BEFORE THE POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

AIRPORT COMMUNITIES COALITION, Appellant, v. STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY; and PORT OF SEATTLE, Respondents.	PCHB No. 01-133 DECLARATION OF KATIE WALTER

Katie Walter declares as follows:

1. I am over the age of 18, am competent to testify, and have personal knowledge of the facts stated herein.

2. I am a principal wetland scientist at Shannon & Wilson Inc. I have been employed at Shannon & Wilson, Inc. since October 1994. In my current position I supervise junior level wetland biologists, and am instrumental in hiring, training, mentoring and evaluating their performance. From June 1991 through October 1994 I worked as a wetland biologist for Pac Tech Engineering in Tacoma, Washington. Prior to that I worked as a project biologist for Woodward Clyde on the natural resource impacts resulting from the Exxon Valdez oil spill.

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3. I received a bachelors degree in botany in 1990 from the University of Washington. I am a certified Professional Wetland Scientist with the Society of Wetland Scientists, and have held a position on the Pacific Northwest chapter board for many years. As a consulting biologist in the last ten years I have worked on hundreds of projects throughout the Pacific Northwest and Alaska performing natural resource inventories, wetland delineations, developing mitigation plans, and permitting for large complex multi-jurisdictional projects. I have provided extensive support to municipal and government clients working directly with several agencies. I have developed mitigation plans, performed botanical surveys, conducted functions and values assessments, developed conceptual and final mitigation plans, performed regulatory review, managed permitting, and provided construction oversight for numerous projects. In addition, I have applied my technical expertise in mitigation design and applied ecological concepts to help clients plan for expected permit requirements, implement permittable project designs, and meet project schedules.

4. I have assisted in the development of a series of seminars presented on the federal permit process for in-water work, with emphasis on the Endangered Species Act. The seminars covered Army Corps of Engineers (Corps) permit requirements for emergency, maintenance, and construction activities. They included a discussion of the Corps jurisdiction under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, as well as requirements of the Endangered Species Act (ESA). Also presented were federal programs administered by the State, which included Section 401 Water Quality Certification (401 Certification) and the Coastal Zone Management Act. The seminars covered permitting requirements in the states of Washington, Oregon, Idaho, Western Montana, and Northern California. In addition, I was a lead technical presenter for a seminar regarding the impacts of the ESA on development projects. I developed an educational program presented to engineering and architectural firms on the ESA and how recent changes may impact their projects.

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5. Recently, I completed the Sammamish River Sub-basin Wetland Functions Assessment, using the Washington State Wetland Functions Assessment Methodology, in which I assessed nine wetland assessment units in the Sammamish River basin. This is the first project of its kind done at a watershed level. The purpose of the assessment is to evaluate the current functions of each wetland and gain an understanding of the role each plays in the basin.

6. In January 2001 Shannon & Wilson, Inc. contracted with the Department of Ecology (Ecology) to provide natural resources and mitigation plan review services associated with the Port of Seattle's (Port) proposed Third Runway and related Master Plan projects. The purpose of that review was to assist Ecology in developing conditions in the event a 401 Certification was issued to the Port.

7. I am the Shannon & Wilson project manager for that contract and have completed review of the Port's Natural Resources Mitigation Plan (NRMP) and supporting documentation. Through my review I have assisted Ecology staff in developing related permit conditions for the 401 Certification issued on August 10, 2001. I am continuing to assist Ecology through the appeal process.

Project History

8. As part of its Master Plan update improvements for the Seattle-Tacoma International Airport ("STIA"), the Port proposes to construct an 8500 foot parallel third runway west of the existing runway and relocate the South 154th/156th Way bridge. Additional activities proposed by the Port include:

- Excavation and land clearing on 1.10 acres of jurisdictional wetlands at onsite borrow sources located south of the existing runways to provide fill material for the third runway;
- Filling 0.14 of an acre to construct two new Runway Safety Areas on the north end of the existing runways;

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- Filling an additional 2.78 acres in wetlands one mile south of the existing terminal to construct the South Aviation Support Area for airport support and maintenance facilities;
- Filling about 8.17 acres of forested wetlands, 2.98 acres of scrub-shrub wetland, and 7.22 acres of emergent wetlands.

9. The proposed work will also require the fill and reconstruction of approximately 980 linear feet of Miller Creek, about 1290 linear feet of drainage channels in the Miller Creek basin, and 100 linear feet of drainage channel in the Des Moines Creek basin. *See* Revised Corps Public Notice, December 27, 2000. The fill activities will also impact approximately 5.24 acre-feet of the Miller Creek 100-year floodplain. *See* NRMP, December 2000.

10. Direct permanent impacts to wetlands total 18.37 acres of wetland. In addition, long-term temporary impacts will occur to 2.05 acres of wetlands as a result of construction of the Master Plan improvement projects. The 2.05 acres of temporary impacts includes 1.15 acres of forested, 0.46 acre of scrub shrub, and 0.44 acre of emergent wetlands. *See* Revised Corps Public Notice, December 27, 2000.

11. The temporary wetland impacts will result from construction of temporary stormwater management facilities, implemented during construction to protect down stream water quality. Upon completion of construction, the temporary stormwater management facilities will be removed. Where these facilities overlap with existing wetlands, the wetland areas will be restored. As a result of the long-term impacts and temporal loss of wetland functions caused by the installation of the temporary stormwater facilities, Ecology required additional mitigation as described in Condition D (4) of the 401 Certification. This mitigation included development of a mitigation plan for enhancement of the wetland and riparian corridor and buffers associated with the Wetland A17 complex and Water D.

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12. To address the direct permanent impacts to wetlands caused by the project, the Port developed a Natural Resource Mitigation Plan ("NRMP"). The NRMP describes actions the Port will take to:

- Avoid and minimize impacts to wetlands and streams by reducing impacted areas;
- Restore temporarily impacted wetlands caused by project construction; and
- Compensate for the impacts by providing in-kind mitigation that replaces ecological function lost by filling wetlands and streams.

13. Table 4.1-3 of the NRMP, attached hereto as Exhibit 1, sets forth the summary of wetland mitigation credit for the proposed STIA Master Plan improvements. The table shows that the in-basin mitigation being provided by the Port is 102.27 acres, which provides 29.82 acres of in-basin mitigation credit. The in-basin wetland mitigation includes restoration of the 6.6 acre Vacca Farm wetland; 21.46 acres of wetland enhancement; 50.66 acres of buffer enhancement; and 23.55 acres of wetland preservation. In excess of 65 acres of out-of-basin mitigation is being provided through 29.98 acres of creation, 19.5 acres of wetland enhancement, and 15.9 acres of buffer enhancement. The total mitigation area in and out of basin totals over 167 acres. The total in-basin mitigation area divided by wetland impact (18.37 acres plus 2.05 acres of temporary impacts) provides a 5:1 aerial replacement ratio. The total mitigation *credit* sought for the wetland impacts (18.37 acres plus 2.05 acres of temporary impacts) provides a 3.6:1 replacement ratio.

14. The in-basin mitigation being proposed by the Port will provide much needed protection for highly urbanized wetland and stream systems, including Miller, Walker, and Des Moines Creeks. Over 300 homes, their driveways, septic systems, and other amenities that supported those structures will be (and are being) removed as a part of the watershed restoration effort. This restoration provides a unique opportunity to improve the functions within the watershed, especially in Miller Creek. Approximately 102 acres of in-basin

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mitigation is proposed to restore natural wetlands and stream conditions in developed portions of the Miller and Des Moines Creek basins. Specifically, the in-basin mitigation proposes to:

- Restore and enhance riparian wetlands in Miller, Walker, and Des Moines Creeks;
- Restore and enhance salmon habitat;
- Enhance stream buffers;
- Remove existing land uses that are detrimental to adjacent wetlands and streams; and
- Protect water quality and stream hydrology.

15. In addition, the 65 acres of out-of-basin mitigation, located in Auburn, is proposed to replace wildlife habitat functions that cannot be mitigated for onsite. The Auburn mitigation site will enhance degraded wetlands and upland farm fields to a high quality diverse wetland ecosystem. Although this mitigation site is necessary to mitigate for the wildlife habitat functions that cannot be replicated on site, it will also enhance a suite of other wetland functions.

16. The NRMP gives a complete description of the goals and objectives of each mitigation project. It provides detailed performance and monitoring standards. Through monitoring and adaptive management the Port proposes to modify the compensatory mitigation to ensure it achieves its goals.

17. The NRMP developed by the Port was done using best available science. In my opinion, based on our understanding of wetland science, this plan provides adequate mitigation for the impacts created by the proposed project.

Response to Appellant's Criticisms

18. I have reviewed the written declaration of Amanda Azous submitted as part of the Appellant's motion for stay. I believe errors in Ms. Azous' analysis have resulted in flawed conclusions. I have the following responses to Ms. Azous' comments.

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19. Table 1 provided on page 5 of Ms. Azous' declaration incorrectly identifies the area of mitigation activities being provided by the Port and completely omits the acreage of wetland preservation. The following table prepared by Erik Stockdale of Ecology provides the corrected acreage, and includes the wetland preservation proposed. .

Compensatory Mitigation for 18.37 Acres Permanent Wetland Impacts						
Location	**Wetland creation**	**Wetland restoration**	**Wetland enhancement**	**Wetland preservation**	**Upland buffer enhancement**	**Total area**
In-basin mitigation	0	6.6	21.46	23.55	50.66	102.27
Out-of-basin mitigation	29.98	0	19.50	0	15.9	65.38
Total mitigation	29.98	6.6	40.96	23.55	66.56	**167.65**

Mitigation ratio	1:1	1:1	1:2	1:10	1:5	**Total credit**
In-basin mitigation credit	0	6.6	10.73	2.36	10.13	29.82
Out-of-basin mitigation credit	29.98	0	9.75	0	3.18	42.91
Total mitigation credit	29.98	6.6	20.48	2.355	13.31	**72.73**

20. Ms. Azous failed to recognize that temporal loss of wetland functions were addressed in the mitigation plan. The mitigation credit ratio provided by the applicant allows for 3.6 acre credits to one acre lost. Because it is recognized that temporal losses occur, mitigation ratios were developed through the scientific community as an acceptable way to reach equivalency. The NRMP is designed to replace and enhance the functions of impacted wetland habitat and has accounted for temporal losses.

21. In paragraphs 15 and 17, Ms. Azous contends that Ecology failed to address the 2.05 acres of temporary impacts associated with the construction of temporary stormwater facilities. These impacts are not newly realized, they have been identified by the Port at least since 1999. Through the process of review of the NRMP and gaining a better understanding of

the overall impacts, Ecology determined the temporal loss of functions for those 2.05 acres of temporary impact needed to be mitigated, and required permanent mitigation. Ecology required the restoration of the Wetland A17 complex to mitigate for those temporal impacts.

22. In paragraph 9, Ms. Azous states that there are only 37.42 acres of wetland that remains hydrologically connected to Miller Creek within the entire watershed. This is misleading and unsubstantiated. It underestimates the wetland area and therefore overstates the potential impact. The Port estimated that they found approximately 25% more additional wetlands after they obtained legal access to the parcels within the Master Plan than they expected based on the inventories and delineations done for those areas in the past. An accurate determination of wetlands that remain within the watershed cannot be determined unless formal delineations are completed. Table 2.1-1 of the NRMP states 51.33 acres of wetland are in the Miller creek drainage basin within the Master Plan area. This total does not include the wetlands inventoried outside of the Master Plan area by the Cities of Des Moines, Burien, and Normandy Park. It is unclear how Ms. Azous estimated the actual wetland acreage remaining hydrologically connected to Miller Creek since much of the Master Plan area is off limits to visitors, and wetland inventories generally miss large areas of wetland.

23. Ms. Azous further states that 21 percent of the wetlands remaining in the entire watershed (and 27 percent in the upper watershed) will be eliminated by the Port's proposal. This is misleading since it does not account for the 6.6 acres of wetland restoration, and the 21.46 acres of wetland enhancement being provided by the Port. At the credit ratios agreed upon by Ecology and the Port, this provides 17.33 acres of mitigation credit and an overall net gain in wetland functions.

24. In paragraph 21 of Ms. Azous' declaration she incorrectly contends that the excavation required to restore flood storage at Vacca Farm will lack adequate hydrology to fully restore the wetlands functions. In fact, the design of the mitigation will ensure that adequate hydrology is present. Water in the flood storage portion of the Vacca Farm wetland

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will drain relatively rapidly after floodwater recedes since it is facilitated by the proposed shallow swale. This swale is being constructed to minimize standing water in the wetland and therefore diminish bird strike hazards. Over time this area will become a scrub-shrub wetland that transitions to a forested wetland. The channel will slowly silt in. Once vegetation is established, standing water will be less visible to birds thereby reducing the bird strike hazard. It will no longer be necessary to facilitate removal of the standing water, and no maintenance to the channel will be required.

25. In a related point, Ms. Azous states that the Vacca Farm site will lack adequate hydrology to fully restore its functions, because the majority of the Vacca Farm wetland will receive water only during extreme storm events such as a 100-year flood. That view is inaccurate, based on the information provided by the Port that this system is primarily a groundwater supported system, and does not rely on flooding to maintain the existing wetland hydrology. As a result, the existing and restored wetlands in this area will maintain wetland functions, which will significantly improve over time as the system recovers from past farming activities.

26. In paragraph 7, Ms. Azous contends that the only mitigation activity that will directly provide all wetland functions will be out of basin. This statement is misleading since it does not account for all the benefits of the in-basin mitigation, and since the proposed mitigation clearly provides for a net gain in wetland mitigation credits and a no **net** loss of wetland functions and values. The mitigation sites have been designed to replace the suite of functions impacted by the project. Although a subset of the wildlife habitat function (waterfowl habitat) will not be an in-basin target in this mitigation plan because of bird strike hazards, overall, the NRMP shows that there will be a net gain in functions and values in this watershed.

27. Throughout Ms. Azous' declaration she contends that the wetlands being eliminated are of high quality, and cannot be adequately replicated through mitigation. She

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also contends that "enhancement of Miller Creek riparian buffer and remaining wetlands could actually reduce those areas' effectiveness for water quality and storage functions because of disturbance to the soil." Azous Declaration at ¶ 19, line 13. Ms. Azous fails to acknowledge several things. First, even the Category II wetlands, the highest category wetlands found in the Master Plan, are degraded wetlands. Most are early successional forested wetlands, dominated by blackberry and willows in the shrub layer, and non-native emergent. In addition, more than 300 homes and related amenities will be removed from the basin and farming activities will stop within the project area. Unregulated use of the wetlands, streams and buffers have been going on since the area was populated. In many areas, homes are within the wetlands and buffers, mowing and clearing have occurred up to the edge of the streams, the streams have been rechannelized, and/or tires and concrete bulkheads are in the streams. Unregulated use of herbicides, pesticides and fertilizers are a well known cause of major pollution within urban environments. In addition, aging septic systems are a known major contributor to eutrophication of wetlands, lakes and streams. The areas not covered by roads, houses and driveways are dominated by noxious weeds, lawns, and landscaped yards. Enhancement of the entire area with native plants and removal of the weeds will provide better vegetative cover in many areas and promote biological process, and ecologic restoration of this area. Unpermitted crossing of the streams and wetlands, and impoundments will be removed, in addition to removal of bulkheads and riprap. Noise, direct human disturbance, unregulated stormwater runoff, and major pollutant sources will be removed as a result of the removal of homes. Restoration of an area that includes a large portion of the overall watershed is unprecedented in any urban watershed in this region.

28. Upland buffer enhancement is integral to successful mitigation. In Ms. Azous' May 24, 2000 letter to the Corps she acknowledges that buffers are necessary to prevent direct loss of wetland functions. However, in her declaration at paragraphs 6, 19 and 29, she diminishes the need for buffer enhancement for this project by contending that mitigation

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credit is not valid for buffer enhancement. Despite Ms. Azous' assertion to the contrary, buffer enhancement in combination with wetland mitigation is a scientifically accepted and suitable means for receiving mitigation credit.

29. In paragraph 16, Ms. Azous argues that where a wetland is partially filled, the entire acreage of the wetland should be included in the tally for permanent wetland impacts. Several wetlands, such as Wetlands 18 or 37, will be partially filled. However, because the portion of the wetland not being filled will continue to function as a wetland, it is inappropriate to include the entire wetland acreage in the permanent impact calculation. For example, the area remaining of Wetlands 18 and 37 is directly adjacent to Miller Creek, and the remaining wetland area benefits from the proximity to the stream, which provides a riparian corridor. The most sensitive portion of the wetland system will remain and most functions within the remaining portion will be preserved.

30. Ms. Azous contends that meeting performance standards has been a major issue for many mitigation projects. One of the leading causes of this failure is the lack of maintenance after implementation of the site wetland. This concern is addressed by the monitoring and maintenance requirements imposed on the Port, which are more stringent for this project than any other permitted project that I am aware of. Furthermore, lack of follow up post construction will not be an issue for the Port since one of the permit requirements allows for funding of three to five full time Ecology employees for oversight.

Conclusion

31. The NRMP and supporting documentation provided by Port outlines the goals, objectives, performance standards, and monitoring protocols for mitigation at the STIA and Auburn sites. These plans, in my opinion provide sufficient mitigation for the expected direct and indirect impacts to wetlands and other aquatic areas. Based on my evaluation of the proposed mitigation, I feel Ecology has reasonable assurance that construction of the project with the proposed mitigation will not result in violation of state water quality standards.

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

DATED this 28 day of September 2001.

Katie Walter

KATIE WALTER

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Katie Walter Declaration

Exhibit 1

Table 4.1-3. Summary of wetland mitigation credit for Seattle-Tacoma International Airport Master Plan Update improvements.

Mitigation	Mitigation Area (acres)	Mitigation Credit
In-Basin		
Wetland Restoration – Credit ratio 1:1		
Vacca Farm (prior converted cropland and other upland)	6.60	6.60
Wetland Enhancement – Credit ratio 1:2		
Vacca Farm (Farmed Wetland, Other Wetlands, Lora Lake)	5.70	2.85
Wetlands in Miller Creek Wetland and Riparian Buffer	10.25	5.12
Tyee Valley Golf Course	4.50	2.25
Wetland in Des Moines Creek Buffer	1.01	0.51
Subtotal	**28.06**	**17.33**
Buffer Enhancement- Credit ratio 1:5		
Miller Creek Buffer, South of Vacca Farm	40.86	8.17
Vacca Farm	4.58	0.92
Lora Lake	0.27	0.05
Tyee Valley Golf Course Mitigation Area Buffer	1.57	0.31
West Branch Des Moines Creek Buffer	3.38	0.68
Subtotal	**50.66**	**10.13**
Preservation – Credit Ratio 1:10		
Borrow Area 3 Wetland	2.35	0.24
Borrow Area 3 Buffer	21.20	2.10
Subtotal	**23.55**	**2.34**
Total In-Basin Mitigation[a, b]	**102.27**	**29.80**
Out-of-Basin		
Wetland Creation[c] - Credit ratio 1:1		
Forest (17.20 acres), shrub (6.0 acres), emergent (6.20 acres), and open water (0.60 acres)	29.98	29.98
Wetland Enhancement - Credit ratio 1:2	19.50	9.75
Buffer Enhancement - Credit ratio 1:5	15.90	3.18
Total Out-of-Basin Mitigation	**65.38**	**42.91**
Total Mitigation	**167.65**	**72.71**

a Mitigation credit has not been assigned for relocating a portion of Miller Creek channel, instream enhancement projects, drainage channel replacement, Des Moines Creek buffer enhancement, or a $300,000 trust fund for watershed restoration.

b Mitigation areas in the Des Moines and Miller Creek watersheds exceed 102 acres. In- basin mitigation area divided by wetland impact (18.37 acres permanent plus 2.05 acres temporary) provides a 5:1 aerial replacement ratio.

c Based on maps of hydric soils, mitigation can be also characterized as restoration.