POLLUTION CONTROL HEARINGS BOARD
FOR THE STATE OF WASHINGTON

AIRPORT COMMUNITIES COALITION, Appellant, v. DEPARTMENT OF ECOLOGY and THE PORT OF SEATTLE, Respondents.	No. PCHB 01-160 ERRATA FOR PREFILED TESTIMONY OF JAMES C. KELLY, PH.D. AND PREFILED TESTIMONY OF JOSEPH BRASCHER

Respondent Port of Seattle hereby submits the attached errata pages to the Prefiled Testimony of James C. Kelley, Ph.D., and the Prefiled Testimony of Joseph Brascher.

With respect to the testimony of Dr. Kelley, three pages contained typographical errors that required correction. Redlines of those three pages are attached to this pleading. A corrected version of Dr. Kelley's testimony is provided with this pleading (an original plus three copies). The Port requests that the Board substitute the corrected testimony for the testimony currently in the Board's witness binders with the exception of the exhibits to Dr. Kelley's testimony, which was unchanged.

With respect to the testimony of Mr. Brascher, the final two lines of paragraph 39 of Mr. Brascher's testimony were inadvertently omitted, because different computer systems paginated the testimony differently. A copy of the revised page for Mr. Brascher's testimony, which includes the two omitted lines from paragraph 39, is attached to this pleading. As with Dr. Kelley's testimony, a corrected version of the Mr. Brascher's testimony (original and three copies) is provided for the Board's convenience. The Port requests that the Board substitute the attached

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corrected testimony for the prefiled testimony in the Board's witness books, with the exception of the exhibits to Mr. Brascher's testimony, which are unchanged.

Respectfully submitted this 14th day of March, 2002.

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identifications and boundary delineations between July 1998 and November 2000. The ACOE review of delineated wetland is documented in a *Memorandum for the Record (MFR): Field Review and Jurisdictional Summary* in February 2001. All modifications requested by ACOE during those site visits have been made and are reflected in the wetland mapping and analysis for the project.

15. Independent of the ACOE wetland determination, Ecology also reviewed wetland conditions and the wetland delineation. Ecology determined in July of 1998 that certain areas on the Vacca Farm that meet the wetland hydrology criteria but are exempt from federal regulations (the Prior Converted Cropland) would be considered wetland and waters of the State. Project impacts to these waters of the State have been identified and mitigation provided. The mapping of Prior Converted Cropland has also been provided in the wetland delineation or mitigation plans since 1999 (NRMP Figure 2.1-4). The mitigation plan provides on-site and off-site mitigation both for the fill impacts (0.92 acres), and for the 980 linear feet (0.25 acres) of the Miller Creek channel impacts.

16. Ecology assigns wetland ratings (Category I, II, III, and IV) based on rarity, general habitat conditions, and other features. Categories are assigned independent of any specific evaluation of all the wetland functions that a more detailed functional assessment would provide. While the rating approach helps identify a general ecological value that a wetland may provide, it cannot be used to infer what the specific functional performance of a wetland may be. Likewise, the ratings are assigned independent of the level of human disturbance or degradation that a wetland may have been subjected to. Most of the wetlands filled by the project are rated as Category II and Category III wetlands. Even the supposedly higher quality Category II wetlands here are functionally degraded wetlands. For example, the Category II wetlands that occur in the Vacca Farm area are degraded by farming and hydrologic alterations. The Category II Wetland 18 and Wetland 37 are functionally degraded by residential development, grazing, ditching, land clearing and logging.

17. In her testimony, Ms. Azous claims a large percentage of wetlands hydrologically connected to Miller Creek ~~as been~~ will be filled. Ms. Azous is ~~correct~~ incorrect. I have prepared graphs

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52. The following paragraphs discuss each of the functions assessed in the WFA report and describe how the mitigation plan replaces each of the functions that would be lost when the wetlands are filled. The functions considered are: (1) Resident/Anadromous Fish Habitat; (2) Passerine Bird Habitat; (3) Waterfowl Habitat; (4) Amphibian Habitat; (5) Small Mammal Habitat; ~~(4)~~(6) Organic Matter Export; ~~(5)~~(7) Groundwater Exchange; ~~(6)~~(8) Flood Storage/Desynchronization; and ~~(7)~~(9) Nutrient Retention/Sediment Trapping. The locations of the mitigation sites are mapped in Exhibit D.

53. Functions for Resident/Anadromous Fish. The new Miller Creek stream channel and in-stream enhancements at 4 locations will provide improved fish and other aquatic habitat because the features are designed with a number of beneficial features. The primary characteristics provided by the design are large woody debris (LWD), woody riparian vegetation, and substrate variability. Each of these features will enhance fish and aquatic habitat. Increased amounts of woody riparian vegetation will result in increased shade, allochthonous inputs (food sources in the form of coarse particulate organic matter [CPOM] and terrestrial invertebrates), and sources of woody debris. Increased LWD generally provides habitat complexity, including small plunge pools, fish cover, invertebrate substrates, variable water depths and velocities, etc. These conditions will provide nesting, resting, and forage habitat for fish and other aquatic life. Increased streambed variability in the form of gravel, wood, and CPOM will also increase the diversity of invertebrate habitat. The function of large woody debris and other organic matter in providing fish habitat and food resources for fish is well understood and documented.[16,17]

54. The channel is designed to provide fish habitat despite it gentle slope. The existing ditched channel provides limited fish habitat while the design features of the new channel will improve conditions for fish and invertebrates. The types of habitat and flow regimes that can be established in a low gradient creek have been considered and incorporated into the design. The channel design includes a geotextile liner for geotechnical reasons. This liner is very porous, far more porous than the peat soils

[16] See Chapter 5 in *Streamside Management: Forestry and Fishery Interactions*, E. Salo and T Cundy eds, Institute of Forest Resources, University of Washington, Seattle.

[17] See Chapter 12 of *Stream Ecology: Structure and Function of Running Waters,* J, Allen. 1995. Kluwer Academic Publisher, Boston.

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existing land uses that contribute pollutants to the wetlands and Miller Creek will be replaced by natural vegetation.[21]

- For areas within development footprints, existing pollution-generating areas within the acquisition area (e.g., lawns, streets and driveways) that currently lack water quality treatment facilities will be removed. These areas will be replaced with embankment and other facilities with stormwater management BMPs.
- For areas to remain undeveloped, but not specified as mitigation, the removal of residential and commercial land-uses will eliminate pollutant sources, including failing septic tanks, fertilizer, runoff, and other potential pollutants (pesticides, pesticide residues). If redevelopment of these areas occurs, then stormwater management standards for water quality treatment and runoff rates must be met at the time of development. These standards would exceed the baseline condition (lacking any stormwater BMPs), and maintain water quality benefits compared to the current condition.
- For areas in the Vacca Farm mitigation area, the restoration of farmed areas in the Miller Creek floodplain with native wetland vegetation will reducing erosion, pollutant sources, and increase the area's water quality treatment capacity to remove nutrients and pollutants from Miller Creek and stormwater runoff from adjacent areas.
- For Miller Creek and Wetland A17 mitigation areas, the enhancement of wetlands and buffers will eliminate pollutant sources, including failing septic tanks, fertilizer, runoff, and other potential pollutants (pesticides, pesticide residues). Planting of these areas native upland and wetland vegetation will reduce erosion, pollutant sources, and increase the area's water quality treatment capacity to remove nutrients and pollutants from Miller Creek and stormwater runoff from adjacent areas.
- For mitigation along on the Tyee Valley Golf Course and along Des Moines Creek, removal of golf course uses would remove fertilizer and pesticide runoff to the creek. Planting of these areas native upland and wetland vegetation will reduce pollutant sources and increase the area's capacity to remove nutrients and pollutants from Des Moines Creek and stormwater runoff from adjacent areas.

81. Amanda Azous[22] asserts that a loss in the wetlands alter the removal of an important plant nutrient, nitrogen. She states that eliminating the nitrogen removal capabilities of wetlands will alter the food web and increase the supply of nitrogen at the mouth of the creeks. She later (paragraph 22) argues that wetlands are "*important sources of nutrients and freshwater to coastal and estuarine environments*". ~~Theses~~ These are contradictory statements, and no evidence is offered to support either. In reality, the project will remove sources of pollutants to wetlands, Miller, Des Moines and Walker Creeks by removing land uses that contribute nitrogen and other pollutants to them. The replacement of

[21] The influence of land use on the water quality conditions of runoff water is well documented, and include studies in Washington (see *Fundamentals of Urban Runoff Management* R. Horner, J. Skupien, E. Livingston, and H. Shaver. 1994. page 38; as well as other regions (*Los Angeles County 1994-2000 Integrated Receiving Water Impact Report.* Los Angeles County Department of Public Works. 2000; *Sources of Pollutants in Wisconsin Stormwater.* Bannerman et al. 1999. Natural Science and Technology, 28:241-259).

[22] See *Pre filed testimony of Amanda Azous*, paragraph 10.

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embankment area. The groundwater outflow from PERLND 80 was then routed to the headwater wetland for Walker Creek.

RESULTS OF ANALYSIS

40. The HSPF model was run for the four-year study period. We determined the net effects to flow during the summer low-streamflow periods by comparing the modeled streamflow before project construction to modeled streamflow after project construction, with non-hydrologic impacts included as appropriate. Based on the previously described analyses, we determined the total net summer low-streamflow impacts to be 0.08 cfs for Des Moines Creek, 0.11cfs for Walker Creek and 0.00 cfs for Miller Creek. These results and supporting data were reported to Parametrix.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Executed at Tumwater Washington, this 13th day of March 2002.

Joseph Brascher

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