

NORTHWEST ENVIRONMENTAL ADVOCATES



August 1, 2013

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Via email only: Bohaboy.Spencer@deq.state.or.us

Re: **Proposed Water Quality Permit Renewal for the Oak Lodge Water Reclamation Facility**

Dear Spencer:

Thank you for the extension to the due date for public comments on this proposed permit. These comments are submitted on behalf of Northwest Environmental Advocates and the Northwest Environmental Defense Center.

1. **Copper, Ammonia and Jeopardy.** The National Marine Fisheries Services (NMFS) issued a final Biological Opinion on Oregon's aquatic life criteria for toxics in 2012. In that document, NMFS concluded that Oregon's current aquatic life criteria for copper and ammonia present jeopardy to threatened and endangered salmonids. At this writing, Oregon DEQ has not taken action to remedy the standards' deficiencies nor has EPA. However, given the nature of the finding, the fact that both copper and ammonia are present in the Oak Lodge effluent, and the fact that changes in the criteria could affect the outcome of the Reasonable Potential Analysis ("RPA"), the permit should contain a re-opener that is tied to completion of new copper and ammonia water quality criteria. While DEQ has included Schedule B Conditions 5.f.a.ii ("If, after permit issuance, the EQC adopts water quality standards for a new parameter or parameters, characterization of effluent and ambient water quality for the new pollutant parameter(s).") and iii ("If, after permit issuance, the receiving stream is listed as impaired on DEQ's 303(d) list for a new parameter or parameters, characterization of effluent and, if necessary, ambient water quality for the newly listed pollutant parameter(s).") to address new or revised criteria and new 303(d) listings of impaired waters, those conditions apply only to additional monitoring. We suggest that a re-opener should apply to permit limits after such new criteria are established.

2. **Copper.** In addition, given that the outcome of the copper criteria revisions may be, in fact is likely to be, adoption of the EPA CWA Section 304(a) recommended Biotic Ligand Model ("BLM") criteria, and that the BLM model requires numerous parameter inputs, the permit conditions for this permit must ensure that DEQ has all the data necessary to run the BLM for Oak Lodge at the time the permit is re-opened and, at the worst case, that the data are available for reissuance of this permit in five years. Given DEQ's history of failing to ensure that permittees gather sufficient data on receiving stream quality and effluent quality *prior* to the issuance of NPDES permits, DEQ must ensure that this circumstance does not hinder future permit limits for a pollutant with known adverse effects to salmonids which is contained in this

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discharge. We support the inclusion of the Schedule B Condition 5.f.a.ii requiring additional monitoring but in this instance it will cause delays that can be remedied by addressing the copper issue in the permit itself.

3. **Inadequate Information.** An example of this ongoing problem with DEQ's entering permit writing without sufficient information is the Schedule D permit condition that requires Oak Lodge to conduct an evaluation of the mixing zone for outfall Nos. 001 and 001A when, particularly given the fact that this permit dates to 2004, this evaluation should have been completed prior to the issuance of this permit.

4. **Inflow and Infiltration.** Prevention of inflow and infiltration ("I&I") should be a permit condition that goes beyond the permittee's merely having to submit a report pursuant to Schedules B and D. The Fact Sheet reports that annual reports have been filed regularly but there is no indication of the level of success in controlling I&I from that process. Either the reports are not really useful in that regard or DEQ is not fully characterizing them. If it is the former, this permit should ensure that the reports do focus on efficacy of the I&I program. If it is the latter, we suggest that the Fact Sheet should identify the efficacy of the program. We agree with the new language of the permit that prohibits sanitary sewer overflows. However, when DEQ says that it "will continue to exercise enforcement discretion with respect to overflows consistent with the provisions of the Bacteria Rule (OAR 340-041-0009)," Fact Sheet at Section 6.6, it makes its new commitment to the prohibition a distinction without a difference. Despite EPA's informing DEQ that its policy needed to be one of prohibition, DEQ intends to continue to interpret its permits as allowing overflows precisely as it has up until it "accepted" EPA's request. The fact that DEQ makes this statement renders even more clear its intention to ignore the requirement for a prohibition. This language should be struck from the Fact Sheet.

5. **Biosolids.** The Fact Sheet states that updated biosolids plans will be subject to public notice, Fact Sheet at 7, however it is unclear what the public must comment upon now, if anything. Generally, we would say that certain references to the Plan Contents of Land Application Plans have not been effective with other municipalities. So, for example, we do not believe that it is sufficient for DEQ to require permittees such as Oak Lodge to provide "[c]riteria that will be used in the selection of new sites" because we do not believe that this ensures that sites are not chosen where biosolids may enter surface or groundwater. Likewise, we do not believe that a permit requirement that the permittee provide procedures for notification of adjacent land owners is sufficient without at least some procedure to demonstrate to DEQ that, in fact, the permittee did notify adjacent property owners. It is our experience that sites are chosen that are, for example, former tiled wetlands and that adjacent property owners have not been notified for decades. If DEQ cannot learn from its failures, those failures are bound to continue. Relatedly, we disagree that DEQ should grandfather existing land application sites into new permits because sites have been poorly chosen in the past. Therefore, we recommend the removal of Schedule D Condition 5.c.i and, instead, recommend that DEQ require public comment on all land application sites and plans, new and old.

6. **Mercury.** We agree that all sources of mercury should be required to institute Mercury Minimization Plans ("MMP") as is required in Schedule D Condition 8. We disagree that DEQ can issue a permit without a water quality-based effluent limit ("WQBEL") for mercury. First, while NWEA does not believe that the Willamette Mercury TMDL is an actual TMDL, DEQ did submit it to EPA for approval and EPA did approve it. Therefore, this permit must conform to

the assumptions and requirements of the approved TMDL. The TMDL states that “[p]oint sources within a sector will be required to develop mercury minimization plans and to monitor their effluent to better characterize their contribution of mercury and the effectiveness of management measures. The implementation of best management practices (BMPs) should allow point sources to meet the overall allocation for the specific sector.” *Id.* at 3-34. It also requires “an ‘across the board’ reduction of 27% for each of the source categories considered in the analysis.” *Id.* Further, it requires for all municipal discharges together an “interim” wasteload allocation of 2.6 kg/year. *Id.* at 3-36. Therefore, DEQ must establish a WQBEL of 27 percent of the total mercury loading in the Oak Lodge effluent as called for in the TMDL. In addition, as the TMDL states that BMPs should be sufficient to meet the overall allocation for the sector, namely Oak Lodge’s contribution to the 27 percent reduction to 2.6 kg/year and that minimization plans must establish the “effectiveness of management measures,” the permit must establish that the BMPs will in fact result in that level of reduction and the effectiveness must be established. EPA regulations require permits to be issued so that they are “consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA[.]” 40 C.F.R. § 122.44(d)(vii)(B). TMDL wasteload allocations cannot be ignored.

Instead, the proposed permit in Schedule D Condition 8 calls for development of a plan that involves only “identification” and “monitoring.” Condition 8.e, which arguably comes the closest to actual pollution controls, does not require any pollution reduction. Instead, it calls for “[i]dentification of potential methods for reducing or eliminating mercury.” After two years Oak Lodge will have issued a plan with “potential methods” which it then must “implement[.]” within one month of DEQ’s approval. (The logic of a potential being implemented escapes us.) Moreover, Condition 8.f, which addresses monitoring for effectiveness only applies to overall “effluent” quality so that Oak Lodge, DEQ, and the public will have no way of knowing whether individual BMP efforts identified in the plan will have proven effective. There is, additionally, no accountability for failure of Oak Lodge to institute an *effective* plan, so long as it’s a plan, and no public input into the content of the plan to oversee DEQ’s lax approach to regulating mercury. This provision is, in short, a fig leaf, just as the so-called TMDL for Willamette mercury is.

The permit contains too much ambiguity as to what little accountability might be inferred from its present language. Condition 8 states that “[i]f it is determined that the MMP is not effective . . . DEQ may reopen the permit to modify the permit conditions, including a possible numeric effluent limit.” This raises several questions. First, if DEQ believes that it is possible, in the event that Oak Lodge fails to do a good job with its MMP, to establish a numeric effluent limit, why does it not believe that it is capable of establishing such a limit now? Such a limit is required in light of the “wasteload allocation” established in the TMDL which cannot be ignored. Moreover, where BMPs are allowed in lieu of WQBELs, it is only where the WQBELs cannot be set, 40 C.F.R. § 122.44(k), but here DEQ is saying that it is capable of setting them. Second, when will DEQ make this determination? Third, how will the determination of ineffectiveness be made? Is this effectiveness in achieving the 27 percent reduction of the WLA that is not expressed in the permit or is it in the eye of the DEQ staff beholder? Fourth, why does this attenuated reduction not require a compliance schedule? These questions are both questions and rhetorical statements. Since DEQ has admitted it is capable of setting numeric effluent limits, it must do so here. DEQ has not established a date for determining the efficacy of the MMP nor a method of evaluating it. And, we believe that a compliance schedule is required.

DEQ cannot rely only on the outcome of the TMDL which was established to meet a human

health criterion for mercury that is now superseded by new human health criteria and which failed to address the levels of mercury that can be allowed for the protection of aquatic and aquatic-dependent wildlife pursuant to DEQ's narrative criteria for toxics. Despite DEQ's view that its narrative criteria only apply if there are numeric criteria – see DEQ response to comments by NWEA on the Willamette Mercury TMDL at 3-12 – federal regulations pertaining to the issuance of NPDES permits explicitly require consideration of narrative criteria which are, of course, only pertinent where numeric criteria are not established or are inadequately protective. *See, e.g.*, 40 C.F.R. § 122.44(d)(i) (“Limitations must control all pollutants or pollutant parameters . . . which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, *including State narrative criteria for water quality.*”)(emphasis added). Therefore, DEQ must use the assumptions underlying the TMDL as a basis for WQBELs, but further increasing the load reductions in proportion to the changes that have been made in the human health criteria since the TMDL was developed, and, in addition, interpret and apply the narrative criterion. The WQBEL must be consistent with the assumptions of the TMDL and comply with the currently applicable standards in this permit.

Additionally, while DEQ persistently points to Whole Effluent Toxicity testing as the answer to its narrative criteria, WET testing does not address the requirement that toxic substances “not be introduced . . . in amounts, concentrations, or combinations that may . . . bioaccumulate in aquatic life or wildlife to levels that adversely affect . . . aquatic life, wildlife, or other designated beneficial uses.” OAR 340-041-0033(2). Specifically, WET testing does not provide protection of wildlife and mercury is known to have adverse impacts to wildlife. *See, e.g.* The Mercury Report to Congress available at <http://www.epa.gov/mercury/report.htm>. This report includes proposed limits for the protection of such wildlife as piscivorous birds and mammals.

In addition, DEQ acknowledged the shortcomings of the TMDL by stating that it would be “taking actions to fill in those data gaps leading to a revised TMDL in 2011” but has not, of course, issued a revised TMDL in 2011. It is unclear if DEQ has filled the data gaps.

Assuming that DEQ accepts our comments above, we now address the mixing zone for mercury. Having established a TMDL with load reductions and wasteload allocations, DEQ cannot issue wasteload allocations in permits that apply after those loads have been diluted in a mixing zone. Where the issue is dilution, as in numeric criteria which are established as concentrations, and to the extent mixing zones are allowed and applicable, dilution is an appropriate calculation to make to evaluate whether a discharge is meeting the concentrations established in a criterion. A wasteload allocation is not, however, a concentration; it is a load. A wasteload, therefore, must apply to the end-of-pipe and cannot be evaluated after dilution because dilution is not logically applied to loads, only to concentrations. The load is the load, regardless of the concentration that results.

Finally, it is extremely unclear how this proposed permit conforms with the almost non-existent description of NPDES permitting contained in DEQ's Internal Management Directive on Implementation of Methylmercury Criterion in NPDES Permits, issued January 2013. Other than a discussion of an approach akin to the intake credit, there is one paragraph on a reasonable potential determination which concludes the following:

Any facility contributing significant and consistent concentrations of total mercury to the receiving water body is considered to have the reasonable potential to

exceed the water quality criterion unless a site-specific survey determines otherwise.

IMD at 3. Contrary to the IMD, however, DEQ has not made a reasonable potential determination for Oak Lodge. And it has not explained why the IMD is not being followed for this permit. Finally, the IMD, in a single paragraph, states that no effluent limits are required even, apparently, where a TMDL has been completed that makes the link between methylmercury tissue levels and water column levels. *See* Mercury TMDL at 3-33 (“The water column guidance value for total mercury (associated with the median value for the northern pikeminnow) is 0.92 ng/l (Table 3.3). If this guidance value were reached fifty percent of the time in the Willamette mainstem system, then our analysis predicts that average fish tissue concentrations of mercury in the northern pikeminnow will eventually fall below the threshold of 0.3 mg/kg thereby eliminating the need for fish consumption advisories pertaining to mercury.”) This is simply false based on the EPA regulations discussed elsewhere in these comments.

If DEQ were not prepared to use its methylmercury criterion as a tissue level for purposes of NPDES permitting, DEQ should not have deleted its human health criteria for mercury. The Oak Lodge permit should also include a reopener to address the following statement in the IMD: “This process is expected to be completed by the end of 2013 and may result in a further reduction of the QL for total mercury around 0.0005 µg/l (0.5ng/l).” IMD at 2, footnote 10.

7. **Pretreatment Program.** With regard to Oak Lodge’s pretreatment program, Schedule E Condition 6 establishes that Oak Lodge must evaluate “the need to revise local limits by the end of July, 2016.” Given that the MMP is due in two years, it is unclear why the local limits – which presumably would include mercury limits for pretreaters – do not need to be evaluated for three years. Moreover, this evaluation is not implementation yet the MMP is supposed to be implemented within one month of DEQ’s approval of the plan. It appears that the pretreatment requirements are entirely separate from DEQ’s BMP-based effluent limits on mercury which is contrary to law and good policy. Instead, DEQ should *at a minimum* require that the pretreatment program be used to control mercury. We do not intend to suggest that only those sources of mercury covered by the federal pretreatment program should be required to “pretreat” and remove or eliminate mercury from their discharge to Oak Lodge’s sewer collection system. Quite the contrary. However, if it is the only step, it is certainly a necessary one.

The Fact Sheet contains disheartening information, namely that the facility’s pretreatment program has “not yet been evaluated by DEQ for consistency with state and federal requirements.” Considering that DEQ has hardly issued a single individual permit since February 2012 and that the Oak Lodge permit was last issued in 2004, this inaction reflects poorly on DEQ’s oversight. This permit should not refer to “immediate implementation” of the pretreatment program after DEQ’s approval, which comes after three years, Fact Sheet at 9, but rather should be specific as to dates. Moreover, given that the current pretreatment program consists of two categorical users, it appears that the program has not been extended to all sources of mercury that could be reached through the federal pretreatment program through local limits if properly instituted. Finally, given that implementation does not occur “immediately” until DEQ’s approval, and based on the history outlined it seems possible that DEQ’s approval might conceivably never take place, the permit might be sanctioning operation without compliance with federal pretreatment requirements. DEQ must establish conditions in the permit that do not allow that situation to arise.

The history of the pretreatment requirements might also be made a bit more clear in the Fact Sheet. On page 9, it says that they were added in 1987 and eliminated in 1995 so it's not clear when the new requirements, which DEQ has never reviewed, were added.

8. **Outfalls.** It is unclear whether DEQ has evaluated compliance for both permit outfalls, 001 and 001A. Because Outfall 001A is designed to be used when effluent levels increase and receiving waters are high and therefore reduce the discharge capacity of the primary outfall, compliance with water quality standards must be evaluated for Outfall 001A during high flow seasons. It is not entirely clear if this analysis of both outfalls has been done or if the data necessary to conduct this analysis are available.

9. **Enforcement History.** The Enforcement History table on page 11 of the Fact Sheet is uninformative because it fails to include information on what parameters were violated and what caused the violations (e.g., equipment, inadequate treatment capacity, etc.). This should not be too much of an effort to add.

10. **Toxics.** Given that many of the toxic pollutants for which the Willamette River is water quality limited, see Table 6 of the Fact Sheet, the high quantitation limits for those pollutants, and the inability of modern technology to measure criteria levels in either the effluent or the receiving water, DEQ should require the use of semipermeable membrane devices. In addition, DEQ cannot rely on the official 303(d) list because Oregon does not include toxics on that list that have been found in fish tissue, other than those deemed to be a health hazard by another agency. EPA permitting regulations implementing the Clean Water Act do not refer to the 303(d) list as the arbiter of whether a source may cause or contribute to a violation of water quality standards but merely that this issue must be evaluated and addressed. *See* 40 C.F.R. § 122.44(d). Fish tissue levels that are known to present harm to species or human health, or that when translated to water column levels exceed water column criteria, are violations of water quality standards. In fact, these regulations explicitly require an analysis of compliance with *narrative criteria* which, in Oregon requires an evaluation of bioaccumulation, impacts to wildlife, etc. as described *supra*. OAR 340-041-0033(2). Such an evaluation does not currently occur in the 303(d) listing process by Oregon, although it should, rendering the 303(d) list an inadequate determination of whether standards are already being violated. This determination, in turn, underlies the findings of whether there is reasonable potential for a source to cause or contribute to standards violations.

11. **Bis (2-ethylhexyl) phthalate.** DEQ has explained in its Fact Sheet why the existing data demonstrating a potential need for WQBELs for bis (2-ethylhexyl) phthalate is not being used to establish effluent limits and, instead, DEQ is requiring additional monitoring. DEQ incorrectly has concluded that “[i]f after the review of Tier 1 monitoring data, an imminent environmental hazard is determined, the department has the option of re-opening the permit and adding effluent limits.” Fact Sheet at 19. Federal regulations are silent on the matter of “imminent environmental hazard.” Instead, EPA regulations at 40 C.F.R. § 122.44(d) require a reasonable potential analysis and WQBELs if the outcome demonstrates there is a reasonable potential to cause or contribute to violations of standards. The appropriate condition is that having sought immediate confirmation of the bis (2-ethylhexyl) phthalate levels, the permit be re-opened for WQBELs if there is evidence of reasonable potential. Hazard is not the trigger.

13. **Temperature.** The evaluation of temperature for this permit is complicated by the fact

that the TMDL for temperature in the Willamette is based on a part of the water quality standards since vacated by a federal court. Nonetheless, the TMDL remains applicable in some fashion and EPA regulations require permits to be “consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA[.]” 40 C.F.R. § 122.44(d)(vii)(B). As a preliminary matter, we disagree that in the absence of EPA approval, DEQ can use the reserve capacity for existing sources as asserted in the Fact Sheet at 21. While we appreciate the uncertainty surrounding litigation over the TMDL, as mentioned by DEQ, it is also true that the existing TMDL has been approved and, as stated above, at a minimum permit limits must be consistent with its assumptions until the TMDL is disapproved, withdrawn, vacated or otherwise ceases to exist. Therefore, the Fact Sheet’s description of how the numeric criterion is applicable is simply not relevant for this permit. Specifically, the conclusion that “[t]he analyses determined there was no reasonable potential for the discharge to violate the Human Use Allowance (OAR 340-041-0028(12)(b)(A)),” *id.* at 22, cites to a provision of the regulations that does not apply here, where a TMDL is *not* present. DEQ cannot use the 0.3 HUA as if there were no TMDL in place because it is not consistent with the assumptions of the TMDL.

It is also true that the following statement is irrelevant: “the net effect of the effluent is that of a cooling effect on ambient temperatures during critical time periods.” *Id.* Ambient temperatures are not relevant to whether the discharge will cause or contribute to a violation of the standards; they are only relevant in demonstrating that this source, along with all other temperature sources, contributes to a violation of the temperature standards. Therefore, the conclusion that this 22.1° C discharge into an ambient temperature of 25.4° C will actually cool the river is irrelevant. This evaluation, while factually correct, is not legally correct and leads to a false conclusion: “No permit limits for temperature are needed.” This is not correct because this source is one of many which collectively are causing the violation of temperature criteria, which is 20° C, not 25.4° C. Moreover, given that there is a TMDL with wasteload allocations, DEQ cannot issue a permit that does not contain corresponding WQBELs.

This takes us to the TMDL. With regard to the TMDL Option 1 approach, as stated above, the appropriate number is the 42 million Kcals of the TMDL, not the WLA adjusted to reflect the reserve capacity. We are not in a position to question DEQ’s calculation that the Oak Lodge excess thermal load is 28 million Kcal, which is below the WLA of 42 million Kcal, but at a minimum, DEQ must issue this permit with a WQBEL that is consistent with the assumptions of the TMDL. The absence of a WQBEL is a WQBEL that is inconsistent with the TMDL. Therefore, there must be a WQBEL even where DEQ, in the TMDL established that at the location of Oak Lodge “[a]ll individual WLAs are flow-based and allow for substantial growth in heat loads above low flow levels as receiving streamflow rates and heat loading capacities increase.” TMDL at 4-68.

The second question is: what is the correct WQBEL? We do not agree that it can be based solely on the calculations of the wasteload allocation in the TMDL because while this would make the WQBEL consistent with the TMDL assumptions, it would also make the WQBEL inconsistent with other federal requirements, namely 40 C.F.R. § 122.44(d)(i), which requires compliance with *water quality standards*: “Limitations must control all pollutants or pollutant parameters . . . which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard[.]” Since the 42 million Kcal wasteload allocation in the TMDL is based on the now-vacated Natural Conditions Criterion (“NCC”), the actual allocation cannot be used in this

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permit. What can be used is the portion of the overall point source section allocation made to Oak Lodge in the TMDL, that is its portion of the 70 percent allocation to NPDES permittees. TMDL at 4-68. This would achieve compliance with the assumptions of the approved TMDL and with the existing water quality standards.

14. **Mixing Zones.** DEQ has found that absent a mixing zone certain pollutants discharged by Oak Lodge would cause or contribute to the violation of water quality standards in the Willamette by virtue of the fact that the standards in the Willamette are already violated and Oak Lodge contributes loads to those violations. Again, DEQ confuses loads with concentrations and determines that it can evaluate whether there is reasonable potential for this source to cause or contribute to the violations based on the calculations at the edge of an imaginary mixing zone. In fact, the correct analysis is the end-of-pipe calculation which, for copper, lead, mercury, silver, zinc, free cyanide, and bis (2-ethylhexyl) phalate should result in WQBELs because those end-of-pipe calculations demonstrate the source is contributing loads that are contributing to the violations of those criteria.

Sincerely,

A handwritten signature in black ink, appearing to read "Nina Bell". The signature is fluid and cursive, with a large initial "N" and a long, sweeping underline.

Nina Bell
Executive Director