POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

AIRPORT COMMUNITIES COALITION, Appellant, CITIZENS AGAINST SEA-TAC EXPANSION, Intervenor/Appellant, v. STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY; and PORT OF SEATTLE, Respondents.	PCHB No. 01-160 RESPONDENT DEPARTMENT OF ECOLOGY'S PRE-HEARING BRIEF

I. INTRODUCTION

The hearing in this matter regards the Airport Communities Coalition's and Citizens Against Sea-Tac Expansion's (collectively ACC) appeal of the Department of Ecology's (Ecology) Order No. 1996-4-023525 (the 401 Certification),[1] which constituted a Clean Water Act (CWA) § 401 Certification, an RCW 90.48 Order, and a Coastal Zone Management Act (CZMA) Consistency Concurrence determination for the Port of Seattle's (Port) proposed

[1] Ecology initially issued Order No. 1996-4-02325 on August 10, 2001. Ecology subsequently rescinded that order and issued Order No. 1996-4-02325 (Amended-1) on September 21, 2001. Those orders will be collectively referred to as the 401 Certification.

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Master Plan Update (MPU) Improvements for the Seattle-Tacoma International Airport (STIA). The evidence and testimony presented to the Pollution Control Hearings Board (Board) will demonstrate that Ecology appropriately issued the 401 Certification. In addition, the hearing will show that the ACC has failed to meet its burden of proof and hence the Board should affirm Ecology's decision.

II. BACKGROUND

Through testimony and exhibits Ecology expects to prove the following at hearing:

The terms of the 401 Certification were developed through extensive coordination with Ecology's experts on wetlands science, hydrology, stormwater management, water quality, and toxics.

The Port identified a number of projects in its MPU in order to allow it to efficiently meet existing and future regional air travel demands. In its Joint Aquatic Resources Permit Application (JARPA) the Port states:

> The airfield operates inefficiently during poor weather because it accommodates aircraft in a single arrival stream only. As a result, significant arrival delay occurs during poor weather. Aircraft are either held on the ground in their originating city, slowed en route, or they are placed in holding patterns to await clearance to land at STIA.

To address this concern, the Port identified several improvement projects through a master planning process. Some of the MPU projects impact wetlands in the Miller and Des Moines Creek watersheds. Specific projects with direct impacts to wetlands, floodplains, stream, and drainage channel impacts include:

1. Adding an 8,500 foot long third parallel runway with associated taxiways and navigational aids on an embankment consisting of 17 to 20 million cubic yards of imported fill.
2. Establishing standard Runway Safety Areas for the existing runways.
3. Relocating South 154th Street north of the extended runway safety areas and the new third runway.
4. Using on-site borrow sources for the third runway embankment.

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Other components of the MPU Improvements include construction of the proposed South Aviation Support Area (SASA), the proposed stormwater management system to manage runoff from the new impervious surfaces, and the proposed relocation of Miller Creek. The major plans that Ecology reviewed for this project included the Natural Resource Mitigation Plan (NRMP), the Comprehensive Stormwater Management Plan (CSMP), and the Low Flow Analysis and Summer Low Flow Impact Offset Facility Proposal. In order to construct these projects, the Port needs to obtain a CWA § 404 Permit (404 Permit) from the Army Corps of Engineers (Corps) and a 401 Certification and CZMA consistency concurrence from Ecology.

The testimony and evidence presented by Ecology will establish that there is reasonable assurance that the Port's project as proposed and conditioned in the 401 Certification will meet applicable water quality standards.

III. ARGUMENT

A. Legal Standards

1. Standard of Review And Burden Of Proof

The Board has jurisdiction over this matter and the parties under Chapters 43.21B and 90.48 RCW. The Board's scope and standard of review is *de novo* pursuant to WAC 371-08-485.[2] *U.S. Dep't of Energy v. Dep't of Ecology*, PCHB No. 97-1157 (1998). Under *de novo* review the parties are allowed to present all relevant evidence to the Board so that it can make an informed and final decision. In an appeal of a 401 Certification, the Board decides *de novo* whether the proposed project meets applicable water quality standards and that determination is "based on the proposed project as it is presented to the Board" at the hearing. *Barrish & Sorenson Hydroelectric v. Dep't of Ecology*, PCHB No. 94-193 (Conclusion of Law 4) (1995).

[2] WAC 371-08-485(1) provides: "[h]earings shall be formal and quasi-judicial in nature. The scope and standard of review shall be de novo unless otherwise provided by law."

The *de novo* review standard does not preclude the Board from affording due deference to Ecology on the technical challenges raised by the ACC. Due deference should be afforded to Ecology because of its specialized knowledge and expertise. *Dep't of Ecology v. P.U.D. 1 of Jefferson County*, 121 Wn.2d 179, 201, 849 P.2d 646 (1993), *aff'd*, 511 U.S. 700, 114 S. Ct. 1900, 128 L. Ed. 2d 716 (1994). The Supreme Court has agreed that deference to Ecology is appropriate when the case is "based heavily on factual matters, especially factual matters which are complex, technical, and close to the heart of the agency's expertise." *Hillis v. Dep't of Ecology*, 131 Wn.2d 373, 396, 932 P.2d 139 (1997). The ACC raises numerous technical issues ranging from ground water and surface water modeling to wetland mitigation and functions. Because these technical issues are encompassed within Ecology's expertise, the Board lends great weight to Ecology's decisions regarding factually complex and technical areas.[3]

In addition, on matters of legal interpretation the Board lends great weight to Ecology's interpretation of statutes and rules that it is charged with administering. *See Kaiser Aluminum v. Dep't of Ecology*, 32 Wn. App. 399, 404, 647 P.2d 551 (1982); s*ee also Federated American Ins. Co. v. Marquardt*, 108 Wn.2d 651, 656, 741 P.2d 18 (1987) (ruling that the Insurance Commissioner's "interpretation of his own regulation is entitled to great weight"). Even greater deference should be afforded to an agency's construction of its own statutes and regulations where technical expertise is required in its administration. *Kaiser Aluminum*, 32 Wn. App. at 404. Ecology's construction of the water quality regulations and other Ecology rules and regulations that it implements and administers in a 401 Certification process should be given great deference.

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[3] *See, e.g., Hubbard v. Dep't of Ecology*, 86 Wn. App. 119, 123, 936 P.2d 27 (1997) (holding in the context of a hydraulic continuity analysis that Ecology's conclusions are "entitled to great weight" due to its expertise); *Harvest States Cooperatives v. Dep't of Ecology*, PCHB No. 94-169 (Conclusion of Law VIII) (1995) (ruling that Ecology was "entitled to great deference" in the methods of analysis it employed in deciding to require Harvest States to obtain a water quality discharge permit).

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The burden of proof in this case falls squarely on the ACC. WAC 371-08-485(2); *Friends of the Earth v. Dep't of Ecology*, PCHB Nos. 87-63 & 87-64 (Conclusion of Law IV) (1988). WAC 371-08-485(2) provides:

> The issuing agency shall have the burden of proof in cases involving penalties or regulatory orders. In other cases, the appealing party shall have the initial burden of proof.

Ecology's issuance of a 401 Certification is similar to that of a permit decision and thusly the burden falls on the party challenging a certification. *See, e.g., Port Townsend Paper Corp. v. Dep't of Ecology*, PCHB No. 98-77 (1999) (ruling that the appellant had the burden of proof when challenging the opacity limitations that Ecology placed in the appellant's air permit). A CWA 401 Certification and CZMA consistency concurrence are neither penalty actions nor regulatory enforcement orders and, therefore, the ACC bears the burden of proof in the appeal at bar.[4]

2. Reasonable Assurance Standard

Ecology's 401 Certification ensures that the Port's project will be in compliance with applicable water quality laws under the "reasonable assurance" standard. A 401 Certification must be based on a valid finding that "there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards." 40 CFR § 121.2(a)(3); *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700, 712, 114 S. Ct. 1900, 128 L. Ed. 2d 716 (1994). A 401 Certification means the state has reasonable assurance there will be compliance with water quality laws. *Friends of the Earth*, PCHB No. 87-63 (Conclusion of Law II).

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[4] *See*, e.g., *Bowers v. Pollution Control Hearings Board*, 103 Wn. App. 587, 598-99, 13 P.3d 1076 (2000), *review denied* 144 Wn.2d 1005, 29 P.3d 717 (2001) (holding that the Board properly assigned the burden of proof to the appellant who was challenging an air order establishing certain air emission limits and pollution control technologies). The *Bowers* court stated that "WAC 371-08-485(2) typically applies when an agency issues an enforcement order alleging certain violations or seeks penalties for violations . . . [t]he instant appeal, however, is not strictly an enforcement order. It is more akin to appeals of emission or effluent limits found in permits, where the burden of proof is placed on the party contending that the limit does not satisfy statutory authority or regulatory requirements." *Id.* (Footnotes omitted.)

In order to overturn a 401 Certification, the appellant "must establish by a preponderance of the evidence that Ecology did not have 'reasonable assurance' the applicable provisions [of the Clean Water Act and state water quality standards] would be complied with." *Friends of the Earth*, PCHB No. 87-63 (Conclusion of Law IV). The preponderance of the evidence standard means that the ACC must proffer more than a guess or mere speculation that water quality standards will not be met by the project. *See Friends of the Earth*, PCHB No. 87-63 at 28.

B. Summary of Ecology's Case

1. Public Notice Requirements Met

Ecology followed the public notice and comment requirements for the 401 Certification. Public notice is triggered by the submission of an application for a 401 Certification or CZMA consistency concurrence. WAC 173-225-030; 15 CFR § 930.61(a). In compliance with these provisions, public notice of the project was provided by means of the joint Corps and Ecology Public Notice issued by the Corps on December 27, 2000.[5] Comments were received during the formal comment period that ran from December 27, 2000 to February 16, 2001.[6] Ecology continued to receive and review public comments submitted after the close of the formal written comment period.[7] The Corps and Ecology held a joint public hearing regarding the project on January 26 and 27, 2001. These activities constitute full compliance with applicable public notice and comment requirements.

Ecology was not required to conduct additional public notice when it issued the Amended 401 Certification on September 21, 2001 as the amendment did not result in changes to the proposed project and, thus, no new application was required. *See* WAC 173-225-030; 15 CFR § 930.61(a). The Amended 401 Certification adjusted only the conditions that applied to the project and, because the project itself was not changed,

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[5] *See* Ecology Exhibit 2132.
[6] *Id.*
[7] *See* Direct Testimony of Ann Kenny at ¶ 2.

submission of a new application was not warranted. Moreover, Ecology previously determined on August 10, 2001 that the project was consistent with Washington's Coastal Zone Management Program (CZMP), and due to the fact that only the project conditions were adjusted, additional public notice was not required. The public notice and comment process that Ecology followed for the 401 Certification complied with WAC 173-225-030 and 15 CFR § 930.61(a).

2. Scope Of 401 Certification Is Appropriate

Under CWA § 401(a)(1), an applicant for a federal license or permit for construction of a facility, which may result in a discharge into navigable waters, shall obtain from the state where the discharge occurs a certification that any such discharge will comply with applicable water quality standards. 33 U.S.C. § 1341(a)(1). In reviewing an application for a 401 certification, the state can consider the water quality impacts of the proposed project, not just those of the anticipated discharge. *PUD No. 1 of Jefferson County*, 511 U.S. at 710-11, 114 S. Ct. 1900, 128 L. Ed. 2d 716. The conditions in a 401 Certification then become conditions of the federal license or permit. 33 U.S.C. § 1341(d).

In this case, the Port seeks a 404 Permit from the Corps and a 401 Certification from Ecology to construct the projects identified in its JARPA. The 404 Permit and, therefore, the 401 Certification, have a limited life. See Corps Public Notice (Ecology Exhibit 2132); 401 Certification Condition B(2). In recognition of that fact, Ecology also issues a 401 Certification as a ch. 90.48 RCW order, thereby ensuring that conditions that might otherwise expire with the 404 Permit continue into the future. In addition, where an applicant has an individual NPDES permit to operate its facility, Ecology will incorporate appropriate 401 Certification conditions into that permit, thus allowing for future enforcement of those conditions.

The breadth of the 401 Certification issued to the Port is appropriate and within the authority granted Ecology. As discussed above, Ecology analyzed the project's impacts on

water quality and, where appropriate, crafted conditions for the 401 Certification requiring the Port to address those impacts and monitor aspects of the project. The Port operates the airport under an individual NPDES permit, which is presently under review for renewal. In that process, Ecology will include appropriate 401 Conditions into the renewed NPDES permit. *See, e.g.*, 401 Condition J(2)(a). By utilizing the authority of ch. 90.48 RCW and incorporating conditions into the Port's NPDES permit, Ecology has guaranteed that conditions in the 401 Certification will continue beyond the expiration of the 404 Permit.

3. CZMA Consistency Concurrence Properly Granted

The Port's project will occur in Washington's coastal zone thus requiring the Port to obtain a CZMA consistency concurrence statement from Ecology.[8] The process for determining consistency with Washington's Coastal Zone Management Program (CZMP) involves the following steps: (a) review of the project to determine whether appropriate water quality authorizations have been obtained; (b) review of any SEPA documents submitted for the project to determine whether SEPA has been completed; (c) verify that, where applicable, appropriate shoreline management authorizations have been obtained; and (d) verify that, where applicable, appropriate Clean Air Act authorizations have been obtained.[9] After this review, Ecology determines whether the proposed project is consistent with Washington's CZMP. If consistency is found, a concurrence letter is issued to the applicant. If the project is found not to be consistent with Washington's CZMP, a letter objecting to consistency is issued.[10]

The Port submitted an application for Certification of Consistency with Washington's CZMP. In reviewing the Port's application, Ecology verified that the Port had complied with the enforceable policies of Washington's CZMP.[11] In that review Ecology verified that (a) the

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[8] *See* Direct Testimony of Gordon White at ¶¶ 8-9.
[9] *Id.* at ¶ 22.
[10] *Id.* at ¶ 23.
[11] *See* Direct Testimony of Ann Kenny at ¶ 46.

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Port had completed its SEPA review;[12] (b) the Port obtained a shoreline exemption from the City of Auburn for the proposed wetland mitigation site; (c) the Port has a valid individual NPDES permit for the airport site, has obtained a general NPDES stormwater permit for construction of the Auburn mitigation site, and was issued a 401 certification for the proposed project; and (d) the Port had the appropriate discharge permits from the Puget Sound Clean Air Agency and the scope of the project had not changed so as to alter Ecology's determination that the SeaTac area was in compliance with National Ambient Air Quality Standards for carbon monoxide and nitrous oxide.[13] The sole outstanding issue for CZMP consistency is whether Ecology properly determined in issuing the 401 Certification that it had reasonable assurance that the project as proposed and conditioned will meet applicable water quality standards. As demonstrated in this brief and as will be proven at trial, Ecology's issuance of the 401 Certification was appropriate and, therefore, Ecology properly concurred that the Port's project is consistent with Washington's CZMP.

4. Wetland Impacts Are Fully Mitigated

The 401 Certification adequately compensates for impacts to wetlands created by the Port's construction of its proposed project. In addition, the wetland mitigation will result in net benefits to the highly urbanized and degraded Miller, Walker and Des Moines Creek basins. The Port's project will result in the filling of 19.29 acres of wetlands.[14] Construction activities will temporarily impact an additional 2.05 acres of wetlands, which has been treated as a permanent impact that must be mitigated. The 401 Certification requires the Port to restore and enhance ecological and hydrological functions to 176 acres of land, with approximately 111 acres of the mitigation occurring on-site. The in-basin mitigation includes the restoration of over 9 acres of wetlands, enhancement of more than 22 acres of wetlands, approximately 55

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[12] The Board recently granted the Port's Motion for Summary Judgment on the issue of whether the Port and Ecology had complied with SEPA.

[13] *See* Direct Testimony of Ann Kenny at ¶ 46.

[14] The impact total is derived from the 18.37 acres of impact identified in the Corps Public Notice plus 0.92 acres of prior converted cropland that Ecology regulates under ch. 90.48 RCW.

acres of wetland buffer enhancement and riparian corridor restoration, and preservation of 2.35 acres of wetlands and 21.20 acres of wetland buffer. The 65.38 acres of out-of-basin mitigation is provided through the creation of 29.98 acres of wetlands, enhancement of 19.5 acres of wetlands and 15.9 acres of wetland buffer.[15]

As described in the testimony of Erik Stockdale and Katie Walter, the required mitigation meets Ecology's wetland mitigation policies, provides meaningful mitigation to the impacted basins, and includes appropriate monitoring and performance standards that ensure that the mitigation will be successfully implemented.[16] The off-site mitigation is consistent with Ecology's Alternative Mitigation Policy Guidance[17] and the provisions of ch. 90.74 RCW.[18] Ecology has reasonable assurance that through the mitigation detailed in the NRMP, in combination with the conditions in the 401 Certification, the Port's project will meet applicable water quality standards with respect to impacts to wetlands and aquatic resources.

5. Ecology's 401 Certification Includes Specific Conditions To Ensure Mitigation Of Low Flow Impacts

The addition of impervious surface area resulting from the MPU projects will cause stormwater that would otherwise infiltrate into the ground and contribute to base flows in Miller, Walker, and Des Moines Creeks to runoff instead, thus lowering base flows during the summer low flow months. The Port has engaged in extensive hydrologic modeling to predict the low flow impacts. To offset the impact, the Port proposes to construct stormwater detention facilities that will detain, treat and release stormwater to the streams during the calculated low flow periods. Ecology's consultant, Kelly Whiting, reviewed the Port's July 2001 low flow plan and the revised plan submitted in December 2001 and concluded that the Port's proposals are technically feasible.[19] In addition, Mr. Whiting concluded that the models

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[15] *See* Direct Testimony of Erik Stockdale at ¶ 5.
[16] *Id.* at ¶¶ 6-44, 50; Direct Testimony of Katie Walter at ¶¶ 7-30.
[17] *See* Ecology Exhibit No. 2193.
[18] *See* Direct Testimony of Erik Stockdale at ¶¶ 45-49.
[19] *See* Direct Testimony of Kelly Whiting at ¶ 16.

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used by the Port were "sufficiently calibrated to accurately predict low flow impacts in Miller and Walker Creeks" provided some adjustments and checks were performed.[20] With regard to Des Moines Creek, he accepted the Port's model based on the fact that it was based on the model used in the Des Moines Creek Basin Plan.

The third runway embankment has the effect of moderating low flow impacts because stormwater that infiltrates into it is delayed in its progress toward the streams. To quantify this effect, the Port utilized and refined previous work that had been done by Pacific Groundwater Group (PGG) pursuant to a legislatively mandated study, overseen by Ecology, of the embankment's hydrologic impacts.[21] PGG developed a groundwater model, Hydus, to simulate groundwater flow through a cross section of the embankment and integrated the results over the embankment's entire length. These results were then incorporated into the stream models used to predict low flow impacts. Ecology reviewed the groundwater modeling conducted by PGG and concluded that the assumptions used in the model were reasonable and that drainage from the proposed embankment was adequately characterized.[22]

Ecology's 401 Certification provides reasonable assurance that low flow impacts will be mitigated because it requires the Port to implement and revise the July 2001 Low Flow Plan. Further, the Port already has made or rendered moot most of the revisions requested by Ecology in its December 2001 plan.[23] The Port continues to refine the modeling that forms the basis of the plan in response to ongoing review by Ecology's consultant.[24] By setting up a process of continuous review by technical experts and further refinement by the Port in response to that review, Ecology has reasonable assurance that low flow impacts will be mitigated.[25]

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[20] *Id.* at ¶ 14.
[21] *See* Direct Testimony of Dave Garland at ¶ 6.
[22] *Id.* at ¶ 20.
[23] *See* Direct Testimony of Kelly Whiting at ¶ 13.
[24] *Id.* at ¶ 16.
[25] *See* Direct Testimony of Ann Kenny at ¶ 41.

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6. Stormwater Management And Low Flow Mitigation Do Not Require A Water Right Permit

The Port's stormwater management and low flow mitigation plans do not trigger the requirement to obtain a water right. Whether a water right is required is a legal issue. The parties fully briefed this issue in the pleadings filed with the Board regarding the ACC's Motion for Summary Judgement on Issue No. 9(a). As detailed in the pleadings submitted by Ecology and the Port, a water right is not required for the Port's use of stormwater to mitigate for the project's impacts to stream flows.

7. The Fill Acceptance Criteria Protect Water Quality

The fill criteria conditions in Section E of the 401 Certifications comport with applicable law and provide reasonable assurance that water quality standards will be met.[26] The inclusion of fill criteria in the August 10, 2001 401 Certification was unprecedented in the history of the Department.[27] These criteria were later superceded by the more stringent set of criteria contained in Appendix E of the September 21, 2001 Certification. Those fill criteria constitute the most stringent set of criteria for the use of imported fill material ever imposed by Ecology in any 401 Certification.[28] Because there is no national or state guidance on acceptable fill standards or criteria, Ecology elected to craft conditions for inclusion in the 401 Certification that place requirements on the Port to investigate its fill sources to ensure that fill material came from uncontaminated sources.[29]

The fill screening protocols, set forth in Condition E of the 401 Certification, are designed to fulfill two separate but related objectives of the Corps and Ecology. Those requirements are the Corps' § 404 Permitting Standard of "free from toxic pollutants in toxic amounts" (U.S. Army Corps of Engineers Nationwide Permitting Standards No. 18. "Suitable

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[26] *See* Direct Testimony of Kevin Fitzpatrick at ¶¶ 27-35, Ann Kenny at ¶¶ 27–36, and Chung Ki Yee at ¶¶ 2-16.

[27] *See* Direct Testimony of Ann Kenny at ¶ 36 and Kevin Fitzpatrick at ¶ 27.

[28] *See* Direct Testimony of Ann Kenny at ¶ 36.

[29] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 28.

Material") and Ecology's requirement that fill materials used for the project not be sources of any contaminants that would exceed state surface water standards (WAC 173-201A) and state groundwater standards (WAC 173-200) at any time over the life of the project. When developing the fill criteria, Ecology was specifically guided by the requirements of WAC 173-201A-040(1) ("[t]oxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses") and the anti-degradation standard in WAC 173-201A-070(4)(a) ("[e]xisting instream uses and the level of water quality necessary to provide full support to those uses must be maintained and protected").[30]

Under Condition E, the Port is restricted to using only naturally occurring uncontaminated soils as fill material. Under Condition E(1)(c), there are only three sources from which the Port is allowed to obtain fill: state-certified borrow pits, contractor-certified borrow pits, and Port of Seattle-owned properties.[31] Condition E(1)(d) *Prohibited Fill Sources* prohibits the Port from using "[f]ill which consists in whole or in part of soils or materials that are determined to be contaminated following a Phase I or Phase II site assessment." Phase I and Phase II site assessments refer to established protocols from the American Society for Testing and Material Standards (ASTM) for investigating historical uses of a site and necessary record reviews that may disclose actual or potential instances of site contamination. Condition E(1)(d) also prohibits the Port from using "soils or materials that were previously determined to be contaminated by a Phase I or Phase II site assessment and have been treated in some manner so to be considered re-mediated soils or fill material." If any of this fill is determined to be "contaminated" the Port is prohibited from using the material for the project and, even if it has been remediated, it cannot be used.[32]

[30] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 29.
[31] *See* Direct Testimony of Ann Kenny at ¶ 29.
[32] *Id.* at ¶¶ 30, 34.

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Under Condition E(1)(a) *Documentation*, the Port must investigate the proposed fill source to determine whether the site has any history of contamination. This condition defines the detailed nature of the site investigation and the information that must be submitted to Ecology documenting that investigation. Specifically, Condition E(1)(a) requires that:

> The environmental assessment shall be conducted by an environmental professional in general conformance with the American Society for Testing and Materials Standard (ASTM) E 1527-00 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and E 1903-97 Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

The verification provisions, contained in Conditions E(1)(a)(iv) *Fill Source Sampling* and E(1)(b) *Criteria*, require the Port to sample fill materials for the potential contaminants identified and sets forth criteria for concentrations of naturally occurring contaminants in soil. The purpose of the verification is twofold: (1) to establish that the source of fill is indeed uncontaminated; and (2) to ensure that even naturally occurring contaminants in soil do not exceed the specified concentrations. The latter requirement is needed because of the potential for naturally occurring contaminants present in the soil at concentrations in excess of the stated criteria to exceed state groundwater and surface water standards if mobilized. For example, naturally occurring contaminants such as arsenic and copper could be at concentrations in a fill source where, if mobilized, they present a risk of violating state groundwater and surface water standards at some time over the life of the project.[33]

Ecology developed the criteria established for concentrations of the naturally occurring contaminants listed in Condition E(1)(b) to protect surface water and groundwater.[34] The Port must employ the stricter criteria when screening fill for placement in the fill profile where the location increases the risk of those contaminants reaching surface water or groundwater.

Conditions E(2) *As-Built Documentation* and E(3) *Post Construction Monitoring* provide additional assurance that the fill materials used meet the objective that the placement

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[33] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 32.
[34] *Id.* at ¶ 33.

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of fill not jeopardize either state surface or groundwater standards. To that end, Condition E(2) establishes a tracking system for fill materials imported onto the construction site so that Ecology and the Port know with some certainty the exact location and elevation of the materials used. In addition, under Condition E(3) the Port is required to monitor both surface water and groundwater conditions throughout the project development. Finally, in both August and September 401 Certifications Ecology required the Port to develop an embankment seepage monitoring plan. The Port has submitted the plan and Ecology is presently reviewing it.[35] The monitoring requirements in Ecology's 401 Certification serve as an "early-warning" system concerning surface water and groundwater conditions in the unlikely event that the Port places unsuitable fill material onto the site.

The fill criteria and protocols established in Condition E provide for the protection of the water quality of state groundwater and surface water in the Port's construction of its proposed project.[36] As a result, it is highly unlikely that the Port will place contaminated fill or that contaminants will mobilize and move into groundwater and surface waters at concentrations exceeding acute or chronic criteria established in the state's surface and groundwater standards. The unprecedented requirements placed on the Port in its selection and use of fill material provide Ecology with reasonable assurance that the Port will meet Washington State's surface water and groundwater quality standards throughout the life of this project.

8. Migration Of Contaminated Groundwater Is Not An Issue

ACC may contend that existing groundwater contamination at Sea-Tac may migrate to MPU construction areas. However, ACC's prefiled testimony does not pursue the issue. Also, under its pathways analysis Ecology has reasonable assurance that migration of groundwater

[35] *See* Direct Testimony of Ann Kenny at ¶ 35.
[36] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 35.

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contamination is not an issue.[37] The pathways analysis was a component of Ecology's 401 Certification for the Port's MPU project.[38]

The pathways analysis work evaluated four potential pathways:

a. The potential for chemical contaminants to migrate from beneath the SeaTac Airport Operations and Maintenance Area (AOMA) to the perched and regional water table aquifer (referred to as the Qva aquifer);

b. The potential for contaminants to migrate vertically and laterally in the perched and regional water table aquifer;

c. The potential for contaminants and groundwater contamination to affect water quality in the 3rd runway area; and

d. The potential for subsurface utility lines to act as conduits of contaminant migration.

As part of the pathways analysis, the Port conducted a comprehensive identification of subsurface contaminant sources at the SeaTac AOMA. The contaminant identification effort included a careful evaluation of the extent of vertical and lateral migration of contaminants and contaminated groundwater. The Port also conducted a comprehensive identification of groundwater flow directions at the SeaTac AOMA. Finally, the Port conducted a careful evaluation of available data to identify the directions, and extent of vertical and lateral migration of groundwater in the perched and Qva aquifers.[39]

Contractors for the Port of Seattle compiled the data for the pathways analysis and its components (contaminant migration and groundwater flow). Ecology instructed the Port contractors to utilize the data to develop conceptual models, maps, and diagrams for Ecology to conduct the pathways analysis. Ecology evaluated the potential impacts to water quality and

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[37] *See* Direct Testimony of Ching-Pi Wang at ¶¶ 3-10.

[38] *Id.* at ¶ 4. The work to be performed for the pathways analysis was specified in Ecology's Agreed Order #97TC-N122 (see State of Washington Department of Ecology Agreed Order #97TC-N122, In the Matter of Sea-Tac International Airport, p. 6, section IV, 1b).

[39] *See* Direct Testimony of Ching-Pi Wang at ¶ 6.

determined that it is very unlikely subsurface contaminants and contaminated groundwater from the SeaTac AOMA area will affect water quality in the vicinity of the third runway. Based on the data and analyses summarized briefly above, Ecology is reasonably assured that subsurface contaminants beneath the SeaTac AOMA will not reach the third runway.[40]

Furthermore, under Condition F.1 of Ecology's 401 Certification the "Port shall submit to Ecology proposed construction BMPs to prevent interception of contaminated groundwater by utility corridors and a plan to monitor potential contaminant transport to soil and groundwater via subsurface utility lines at the STIA and submit to Ecology for review and written approval no later than November 9, 2001." The Port has submitted the proposed construction BMPs and the monitoring plan to Ecology. Ecology has reviewed and concurs with both the proposed construction BMPs and the monitoring plan and recommends their immediate implementation.[41]

9. The Port's Stormwater Discharges Will Meet Water Quality Standards

The 401 Certification provides reasonable assurance that the Port's proposed stormwater discharges will meet water quality standards because it requires the Port to comply with a Comprehensive Stormwater Management Plan (CSMP) and NPDES permit, and it precludes the Port from discharging stormwater from new impervious surfaces until the Port conducts a detailed site specific study to ascertain whether additional treatment requirements are needed. The CSMP meets, and goes beyond, the technical requirements of the King County Surface Water Design Manual (King County Manual).[42] The CSMP goes beyond the requirements of the King County Manual by including flow control facilities designed to meet a target flow regime based on predevelopment conditions and by including water quality and flow control retrofits for existing developments. The 401 Certification requires the Port to

[40] *See* Direct Testimony of Ching-Pi Wang at ¶ 9.
[41] *Id.* at ¶ 10.
[42] *See* Direct Testimony of Kelly Whiting at ¶ 5.

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retrofit its existing facilities at a rate of 20% retrofit for every 10% of new impervious surface added.

The Port's stormwater discharges are regulated under an individual NPDES permit. This permit, consistent with guidance from the U.S. Environmental Protection Agency and Ecology's water quality standards, relies on best management practices (BMPs) to treat stormwater.[43] *See* WAC 173-201A-160(3)(a). Due to the inherently variable nature of stormwater, it is difficult if not impossible to apply Ecology's numeric water quality standards to stormwater.[44] Therefore, the ACC's assertions that the Port's stormwater discharges currently violate state water quality standards are erroneous.[45]

In the 401 Certification, Ecology required the Port to undertake site specific studies, or water effects ratio (WER) studies, so that numeric effluent limitations could be established and incorporated into the Port's NPDES permit. These studies are necessary to determine the appropriate level of treatment to be required of the Port.[46] There is limited data currently available regarding the effectiveness of emerging technologies for the treatment of metals in stormwater.[47] By using the NPDES permit and the WERS data to establish effluent limitations, Ecology has established a "feedback loop" that ensures that water quality standards will be met.[48]

The BMPs to be utilized by the Port are consistent with those required by the King County Manual.[49] The performance goal of those BMPs is 80% removal of total suspended solids. By achieving that performance goal, the proposed BMPs should be partially effective at removing metals from the Port's stormwater because some of the metals will be in particulate

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[43] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 5.
[44] *Id.* at ¶ 10.
[45] *Id.* at ¶¶ 11-12.
[46] *See* Direct Testimony of Ed O'Brien at ¶¶ 6, 10.
[47] *Id.* at ¶ 7.
[48] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 24.
[49] *See* Direct Testimony of Kelly Whiting at ¶ 11.

form.[50] If the results of the WER study or monitoring shows that additional BMPs are required, Ecology's reviewer concluded that it is feasible under the Port's CSMP to add those BMPs.[51]

Issuance of an NPDES permit is a determination by Ecology that water quality standards will be met by the project if the conditions in the permit are followed. Therefore, the same standard governs issuance of an NPDES permit as applies to issuance of a 401 Certification, and Ecology properly may rely on an NPDES permit in determining reasonable assurance under CWA § 401. *Protect the Peninsula's Future v. Dep't of Ecology*, PCHB No. 96-178 (1996). Incorporation of appropriate 401 Certification conditions into the Port's NPDES permit gives Ecology an enforcement mechanism to ensure compliance with water quality standards even after the 401 Certification expires.

10. Future Monitoring Authorized; Pre-construction Monitoring Sufficient

CWA § 401(d) specifically provides for the inclusion in a 401 Certification of conditions requiring future monitoring necessary to assure that the applicant complies with applicable water quality standards and any other appropriate requirement of state law. 33 U.S.C. § 1341(d). The 401 Certification issued to the Port includes monitoring conditions that are in compliance with CWA § 401(d).

The ACC asserts that the absence of hydrologic data precludes Ecology from being able to develop hydrologic performance standards for wetlands downslope of the embankment. As described in the testimony of Katie Walter, it is difficult to define the hydroperiod for the slope wetlands that drain to Miller Creek because the hydroperiod for those wetlands varies from year to year, with no predictable pattern.[52] The NRMP provides for hydrologic monitoring of the downslope wetlands and, because of the uncertainty in relying on that data alone, additional data will be collected in the wetlands. Those data points will be compared to

[50] *Id.* at ¶ 11.
[51] *Id.* at ¶ 10.
[52] *See* Direct Testimony of Katie Walter at ¶ 16.

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the performance standards in the NRMP to determine if wetland hydrology is maintained. If necessary, through adaptive management the amount of water the wetlands receive can be manipulated.[53] The design criteria in the NRMP constitute reasonable performance criteria and those criteria are buttressed by an adaptive management strategy to ensure that the proposed mitigation sites perform as expected. Moreover, the performance standards are sufficiently prescriptive to provide reasonable assurance that the applicable water quality standards will be met but not so prescriptive as to not be implementable.[54]

11. 401 Certification's Conditions Requiring Future Submittals Does Not Diminish Reasonable Assurance

As explained in Ms. Kenny's testimony, Ecology's determination of whether there is reasonable assurance that a proposed project will comply with applicable water quality standards is a two step process: (1) determine, through a preponderance of the evidence, that water quality standards can and will be met, and identify any areas of uncertainty; and (2) address the areas of uncertainty by including measures that will remove or reduce the uncertainty.[55] Conditions imposed in a 401 Certification often require the applicant to submit additional data such as monitoring reports, as-built plans for mitigation sites, and plan revisions incorporating the 401 Certification conditions.

In issuing a 401 Certification, the agency has determined it has reasonable assurance that the project and the proposed mitigation is adequate and the project will not result in discharges that violate applicable water quality standards or result in further degradation of beneficial uses, so long as the conditions in the 401 Certification are fully complied with. If the recipient is out of compliance with a particular condition of the certification, reasonable assurance is not broken. Ecology addresses an applicant's lack of compliance on a

[53] *Id.* at ¶ 19.
[54] *Id.* at ¶¶ 8, 13.
[55] *See* Direct Testimony of Ann Kenny at ¶ 9. *See also* Direct Testimony of Gordon White at ¶ 18.

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case-by-case basis and has a variety of mechanisms to ensure ongoing compliance with the certification's conditions, including exercising its enforcement authority.[56]

In the 401 Certification issued to the Port, Ecology required the submittal of revised plans or reports addressing specific conditions in the Certification.[57] In addition, as permitted by CWA § 401(d), the 401 Certification requires the Port to monitor specific aspects of the project and directs the Port to develop appropriate monitoring plans for Ecology's review and approval.[58] As required by the 401 Certification, the Port has revised existing plans and developed monitoring plans and submitted those documents to Ecology for its review. These conditions are not unique to this 401 Certification nor do they indicate that Ecology does not have reasonable assurance that the project will comply with applicable water quality standards.

At the hearing on this appeal, the Board will determine whether the project as presented meets the requirements of CWA § 401. *Barrish & Sorenson Hydroelectric v. Dep't of Ecology*, PCHB No. 94-193 (Conclusion of Law 4) (1995). Under its *de novo* review, the Board can and should consider all relevant evidence presented, including the plans and reports developed by the Port in response to the conditions in the 401 Certification.

Moreover, the 401 Certification's requirement that the Port obtain dam safety permits for its stormwater facilities is not unique to this Certification nor does such a requirement lessen the agency's reasonable assurance determination. Ecology was aware that some of the Port's proposed stormwater facilities would require a dam safety permit from Ecology and, therefore, Condition G requires the Port to obtain the necessary dam safety permits prior to beginning construction of any such facility. Ecology had reasonable assurance that water quality standards would not be violated at the time the 401 Certification was issued because the

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[56] *See* Direct Testimony of Ann Kenny at ¶¶ 10-11.

[57] *See, e.g.*, Condition D(3), Revised NRMP; D(4), Conceptual Plan for Wetland A17 Complex; D(7)(a)(iii), Mitigation As Built Report; E)(2), Fill Placement As Built Reports; F(1), Plan to Prevent Transport of Contaminants; I (1), Revised Low Streamflow Analysis and Summer Low Flow Impact Offset Facility Proposal.

[58] *See, e.g.*, Condition A(2), Instream/Shoreline Work Monitoring Plan; D(7), Annual Wetland Monitoring Report; E(3), Fill Embankment Seepage Monitoring Plan; I(e), Low Flow Stream Monitoring; K8(3), Stormwater Monitoring Plan for Construction and Stormwater Discharges.

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agency had reviewed the sizing of the stormwater facilities and determined that they were appropriately sized for stormwater collection purposes. Ecology also required that, if any of the stormwater facilities changed during final design, the Port shall provide Ecology with those changes for its review and written approval.[59] Condition G is an appropriate component of Ecology's reasonable assurance determination.

12. Ecology Properly Relied On the Port's NPDES Permit And Site Specific Studies In Issuing The 401 Certification

The Port's stormwater discharges do not routinely violate state water quality standards as claimed by the ACC. The state water quality standards for toxic pollutants, set forth in WAC 173-201A-040, cannot readily be applied to stormwater discharges because of the difficulty in determining exceedences of the standards for the necessary period of time and attributing those exceedences to a particular outfall.[60] The Port's annual monitoring reports show instantaneous exceedences for copper, lead, and zinc, but they do not show that the state criteria were exceeded for the necessary period of time. They also do not report concentrations in the receiving waters but instead report concentrations in the stormwater discharges. The state water quality standards apply only in the receiving waters.[61] In order to determine violations in the receiving waters attributable to the Port's discharges, it would be necessary to sample upstream and downstream of the Port's discharges which is difficult to do because the Port's discharges travel through pipes, ponds, and ditches before reaching the receiving waters. Also, there is considerable debate in the field regarding the proper sampling method to characterize pollutant concentrations in highly variable stormwater discharges.[62]

For these reasons, Ecology directed the Port in the 401 Certification to conduct a site specific study to determine whether the Port's discharges are violating state water quality standards and to determine appropriate effluent limitations to be set in the Port's NPDES

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[59] *See* Direct Testimony of Ann Kenny at ¶ 48.
[60] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 10.
[61] *Id.* at ¶ 11.
[62] *Id.*

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permit. The 401 Certification prohibits the Port from discharging stormwater from new pollution generating impervious surfaces at STIA until effluent limitations are established in the Port's NPDES permit.[63] As explained above, reliance on effluent limitations in an NPDES permit for reasonable assurance is entirely appropriate under both Ecology policy and the Board's previous decisions, where, as here, the anticipated discharges are capable of being controlled under the NPDES permit.[64] The Port's discharges are capable of being controlled under the NPDES permit because, if the site specific study or monitoring shows a need for additional BMPs, those BMPs may be required and feasibly installed under the stormwater management plan.

13. Mixing Zone Not Authorized In Violation Of Water Quality Standards

The 401 Certification does not authorize a "mixing zone" in violation of water quality standards. Condition A(1) of the 401 Certification provides that the water quality criteria of WAC 173-201A-030(a) and 173-201A-040 apply to the Port's project and that temporary exceedences of water quality standards beyond the limits of WAC 173-201A-110(3) are not permitted.[65] For instream and shoreline work only, Condition A(1) allows temporary exceedences of water quality standards for turbidity as permitted by WAC 173-201A-110(3). Condition A(2)(d) further states that any mixing zone established pursuant to that regulation must be minimized pursuant to WAC 173-201A-100. These conditions do not authorize mixing zones for any work other than instream and shoreline work and for no other criteria than turbidity. The 401 Certification does not authorize mixing zones for stormwater discharges from the Port's STIA industrial operations.[66]

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[63] *See* Direct Testimony of Ann Kenny at ¶ 20.
[64] *See* Direct Testimony of Kevin Fitzpatrick at ¶¶ 24-25.
[65] *See* Direct Testimony of Ann Kenny at ¶ 44.
[66] *See* Direct Testimony of Kevin Fitzpatrick at ¶ 26 and Ann Kenny at ¶ 44.

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14. MSE Wall Not Subject To Ecology Regulation

The ACC may argue that the MSE wall should be considered a dam and therefore subject to review by Ecology's Dam Safety Office. This issue was reviewed with Ecology's Dam Safety Office. Ecology properly concluded that the MSE wall was not a dam according to WAC 173-175-020, -040 and was therefore not subject to regulation by Ecology.[67]

IV. CONCLUSION

Based on the foregoing, Ecology respectfully requests that the Board affirm the 401 Certification as consistent with the reasonable assurance standard. The Board should uphold Ecology's 401 Certification on all issues raised and the Board should dismiss ACC's appeal of this matter.

DATED this 12th day of March, 2002.

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[67] *See* Direct Testimony of Ann Kenny at ¶ 48.

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POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

AIRPORT COMMUNITIES COALITION, Appellant, CITIZENS AGAINST SEA-TAC EXPANSION, Intervenor/Appellant, v. STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY; and PORT OF SEATTLE, Respondents.	PCHB No. 01-160 CERTIFICATE OF SERVICE

Pursuant to RCW 9A.72.085, I certify that on March 12, 2002, I caused to be served, Respondent Department of Ecology's Pre-Hearing Brief, and this Certificate of Service, in the above-captioned matter to be served upon the parties herein, as indicated below:

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the foregoing being the last known business addresses.

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

DATED this 12th day of March, 2002, in Olympia, Washington.

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