PUGET SOUND PARTNERSHIP

State of Washington

January 10, 2008

Mr. Lionel Klikoff
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Dear Mr. Klikoff:

Thank you for the opportunity to comment on the Draft Industrial Stormwater General Permit, released by the department November 21, 2007.

Stormwater runoff is a leading cause of water pollution in urban areas of Puget Sound. Stormwater also harms many aquatic species and their habitat. The Governor's Salmon Recovery Office and the Puget Sound Salmon Recovery plan have both cited stormwater as one factor limiting recovery of salmonids listed as threatened under the Endangered Species Act. Recently, NOAA Fisheries scientists have conducted studies to determine the causes of very high percentages (75% and up) of otherwise healthy coho salmon dying in Seattle urban creeks before spawning. The scientists find that something in the water is causing the deaths, that higher rates of mortality are observed immediately following rain events, and that mortality is much higher in watersheds with higher percentages of impervious surface cover. Given these observations, it seems highly probable that stormwater runoff plays an important role in the high mortality rates.

NOAA Fisheries scientists have also studied the adverse effects of copper on the olfactory systems of juvenile coho salmon and have found that "neurophysiological and behavioral responses to an alarm pheromone are reduced or eliminated by a short-term exposure (3 hours) to low levels of dissolved copper (< 10 µg/L)...."[1] Copper is commonly found in stormwater discharges, including discharges from industrial sites, and copper loadings in stormwater are sometimes very high. We believe that to protect

Puget Sound's water quality and biological resources, copper loadings in stormwater discharges must be reduced significantly.

---

[1] "The impacts of dissolved copper on olfactory function in juvenile coho salmon," current research by Baldwin et al, 2007, Northwest Fisheries Science Center, NOAA Fisheries. From the following web site: http://www.nwfsc.noaa.gov/research/divisions/ec/ecotox/fishneurobiology/copperimpacts.cfm

Scientists contributing to the Puget Sound Assessment and Monitoring Program have found that English sole residing in urban areas of the Sound have much higher incidences of lesions on their livers than their counterparts found in less urban areas. Scientists have demonstrated that elevated levels of PAHs (polycyclic aromatic hydrocarbons) in sediments are associated with increased evidence of these lesions. PAHs are often found in stormwater runoff, especially on particles in this runoff.

This evidence of harm led the original Puget Sound Partnership, in its December 2006 recommendations to Governor Gregoire (*Sound Health, Sound Future*), to identify stormwater runoff as one of five areas in need of immediate state attention. The report notes that "managing stormwater runoff is essential for clean water, as well as protecting habitat and our supply of water."

RCW 90.71.210, which establishes the Puget Sound Partnership as a new state agency, cites stormwater runoff as one of the most pressing problems facing Puget Sound. The law provides a suite of core activities that need to occur to meet state goals of recovering Puget Sound by 2020, one of which is to "improve water quality and habitat by managing stormwater runoff."

Given the magnitude of these and other problems caused by stormwater in the basin, and the focus on stormwater in the region to recover Puget Sound by 2020, this and other stormwater permits play an important role in our effort to manage stormwater and have a healthy and safe Puget Sound.

We support many aspects of the draft permit, such as the elements of a stormwater pollution prevention plan; required sampling of discharges; use of the department's stormwater manuals for selection of best management practices (BMPs); the improved correction actions section and graduated response levels following exceedances; inspections; training; and reporting. We support lower benchmarks for copper and zinc (compared to the existing permit). These toxins are commonly found in stormwater runoff and, in the case of copper, have been shown to have significant adverse effects on salmon.

However, we have several concerns regarding the current draft of the permit and suggestions for improvement.

We appreciate that the department has lowered the benchmark for copper significantly compared to the existing permit (to 20 µg/l). Given the weight of evidence of harm from copper on aquatic resources (such as threatened salmonids), we think the department is certainly moving in the right direction. We understand that the department is taking a step-by-step, measured approach by lowering this benchmark. We also understand that permittees face technological challenges in removing copper, particularly in its dissolved state, from stormwater discharges. However, given the goals of RCW 90.71 to recover Puget Sound by 2020 and demonstrated evidence that even low levels of copper (< 10 µg/L) harm salmonids within hours of exposure, we feel the department should return to the benchmark for copper that was included in the first draft of this permit (11.9 µg/L).

We feel that by using this lower benchmark for copper there is a far greater likelihood that salmon and other species sensitive to copper will be protected.

We understand that in developing new thresholds for parameters, the department is establishing numeric values that, when exceeded, would require immediate reporting to the department and action by the permittee. We support this concept – we believe that if sampling reveals a gross violation, the permittee should alert the department and take immediate action to improve the situation. However, we feel that setting the threshold at 10 times the benchmark is too high and may result in serious violations of water quality that are not acted upon immediately. Benchmarks are believed to be the value below which discharges are not likely to cause water quality violations. We recommend the department lower the thresholds in the current draft to a lower order of magnitude (for example, to five times the benchmark).

We understand that permittees have many best management practices in place that are functioning well, and there is no strong reason for them to upgrade the practices in their stormwater pollution prevention plans if benchmarks are not exceeded or if substantial process changes are not undertaken. However, we feel that permittees should be required to use the most recent version of a department-approved manual when installing new best management practices. The department's most recent versions of manuals are considered the region's baseline for stormwater management and are required to be used for new facilities in other NPDES permits, such as the municipal NPDES phase I and phase II permits. We urge the department to revise the current draft of the permit to clearly state that the most recent version of the manuals must be followed when installing new best management practices.

We hope that as you move forward to completing this permit you keep this question in mind: *Will this permit as currently written move us forward sufficiently to help our region achieve the state's goals for a healthy and thriving Puget Sound by 2020?* Reaching this goal will require strong, concerted action on many stormwater strategies, including rigorous development and implementation of stormwater general permits.

Attached you will find more detailed comments from our agency. Again, thank you for your work on this important issue and the opportunity to comment. If you have questions on these comments, please contact Bruce Wulkan of the Partnership at (360) 725-5455 or at bruce.wulkan@psp.wa.gov.

Sincerely,

David Dicks
Executive Director

Detailed Comments on the Final Draft Industrial Stormwater General Permit
Dated November 11, 2007
Submitted by the Puget Sound Partnership

The following specific comments are divided into two parts: Suggestions for improvement and areas of support.

Suggestions for Improvement

- This version of the draft permit contains a higher benchmark for copper (20 µg/l) than the first draft of the permit (11.9 µg/l). We support the department's direction in lowering the benchmarks from the existing permit, and appreciate that many permittees will have difficulty meeting lower benchmarks for copper. However, NOAA Fisheries research clearly shows that salmon are significantly harmed by even low levels of copper (<10 µg/l after only hours of exposure). To meet state goals of recovering Puget Sound by 2020 and state and federal goals of recovering salmonids threatened with extinction, we must take strong, concerted action, and we may not have time to take a measured, step-by-step approach to reducing copper in stormwater discharges. We urge the department to return to the lower benchmark for copper that existed in the first draft of the permit (11.9 µg/l). In our mind, there is a far greater likelihood that salmon and other aquatic species sensitive to copper loadings will be protected by using this lower benchmark. Our region may need to explore options for helping permittees reduce copper loadings in their discharges by researching and testing new best management practices and ensuring that our region is using all practices that are currently available nationwide and internationally. The department may need additional resources for inspections and technical assistance. The Puget Sound Partnership stands ready to help with these and other options.

- This version of the draft permit contains new thresholds that are intended to reflect that one or more parameters have been grossly exceeded. Permittees are required to alert the department and take immediate action. We support this concept entirely and agree that thresholds should be set at levels that indicate gross violations of benchmarks. We do feel, however, that setting the thresholds at 10 times the benchmark is too high, and might result in numerous discharges that may degrade water quality and harm species without any immediate action or alerting of the department. We recommend the department revise downward the thresholds to five times the benchmarks so that additional exceedances of benchmarks are captured, action is taken to address the exceedances, and the department's inspectors have the opportunity to provide assistance to permittees.

- The permit states that permittees need not update their stormwater pollution prevention plan (SWPPP) to incorporate the most recent version of the stormwater management manual unless certain conditions apply (S3 A5). We find the conditions confusing and recommend that the department revise the current draft of the permit to clearly state that permitttees shall use the most recent

version of a department-approved manual when installing new best management practices. This would make this permit consistent with the municipal NPDES permit, which requires that cities, towns and counties use the most recent version of a department-approved manual. Second, if the department wishes to require that permittees upgrade their SWPPP only if there is a significant process change at the facility, we recommend including guidance in the permit that clarifies what constitutes a significant process change. Last, if the department wishes to require that permittees upgrade their SWPPPs if a seasonal benchmark is exceeded (regardless of what caused the exceedance), we suggest clarifying language in section S3 A5(a.i.) to clearly state this.

- The draft permit lists oil and grease as a baseline sampling parameter. Oil and grease is generally recognized as an inferior means of measuring hydrocarbons in stormwater discharges. We recommend using TPH (total petroleum hydrocarbons) instead as a baseline parameter. If the benchmark for TPH is exceeded, permittees should be required to also sample for PAHs (polycyclic aromatic hydrocarbons).

- We recommend using TSS (total suspended solids) as a base sampling parameter in addition to turbidity. We understand that there currently is no viable correlation between the two parameters. Requiring sampling for both in this permit would allow the department to establish a correlation for the next permit cycle, and require sampling for one. Rationale: The department's stormwater management manuals use TSS as a treatment standard criteria rather than turbidity. Using TSS would also follow EPA's direction. The states of California, Oregon and Connecticut currently require sampling for TSS, according to the 6415 report.

- The draft permit requires that permittees discharging to waterbodies that are impaired for low dissolved oxygen, such as Hood Canal, are only required to sample for BOD (biological oxygen demand) or COD (chemical oxygen demand), and not for nutrients. The action plan to restore Hood Canal implicates stormwater as one of the contributors to severely lowered oxygen levels in Hood Canal. We suggest requiring permittees to sample for nitrogen and phosphorous if they discharge to a 303(d) listed waterbody for low dissolved oxygen. If two years of sampling indicates no significant levels of the nutrients, sampling can then be suspended.

- The draft permit contains no provisions for permittees to sample for temperature, even when discharging to a waterbody that is impaired for temperature and on the 303(d) list. Numerous studies show that stormwater temperatures increase when in contact with impervious surfaces and held in detention/retention ponds. We recommend requiring permittees to sample for temperature if they discharge to a 303(d) listed waterbody for temperature. If two years of sampling indicates that discharges should not increase receiving water temperature, sampling can then be suspended.

- We recommend revising Table 7 (Wet Season Inspection Periods) so that inspections occur through April 30, not March 31. The *Stormwater Management Manual for Western Washington* defines the wet season, in Volume I Minimum Requirements, as October 1 – April 30.

- We recommend adding additional language to clarify which industry staff specifically should receive training (S3). We recommend adding that staff with responsibilities related to inspections and sampling should receive the training. This would ensure that these two key activities are conducted properly.

- We recommend changing the sampling requirements as follows:
    - Require samples be taken within the first 12 hours of a storm, with an antecedent 24-hour dry period. We understand and appreciate that permittees had difficulties meeting the current permit requirement of sampling within the first hour of the storm. Yet it is important to attempt to capture the "first flush" of stormwater, and requiring sampling within the first 12 hours of a storm following at least one dry day appears to be a fair compromise between providing permittees with added flexibility while still providing valuable sampling data. If this is considered an excessively burdensome permit condition, the department should, at a minimum, include language in the permit that requires samples to be representative of storm events (and include guidance on what is considered representative) and require samples to be taken from separate storm events (to ensure multiple samples are not taken from the same storm event).

    - Require at least two samples each year be taken in October and November. (The final draft permit requires one, anytime after September 1.) Requiring two, after October 1, would in our mind better capture a "seasonal first flush," (as the wet season officially begins October 1) and is consistent with requirements in California's industrial stormwater general permit. We understand that the permit requires only three samples total for facilities located east of the Cascade mountains; this additional permit condition could pertain only to facilities located west of the Cascade mountains.

    - Require that permittees sample from a range of discharge points from their site. This would help ensure that discharges from a given site are characterized, while providing permittees flexibility to choose which sites to sample.

    - Require permittees to provide a brief narrative for their samples that describes the storm event during which the sample was taken, at which point of the storm the sample was taken (or when water began discharging from the stormwater pond), and other relevant information. This would allow for better characterization and analysis of the sampling data.

- Given the department's decision to address lead in its next chemical action plan process, we don't believe the timing is right to withdraw lead from the list of sampling parameters. Withdrawing sampling for lead for this permit cycle will foreclose the department's opportunity to learn more about lead loadings from industrial stormwater runoff.

Areas of Support

We support many aspects of the draft permit, including:

- Specific requirements of a SWPPP, and public accessibility to SWPPPs;
- Requiring five samples each season to determine a seasonal median;
- Use of the department's stormwater manuals for selection of BMPs;
- Improved, streamlined corrective actions process, including requiring treatment during Step A Corrective Action after one or more benchmarks is exceeded following seasonal sampling, and requiring an engineering report during Step B after one or more benchmarks is exceeded following Step A;
- Periodic inspections throughout the wet season;
- Training;
- Reporting; and
- Lower benchmarks for copper and zinc (compared to the existing permit).