



DRAFT  
October 9, 2000

TO: Ecology's SeaTac reviewers – Ray Hellwig, Gordon White, Kevin Fitzpatrick,  
Erik Stockdale, Dave Garland, Joan Marchioro

FROM: Tom Luster

RE: My most current list of issues to be resolved for SeaTac 401 review

Here is my latest draft list of issues. They are in the following categories:

- General Issues
- Stormwater Management Plan
- Streamflows and Flow Augmentation
- Natural Resource Mitigation Plan/Wetlands
- Clean Fill
- Other Issues
- Future Probable Issues (if 401 is issued)

You'll note some overlap between the various areas.

Also, I did not describe the various states of resolution of each issue. Some may just require some documents to be clarified or slightly modified, others may require significant new documentation or development of 401 condition language. And, of course, this list should be considered provisional pending future public comment and Ecology's evaluation of those comments.

**General Issues:**

Direct, indirect, cumulative impacts:

- Direct impacts:
  - SR 509 Construction Interchange – status of redesign?
- Indirect impacts:
  - Wetland 39b – hydrology interrupted from Stormwater Pond D?
  - SR 509 Construction Interchange – status of documentation regarding indirect impacts? – *status quo - no change in*
  - Wetlands 18/37 per PGG report
  - ~~X~~ Borrow Site #3 – wetland hydrology impact
  - IWS Lagoon #3 Expansion (wetland hydrology impact?)
- Cumulative impacts: current documentation does not adequately describe the likely cumulative of several related proposed projects, including:
  - South Access Road
  - RDF
  - x

*part of next PN.*

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Is there enough mitigation opportunity in the Des Moines Creek basin to allow these proposed interconnected impacts? Recommend either significantly improved

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- documentation and analysis of cumulative impacts by Port, or a coordinated mitigation strategy between Port, WDOT, & DMCBPC, with concurrence of Ecology and Corps.
- Integration of SWMP and NRMP: does current SWMP result in additional impacts to NRMP elements (e.g., detention pond sizes/locations, streamflows, etc.)?
- Flow augmentation: location of treatment system, pipelines, wells, etc. – additional direct, indirect, or cumulative impacts? [Note: September 2000 proposal showed location of treatment system within Des Moines Creek buffer easement area.]

Are various plans and documents internally consistent and consistent with one another? Need to have this resolved as part of Public Notice documentation.

- SWMP: internal consistency being handled through Kelly's review?
- SWMP and NRMP
- SWMP, NRMP, and flow augmentation proposal: e.g., drainage channels shown in NRMP aren't included in SWMP(?)

Reasonable assurance: do we have adequate certainty about mitigation success?:

- Interaction of RDF design and Tyee Mitigation Site: grading, planting, hydrology? Also, site is proposed to provide five roles – mitigation, stormwater detention, emergency spill detention, Runway Object Free Area, and sewer easements.
- Auburn – interaction with other proposed projects – RDF, flood storage,

#### Stormwater Management Plan (SWMP):

##### General:

- Possible aquitard breach at MCRDF and Walker Creek retaining wall (PGG report, p. 23-24), resulting in uncontrolled water and sediment discharges. We'll need a 401 condition to address this. (Is Kelly weighing in on this?)
- Feasibility: are proposed wetvaults feasible; i.e., has anyone ever built a 86 acre-foot or 98 acre-foot wetvault? *10/10*
- Is SWMP consistent with First Flush report and fate and transport study? *check w/ Kevin - part of 402?*
- Do the release rates in the SWMP comply with the Kludt settlement?

##### Water Quality:

- What additional water quality BMPs do we need (above the County's basic menu) to meet water quality standards? [Note: see previous 401 – Lisa Austin recommended "doubling up" BMPs unless Port came up with acceptable alternative). Required differences between new and existing discharges – what does this include?

##### Construction stormwater:

- Likely uncontrolled sediment release even with properly implemented BMPs (per PGG report, p. 63-64): what additional 401 conditions needed?
- Contingency detention area for construction stormwater (PGG report, p. 63): status?
- Contingency response: some construction stormwater ponds require pumps – has the Port included contingency in case of pump failure (e.g., additional storage, backup pumps, etc.)?
- Does the current plan include Port's construction staging area and construction offices in acquisition area (new impervious surface)?

NPDES-related:

- Is Port currently in compliance with the NPDES permit (e.g., July TSS exceedance – corrected in August?; also see 9/22 letter from Richard Poulin).
- DMRs show continuing discharges of some metals at levels above water quality criteria: does this provide compliance with NPDES permit and/or water quality standards (especially given the 9<sup>th</sup> Circuit decision (Defenders of Wildlife v. Browner) stating that stormwater discharged under an industrial NPDES permit must meet toxic effluent limitations)?
- Are the currently required construction BMPs adequate to handle soil with contaminants up to MTCA Level A criteria?

Streamflows and Flow Augmentation:

Des Moines Creek flow augmentation:

- discussion deferred to later in meeting.*
- Status of confirmed source of water?
  - Hydraulic continuity issues: 3 aquifers? (see 9/5/00 Willing letter, and 9/8 and 9/18 letters from Water District #54).
  - Alternative source of water: apparently existing golf course well is not up to standards (per WACs 173-154 and 173-160) – this and other doubts about the alternative source make certainty about the confirmed source even more important.
  - Is additional NEPA/SEPA required? No mention of augmentation/treatment in previous documents.
  - Comments on Port's September 2000 Flow Augmentation proposal:
    - Needs to add description on how proposed treatment system will remove fluoride.
    - Should compare proposed system's design levels of treatment for chlorine (dissolved and total residual), fluoride, d.o., temperature, pH, etc., and compare with applicable water quality criterion or standard.
    - Should describe associated byproducts or breakdown components of proposed treatment method (i.e., sodium sulfite) and the fate and transport of such components into the stream channel and aquatic biota.
    - Should add information on necessary type and frequency of maintenance, how any byproducts described above would be removed and disposed of.
    - Proposed treatment system shown located within proposed stream buffer easement along south side of West Branch Des Moines Creek. System should be relocated out of the easement area or additional mitigation should be provided.
  - Process question: does the 404/401 renote re-open our timing re: water rights determination?

Miller Creek flows:

- Per ACC comments (Rachel P.), the Port's analysis of Miller Creek baseflow was arbitrary in that it assumed use rates that weren't verified (e.g., assumed that 50% of claimed water rights were used).
- Per ACC comments (Malcolm L.), Miller Creek baseflow estimate in error by 100%? – he estimated that the reduction was understated by half.

- New SWMP (Vol. 2, Section 2.7, page A-16) doesn't reach same conclusion as PGG study for groundwater response – faster and less flow? [Note: I believe Kelly is looking into this.]
- What additional certainty can be provided re: the interaction of the retaining wall and the amount and timing of water provided to Miller Creek and nearby wetlands?

Walker Creek:

- PGG report identifies possible loss of flows to headwaters due to retaining wall – has this impact been further evaluated and/or mitigated for?

NRMP/Wetlands:

- See 8/11/00 letter from Corps for additional comments/concerns.
- The NRMP is based in part on the 11/99 SWMP – is this adequate or has the SWMP changed so that there are additional resource impacts and a need for additional mitigation?

*Carol  
10/13*

Additional impacts?: the acquisition area includes a Miller Creek tributary and associated wetlands that have not yet been delineated or evaluated? Also, per ACC comments, there are new wetlands identified on NRMP Implementation Plan that were not previously evaluated?

- Status of monitoring requirements: what additional information/detail do we need on monitoring requirements – e.g., frequency, type, location, etc. – and on performance standards? We'll need to turn these into 401 conditions.
- Per ACC comments (Amanda A.), Parametrix memo (from Jan C.) includes statements that are not backed up with data (Erik?)?

*discuss  
12/13*

What is the hydrologic interaction of stormwater detention ponds with nearby/adjacent wetlands? Need site plans and cross-sections showing ponds in relation to Miller Creek and wetlands along with groundwater data. 18/37, 39, etc.

- Vacca Farms: need additional details/site plans on microtopography and placement of habitat features (per Erik).

- Wetlands 39b and 41a: Stormwater pond F will fill Wetland 41a – how will it affect downslope Wetland 39b? (per Erik)

- IWS Lagoon #3 Expansion: what effect will the IWS Lagoon #3 expansion have on Northwest Ponds / Wetland #28 – approximately 10 additional acres of impervious surface immediately north of the wetlands could reduce hydrologic support – flow direction identified in IWS hydrologic study as being towards wetlands.

- SR 509 Interchange: direct and indirect impacts to Walker Creek watershed – have these been included in NRMP? Also, the Port is redesigning the interchange to avoid direct impacts – if we are basing our 401 decision on no direct impacts in that basin, we need to see the revised design before we complete 401.

- Mitigation irrigation water: what is the source of irrigation water at the various mitigation sites, and does the Port have the necessary water rights for this water?

- Status of \$150K mitigation fund: what's the status? Is it still part of proposal? Need additional details, certainty about implementation.

- Tye Mitigation Site: it is a significant mitigation element in the Des Moines Creek basin; can it fulfill five roles – wetland mitigation, stormwater detention, FAA object free zone, emergency containment area, and two sewer easements?

*Erik*

*Provide  
to  
Jim*

ERIK?

16/17

- Auburn Mitigation Site: design is based on site providing approximately 60 acre-feet flood capacity for future development of adjacent parcels – has this additional project/impact been evaluated (or conversely, do we need to condition 401 to prevent use of the site for flood storage of future development?).
- Borrow Site #3: the Port recently added a conceptual mitigation element (the diversion ditch) to provide hydrologic support to nearby wetlands. We either need additional information on this element or avoidance of the impact by not removing borrow material below the 300' elevation (per Dave G.'s review). See also draft 401 condition that addresses this issue.

**Clean Fill:**

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- Status of language for proposed clean fill 401 condition?
- Connections between clean fill, surface runoff from embankment, interflow through embankment, water quality/quantity in surface water bodies? Have we adequately evaluated these (per ACC comments)?
- Decant/Chemical Accumulation Area, soil segregation facility: these were included in a recent SWPPP (per 9/27 Wingard letter) – What are they? What's their role per the proposal? Where are they? Is the design adequate to meet water quality standards?
- Status of Port's soil sources: what issues still alive re: Hamm Creek soil? Was the 177 cy of high TPH soil used (Chung is looking into this)?
- Do we need to develop a 401 condition requiring surface soil samples from Port's onsite borrow sources? These areas may be within the Asarco plume and therefore may have elevated levels of arsenic in the surface layers that will require special handling.

**Other Issues:**

*Has the Port completed SEPA?*

Status of SEPA/NEPA: has adequate SEPA been done to allow us to issue a valid 401?

- Des Moines Creek Flow Augmentation
- Des Moines Creek RDF
- SR 509/South Access Road
- Per ACC comments (Barbara H.), the current design includes an expansion of the 150 noise contour; EIS said it would remain the same.

Clean Air Certification: is the previous certification re: Clean Air requirements still applicable? Still in effect?

**Cleanup Issues (per Supplement to Biological Assessment):**

- Buyout parcels within 3<sup>rd</sup> Runway Safety Area: part of RCRA, UST, etc. actions: status and connection with 401?
- IWS Lagoon #3 Expansion: contamination per 6/21/00 Port of Seattle Hydrogeographic Study?

Interaction with NPDES major modification?: does 401 re-notice change the timing of the NPDES major modification?

Retaining Walls: do we have adequate assurance about the eventual design of the retaining walls and their ability to provide hydrologic support to wetlands and Miller Creek?

**Future Probable Issues (if 401 issued):**

Compliance monitoring: Ecology's review of any necessary sampling and monitoring data will require significant resources. Can we do cost-recovery (all or part) or require the Port to hire a consultant to provide initial review of documentation?

Data and Reports: require Port to provide electronic copies of all monitoring information (and possibly some sort of web-based or CD documentation?). This would allow us to more efficiently determine project compliance and would also help with public disclosure requests.

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## **DRAFT: Water Quality BMP requirements for SeaTac 401 review**

**Issue:** any 401 certification issued for the proposed SeaTac expansion must include water quality BMPs beyond what is required through the County's stormwater manual and beyond the BMPs currently in place at the airport. This definitely applies to the proposed new discharges that are not on the current NPDES Permit, and may apply to the other existing discharges, some of which will receive additional stormwater due to the proposed expansion.

### **Reasoning:**

#### Additional BMPs/conditions needed to meet antidegradation requirements:

- Current modeling shows the Port's proposal will reduce stream baseflows.
- Current water quality monitoring shows the Port's existing water quality BMPs are resulting in high concentrations of several stormwater-related contaminants.
- Proposed new discharges will increase the amount of stormwater entering the stream.

If the proposed new discharges include only the water quality BMPs the Port currently uses, the result would be an increase in the concentration of contaminants in the receiving waters.

#### SEA/WQ Programs 401/402 Policy:

The A.G.'s Office provided guidance during development of this policy, including the following (per memo from Sandi Manning 3/28/00):

- a 401 cannot be issued with a requirement that a 402 be obtained in the future – the 402 permit has to be issued prior to the 401.
- If a parameter is not granted a waiver or exemption in a 402 permit, it must meet the criteria.

Condition B4 of the Policy (for when both 401 and 402 apply to a proposed project) states:

“For projects that have not yet obtained a required 402 Permit, the 401 Certification will be held in abeyance for a maximum period of one year, or denied without prejudice until the 402 Permit is received. A 401 Certification can not be approved if a required 402 Permit has not yet been received because reasonable assurance that the standards will be met can not be determined on a proposed future permit.”

The existing NPDES Permit does not authorize discharges from the proposed new discharges along Miller Creek; therefore, the required 402 permit has not yet been obtained.

Additionally, Sections 401 and 402 of the Clean Water Act have different requirements regarding effluent limitations. Under 401, a certification must ensure compliance with effluent limitations; however, under 402, a permit may either require compliance with effluent limitations or may take other actions as deemed necessary:

“Section 401(d) Limitations and monitoring requirements of certification. Any certification provided under this section shall set forth any effluent limitations and other

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limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section.”

“Section 402(a) Permits for discharge of pollutants. (1) Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either (A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.”

However, I believe Ecology could issue a 401 before a 402 is issued if the 401 included the conditions necessary to ensure the applicable effluent limitations are

#### **Conditions of previous 401:**

Part of Ecology’s message to the Port and the public has been that the previous 401 certification issued to the Port established a baseline of environmental protection. Conditions of the previous 401 include the following:

#### **C. Stormwater Management:**

C1. The Port shall comply with a final comprehensive stormwater management plan approved by Ecology.

Within sixty (60) days of issuance of this Order, the Port shall submit to Ecology for review and written approval a Final Comprehensive Stormwater Management Plan for Sea-Tac International Airport Master Plan Improvements. This Final Plan shall contain a comprehensive plan for managing stormwater from the Master Plan projects in compliance with the stormwater source control, detention, treatment, and monitoring requirements in Condition #C4 below. It shall also identify the stormwater detention storage necessary for each major element of the Master Plan Improvements.

C2. Within ninety (90) days of issuance of this Order, the Port shall submit to Ecology a schedule for construction of all major elements of the Master Plan Development Project, and the stormwater detention storage necessary to meet the requirements of Condition #C4 of this Order. Subsequent changes to this construction schedule shall be submitted to Ecology.

C3. Within six (6) years of issuance of this certification, the Port shall complete construction of all facilities in compliance with the approved Final Comprehensive Stormwater Management Plan for Sea-Tac International Airport Master Plan Improvements referenced in Condition #C1 of this Order.

C4. Both Des Moines Creek and Miller Creek have been identified as having excessively high storm flows and levels of contaminants above state water quality criteria. These high storm flows and contaminant levels prevent some characteristic uses of Class AA waterbodies from being met. In order for the operation of the proposed project to meet



water quality standards. the following requirements related to stormwater detention and treatment shall be implemented:

C4a. Stormwater Detention: The Port shall design, construct, operate, and maintain stormwater facilities that control stream erosion by matching developed discharge durations for the range of predeveloped discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow and by matching the peak discharge rates for 2- and 10-year return periods for all stormwater discharges from Sea-Tac International Airport (STIA). For the purpose of calculating runoff characteristics, predeveloped conditions shall be as follows:

- For expansion areas, the 1994 land use condition shall be the predeveloped condition.
- For the existing facility, predeveloped conditions shall be 100% till-pasture, unless the Port can provide documentation that shows other predeveloped conditions were present before the development of STIA.

C4b. Stormwater Treatment: All stormwater discharges from Sea-Tac International Airport shall be in compliance with state of Washington surface water quality standards (Chapter 173-201A WAC), sediment management standards (Chapter 173-204 WAC), ground water quality standards (Chapter 173-200 WAC), and human health based criteria in the National Toxics Rule (Federal Register, Vol. 57, No. 246, Dec. 22, 1992, pages 60848-60923).

The Port shall design, construct, operate, and maintain stormwater treatment facilities that will not result in exceedances of state water quality criteria in receiving waters. All runoff from pollution-generating surfaces shall be treated using water quality treatment BMPs. Pollution-generating surfaces include, but are not limited to: surfaces that are exposed to and/or are subject to aircraft use, vehicular use, or leachable materials, wastes, or chemicals.

Water quality treatment BMPs for each stormwater treatment facility shall consist of no less than any one of the following:

- a large sand filter, a large sand filter vault, or a large linear sand filter.
- a biofiltration swale, followed by a basic sand filter, sand filter vault, or leaf compost filter.
- a filter strip, followed by a linear sand filter with no presettling cell needed.
- a basic wetpond, followed by a basic sand filter, sand filter vault, or leaf compost filter.
- a wetvault, followed by a basic sand filter, sand filter vault, or leaf compost filter.
- A combined detention and wetpool facility, followed by a basic sand filter, sand filter vault, or leaf compost filter.
- a basic sand filter or sand filter vault (preceded by a presettling cell if the sand filter is not preceded by a detention facility), followed by a leaf compost filter.

Any basic sand filters shall be sized so that 90% of the runoff volume will pass through the filter. Any large sand filters shall be sized so that 95% of the runoff volume will pass through the filter.

The Port may propose other BMPs for stormwater treatment if it can be demonstrated that they will result in stormwater discharges that meet the state water quality standards. Any proposed changes are subject to review and approval by Ecology.

**C4c. Source Control Best Management Practices:** The Port shall prepare and implement a Stormwater Pollution Prevention Plan for Airport Operations and a Stormwater Pollution Prevention Plan for Construction as required by Special Conditions S12 and S13 of NPDES Permit No. WA-002465-1.

**C4d.** The Port shall collect the washoff of pollutants from the runways and taxiways after anti-icing/deicing events to prevent violations of the water quality standards in Miller Creek and Des Moines Creek. The first 1.3 inches of runoff shall be collected from the runways and taxiways after deicing chemicals have been applied. This runoff shall either be discharged to the IWS system or treated separately so as to meet the criteria contained in the state water quality standards (173-201A WAC).

**C4e. Receiving Water Monitoring Plan:** The Port shall submit within one (1) year of issuance of this Order a monitoring plan to determine the effectiveness of the Port's stormwater management system. The plan shall be subject to Ecology's review and approval. The plan is meant to provide data on the levels of contaminants of concern in Miller Creek and Des Moines Creek after the Master Plan improvements have been constructed. At a minimum, the plan shall include the following:

- sampling parameters: types of samples – temperature, pH, dissolved oxygen, flow, fecal coliform, turbidity, copper, lead, and zinc. Detection limits shall be sufficient to determine compliance with the water quality criteria of 173-201A WAC.
- frequency – the minimum frequency shall be sufficient to verify compliance with the water quality standards.
- locations – samples shall be taken in Miller Creek and Des Moines Creek immediately downstream from each stormwater discharge point.

Data collected will be used to determine the level of treatment provided by the Port's stormwater facilities and whether the Port is in compliance with state water quality standards. Violation of the standards are subject to penalties under RCW 90.48.

**AR 018779**

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