

## Water Quality Standards Rule Making Implementation Tool - Intake Credits

November 6, 2013

### Background and Definition

Intake credits are used in some states to account for levels of pollutants that occur in facility intake waters from human actions or due to naturally occurring background levels where technology does not exist to treat the pollutants to established water quality standards.

The following conditions typically must be met for an intake credit to apply:

- The intake pollutant must not cause, or have the reasonable potential to cause, or contribute to levels above an applicable water quality standard.
- Intake water must come from the same body of water to which the discharge is made.
- The facility must not contribute any additional mass of the identified intake pollutant to its wastewater.
- The facility must not alter the identified intake pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur that would not occur if the pollutants were left in-stream.
- The facility must not increase the identified intake pollutant concentration at the edge of the mixing zone or at the point of discharge if a mixing zone is not allowed, as compared to the pollutant concentration in the intake water, unless the increased concentration does not cause or contribute to an excursion above an applicable water quality standard.
- The timing and location of the discharge must not cause adverse water quality impacts to occur that would not occur if the identified intake pollutant were left in-stream.

Typically, states have used intake credits in conjunction with technology-based effluent limits (TBEL), but during the development of the Great Lakes Initiative water quality standards, EPA also allowed use of intake credits with water quality based effluent limits (WQBELs).

Intake credits do not alter the permitting authority obligations under 40 CFR 122.44(d)(vii)(B) to develop effluent limitations as part of a TMDL prepared by the state department and approved by EPA as outlined in 40 CFR 130.7. They may have a limited applicability due to the requirement that pollution essentially pass through the facility unaltered.

### Experience in Other States

### *Oregon*

Oregon revised its intake credits provisions as part of their recent rulemaking and modeled their revisions after the language approved by the EPA for the Great Lakes Initiative. This language can be found in OAR 340-045-0105, and includes the general requirements listed above. The Oregon regulations provide facilities the ability to gain credit for pollutants in their intake water when there is “no net addition” of pollution, or when the facility removes any incidental concentrations of a pollutant that might have occurred during production prior to discharging.

### *Idaho*

Idaho does appear to utilize intake credits for water quality based effluent limits.

### *California*

The California State Implementation Plan Section<sup>1</sup> 1.4.4 (CA SIP) provides the requirements for the use of intake credits and lists the same general conditions as other states for the applicability of intake credits. When these are met a regional water board may “establish effluent limitations the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility’s intake water. A discharger may add mass of the pollutant to its waste stream if an equal or greater mass is removed prior to discharge, so there is *no net addition* of the pollutant in the discharge compared to the intake water”. Regional water boards may establish pollutant limits that are lower than concentrations found in intake water if technology available to remove all or some of the intake pollutant.

For facilities that discharge pollutants from multiple sources and multiple source water bodies, the regional water board has the ability to derive an effluent limit that reflects the “flow-weighted amount of each source of the pollutant provided that adequate monitoring to determine compliance can be established and is included in the permit”.

### *Florida*

Florida does not appear to utilize intake credits for water quality based effluent limits. Section 6.3.2.1 of the Florida Wastewater Permit Writers Manual, *Pollutants in Intake Water*<sup>2</sup>, outlines how credits may be used for technology based effluent limits with the following restrictions:

- Credit for generic pollutants such as biochemical oxygen demand (BOD) or total suspended solids (TSS) shall not be granted unless the permittee demonstrates that the constituents of the generic measure in the effluent are substantially similar to the constituents of the generic measure in the intake water or unless appropriate additional limits are placed on process water pollutants either at the outfall or elsewhere.
- Credit shall be granted only to the extent necessary to meet the applicable limitation or standard, up to a maximum value equal to the influent value.

<sup>1</sup> Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, March 2005. Available online at:

[http://www.waterboards.ca.gov/water\\_issues/programs/state\\_implementation\\_policy/docs/final.pdf](http://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/final.pdf)

<sup>2</sup> The Florida Wastewater Permit Writers Manual can be found online at:

<http://approd.dep.state.fl.us/nwu/FDEP.WW.PWriters.pdf>

- Credit shall be granted only if the discharger demonstrates that the intake water is drawn from the same body of water into which the discharge is made. The Department shall waive this requirement if the discharger demonstrates that no environmental degradation will result.
- Adjustments for pollutants in intake water shall not be applied to the wastewater discharged or sludge generated from the treatment of the intake water.

### *Great Lakes*

Until March 2007, Great Lakes States and Tribes could consider the presence of intake water pollutants in establishing water quality-based effluent limits (WQBELs) in accordance with the final Water Quality Guidance for the Great Lakes System.<sup>3</sup> The rule language followed the same general criteria laid out above and provided permitting authorities the ability to establish effluent limitations for a facility to discharge a mass and concentration of a pollutant identified in a facility's intake water as long as there is "no net addition" of the pollutant. Similar to California, the Great Lakes regulations provided authority to establish limitations that reflect the lower mass and/or concentration of a pollutant that might be achieved by available treatment. The regulations also had the same language for facilities that have multiple sources of intake water.

### **Ecology's Preliminary Decision for Rule-making**

At this time Ecology is considering adding a new section to the water quality standards rule at WAC 173-201A-510(1) that addresses implementation of standards in permits. Language would be added to clarify conditions where intake credits would be allowed for water quality-based effluent limits (similar to Oregon and Great Lakes Initiative):

- Accounts for pollutants already present in intake water
- When the mass and concentration of effluent is the same or less than intake water
- "No net addition" of the pollutant

### **Additional Information**

- Oregon DEQ. 2011. *Issue Paper: Implementing Water Quality Standards for Toxic Pollutants in NPDES Permits*. Prepared by: Spencer Bohaboy, Annette Liebe, Andrea Matzke, Debra Sturdevant, and Jennifer Wigal. Available online at: [www.deq.state.or.us/wq/standards/docs/toxics/humanhealth/rulemaking/NPDESIssuePaper.pdf#page=29](http://www.deq.state.or.us/wq/standards/docs/toxics/humanhealth/rulemaking/NPDESIssuePaper.pdf#page=29)
- December 13, 2011. Developing Implementation Tools Related to Recently Approved Human Health WQS for Toxic Pollutants in Oregon. Presented by Jennifer Wigal and Andrea Matzke, OR

---

<sup>3</sup>Appendix F; Procedure 5; *Reasonable Potential to Exceed Water Quality Standards*, Part D. Available online at: <http://www.epa.gov/owow/tmdl/glsprohibit.pdf#page=156>

DEQ at the WA DOE Public Workshop: Surface Water Quality Standards. Lacey, WA. Available online at: <http://www.ecy.wa.gov/programs/wq/swqs/OregonPresentation.pdf>

- Water Quality Credit Trading White Paper, Prepared for the Green Bay Metropolitan Sewerage District (GBMSD) - Prepared by CH2M HILL, February 11, 2011. Available online at: [http://fyi.uwex.edu/wqtrading/files/2011/03/GBWQCT\\_2-11-11\\_FINAL.pdf](http://fyi.uwex.edu/wqtrading/files/2011/03/GBWQCT_2-11-11_FINAL.pdf)