

October 29, 1998

DRAFT

TO: Gordon White, Paula Ehlers, Tom McDonald
FROM: Tom Luster, 407-6918
RE: 401 Certification, Water Quality, and Stormwater

This memo summarizes two issues that came up during Ecology's certification review for SeaTac airport. These issues have far-reaching implications, and will be a part of the Port's legal challenge to Ecology's ability to condition 401 certifications. I have included a discussion about each issue along with a recommendation and some implications. Some of this is based on my discussion two weeks ago with several folks from the Water Quality Program. Please let me know if you have questions or would like more information.

Summary: Ecology's analysis of the Port's proposed stormwater treatment methods showed that the minimum BMPs in Ecology's Stormwater Manual were not adequate to allow the Port's stormwater discharges to meet water quality criteria. Additionally, it appears that even a combination of BMPs (i.e., going beyond the minimums) would not provide adequate treatment. Since the runoff from the Port is fairly typical of many urban stormwater discharges, it appears that the guidance provided in our Manual results in projects discharging urban stormwater not meeting the water quality standards. In fact, it appears that for many of those projects, even going beyond the Manual will not result in their discharge meeting the standards.

Our certification review also revealed some differences in the way the Water Quality Program and the 401 certification staff are interpreting and implementing the water quality standards. These differences may be appropriate, considering the type of work each group does, but it may result in the appearance of inconsistent agency positions on stormwater.

The two main issues that came out of this process have to do with how we apply the water quality standards to stormwater discharges, and how we might apply the standards differently during 401 review and NPDES review.

Significance: The way we resolve these issues could have the following results –

- Permit Denials: could conceivably affect any project discharging stormwater from a parking lot or a road. Many of these projects may not be able to provide enough stormwater treatment to meet the water quality standards, thus Ecology may not be able to certify them under 401, even if they meet the requirements of our Stormwater Manual.
- Significant Change in Water Quality, Wetland Protection, and Salmon Recovery – projects now required to meet minimum BMPs could either be required to increase their stormwater treatment or may not be able to discharge stormwater into waterbodies. Discharges would be less harmful to salmon. Fewer project might be built in wetlands.
- Project Review: will have far-reaching implications on how Ecology reviews projects and on the level of treatment needed to approve projects.
- Relationship within Ecology and with local jurisdictions: will affect the cross-program relationship between the Water Quality and SEA Programs on 401 certification, the water quality standards, and Ecology's approach to stormwater discharges. Will also affect how we work with local jurisdictions.

Issue #1 -- Do the water quality standards require stormwater discharges to meet water quality criteria, or is it adequate that they meet the minimum BMPs in Ecology's Stormwater Manual?

The water quality standards require that stormwater discharges meet water quality criteria. WAC 173-201A-160(3) states that activities that generate nonpoint source pollution (e.g., stormwater) use "all appropriate combinations" of BMPs to prevent violations of water quality criteria. If a discharger is applying all BMPs "appropriate or required" by Ecology and water quality violations occur, the discharger is to modify existing practices or apply additional measures "selected or approved by the department, to achieve compliance with the water quality criteria."

Ecology's Stormwater Manual establishes a number of BMPs appropriate to detain and treat stormwater, but in many cases, the minimum BMPs listed in the Manual are not adequate to meet various criteria. Many stormwater discharges of standard urban stormwater runoff (containing zinc, lead, copper, fecal coliform, etc.), cannot be treated adequately to meet the water quality criteria. In fact, for some contaminants, even a combination of several BMPs may not provide enough treatment to meet the criteria. For example, at SeaTac, we found that a bioswale followed by a compost filter would not provide adequate treatment to meet the copper criterion. This is especially important because copper is a ubiquitous contaminant in urban stormwater runoff, and it is often at levels that are harmful to salmon.

The stormwater analysis we did with the Port was the first time I learned that the Stormwater Manual was not adequate to meet the standards. My assumption for the past few years was that if a project was built in accordance with the guidance in the Manual, then it was meeting the standards – it appears that my assumption has been wrong.

Issue #2 -- Should Ecology review a project differently for a 401 certification than for an NPDES application?

I believe the answer is yes. A water quality certification is a one-time opportunity for the state to determine whether the construction and operation of a proposed project will meet the state's water quality standards. Projects requiring a certification differ from other projects in one significant way – they involve placing fill in waters of the state, and so they often have a more significant direct impact. In my opinion, this creates a higher burden on both the applicant and the state to ensure that such projects include measures to protect associated aquatic resources. Projects built entirely in uplands result in less of a direct impact, so Ecology may be justified in not requiring the project to meet the same performance standards as a project built in wetlands or in other water bodies. This is an issue for the Water Quality Program to address.

Additionally, projects requiring certification usually involve new discharges. WAC 173-201A-160(4) allows compliance schedules for existing discharges to meet the criteria, but not for new discharges. Since the certification is a one-time opportunity for state review, we need to ensure that the project's proposed stormwater treatment system will meet water quality criteria. I recognize that Ecology's stormwater and NPDES programs have taken a different approach on this issue, in part because the NPDES program allows for compliance schedules and continual "notching up" of treatment requirements. The water quality certification process has no such mechanism.

Recommendation: Ecology should require that projects needing a water quality certification include adequate stormwater treatment to meet the water quality criteria. This is based on the following:

- Existing regulatory requirement: it is required by the federal Clean Water Act and by the state water quality standards.
- Only applies to the loss of state waters: it will apply to projects proposed to be built in wetlands or that result in filling of other waterbodies.
- Wetland avoidance: it will very likely result in more proposed projects avoiding wetland fills entirely in order to avoid the additional costs of complying with this requirement.
- Relatively small number of projects: it will affect at most several hundred of the thousands of projects built statewide each year. It may affect even fewer if project applicants determine that the benefits of avoiding wetland impacts are greater than the costs of building in a wetland.

Results and Implications:

Pros --

- Fewer projects built in wetlands – project proponents will have more incentive to avoid wetland impacts due to the higher cost of stormwater treatment in certification conditions.
- Better water quality – projects built in wetlands or other water bodies will be required to treat stormwater above current treatment levels, but at levels required by law.
- Better for fish – some of the contaminants in urban stormwater runoff (especially copper) are harmful to salmon at relatively low levels. This recommendation should fit in well with the “No Extinction” Option for endangered fish species.

Cons –

- Apparent inconsistency – Ecology would have a stormwater manual that is inadequate to approve some projects. In many cases, local stormwater requirements would also be inadequate. Projects requiring a certification will need to do more than the standard BMPs to be approved. Resolution: we should make it clear that this requirement applies to projects in wetlands and waterbodies only, where the impacts are most direct. We should also recognize that in some cases, we have developed agreements with applicants (i.e., WDOT) that include other specific requirements.
- Increased project costs – some projects will require more intensive BMPs or will require a large amount of area to provide adequate stormwater treatment and detention.

Workload Implications:

- Increased coordination -- this approach will require stronger coordination between the 401 staff and the Water Quality Program. We will either need the stormwater staff to review proposed projects for adequacy of stormwater treatment, or will need training from the stormwater staff on how to review the stormwater aspects of a project.
- Changes to stormwater manuals – Ecology may have to change its stormwater manual, and local jurisdictions may also have to update their manuals to reflect these changes.
- Increased public education – Ecology will have to get the word out to project applicants and to local jurisdictions about this requirement.