



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
WATER AND
WATERSHEDS

March 20, 2014

Ms. Jennifer Wigal, Water Quality Program Manager
Oregon Department of Environmental Quality
811 S.W. Sixth Ave.
Portland, OR 97201-4987

via email to: Wigal.Jennifer@deq.state.or.us

Re: U.S. Environmental Protection Agency Concerns about Oregon Department of Environmental Quality's (DEQ's) Internal Management Directive (IMD) - Disposal of Municipal Wastewater Treatment Plant Effluent by Indirect Discharge to Surface Water via Groundwater or Hyporheic Water (DRAFT, dated September 2013)

Dear Ms. Wigal:

The EPA understands that DEQ is revising its IMD entitled, *Disposal of Municipal Wastewater Treatment Plant Effluent by Indirect Discharge to Surface Water via Groundwater or Hyporheic Water* dated September 2013. The EPA has reviewed the draft document and has concerns about the approach set out in the document. We feel it is prudent to communicate these concerns to you at this time before additional resources are spent further revising the draft document.

As background, Northwest Environmental Advocates (NWEA) expressed concerns about the use of hyporheic flow for the cooling of thermal discharges in a letter to the EPA, dated July 26, 2013. NWEA presented information detailing the importance of hyporheic flows as thermal refugia for cold-water species and their contribution "to the physical, chemical, and biological processes of natural streams." The EPA has similar concerns about the overall impacts of these indirect discharges to environmentally important and sensitive areas. In addition, the EPA has concerns related to the logistics of permitting discharges into hyporheic zones.

The use of hyporheic zones in permitting wastewater discharges challenges the scope of the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES) regulations. The EPA considers the hyporheic zone of a river as surface waters and thus these waters are to be permitted as such from a NPDES permitting standpoint. The indirect nature of discharges to surface waters through hyporheic zones complicates the identification of the point of compliance with surface water quality standards.

The EPA views the permitting of discharges to the hyporheic zone as inconsistent with the intent of the State's water quality standards, in particular the water quality standard for temperature. The goal of the temperature water quality standard calls for the protection and restoration of cold water to streams and rivers that are designated for salmon, steelhead, and cold-water trout uses [OAR 340-041-0028(2)]. Further, the temperature standard includes a criterion for the protection and restoration of cold water refugia in waters designated as a migration corridor for salmonids [OAR 340-041-0028(4(d))].

The hyporheic zone, where there is mixing of groundwater and surface water, is recognized to be an important feature of a riverine system that contributes cold-water flows to rivers and streams, in addition to providing in-stream habitat for various lifestages of salmonids and other aquatic species. The approach in the IMD appears to adversely impact the cold water that hyporheic flows provide to a river, which appears to conflict with the objective expressed in the water quality standard. The IMD does not address this apparent conflict with the water quality standard, nor does it provide a context for evaluating the net effect permitting indirect discharges may have on meeting in stream temperature standards.

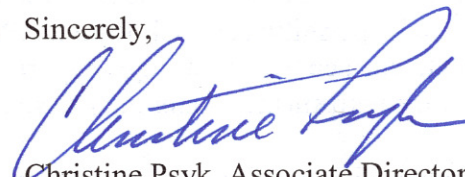
In addition, the IMD lacks specificity in relation to design and operational considerations when evaluating the feasibility and environmental benefits of indirect discharge proposals. The EPA cannot support this approach without a clear understanding of the design requirements and evaluation criteria such as waste management zone design and site-specific hydrogeological study requirements. The IMD must incorporate details encompassing the design and evaluation criteria used to determine the feasibility of each project and its impact on the receiving water.

Finally, the permitting approach is contrary to the General Policies of the Groundwater Quality Protection Rule for preventing groundwater pollution and protecting beneficial uses. While the CWA does not govern groundwater quality, it did not contemplate shifting pollution to groundwater as a means of avoiding direct discharges to surface water. The EPA believes groundwater to be a valuable resource to be protected.

The EPA recognizes the complexities DEQ faces in permitting municipal wastewater treatment plant (WWTP) discharges to impaired waters. In particular, permitting discharges to temperature-impaired waters presents significant challenges. However, based on the EPA's understanding of this draft IMD, we believe the proposal to discharge to hyporheic flows conflicts with the State's water quality standard for temperature, the State's ground water regulations and possibly the federal NPDES regulations. The EPA asks DEQ to reconsider providing municipal WWTPs with this option for wastewater discharges, given the regulatory, technical and biological uncertainties of this discharge approach.

Should the State choose to move forward with this permitting approach, the EPA requests early involvement in any proposed discharges to hyporheic zones to determine if such projects can be permitted under the NPDES program. Please contact me at (206) 553-1906 or Mike Lidgard, NPDES Permits Unit Manager, if you have any further questions. Mike may be reached at Lidgard.michael@epa.gov or (206) 553-1755.

Sincerely,



Christine Psyk, Associate Director
Office of Waters and Watersheds

cc: Mr. Dennis Ades, Oregon Department of Environmental Quality
Mr. Bill Mason, Oregon Department of Environmental Quality
Ms. Debra Sturdevant, Oregon Department of Environmental Quality
Ms. Nina Bell, Executive Director, Northwest Environmental Advocates