

NORTHWEST ENVIRONMENTAL ADVOCATES



September 27, 2013

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Re: **Proposed Modification of City of Wilsonville Water Quality NPDES Permit, File #97952**

Dear Ms. Stellmach:

The following are Northwest Environmental Advocates' (NWEA) and Northwest Environmental Defense Center's (NEDC) comments on DEQ's proposal to modify the City of Wilsonville's December 27, 2010 permit to add provisions allowing Wilsonville to meet its thermal load limits through water quality trading. While we support the use of trading as a means of addressing most point source discharges of thermal pollution, DEQ has failed to draft an appropriate permit and its Fact Sheet is highly inadequate, leaving people attempting to submit comments in the dark about the proposal and establishing a permit with less than clear conditions and terms. Moreover, the similarity between the Wilsonville proposed permit and the City of Medford's permit allowing trading is great, with the latter having provided more information than the one currently subject to public comment. We had hoped that after our letter of March 15, 2013 to the U.S. Environmental Protection Agency (EPA) regarding Oregon's trading program, which focused on the limitations of the Medford trade NPDES permit, DEQ would prepare a proposed permit and fact sheet for its next proposed trade that both shed more light on its thinking and addressed some of the significant shortfalls in its past permitting actions. Apparently we were overly optimistic. The Wilsonville proposal is considerably less informative than the last one and fails to address any of the issues that have been discussed. If it is DEQ's intention to make significant changes after the public comment period, rather than allowing the public to comment on its approach, we object in advance to not being given a full opportunity to comment on DEQ's real approach.

I. Thermal Load Limits

DEQ seeks to modify the Wilsonville permit, presumably pursuant to federal rules on modification and revocation of permits at 40 C.F.R. § 122.62, applicable to state programs at 40 C.F.R. § 123.35. These rules state that "[w]hen a permit is modified, only the conditions subject to modification are reopened." 40 C.F.R. § 124.5(c)(2). There are a number of bases allowed for modifications. Although the DEQ Fact Sheet does not establish the basis for the Wilsonville request for modification, *presumably* it is because there are allegedly "material and substantial alterations or additions to the permitted facility or activity . . . which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit." 40 C.F.R. § 122.62(a)(1). The problem is that the public cannot evaluate

whether this prong of the modification rules applies because DEQ has not provided the underlying Wilsonville request to the public nor has it characterized and discussed the request. And in that context, DEQ has not explained how a purported change from using some method of effluent treatment to pollutant trading, and associated changes in monitoring requirements, can be termed an “alteration . . . to the permitted facility or activity . . . *which occurred after permit issuance*[.]” In fact, the alteration to a facility or activity has not yet occurred because permission is being sought to make the alteration by modifying the permit. The permit that Wilsonville seeks to modify does not include any reference whatsoever to a permitted facility or activity the source will use to meet its thermal effluent limitation but merely establishes that there is an excess thermal load limitation. Therefore, no material alteration has been made or could have been made to a permitted facility or activity and this prong of the federal rule cannot apply. (Neither does the current reopener clause in the existing permit apply.)

Understanding whether the proposed modification properly comes under 40 C.F.R. § 122.62(a)(1) is important because there do not appear to be any other legitimate bases upon which this request for modification can be made other than 40 C.F.R. § 122.62(a)(3)(i), a provision that certainly is applicable in this instance, where the underlying EPA-approved water quality standard has changed. But apparently this is not the basis for the proposed modification because DEQ is not proposing to alter the effluent limit affected by the change in water quality standards. In fact, DEQ seeks to modify the method of achieving the excess thermal load effluent limitation without modifying the actual effluent limitation itself despite the applicability of 40 C.F.R. § 122.62(a)(3)(i) which allows modifications where the standards on which the permit was based have been changed by amended standards and/or judicial decisions.

Finally, it is unclear to us how allowing trading but not evaluating the underlying effluent limitation is consistent with the general regulation on modifications, 40 C.F.R. § 124.5(c)(2), quoted above. Putting aside the two modifications concerning monitoring and reporting, which “conditions” precisely have been reopened? The proposed Modification No. 3, the addition of a 9th Special Condition, is an addition of a condition, not a modification of a condition. If, instead, DEQ views the modification as allowing trading to modify how the permittee can meet its thermal effluent limit, then it is modifying the condition of the thermal effluent limit and must open that condition up for revision and therefore public comment.

It appears to us that DEQ has two options. The first option is to modify the permit to allow trading for Wilsonville’s excess thermal load by *also* modifying the existing permit’s excess thermal load limitation, pursuant to 40 C.F.R. § 122.62(a)(3)(i). The second option is for DEQ to revoke in its entirety the existing permit and reissue a new permit. Assuming that DEQ will choose the first option, DEQ may no longer rely solely on the wasteload allocation of 39 million kilocalories per day established by the Willamette River Temperature TMDL and accepted as the excess thermal load limitation for the existing permit, 2010 Fact Sheet at 16, because that wasteload allocation is based on a part of the temperature standard – the Natural Conditions Criterion (NCC) applied in the Willamette Temperature TMDL – that no longer exists. Instead, it must also evaluate whether the Wilsonville discharge meets the remaining numeric criteria and choose the more stringent of the two calculations to establish the thermal limit for a modified permit.

II. Proposed Modification No. 1 – Monitoring

The proposed modification to temperature monitoring and reporting requirements are set out in

Modification No. 1 but DEQ has not stated what they were previously or provided a strike-out version of the old permit, making the task of finding the changes harder for the public and more difficult to track in general. We recommend in future that DEQ simply be more thorough in setting out this information. At a minimum it could provide the url for the old permit. There is a distinct difference in the unhelpful Fact Sheet provided for this permit modification and the one issued by DEQ for the recent Oak Lodge permit renewal, which extensively documents DEQ's thinking. In addition, it is unclear what the difference is between the method of calculation called for in the existing permit's Note 6 for calculating the excess thermal load and that in the modification proposed but they appear to be different formulas and different values. How can the public comment on something that is neither called out nor discussed? DEQ also does not explain its rationale for changing what appears to be a year-round monitoring scheme into one that is limited to June 1 through September 30 of each year. Looking at the Willamette Temperature TMDL it appears that limiting monitoring of temperature to the start of June and the end of September is a mistake. For example, the TMDL states that "[m]odel simulations demonstrate that natural thermal potential stream temperatures for some reaches of the Willamette River and its tributaries exceed biologically-based numeric criteria at times from *April through October*." TMDL at 4-62 (emphasis added). Likewise, the "allocation framework applies throughout the critical period, which for most segments of the Willamette River extends from April through October." *Id.* at 4-63. While the TMDL states that the wasteload allocations apply in this period upstream of RiverMile 50, *id.* at 4-66, it is not clear that the weeks outside the June through September period are not also of some sufficient concern to warrant monitoring. That is to say, monitoring data from both sides of the critical period could be of utility down the road and monitoring should not be limited only to ensuring compliance with applicable wasteload allocations. This is particularly true given that the water quality standards for temperature have changed since both the permit and the TMDL were issued and DEQ cannot rely solely on the wasteload allocations established in a TMDL based on a now-outdated standard.

III. Proposed Modification No. 2 – Reporting

The proposed modification to reporting is inadequate. There is nothing in the reporting that requires Wilsonville to report, for example:

- whether any credits previously obtained have been lost, for example through force majeure provisions of any contracts it may have with third parties;
- a copy of any and all contracts or "trading agreements" by which Wilsonville is purportedly obtaining credits;
- actual kilocalories controlled related to actual vegetation planted and grown as part of any trade; and
- in a clearly-stated location the status of the credits it has purchased (only vague references are made to some on-line credit accounting).

IV. Proposed Modification No. 3 – Trading to Meet Effluent Limits

We strongly object to a permit that includes the following language: "The DEQ-approved credit trading program is incorporated into this permit by reference," and "[a]ll credit trading activities must be conducted according to the procedures in the DEQ-approved credit trading program." Proposed permit at 3. It is not clear what DEQ means by stating that it is incorporating by

reference a “program.” If DEQ means the document identified as “Attachment A,” the “Wilsonville Restoration Approach for Temperature Compliance” (hereinafter “Attachment A”) then it should so state. The NPDES permit is a regulatory document and such ambiguity cannot be tolerated. If, on the other hand, DEQ has in mind another document, it must be provided to the public since it is being incorporated by reference and therefore is a part of the permit that is being put out for public comment. *See, e.g., Waterkeeper Alliance, Inc. V. Environmental Protection Agency*, 399 F.3d 486, 502 (2nd Cir. 2005)(nutrient management plans constitute effluent limitations).

It is also unclear what DEQ means by a “DEQ-approved credit trading program.” Is DEQ informing the public and EPA that it has already approved the “credit trading program”? The Fact Sheet appears to imply that with the statement that “it *finds* that Wilsonville’s proposal is acceptable.” Fact Sheet at 2 (emphasis added). It appears that DEQ has already approved the program. Is what has been approved specific to Wilsonville and this proposed permit modification? If it is specific to this permit modification, how can DEQ term it “DEQ-approved” when DEQ has not taken public comment on the document or “program” and yet it is being incorporated by reference? Or, is DEQ taking public comment on Attachment A even though Attachment A is not attached to the permit but, instead, is attached to the Fact Sheet and nowhere in the documents put out for public comment is Attachment A identified as being subject to public comment and proposed for incorporation by reference into the permit? DEQ’s failure to clearly identify what has been incorporated by reference is sloppy and inconsistent with permitting requirements and its failure to provide the public with an opportunity to comment on the “trading program” is also illegal whether that’s the apparently already-approved Attachment A or some other item that it deems to be the “credit trading program.”

To the extent that DEQ fails to include specific restrictions on what is allowed to constitute water quality trading credits in the permit modification, but requires other documentation of those restrictions, the restrictions themselves constitute effluent limits in the NPDES permit that require public comment. *Waterkeeper Alliance* at 502. Assuming Attachment A is the sum total of the permit requirements at this time, by its own terms it is only a “general description” of how thermal credits will be generated and incorporated into the NPDES permit for Wilsonville. Any “specific practices” that are adjusted or submitted to DEQ for approval are effluent limits that require public notice. That is to say any specific planting projects are subject to public review and comment. DEQ’s position is that the public need not be provided with this opportunity because it has been given the opportunity to comment on the “proposed trading program.” Fact Sheet at 5. The problem is that there is no substance to the proposed trading program other than it will be done in whatever fashion third parties intend to do it. Therefore the specific planting plan is the effluent limitation as it will determine the buffer widths and densities, the species to be planted, the locations of the activity, and the credits to be granted. As such it requires public notice.

A. The Proposed Trading Ratio is Not Explained and is Inadequate

The proposed modification calls for a 2:1 ratio for trading to meet Wilsonville’s thermal limits. The Fact Sheet states that

Thermal load credits may be generated from ecologically appropriate riparian shading projects with a trading ratio of 2:1 (that is, to generate credit for one unit of thermal load, two units of solar radiation thermal load must be blocked by the

planting) unless otherwise approved by DEQ through amendment of the trading program. This ratio provides a way to account for the time it takes for shade to establish and natural variation that occurs with these types of restoration projects.

Fact Sheet at 3. In contrast, EPA trading policy acknowledges far more areas of uncertainty associated with trades between point and nonpoint sources that require a trading ratio than merely the time associated with vegetation growing. *See, e.g.*, EPA, *Water Quality Trading Policy Statement* (hereinafter “2003 Trading Policy”) 9 (January 13, 2003). EPA states that “the basic categories of trading ratios are delivery, location, equivalency, retirement, and uncertainty.” EPA, *Water Quality Trading Toolkit for Permit Writers* (hereinafter “Toolkit”) 43 (August 2007, updated June 2009). The uncertainties for nonpoint sources include lack of knowledge about precisely how successful the nonpoint source controls will be, the time lag between implementation of some practices and full performance, the location of the pollution controls vis-à-vis the discharge, the uncertainty about when pollution reductions will be achieved, the pollution control effect of the baseline, etc. These are all issues that will be determined in the specific planting projects mentioned above yet the ratio remains the same regardless of the specifics.

However, unlike the EPA guidance, Oregon has taken an overly simplistic approach to its trading ratio in its own guidance. DEQ, *Water Quality Trading Internal Management Directive* (hereinafter “Oregon IMD”) 16 (December 2009). DEQ’s view is that the 2:1 trading ratio it “typically” uses “compensate[s] for the time it takes for riparian restoration projects to provide effective shade and to account for the variability inherent in such projects.” *Id.* Even for this limited factor, in the proposed Wilsonville modification, DEQ has not justified the 2:1 ratio as sufficient to address the stated parameters of vegetation growing and “natural variation” inherent in restoration projects in either the Fact Sheet or its IMD guidance. If, for example, a 2:1 ratio is considered appropriate in the Rogue River Basin where the Medford trade is taking place because the species of tree used there is primarily fast-growing Black cottonwoods, *see* Letter from Joe Whitworth, TFT to Michael Lidgard, EPA at 10 (April 22, 2013), what species of tree will be used predominately in the Willamette Basin and how quickly will it provide shade (particularly through height and density)? How can a 2:1 ratio be justified based on one species and then be determined to be adequate for literally all species? A glance at the Willamette Temperature TMDL indicates an extremely broad range of native species and vegetation/habitat types across the basin, the whole of which is open for trading under the proposed modification. *See, e.g.*, TMDL at Map 4.8 (demonstrating nine ecoregions from prairie terraces to montane forest). Will there be, in fact, a “predominate” species in use for these trades such that using one ratio to account for growth can be justified? Where is DEQ’s justification?

DEQ also does not, in its guidance or in its Fact Sheet for the Wilsonville modification, explain how the proposed 2:1 ratio accounts for the limitations of the “average buffers” (and unknown densities) used for the trade in establishing shade and the uncertainties about how much pollution reduction will be achieved. Neither does it address the location of the trading activities with respect to the location of the discharge in terms of required ratios. Instead, the Fact Sheet states that trading can take place anywhere in the Willamette Basin upstream of RiverMile 24.8. What rationale is established to allow a 2:1 ratio for trades that are near the point of discharge and the same ratio for trades that are in entirely different subbasins? What rationale is there for trades that may have no effect on the species of concern, the designated uses which are at the core of the water quality standards? What rationale is there for trades that have no measurable benefit to the impaired water quality to which the City of Wilsonville is contributing?

While the DEQ IMD discusses other ratio-related issues of delivery or location ratios, equivalency ratios, and retirement ratios, it does not establish any means by which the state will actually develop ratios that make sense for the particular trades that are proposed and which will address those specific issues. It becomes clear that DEQ has not given any additional thought to these issues in the Wilsonville modification proposal because there is no discussion of these other ratios in the Fact Sheet. Nowhere does DEQ state that these other issues do not merit a change in ratio; it's simply not discussed. In addition, the IMD does not discuss uncertainty ratios except in the context of a "margin of safety" which DEQ does not address in the Wilsonville proposed modification. Moreover, DEQ does not explain how the 2:1 trading ratio addresses all of those concerns and addresses the "difficulty" of assessing nonpoint source baselines, which its IMD *specifically* states will be addressed through "appropriate trading ratios and/or margins of safety." Oregon IMD at 20. Instead, DEQ just applies an across-the-board 2:1 ratio and assumes, without any analysis whatsoever, that it is sufficient to address the delays inherent in the unknown growth pattern of trees of an unknown species planted at an unknown age as well as the sum total of all the other uncertainties associated with nonpoint source pollution controls.

B. Wilsonville Cannot Obtain Credits for Activities That are Already Required

One of the fundamental objectives in EPA's trading policy is to ensure that trades "[a]chieve[] greater environmental benefits than those under existing regulatory programs." 2003 Trading Policy at 3. Consistent with that objective, EPA has made clear since the inception of its trading policy that in trades between permitted NPDES point sources and nonpoint sources, "trading baselines" must be established to identify what level of pollution control is already required of the landowner: "the baseline for nonpoint sources should be the level of pollutant load associated with existing land uses and management practices that comply with applicable state, local or tribal regulations." *Id.* at 5. More recently, EPA has reiterated this position:

As stated in the Essential Trading Information for Permit Writers section, a nonpoint source should meet the specified baseline before entering the trading market as a credit seller. Baseline is defined as the pollutant control requirements that apply to a buyer and seller in the absence of trading. After a seller meets its baseline, it can generate credits. *A baseline for a nonpoint can be derived from a load allocation (LA) established under a total maximum daily load (TMDL).* Where an LA does not exist, EPA's Trading Policy states that state and local requirements or existing practices should determine a nonpoint source's baseline.

Toolkit at 8 (internal citations removed)(emphasis added).

In stark contrast to the EPA guidance, Oregon has barely touched the issue and certainly ignores the existing TMDL. In its own trading guidance document, Oregon merely says that

The baseline for nonpoint sources would be the pollutant load level associated with existing land uses and management practices that comply with existing state or local regulations. It may be challenging to quantify the baseline for a particular nonpoint source due to the variability associated in management practices; however, DEQ would compensate for this difficulty by developing appropriate trading ratios and/or margins of safety.

Oregon IMD at 19-20. As stated above, DEQ has not compensated for the difficulty in assessing baselines by developing appropriate trading ratios and/or margins of safety as there is no margin of safety and the trading ratio is explicitly established to address the growth delay in vegetation. The Oregon IMD adds that, after a TMDL has been established, “[p]rovisions of the TMDL Implementation Plans for designated management agencies would be the baseline for nonpoint sources.” *Id.* As is discussed further below, in the case of the proposed Wilsonville modification, Oregon gave no consideration whatsoever to baseline requirements for nonpoint sources involved in creating thermal credits. As a result, DEQ simply assumed that existing conditions – not TMDL Implementation Plans or the assumptions of the TMDL itself or the load allocations – are that baseline. DEQ never considered whether the state has either regulated or promised some level of riparian vegetation to meet other requirements, let alone the TMDL, before allowing point sources to take credit for that very same restoration. Instead, the Fact Sheet merely states that

Credit from trading programs can only be generated by actions taken in an approved area . . . not already required by rule. For example, if there is a city or county requirement to protect a 50 foot buffer next to a stream, DEQ will give thermal credit for areas within that buffer that are actively planted and maintained to provide for stream shading. In most cases, planting and maintaining the area would allow for quicker and more successful riparian shade restoration than would occur if the area were allowed to recover without intervention.

Fact Sheet at 2. In this statement there is no reference to DEQ’s having looked at state or local requirements to have vegetation in place; there is merely an unstated assumption that there are no such requirements. DEQ does not explain what it means by a requirement “to protect” and whether some requirements require protection of existing vegetation and some require replanting of absent vegetation. It is unlikely that DEQ’s assumption that no rules anywhere in Oregon require vegetation is true. First, the Oregon Departments of Agriculture and Forestry do have rules that apply and both agricultural and silvacultural lands occur within the entirety of the basin in which Wilsonville will be allowed to trade. Likewise, local governments often have their own requirements to, for example, comply with land use laws and stormwater requirements. Without analyzing those rules how can DEQ assume that they do not require anything? Second, in the development of the MidCoast TMDL, DEQ is insisting on evaluating the requirements of the applicable basin rules, making the opposite assumption than here, namely that there is something that is already required and needs to be analyzed to evaluate whether it is sufficient to meet water quality standards. DEQ’s taking two opposite tacks in two basins is the very definition of arbitrary decision-making.

To the extent that DEQ finds it “challenging” to define the applicable baseline for nonpoint sources, it must then do precisely what its own IMD calls for: establish an additional measure to its trading ratio and/or a margin of safety. There is, however, neither of these nor any discussion in the Fact Sheet for the Wilsonville modification as to why DEQ believes the baseline issue does not merit an appropriate response in the permit terms. In addition, given that the trades for Wilsonville are proposed to be authorized throughout the entire Willamette Basin, DEQ seems to be suggesting that the applicable nonpoint source rules are entirely homogeneous throughout the basin and across all land uses, a fact that is not likely true.

In addition, DEQ proposes to allow trading of activities that predate the proposed modification but which were not identified in advance as developed for trading purposes. In its Fact Sheet,

DEQ states that activities may date any time after the September 29, 2006 adoption date of the TMDL. There is no rationale provided for the TMDL's relationship to the trading activities of Wilsonville. And, there is every reason to believe that activities that predate the modification have not, in fact, been conducted outside the required, the voluntary, and the already-paid-for activities of others. Throughout the Willamette Basin there have been activities which DEQ now is going to allow to count as part of the limitations on the Wilsonville discharge but which, heretofore, have been in addition to the limitations on that discharge. This is absurd. There is, apparently, no limitation on those restoration activities funded by the state of Oregon, the federal government, or any other entity. On what basis can DEQ allow Wilsonville to take credit for restoration work funded by other entities and that are currently in place and some or all of which are required to remain in place by existing laws?

C. Treatment of Assumptions Underlying a TMDL and its Wasteload Allocations

In addition, there are the requirements for the baseline set out in the TMDL itself, requirements that are the basis for the wasteload allocation given to Wilsonville. As DEQ is well aware, NPDES permits must not cause or contribute to violations of water quality standards. When a state, as in the Willamette River Basin in Oregon, has developed a Total Maximum Daily Load (TMDL), it has assessed and allocated the relative responsibilities of point and nonpoint sources for restoring waterbodies to meet water quality standards. EPA regulations describe this point versus nonpoint source balancing process as follows: "If B[est] M[anagement] P[ractices] or other nonpoint source controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. *Thus the TMDL process provides for nonpoint source control tradeoffs.*" 40 C.F.R. § 130.3(i)(emphasis added). The more pollution nonpoint sources can control, the less pollution point sources must remove in order to meet water quality standards. As a result, nonpoint source controls are part of the fundamental assumptions underlying the wasteload allocations TMDLs generate, and which must be implemented through NPDES permits issued to point sources, to ensure discharges do not cause or contribute to the existing violations. In other words, through the TMDL process, the state and EPA assess the likely nonpoint contribution to the waterbody of a given pollutant, and, in light of the likely nonpoint controls, determine how much pollutant loading can come from point sources and still meet the water quality standards for that pollutant. Put another way, in the event that the TMDL includes wasteload allocations that are not zero, the state and EPA have determined that there is reasonable assurance nonpoint source controls will be established.

The Willamette TMDL concluded that point sources must be subject to wasteload allocations to meet water quality standards:

Although the increase in NTP temperatures resulting from current point source heat loads are well within the amount of warming allowed by the human use allowance, simulations demonstrated that if point source loads were allowed to discharge up to current permit design flows they would warm the river during critical periods and at some locations more than 0.3°C. This would consume all of the human use allowance and also result in temperature standards violations. Thus it is necessary to establish new limits for point source heat loads by assigning waste load allocations during the critical periods of the year when ambient or natural thermal potential temperatures exceed biologically-based criteria.

TMDL at 4-66.

Where a TMDL has been developed and approved by EPA, water quality-based effluent limitations in an NPDES permit are required to be consistent with the assumptions that underlie the TMDL. Specifically, EPA permitting regulations require that effluent limits must be “consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.” 40 C.F.R. § 122.44(d)(1)(vii)(B). EPA’s trading policy supports this position: “Trades and trading programs in impaired waters for which a TMDL has been approved or established by EPA should be consistent with the assumptions and requirements upon which the TMDL is established.” 2003 Trading Policy at 5. Not only must the wasteload allocation be incorporated into the permit but the effluent limits must be consistent with the assumptions underlying the TMDL. Among the assumptions that underlie any wasteload allocation is the relative allocation between point and nonpoint sources discussed above. Specifically, in order to establish a wasteload allocation for all NPDES permitted sources of 0.20°C (and up to 0.25° C) in its Willamette River Basin TMDL, TMDL at 4-4, of which the Wilsonville wasteload allocation is a part, DEQ chose to assume that nonpoint sources would implement controls to achieve the load allocations given to various nonpoint sources. It gave the nonpoint sources of reservoir operations various allocations ranging from zero to 0.30° C, and load allocations to nonpoint sources of other types an increase in temperature of 0.05° C. *Id.* Without the assumptions of nonpoint source controls it made in the TMDL, DEQ would have had to set the wasteload allocations for point sources in the basin at zero.

These assumptions in the Willamette River Basin TMDL leave no room for the type of trading used in the Wilsonville permit. The TMDL states that “[m]odel simulations demonstrate that implementation of pollutant load reductions and limitations in the point source and non point source sectors will result in water quality standards attainment. Standards Attainment and Reasonable Assurance are addressed in the WQMP, Chapter 14.” TMDL at 4-4. In Chapter 14, DEQ discusses existing plans and programs of various state, local, and federal agencies. It does not state that the load allocations cannot be met, implying that they will be met. The TMDL does state, however, that approximately 86 percent of temperature increases above the numeric criteria are “caused by the loss of natural riparian vegetation.” TMDL at 4-29. This figure does not account for impacts from dams, hydroelectric projects, or channel modifications. *Id.* at 4-30. Even at RiverMile 26, below Wilsonville, “nonpoint solar loads cause warming of river temperatures in excess of the 0.3° C allowed in Oregon temperature standards.” *Id.* at 4-41. That is even taking into account the now vacated NCC. In other words, the majority of the reductions in thermal warming must be achieved by replacement of vegetation, restoration of channel morphology, and alteration of dams. DEQ’s assumptions about the TMDL are that the overwhelming majority of the thermal influence – nonpoint sources – must also make the biggest effort to reduce that influence. And it is on that basis that the wasteload allocations are set: an assumption that nonpoint sources will be *severely curtailed*, in fact to the point of providing maximum vegetation to provide maximum shade.

Because meeting load allocations means providing levels of shade that would have been there more or less historically, discounted by various intervening impacts such as the massive removal of Willamette River channel complexity, there is no accounting in the TMDL for riparian areas that will not be fully vegetated and therefore available to be used in trade for wasteload allocations. As the TMDL states,

The primary mechanism for achieving load allocations will be the protection and restoration of system potential vegetation and effective shade. . . . However, it is *the intent of this plan to eliminate, to the extent feasible, unnecessary degradation of water quality and warming of temperature-impaired streams from nonpoint sources*. Furthermore, along the lower reaches of the Willamette, restoration and protection of natural vegetation is essential to the maintenance of riparian and floodplain processes that influence cold water refugia and provide other benefits to water quality and aquatic species. *Such measures are necessary to attain water quality standards in the lower river.* (OAR 340-41-0028(4)(d)).

ODEQ did not calculate allowable reductions in system potential effective shade that will meet the load allocations. In other words the department did not quantify the amount of solar radiation loading that would result in a temperature increase that is within the portion of the human use allowance allocated to anthropogenic nonpoint sources. *Instead the TMDL targets system potential effective shade*. Nonpoint source load allocations may address anthropogenic heat loads from roadways, ports and similar developments as well as agriculture, forestry, urban areas, or dam operations. As shown in Table 4.17, nonpoint source load allocations are based on a change in river temperature rather than solar loading values.

TMDL at 4-72 (emphasis added). Put more succinctly, “[n]onpoint source effective shade targets represent system potential vegetative conditions. . . . *Shade targets based on no anthropogenic disturbance* identify TMDL objectives more clearly to land managers than change in stream temperature or energy units such as kilocalories.” *Id.* at 4-62 (emphasis added). The reductions in temperature assumed by DEQ in the TMDL are such as to result in a 0.025° C allowed temperature increase in the lower Willamette River below Willamette Falls. *Id.* at 4-63. System potential shade accounts for tree heights, canopy density, and overhang established in Table 4.8 of the TMDL. *Id.* at 4-36. Put another way by DEQ, “system potential is the design condition used for TMDL analysis that meets the temperature standard by minimizing human related warming.” TMDL at C-76 (emphasis omitted). This system potential is set out for various rivers, such as the Clackamas River at Figure 1.37 in Appendix C, showing the effective shade provided by system potential vegetation and current vegetation. The expected system potential average effective shade values for various rivers in the basin are set out in Fig. 1.47 of Appendix C. System potential called for to meet the load allocations in the TMDL “does not consider management or land use as limiting factors,” according to DEQ. *Id.* at C-76. Therefore, there is no basis for DEQ to discount the system potential it has already used to develop the wasteload allocations, including for Wilsonville, to allow for trading. Additionally, DEQ provided a zero allocation to Army Corps dams, *id.* at 4-73, despite the fact that these facilities currently and for the foreseeable future contribute to violations of temperatures standards, *id.* at 4-29. In other words, the restoration of vegetation contemplated in the Wilsonville permit trade modification is already required in the TMDL and incorporated into the applicable wasteload allocations.

As a consequence of DEQ’s assumptions underlying the TMDL and the wasteload allocations, including to Wilsonville, to allow trading DEQ could revise the TMDL to decrease wasteload allocations (requiring greater thermal reductions by point sources), thereby allowing some nonpoint mitigation to be available to be done by point sources to offset their discharges. Leaving this TMDL in place presents difficulties but we think that DEQ could identify types of

restoration that are not assumed to take place in the TMDL, for example, restoration of channel complexity, natural flows, natural flow regime, or possibly refugia (*see, e.g.*, TMDL at 4-26 (“natural thermal potential temperatures as simulated in this TMDL do not reflect a natural flow regime or a natural stream channel”). Such activities, particularly if they are focused on improving the status of a use rather than sprinkled throughout the entire Willamette Basin, as proposed by DEQ and The Freshwater Trust, could conceivably be allowed within the confines of the existing TMDL. What DEQ cannot do is make assumptions in the TMDL and turn around and ignore them in issuing NPDES permits.

D. It is Unclear if Wilsonville Requires a Compliance Schedule but it Appears to

DEQ states that the proposed modification to allow trading “simply offers the city an additional means of achieving its existing limitation.” Fact Sheet at 4. We disagree. The potential for some of the trading credits to disappear or not be realized on the ground is real and must be considered rather than ignored. It is our opinion that the possibility of credits to disappear/not appear requires a compliance schedule, or requires a reopener that mandates a compliance schedule in the event that credits disappear. The reason for this is that DEQ cannot sanction noncompliance in an NPDES permit; it can, however, allow for a “schedule of compliance leading to compliance with CWA and regulations.” 40 C.F.R. § 122.47(a). Instead, the permit appears to contemplate a situation where credits may come and go, shade may come and go, as if there are no enforceable requirements associated with Wilsonville’s actually achieving the kilocalorie reductions mandated by the effluent limitation in its permit.

Additionally, there is insufficient information to comment on whether there should now be a compliance schedule but all information points to the fact that there should, in fact, be one in place in the existing permit and given the proposed new approach to meeting the thermal load limits through trading there must be one as part of this modification. There is not, however, adequate information on which we can base our analysis because DEQ has not provided sufficient information. However, the Willamette TMDL suggests that a compliance schedule is called for given that Wilsonville was given a wasteload allocation that apparently is less than its effluent:

It is the intent of this TMDL that all Willamette Basin point sources are in full compliance with Oregon temperature criteria and that the cumulative heat loads of all point sources do not exceed the portion of the human use allowance allocated to them. . . . When point sources cannot meet their waste load allocation at the time of NPDES permit renewal, a compliance schedule may be included within the permit. Compliance schedules developed under provisions of state and federal water quality standards require compliance as soon as reasonably possible, and generally within a 5-year permit cycle.

TMDL at 4-67.

The Fact Sheet that supported the most recent renewal of the Wilsonville NPDES permit does not clearly demonstrate the status of the facility with regard to its effluent limit, which was established in the TMDL and is included in the permit. The Fact Sheet states that “[t] TMDL was structured such that potentially higher heat loads might be assigned provided the city can document ambient stream flow and temperature in the Willamette River to accommodate the higher excess thermal loads.” *Id.* at 16. The Fact Sheet also states that monitoring will be

required and “would be used for determination of compliance with the waste load allocation.” While undated, the Fact Sheet was likely completed in 2010 or 2011, suggesting that DEQ is now in possession of the effluent monitoring data that demonstrate whether the facility is in compliance. If it is not, modifications to how the facility will meet its temperature effluent limit require a compliance schedule. Likewise, if DEQ evaluates the likelihood that the facility will violate the effluent limit prior to the permit’s expiration, it must include a compliance schedule. The 2011 permit only establishes a temperature effluent limit but is silent on whether the facility currently meets the limit. In other words, there is no apparent compliance schedule. The original Fact Sheet stated that it did not contain a compliance schedule. Fact Sheet at 17. That Fact Sheet does not establish much other than the fact that DEQ did not calculate that Wilsonville, absent a TMDL, did not have a reasonable potential to cause or contribute to violations of water quality standards for temperature.

In the absence of adequate information in the permit Fact Sheets, one must turn to the Willamette TMDL for guidance. Figure 4.6 of the TMDL demonstrates the change in temperature from a combination of loss of vegetation and impacts of point sources over the numeric criteria. It shows a median change in temperature at the point of the Wilsonville discharge of approximately 0.45° C. Data were collected by DEQ to assess point source impacts to stream temperatures. TMDL at 4-32. Figure 4.10 appears to demonstrate that Wilsonville, as of 2006, contributes between approximately 0.075° C to 0.13° C from September 16 to October 27, with a median contribution of 0.11° C. The median contribution from June 15 to September 15 is 0.05° C. Fig. 4.9. In other words, it appears that DEQ has data which it is not using in this permit modification to establish whether Wilsonville is or is not in compliance with its temperature limits, and therefore whether Wilsonville should have a compliance schedule in place to meet those limits. We were unable to find any statement of current kilocalorie contributions by Wilsonville.

The reason this is important is as follows. If Wilsonville is violating its effluent limits in the absence of a compliance schedule, it is subject to enforcement action. NWEA is indifferent as to whether the City wants to expose itself to such actions. However, when DEQ proposes to modify the permit in a way that may require a compliance schedule but which seeks to both avoid a compliance schedule and purport to establish a permit shield for this parameter, then we have a problem. The Fact Sheet is completely unhelpful in demonstrating when, if now or in the future, Wilsonville is or will be out of compliance with its current temperature limits.

EPA regulations regarding compliance schedules are set out in its permitting regulations, which, in turn, are captured and discussed in a 2007 EPA memorandum frequently referred to as the “Hanlon Memo.” Memorandum from James A. Hanlon, Director, Office of Wastewater Management, to Alexis Strauss, Director, Water Division, EPA Region 9, *Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits* (May 10, 2007). In order to be consistent with the statute and its implementing regulations, the Hanlon Memo states that

Any compliance schedule contained in an NPDES permit must be an “enforceable sequence of actions or operations leading to compliance with a [water quality-based] effluent limitation [“WQBEL”]” as required by the definition of “schedule of compliance” in section 502(17) of the CWA. *See also* 40 C.F.R. § 122.2 (definition of a schedule of compliance).

Hanlon Memo at 2 (brackets in original). For any compliance schedule exceeding one year, the

schedule must set forth interim requirements and the dates for their achievement, the time between each interim date not to exceed one year. 40 C.F.R. § 122.47(a)(3). In the proposed modification of the Wilsonville NPDES permit, DEQ has implied that there is a need for a compliance schedule because it states that the trading plan elements must, at a minimum, include the following: “Interim yearly goals by which the success of the program will be measured.” Proposed Condition No. 9(a)(3)(c)(iii). There is no explanation provided in the Fact Sheet as to why any annual interim goals would be required if there were no compliance schedule and Wilsonville were now and were going to remain in compliance with its effluent limits for temperature. Likewise, there is no explanation provided as to what the interim yearly goals are, because there are none set out in Attachment A, the only other piece of information provided about the Wilsonville trading program.

In addition, the Hanlon Memo states that the permitting authority

has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet (40 C.F.R. § 124.8), that a compliance schedule is “appropriate” and that compliance with the final WQBEL is required “as soon as possible.” See 40 C.F.R. §§ 122.47(a), 122.47(a)(1).

Hanlon Memo at 2. Both the Wilsonville Fact Sheet and Attachment A are silent as to when the credits must be obtained by Wilsonville. This suggests that Wilsonville is now and will always for the duration of its existing permit be in compliance with its temperature limits. Yet Attachment A suggests rather clearly otherwise, stating that “[t]he City intends to secure thermal offset credits from The Freshwater Trust to prevent thermal load exceedances *for current and near term conditions.*” Attachment A at 2 (emphasis added). It goes on to state that “[f]or longer term conditions, the City may choose to secure additional credits.” *Id.* Since, to all appearances, this is the “program” that DEQ has already or may in the future approve as incorporated into the NPDES permit, and as it contemplates a compliance mechanism for 42,000,000 kilocalories in the nearterm and possibly other compliance mechanisms in the longer term, DEQ must also include a compliance schedule that is consistent with EPA regulations.

This compliance schedule must address the time period in which it will take the vegetation from the “2014 spring planting” to generate kilocalorie reductions because plantings that do not immediately generate water quality benefits cannot be counted as credits towards mitigating thermal discharges. Likewise, DEQ must make clear that any future credit purchases must be approved and subject to a compliance schedule if required. DEQ may not incorporate a document by reference into the NPDES permit that says, essentially, that Wilsonville can do whatever it pleases in the future when that permit is supposed to be establishing a permit shield for Wilsonville in exchange for enforceable conditions in the permit.

It is difficult to comment on the terms of a compliance schedule that does not exist but, given the DEQ actions on the Medford permit, we are skeptical that DEQ will do what federal regulations require. Obviously, if DEQ includes a compliance schedule it will need to reissue this proposed modification for further public comment. However, we take this moment to point out that if this modification were establishing interim annual goals, as required by federal rules, there is no explanation for Oregon DEQ’s decision to make the required sequence of actions explicitly unenforceable, a decision at odds with EPA requirements. The proposed modification does this by stating that: “Interim yearly goals by which the success of the program will be measured. *These goals are not subject to enforcement action by DEQ.*” Condition No. 9(a)(3)(c)(iii)

(emphasis added). To the extent that DEQ believes that annual reports can substitute for annual requirements, pursuant to the federal regulations, it is mistaken. It is quite clear from, for example, subsection (a)(3)(ii) of the federal rule, that reports are not a substitute for actions in the meaning of this rule. In that subsection, EPA specifically allows for the submission of progress reports where interim requirements require more than one year to accomplish. Because tree planting is easily divided into terms under or up to one year, the substitution of report submissions for actual actions cannot be allowed.

E. Credit Cannot be Provided for the Planting of Trees Which Do Not Prevent Kilocalorie Capture

DEQ proposes in its modification that Wilsonville be allowed to obtain credits for the planting of trees which themselves capture no kilocalories to mitigate the city's thermal discharge. DEQ claims that the 2:1 ratio addresses the time it takes vegetation to grow. As discussed above, the time vegetation takes to grow is highly variable, likely even in the Willamette Basin and certainly as between different species in different basins throughout the state. DEQ justifies this statewide ratio on the basis that

Credit at planting also recognizes that the active management and protection of riparian areas in trading programs provides immediate benefits to salmonids – many of these riparian areas could be otherwise developed or farmed and stripped of vegetation and contributing pollutants from stormwater runoff.

Fact Sheet at 3. On what basis does DEQ assert that these riparian areas could otherwise be developed or farmed and stripped of vegetation? Is DEQ stating that throughout the Willamette Basin there are no state or local regulations that prevent the *removal* of riparian vegetation? This is an alarming assertion that requires factual support. In addition, DEQ appears to be justifying credits for thermal limitations based on reduction of other pollutants. Does EPA agree that the state is allowed to make this type of trade? We do not. There is, in fact, no basis for asserting that credit at planting is a required aspect of trading. A compliance schedule can ensure that a permittee using trading is deemed in compliance with its permit limits without subverting the intent of the Act.

The planting of trees that provide no kilocalorie capture cannot be used to offset the Wilsonville discharge until they actually grow sufficiently in height and density to provide that capture. Moreover, it cannot be assumed that the 2:1 ratio is sufficient for this proposed trade just because it has been used elsewhere. DEQ must quantify the expectations of timing of vegetation growth and kilocalorie capture to ensure that the 2:1 ratio actually addresses the requirement that at a minimum the permit terms are met and that EPA trading guidance. In particular, this assumption that the 2:1 ratio will, in fact, account for delays in vegetation growth and natural variability underlies the DEQ analysis of antibacksliding and antidegradation. Without more substance to DEQ's purported analysis underlying the ratio, the two other analyses fail. The trading ratio should account for differences in vegetation growth and, at a minimum, it must be clear when the credits are actually providing for the temperature benefits asserted by the trade.

F. The Wilsonville Trading Program – Attachment A

As stated above, it is unclear whether the Attachment A is open for public comment given

DEQ's references to its having already been approved and the lack of clarity as to whether this document is the "program" that will be incorporated by reference into the permit. However, in the event that this is the intended document, we provide comments on it such as it is. There is little information provided.

Problems start in the first paragraph. How can a permit condition include the following statement: "Specific practices will vary and may be adjusted according to site conditions and as required to ensure Thermal Credits acquire third-party verification and Oregon Department of Environmental Quality approval." Attachment A at 1. If practices will vary and may be adjusted and future DEQ approval is necessary, how does this sentence establish an unambiguous permit condition that assures that the requirements of 40 C.F.R. 122.44(d) have been met?

There is no DEQ review in the Fact Sheet of Attachment A despite the possibility that it is, in fact, the "program" that is incorporated by reference into the NPDES permit. Specifically, DEQ has not explained – other than its full reliance on The Freshwater Trust – why the following are likely to result in the kilocalorie capture suggested by the document:

- variable buffer widths;
- whether variable buffer widths will be taken into account in calculating the projected shade for the credit estimate;
- the actual timeframe in which shade will be produced;
- accountability for comparing actual shade produced to estimates projected;
- sufficiency of stem densities (and related vegetation for stem densities) set out in Attachment A;
- location of planting anywhere within the Willamette River basin, regardless of the size of the stream, the type of vegetation, etc.; and
- location of the planting anywhere within the Willamette River basin disregarding any local, state, or federal requirements that vegetation be restored that may not be reflected in the initial site conditions recorded.

In addition, the actual name and url of the on-line credit registry should be in the permit, not just a promise that it will or does exist.

G. Planting Failure and Force Majeure Events

DEQ claims that this modification will not result in a change to the effluent limits. The Attachment A discusses remediation in the event of planting failure, excluding Force Majeure events. In the case of a planting failure resulting in the need for remediation, it is possible that the permit terms will have been altered in the very terms of the EPA modification regulations. That is to say, quite specifically an "alteration . . . to the permitted facility or activity . . . which occurred after permit issuance[.]" In our opinion this requires a permit modification, not just carrying on to see what can be cobbled together. DEQ is not free to authorize in advance permit modifications that otherwise would require actual permit modifications pursuant to federal law. The same is true in the event of a Force Majeure event. It is not sufficient to, as Attachment A states, merely "re-assess[] to determine what future actions are needed," Attachment A at 4, without a permit modification. The best way to evaluate this situation is a hypothetical. What if 50 percent of the plantings failed? Would not the intent of the Clean Water Act be best met by putting the permit modifications out for public comment to see what went wrong and to prevent

Nancy Stellbach
September 27, 2013
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it from happening again? How can DEQ provide a permit shield for activities that are planned to not occur? How is planting failure different from equipment or facility failure?

Conclusion

We strongly recommend that DEQ give more thought to this proposed modification and provide more analysis as to its thinking in a revised Fact Sheet prior to issuing the proposed modification for a new public comment period. This falls well short of what is necessary for the public to have an adequate opportunity to comment on a proposed regulatory action.

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