the creek, most of the adjacent 121 acres will have overburden removed, and will be excavated up to 40 feet deep in places. We found no discussion of whether the area proposed for Borrow Pit 1 currently contributes inflow into Des Moines Creek, or how removal of overburden and excavation will affect overland surface and/or subsurface flow contribution to the Creek. Will excavation intercept the water table, and if so, what affect will this have on the current and downslope water table and subsurface flow?

It is also not mentioned how the borrow areas will be reclaimed/restored after excavation to mitigate expected visual impacts and safety hazards. An agreed-upon generic reclamation plan for all of the borrow pits should be developed that can be refined once the final source of all borrow materials has been determined.

2. Fill material and water quality. Fill is being stockpiled from various sources, and some of the fill tests have shown low residuals of compounds such as petroleum hydrocarbons, metals, PCBs and DDT. It is appropriate to question what affect, if any, the soils would have on water quality as water seeps through the fill material. We believe sampling of seepage water should be required for several years, and mitigation provided if water is found to contain harmful materials. We would also encourage Department of Fish and Wildlife involvement in the monitoring plan development.

3. Functional equivalency. While "no net loss" of acreage is important, *functional* replacement is the real measure of successful mitigation. The functional assessment does a relatively good job of discussing functions of the impacted wetlands, and general goals are set for mitigation sites, but we could find no clear demonstration of how the mitigation areas in Auburn, the Tyee golf course, and the Miller, Des Moines and Walker Creek enhancements will replicate lost wetland *functions* in the impacted wetlands. While there are scattered references to anticipated replacement functions, it is difficult to obtain a clear picture of equivalency, or to determine which lost functions are being replaced where. A number of proposed mitigations involve enhancement of upland buffers, for example, but this does not insure a replacement of lost wetland functions. A side-by-side comparison table showing functional losses and functional replacements would be helpful in determining adequacy of mitigation.

4. Cumulative watershed analysis. It is acknowledged that the project will directly impact 50 of the 117 wetlands (filling 18.37 of the 115 acres) in the Des Moines and Miller Creek:

watersheds. Some of the remaining wetlands may also become hydrologically and/or biologically isolated. A complex mosaic of wetlands, buffers and corridors supports a diversity of habitat and populations greater than simply the sum of the individual wetlands. Simplifying the system can impact both hydrology and biota in areas other than those directly impacted.

The impacted wetlands and mitigation areas are discussed individually, and in many locations, but we found no clear discussion or analysis of how the cumulative loss of wetlands will affect biotic resources and water quality parameters in the remaining wetland/stream systems. Cumulative analysis is admittedly a very complicated and difficult subject. But some basic discussion of cumulative impact, by watershed, that summarizes the overall impact in terms of wetland type and function losses, *and the resulting impact of these losses on the remaining aquatic system and associated biota* would help to provide a clearer picture of project impact. (For example, are some wetland types more disproportionately impacted than others? Where are isolation and fragmentation likely to occur? What impacts will removal of the wetlands and streambeds have on nutrients and other water quality parameters in the remaining system? etc.) Much of the data is probably already available, but it has not been pulled together in a way that easily allows a cumulative picture.

5. Performance Standards. Some of the performance standards mentioned throughout the document are written in a way that is unenforceable. For example, statements like "flows during most flow periods will exceed 0.7cfs" or "bed material will not increase *significantly*" (found in Table 5.1-7 of the Resource Mitigation Plan), are not enforceable because "most" and "increase significantly" are subjective, and one could debate about at what point these are really met. Performance standards should be re-written where necessary so that they are enforceable.

6. Alteration of mitigation plans. There are several statements in the documents to the effect that the Port may alter the approved mitigation vegetation or hydrology in areas within 10,000 feet of the runways, based on wildlife monitoring data. Since any project approval would be based on approved mitigation plans, the permit should contain a condition requiring that the Corps and Ecology be consulted prior to any alteration of wetland vegetation or hydrology.

7. Perpetual preservation. Although the Port is a public entity and therefore not required to post a performance bond for mitigation projects, we encourage the Corps to require that appropriate notice be placed on the title or deeds to ensure the mitigation areas are preserved in the future.