INTERFOR PACIFIC

July 14, 2009

Mr. Jeff Killelea
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Re: Comments concerning Ecology's Draft Industrial Stormwater General Permit

Dear Mr. Killelea:

Interfor Pacific located in Port Angeles, Washington, appreciates the opportunity to comment on the Draft Industrial Stormwater General Permit (ISGP). As a business in the Timber Products Industry that will be covered by this permit, we have the following concerns:

**S5.A. TABLE 2 – TURBIDITY BENCHMARK**

There is virtually no technical or regulatory information to support the appropriateness of a benchmark value for turbidity at 25 nephelometric turbidity units (NTU). This benchmark value appears to be arbitrary. The permit lacks any explanation on how the turbidity benchmark value relates to the WAC 173-201A water quality criterion for turbidity. Similarly, as the proposed turbidity benchmark value appears to serve as an effective numeric water quality-based effluent discharge limitation, there is no accounting for how the RCW 90.48.555(4) criteria have been addressed. The 25 NTU value should be withdrawn and a technical evaluation process undertaken to establish a reasonable and defensible benchmark value in accord with statutory and regulatory criteria.

According to the permit fact sheet, Ecology's justification supporting the 25-NTU turbidity benchmark in the draft ISGP is limited to:

- "Ecology best professional judgment."
- "Ecology retained the turbidity benchmark of 25 NTU from the existing permit. Based on field experience, Ecology staff determined that a stormwater discharge of 25 NTU or less will typically cause no water quality standards violation." (2002 ISGP Fact Sheet, page 34)
- "The median turbidity reported for all permitted facilities is 15 NTU."

These "judgments" have no numeric basis for achieving water quality standards and result in a turbidity benchmark that is extremely difficult and expensive to achieve. Specifically:

- Ecology makes no attempt in the permit Fact Sheet to explain how a stormwater discharge of 25 NTU turbidity relates to the specific elements of the turbidity water quality criteria in WAC 173-201A-200 and -210 (e.g., allowed fixed or percent increase from background to downstream) or implementation issues such as where upstream/downstream measurement should occur. If this is the basic logic, how does Ecology account for the RCW 90.48.555(4) criteria that existing

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controls, pollutant discharge variability, and dilution of stormwater in the receiving water be considered for ISGP permittees?

- Available performance data from ISGP permittees coupled with the corrective action process suggest that hundreds of ISGP permittees will be confronted with very expensive Level 4 requirements because of an inability to continuously achieve the 25 NTU turbidity benchmark value.
- Ecology has made recent regulatory determinations that all known, available, and reasonable methods of treatment (AKART) control for turbidity in stormwater discharges is 50 NTU. It is simply not credible that a benchmark value for turbidity in this draft ISGP would be more stringent than an AKART determination in contemporaneous individual construction stormwater permits. For example, there are numerous and recent individual construction stormwater NPDES permits where Ecology has made regulatory determinations that AKART is 50 NTU.[1] Further, these permits direct that best management practices (BMPs) contained in the *Stormwater Management Manual for Western Washington*, Ecology 2005, will be used.
- Monitoring data produced from the Timber Products Industry has indicated that 51 percent of the sample data were reported as above 25 NTU, with 33 percent of the data above a value of 50 NTU.[2] These results are not surprising. Facilities in this industry are predominately located in Western Washington, are 10 to 100 acres in size with expansive outside storage of raw materials and finished products, and have significant heavy equipment travel on both paved and rocked surfaces. For these reasons, turbidity and suspended solids concentrations will typically be higher in stormwaters discharging from Timber Products Industry facilities even following the application of applicable BMPs. Accordingly, Ecology's judgments based on median turbidity values from all industries combined is not an appropriate measure for the Timber Products Industry.

**S5.B. TABLE 3 – BIOCHEMICAL OXYGEN DEMAND (BOD) BENCHMARK**

The benchmark values for BOD and chemical oxygen demand (COD) should be withdrawn and a regulatory process completed to establish a benchmark value consistent with statutory and regulatory criteria. At this time, the permit lacks any explanation on how the BOD and COD benchmark values relate to the WAC 173-201A water quality criterion for dissolved oxygen. In addition, specific pilot plant studies performed by the Timber Products Industry show that the BOD benchmark is technically infeasible, even with the most advanced treatment methods.

Ecology makes no attempt in the permit Fact Sheet to explain how a stormwater discharge of BOD at 30 mg/l and COD at 120 mg/l relate to the specific elements of the dissolved oxygen water quality criteria in WAC 173-201A. On the contrary, for the purposes of addressing new stormwater discharges

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[1] See for Example: Issaquah Highlands, NPDES Permit No. WA-003188-7; Brightwater Conveyance System Project, NPDES Permit No. WA-003205-1; Brightwater Wastewater Treatment Plant, NPDES Permit No. WA-003204-2; Snoqualmie Ridge II, NPDES Permit No. WA-003201-8; Redmond Ridge East, NPDES Permit No. WA-003208-5.

[2] *Evaluation of Monitoring Data From General NPDES Permits for Industrial and Construction Stormwater,* page A-1, prepared for the Department of Ecology by Herrera Environmental Consultants, March 23, 2006.

into waterbodies listed on the CWA 303(d) for dissolved oxygen (DO), the agency has concluded that high BOD (and certainly COD) discharges have a "far-field" effect and "that can make it difficult to show a direct relationship between the discharge of oxygen-demanding substance and a low DO problem without site-specific water quality modeling."

Given that Ecology has explained that benchmark values are "numeric indicator values used to assess compliance with a water quality-based narrative effluent limitation," and that the sole purpose for the Timber Products Industry benchmarks for BOD and COD must be to protect against violations of the WAC 173-201A, dissolved oxygen criterion, it seems Ecology's logic would support elimination of these benchmarks.

The Fact Sheet states that the BOD benchmark of 30 mg/L is based on the federal secondary treatment standard applicable to municipal wastewater treatment plant. However, the characteristics of municipal wastewater, as well as municipal wastewater treatment technologies, are very different from those associated with industrial stormwater discharge. For example, municipal wastewater is composed of readily degradable BOD, which is treated in a very large and expensive biological treatment processes. In contrast, effluent from log yard areas, even following advanced mechanical and chemical separation of solids, contains dissolved, recalcitrant, forms of BOD associated with tannins, lignands, and other natural elements of wood. Studies performed by the Timber Products Industry have shown that the BOD benchmark of 30 mg/L is unattainable even with the most expensive and technologically advanced treatment methods. See, for example, Level 3 Response Engineering Report prepared by Parametrix, Inc for Olympic Panel Products, September 2008.

**S5.A. TABLE 2 – ZINC BENCHMARK**

Ecology decided to use a single dilution factor of 5 in establishing the zinc benchmarks, on the basis of an insufficient technical study conducted by Herrera. Use of a one-size-fits-all dilution factor of 5 is unreasonably conservative and arbitrary given the inherent variability of stormwater discharges and receiving water flows throughout the state. Most stormwater discharges are very small relative to the flows in the receiving water, and dilution is usually quite rapid. Almost all stormwater discharges will readily attain dilution factors much greater than 5 within seconds to a few minutes following discharge. For this reason, use of a single dilution factor of 5 ignores real-world dilution effects and results in overly conservative benchmarks.

Alternatively, Ecology should use (or allow the permittee to use) a site-specific dilution model to reflect actual site-specific conditions. Interfor encourages Ecology to use a site-specific model to establish more reasonably balanced benchmarks that are both fully protective of receiving water quality and economically reasonable.

**S8.B, C, D, E – CORRECTIVE ACTIONS**

Given the exorbitant treatment costs imposed by the proposed zinc, BOD, and turbidity benchmarks, Interfor supports provisions in the Draft ISGP that allow Ecology to waive structural source control BMPs, Treatment BMPs, or Active Treatment Technologies that are deemed infeasible, or unnecessary to prevent water quality standards exceedances. See Draft ISGP S8.B.4.b and c, S8.C.4.b and c, and S8.D.1.b and c. Also, because site-specific receiving water and dilution models provide a scientifically sound basis on which to base treatment waiver requests, Interfor suggests that Ecology explicitly

authorize their use in the treatment waiver process, and eliminate the arbitrary 90-day requirement in which to seek such a waiver.

**CONCLUSION**

The state needs to strike a better balance in establishing benchmarks for zinc, turbidity, and BOD that are both environmentally protective and economically reasonable. The proposed benchmarks are unreasonably stringent and economically unachievable. The benchmark values for BOD and turbidity should be withdrawn and a regulatory process completed to establish benchmark values consistent with statutory and regulatory criteria. At this time, the permit lacks any explanation on how the BOD and turbidity benchmark values relate to the WAC 173-201A water quality standards. Site-specific treatment and economic studies are available to show that the turbidity and BOD benchmarks in the draft ISGP will impose an unreasonable financial hardship on the Timber Products Industry. In addition, Ecology should incorporate use of (or allow the permittee to use) a site-specific dilution model that better reflects site-specific conditions. The methodology used by the Herrera Report is a blunt tool that arbitrarily disregards these real-world factors. Interfor strongly encourages Ecology to use the alternative processes described above to establish benchmarks that are fully protective of receiving waters yet ultimately achievable by the average stormwater discharger subject to the ISGP.

Sincerely,

INTERFOR PACIFIC

Steven P. Kroll
Manager