UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington State Habitat Office
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Mr. Michael A. Bussell
Director, Office of Water and Watersheds
U.S. Environmental Protection Agency, Region 10
(OWW130)
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Construction General Permit Comments
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504

Mr. Kelly Suswind
Department of Ecology
Water Quality Program Manager
P.O.Box 47600
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Dear Mr. Bussell, Mr. Suswind, and Ecology staff:

The State of Washington Department of Ecology (Ecology) has recently issued a Public Notice requesting review and comment on the Modification of the Construction General Permit. The National Marine Fisheries Service (NMFS) offers the following comments on the proposed permit modification pursuant to our role as providers of biological and technical assistance under the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*), as amended (ESA) and the Fish and Wildlife Coordination Act (16 U,S,C. 661 *et seq.*). We are sending these comments to the U.S. Environmental Protection Agency (EPA) because of EPA's acknowledged oversight role in the issuance of this permit under Section 402(d) of the Clean Water Act (CWA), and acknowledged responsibility to comply with Section 7(a)(2) of the Endangered Species Act (ESA). In addition, these comments are provided per the processes outlined in the Memorandum of Agreement between the EPA and the NMFS regarding enhanced coordination under the CWA and ESA (hereafter "MOA") (May 22, 2001, 66FR 11202-11217).

With the CWA authority delegated from the EPA, Ecology proposes to re-issue the Construction General Permit for Washington State on December 16, 2010.

The geographic area covered by the permit overlaps the range of 15 federally-listed threatened or endangered salmon, as well as designated critical habitat for 13 of these populations. The permit area overlaps areas addressed by the Puget Sound Shared Strategy Recovery Plans, Lower Columbia River Fish Recovery Board, the Upper and Lower Mid-Columbia Fish Recovery Boards, the Governor's Salmon Plan, and the Puget Sound Partnership. Most of these plans have identified stormwater runoff and water quality as significant factors in reaching salmon recovery. In addition, the Puget Sound Partnership has developed recommendations for addressing stormwater effects with the goal of achieving a healthy Puget Sound by the year 2020. Also, a recent report supported by your agency, identified stormwater runoff as the greatest contributor of the worst pollutants in Puget Sound (Hart Crowser, Inc. et al. 2007).

Background: Effects of Sediment on Listed Salmon

The following paragraphs describe the general effects to listed salmoinds from typical discharges from construction sites. The severity of the effect of turbid discharges depends on numerous factors including the proximity to the water, extent of ground-disturbing activity, slope, and weather. Sediments settling out of turbid water introduced into streams can degrade spawning and incubation habitat, and negatively affect primary and secondary productivity. Turbid water can disrupt feeding (Bash et al 2001; Berg and Northcote 1985; Bisson and Bilby 1982; Waters 1995).

The vast majority of literature reports negative consequences from anthropogenic or naturally induced sediment regime changes. Turbid conditions cause physiological stress and reduce growth, and adversely affect fish survival. Important factors influencing the effects of turbid water on fish are the season, frequency, and the duration of the exposure (not just the Total Suspended Sediment (TSS) concentration) and the life stage of the species (NMFS 2005c).

Fine sediment deposition near redds can act as a physical barrier to fry emergence (Cooper 1959, 1965; Wickett 1958; McNeil and Ahnell 1964), and McHenry et al. (1994) found that fine sediment (greater than 13 percent of sediments less than 0.85mm) resulted in intragravel mortality of salmonid embryos due to oxygen stress and metabolic waste build-up. Deposited sediment can cover intragravel crevices that juvenile salmonids use for shelter, in turn decreasing the carrying capacity of streams for juvenile salmon (Cordone and Kelley 1961; Bjorn et al. 1974). Particulate materials physically abrade and mechanically disrupt respiratory structures (fish gills) and respiratory epithelia of benthic macroinvertebrates (Rand and Petrocelli 1985).

Fine sediment can also affect food for salmonids. Embedded gravel and cobble reduce access to microhabitats (Brusven and Prather 1974), entombing and suffocating benthic organisms. When fine sediment is deposited on gravel and cobble, benthic species diversity and densities have been documented to drop significantly (Cordone and Pennoyer 1960; Herbert et al. 1961; Bullard 1965; Reed and Elliot 1972; Nuttall and Bilby 1973; Bjorn et al. 1974). Reduced prey availability could reduce growth and survival of juvenile PS Chinook.

We support Ecology's objectives in permitting construction stormwater activities, and we have identified beneficial permit conditions, as well as, two core areas that will strengthen the permit:

- Recommended Permit Improvements, and
- Innovative Approaches.

Existing beneficial permit conditions

Ecology has done an excellent job through the permit of requiring coordination with local jurisdictions, from public notice requirements and NOI submittals to additional documentation required in the SWPPP Special Condition 9. This special condition lays out specific requirements which range from providing the technical basis for selecting a specific BMP, to the requirement that the Permittee must modify the SWPPP after an inspection from a local jurisdiction or other state regulatory authority. In addition, Ecology does not authorize a mixing zone in this general permit. The pH monitoring and the ensuing adaptive Best Management Practices (BMPs) (Special Condition S4.D) required in the permit are very protective of listed species because it proscribes existing BMPs that effectively adjust pH levels to regulatory standards. Finally, Ecology is also implementing the effluent limitation guidelines in one phase (i.e. permit issuance date) for all sites that disturb ten or more acres at one time which is a significant improvement.

Recommended Permit Improvements

The permit uses the concept of benchmarks (e.g. 25 Nepholometric Turbidity Units (NTU)) and action levels (levels of contaminants that will require the permittee to take further actions) to show permit compliance. NMFS' feels that this benchmark is protective of listed salmonids.

Although in a typical scenario, when the benchmark criteria is exceeded, the permittee is expected to revise the Stormwater Pollution Prevention Plan within 7 days and/or fully implement the appropriate BMPs as soon as possible, or within 10 days of the discharge. If the turbidity discharge is between 26 -249 NTU's, the permittee is required to call Ecology's Environmental Report tracking system and review/revise the SWPPP with the same time period described above. If the discharge is over 280 NTU, the permittee is required to complete non-compliance notification requirements that include developing a report for Ecology on corrective actions taken. The factors influencing the effects of turbid water on fish are the season, frequency, and the duration of the exposure. Over the course of seven days, there is a high likelihood that significant exposure to listed salmonids from turbid discharges greater than 25 NTU's could occur before corrective action is taken.

NMFS' has identified a number of recommendations that would correct the situation described above as well as significantly improve the permit and contribute to conditions that protect listed salmon. These recommendations are summarized below:

- NMFS' recommends that the permit be more specific about the types of erosion control BMPs that reduce turbid discharges down to the 25 NTU benchmark. This specificity

would be similar to the types of BMPs (i.e. dry ice or CO2 sparging) that can be incorporated to adjust pH levels in stormwater discharges.

- NMFS recommends Ecology utilizing only the 25 NTU benchmark value for all sites (i.e. equal to and above 1 acre) as the sole reporting trigger and remove the 280 NTU effluent limit.
- NMFS' recommends decreasing the number of days a permittee is allowed to revise their SWPPP to three and full implementation of BMPs within seven days of exceeding the benchmark.
- NMFS' recommends prescribing a specific distance downstream of the construction discharge where Permit Condition *S8 Discharges to 303(D) or TMDL waterbodies* applies to the permittee.
- NMFS' recommends a permit condition that allows the inspector to place an immediate *stop work* on the site until the non-compliance event is corrected and/or the site is stabilized with additional erosion control BMPs.

Innovative approaches

NMFS Washington State Habitat Office encourages innovative approaches in protecting listed species and solicits feedback from stakeholders in order to improve these ideas. Due to the relative short-term nature of construction projects, it is imperative that timely improvements be incorporated in situations where operators are out of compliance. NMFS' encourages Ecology to incorporate the innovative approaches summarized below into the reissued Construction General Permit.

- Ecology requires that the owner/operator purchase erosion control bonds offered by the local jurisdiction or a state-wide non-interest bearing account to ensure that emergency/non-compliance events are expeditiously taken care of.
- Ecology incorporates a "graduated" permit fee schedule (i.e. 100.00$ per acre for sites from 1 to 5 acres and 200.00$ per acre for sites 5 acres or greater) to ensure adequate funding for personnel to inspect construction sites all over the state at a greater frequency, thus decreasing non-compliance events.
- Ecology incorporates a permit condition that requires the permittee to submit photo-documentation of the site as stabilized before submitting a *Notice of Termination* to the Department.

We thank you for the opportunity to provide these comments under the process identified in the MOA. We look forward to continued coordination with EPA and Ecology on NPDES permits in Washington State, in part to meet the needs of listed salmon. Please call me at (360) 753-6054 if you would like to discuss this issue further.

Sincerely,

Steven W. Landino
Washington State Director
for Habitat Conservation

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