The Freshwater Trust™
Changing the course of conservation.

65 SW Yamhill Street, Suite 200
Portland, Oregon 97204
503.222.9091 MAIN OFFICE
www.thefreshwatertrust.org

April 22, 2013

Michael Lidgard, Unit Manager
NPDES Permits Unit
Office of Water and Watersheds
Environmental Protection Agency
1200 S.E. Sixth Avenue
Seattle, WA 98101
SENT VIA EMAIL

RE: Corrections to Northwest Environmental Advocates' March 15, 2013 Letter Seeking EPA Oversight of Oregon Water Quality Trading Program and Medford Permit

Dear Mr. Lidgard,

On behalf of The Freshwater Trust, I write to address Northwest Environmental Advocates' (NWEA) characterization of the Medford water quality trading program in its March 15, 2013 letter to Environmental Protection Agency (EPA) (the NWEA Letter). That letter incorrectly describes elements of the program, which I will address below. But more importantly, I write to raise a larger issue: four decades after the inception of the Clean Water Act (CWA), the state of our freshwater ecosystems demonstrates that we can no longer manage water quality by simply responding to procedural litigation with little regard for practical realities, timelines, and outcomes on the ground. All of us, regulators and advocates, must adapt and recalibrate our work if we are to achieve environmental gain on a scale and timeframe that matters.

The City of Medford executed a contract with The Freshwater Trust to provide its Regional Water Reclamation Facility (Medford) with thermal credits generated from riparian restoration projects implemented along the Rogue River. Medford uses these thermal credits to satisfy compliance obligations set forth in its National Pollutant Discharge Elimination System (NPDES) permit. Through this letter, we ask EPA to consider The Freshwater Trust's analysis of the trading program in light of its extensive and relevant experience in Medford, Oregon, and its 30 years of conservation expertise and leadership. We also discuss below the significant resource protection and enhancement available through the implementation of innovative policies like water quality trading, which we hope provides a useful perspective for both the EPA and NWEA.

NWEA incorrectly describes how water quality trading is incorporated into the Medford permit and, in doing so, threatens to deny rivers the very solution they need. We agree with NWEA that Oregon Department of Environmental Quality's (Oregon DEQ) analysis in the Rogue total maximum daily load (TMDL) and its other TMDLs could be improved upon (ideally without stalling water quality improvements in the meantime), but that issue is not a result of Oregon's water quality trading program. In short, water quality trading, as conducted under Medford's permit,

provides for riparian restoration that improves water quality, while traditional compliance solutions, such as a settling pond or a chiller, simply would not.

I. The Freshwater Trust's Vision for the Future

Founded in 1983, The Freshwater Trust is a 501(c)(3) not-for-profit conservation organization committed to accelerating the pace and scale of restoration of freshwater ecosystems. As an organization that began decades ago as a wild fish advocacy group that helped list the first Pacific Salmon, The Freshwater Trust understands well what is at stake with regard to freshwater ecosystems and the species that depend on them.

An objective scanning of the natural world tells us that despite outstanding advocacy and restoration efforts over the last four decades, we are nowhere near achieving the freshwater health imagined by the architects of the CWA or Endangered Species Act, on any timeline, for any dollar figure. We need new tools and new methods to address our evolved understanding of water quality concerns. The onus is on us as an environmental community, alongside agencies, to accelerate actions and build accountability into regulatory systems that will provide the outcomes we seek on a scale that matters.

Environmental regulators and advocates alike got into this work with the same intentions—to make a difference. We too often forget that in the day-to-day struggle of furthering our own ideas and objectives. But we need to regroup around the intended outcomes that we all sought so long ago because they are, for the first time, coming within our reach.

A. NWEA's Letter: Procedural Legal Victories Do Not Ensure Outcomes in a Frail Regulatory System

The NWEA Letter illustrates two general but serious problems with how we, as an environmental and regulatory community, go about the management of water quality in waterways. First, focusing on procedural legal victories can come at the expense of real outcomes, and second, a systemic frailty in our regulatory system.

The historic focus on the procedural litigation among environmental advocates is based on the serious need early in the modern environmental movement to keep bad things from happening. Industrial excess and, at the time, a low level of public awareness of society's impact on the environment, required a rigorous response from legislatures and the courts. This need persists, lest we slide backwards in terms of managing impacts, but increasingly we see that the efforts once developed to keep bad things from happening now keeping good things from happening. We need solid procedures and rigorous enforcement to ensure hard-won environmental gains are not lost. But we must not focus on the procedural legal victories to the detriment of creativity, innovation, and continued progressive action to improve ecosystem function.

The NWEA letter also illustrates a systemic frailty in our regulatory system. NWEA makes several points about how the Rogue River TMDL is written, and also questions certain aspects of Oregon's water quality trading policies and guidance. NWEA also criticizes EPA's oversight of Oregon's actions in both regards. There is some validity to these concerns. We agree there are aspects of the TMDL as well as DEQ's water quality trading guidance that could be improved. But the reality is, dramatically under-resourced agencies under constant attack for asserted procedural missteps will make mistakes. This is a systemic problem that ongoing litigation amplifies rather than helps. Correcting this systemic frailty will

not be easy in an under-resourced agency budget world that is unlikely to improve. New systems and tactics are required to simultaneously pursue water quality outcomes with clear-eyed acceptance of practical realities.

B. The Freshwater Trust's Approach to Water Quality Trading

As one of the means of achieving our water quality-based mission, The Freshwater Trust works to advance water quality trading, where appropriate. It has the potential to fund the type of high-quality restoration that rivers need with dollars that would otherwise be spent on compliance solutions that have little or no measurable benefit for water quality. Until recently, wastewater utilities and other point sources have had only a limited set of compliance options at their disposal for meeting permit requirements. In the temperature compliance context, these grey infrastructure options include chilling towers and lagoons that are expensive, depreciating investments that usually must be replaced or substantially upgraded every twenty years. These grey solutions also impose high operating costs, and require on-going energy consumption. Although these technological solutions may result in legal compliance, where they fall short is in considering the very applied question, "*What does the ecosystem need?*" Does an ecosystem need large chillers to cool water discharges a few days out of the year, or a large pit in the ground where a facility can pump large volumes of water that can be stored for a week or two of out the year?[1] In most instances, the simple answer is no.

We seek legal compliance solutions *and* ecological benefit. The laws that established compliance obligations were meant to protect aquatic species and people. So, instead of building a solution that simply results in compliance but does not benefit the ecosystem, we want regulated entities to have access to a different option (where regulators have determined that the solution is both ecologically appropriate to protect designated uses, and will not result in near-field impacts).[2] The Freshwater Trust restores riparian vegetation that will quantifiably reduce thermal impacts on the waterways in places where fish actually need cooler water, in addition to providing other water quality benefits (e.g., improvements in habitat, reductions in sediment and nutrient loading, erosion control, carbon sequestration, etc.).

In addition to quantifying the net environmental uplift potential at a site (i.e. *uplift generated* less *baseline conditions*) in units that can be understood through a regulatory compliance lens, The Freshwater Trust secures twenty year leases with landowners, and then implements projects at those sites according to strict quality standards (i.e. species diversity, planting density, native seed usage, etc.). After implementation, these sites are then verified for consistency with quality standards by

[1] In the context of the Medford permit, the City's three feasible options were: 1) effluent chillers (mechanical refrigeration units that would cool effluent below ambient and wet-bulb temperatures by mechanically pumping water through a vapor compression or absorption refrigeration cycle); 2) effluent storage (effluent discharged into the river during the later summer season would be reduced by storing effluent in a large holding basin; stored effluent would then be discharged to the river after October 31st when permit temperature requirements are not in effect); or 3) water quality trading. Oregon DEQ, City of Medford RWRF, NPDES Permit Evaluation and Fact Sheet, at 29 (2011), http://www.deq.state.or.us/wqpr/3536_2011121400a25CS03.PDF (Medford Permit Fact Sheet).

[2] Water quality trading is not appropriate in all situations. For example, in the temperature trading context, Oregon DEQ will not approve a permit that includes trading if the permittee's thermal discharge would cause fish lethality, impair spawning, or create thermal shock or a migration barrier at a particular outfall point. Or. Admin. R. 340-041-0053(2)(d).

independent third-party professionals, and the net uplift at the site is converted into uniquely serialized credits that are posted on an on-line, publicly-available credit registry. For the duration of the landowner lease, the Freshwater Trust is then responsible for monitoring and maintaining each project site. By converting this high quality restoration work into credits that cannot be double-counted and which must be monitored and maintained over time, we provide the public with the assurance of a credible, transparent system.[3]

All of these extra steps—which are included in the price paid by the regulated entity—ensure that the ecological restoration actions promised are actually delivered and maintained over time. These on-the-ground performance requirements are unprecedented in conservation and of the kind and rigor needed to achieve outcomes for waterways and aquatic species recovery. Procedural legal wins, permanently diminished agency resources, and good but vastly scattered restoration efforts continue to not add up for watersheds. Four decades of CWA focused effort have still left more than half of all U.S. stream miles as impaired.[4] We simply must do better, and Medford is an example how we can.

II. Medford's Water Quality Trading Program Meets its NPDES Permit Obligations

The Freshwater Trust supports water quality trading programs that feature rigorous accounting, credible mechanics, and verified restoration projects that allow point sources to meet their NPDES permit obligations.[5] Such programs allow point sources to not only comply with the CWA, but also to achieve water quality improvements beyond any results attainable through conventional end-of-pipe technologies. Any productive conversation about water quality trading must begin with an accurate description of how this water quality trading solution works. In the spirit of program enhancement and sustainability, we appreciate NWEA's interest in water quality trading and welcome its concern, but we must make some corrections to its analysis. NWEA contends that the water quality program included in Medford's permit suffers from several defects: (1) failure in the TMDL to develop baseline requirements for nonpoint sources involved in creating thermal credits, (2) failure in the NPDES permit to address uncertainties associated with the timing of credit generation, and (3) failure to implement a permit compliance schedule that adheres to EPA regulations. We first focus our technical response in this letter on the last two contentions. We then provide a preliminary response to NWEA's contentions about nonpoint source baseline requirements under the Rogue TMDL and note that, due to recent case law developments, we recognize that the TMDL allocations and implementation may be subject to change.

A. Background on Medford

When The Freshwater Trust and Medford facilities staff first gathered in July 2010 to discuss compliance options for the City's Regional Water Reclamation Facility, the conversation started typically enough—reviewing various solutions for the plant's potential thermal exceedance. Medford's consulting engineer outlined a number of "grey infrastructure" options, including plant improvements and a storage lagoon. The conversation then turned to a new solution—water quality trading. As The Freshwater Trust staff

[3] For example, by using a publicly accessible credit registry that tracks the custody and performance of serialized credits, the public and agencies can be assured that no single credit is used by more than one buyer, at any one time.

[4] U.S. EPA, National Rivers and Streams Assessment 2008-2009, Draft Report, at xi (2013), *available at* http://water.epa.gov/type/rsl/monitoring/riverssurvey/.

[5] *See* discussion of The Freshwater Trust's approach to water quality trading in Section I(B).

and Medford's engineer described how the program would work, heads started nodding. To the practical-minded people in that room, water quality trading was, as one City of Medford official put it, a "no-brainer." What followed was an eighteen-month period of intense collaboration between Medford representatives, Oregon DEQ staff and The Freshwater Trust to design a credible program that made sense for Medford and complied with regulatory obligations and objectives. Make no mistake, Oregon DEQ staff were skeptical at first, but as discussions continued and questions were answered, the enthusiasm grew.

Everyone participating in those early discussions was genuinely focused on a singular outcome: what solution made the most sense for the river. The idea of constructing a giant lagoon next to the plant to store effluent that could be later discharged into the river seemed absurd when compared to the restoration of 20-30 miles of riparian forest. That restored streamside vegetation would, unquestionably, benefit the river far more than any grey infrastructure solution, while demonstrably and measurably meeting Medford's obligation to address its potential thermal exceedance. The program, as designed and now being implemented, represents an impressive, innovative collaboration between people that came at the problem from different perspectives with different objectives, but united on a common outcome.

When Oregon DEQ approved the Medford permit, it was one of the finest moments in that agency's history and a milestone for the future implementation of the CWA. Oregon DEQ recognized that the weight of the ecological evidence supported its decision allowing the municipality to utilize a compliance solution that was better for water quality and habitat in Oregon. Without Oregon DEQ's leadership, the parties would have spent millions of dollars on digging a pit next to the river—a compliance solution that would have technically met the regulatory obligation, but one that would have failed to improve water quality, failed to improve habitat for salmon and steelhead, and failed the public, who, in the end, are paying for the agency and the municipality to improve water quality and protect the beneficial uses it provides. Further, it set the table to quantify conservation efforts in an entirely new way and engage the types of tools, mechanics, and science that can pursue water quality and species benefits on an accelerated timeline.

B. Medford's Permit Compliance Schedule Conforms to CWA Regulations, is Enforceable, and Reaches Attainment "As Soon As Possible"

Oregon DEQ reasonably designed the Medford permit so that Medford could pursue the most environmentally beneficial solution *and* achieve compliance on a reasonable timeline. In the permit, Oregon DEQ included a reasonable schedule that complies with federal compliance schedule rules, includes enforceable obligations, and will result in an environmentally maximized compliance outcome "as soon as possible," as is required by the implementing regulations of the CWA.[6] The compliance schedule requires that Medford purchase a total of 300 million *credits* by 2022; not, as NWEA states, that Medford plant a certain number of miles/year. *Compare* NPDES Permit 100985, Schedule C, § 1 *with* NWEA Letter, at 8. Importantly, because of the 2:1 trading ratio in Oregon, 1 credit is equivalent to 2 kilocalories of heat reduction in the Medford permit, meaning that the 300 million credits Medford will hold in its credit ledger in 2022 equals 600 million kilocalories of removed solar load that will accrue by approximately 2030. Medford is obligated to purchase 300 million credits by 2022 because Medford's facility planner predicted its maximum projected exceedance to be approximately 300 million

[6] Compliance schedules must achieve compliance "as soon as possible." 40 C.F.R. § 122.47(a)(1).

kilocalories per day in late October 2022.[7] As demonstrated in **Figure 1**, The Freshwater Trust's planned delivery of credits to Medford will outpace its schedule obligations.

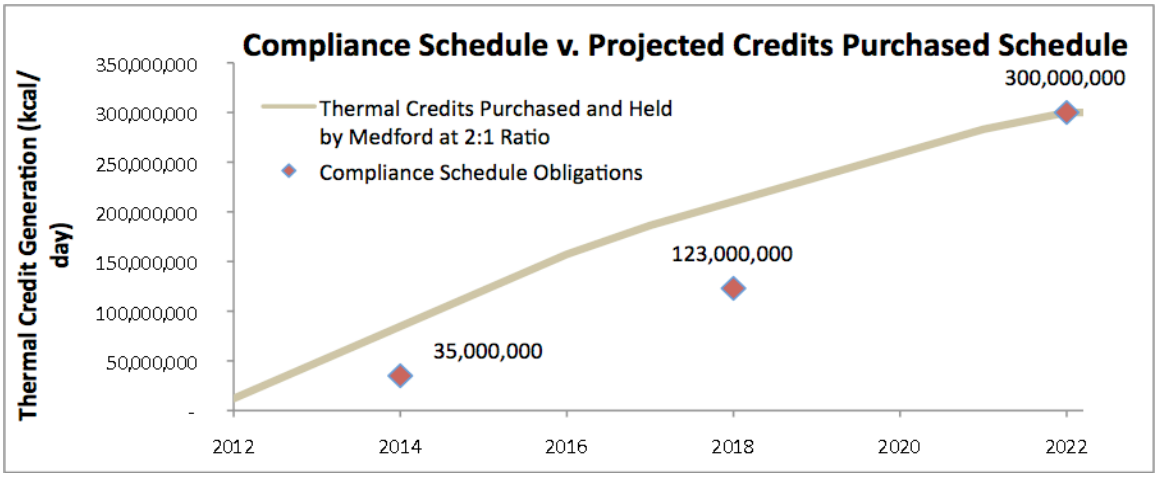

Figure 1*: Medford's compliance obligations are easily met when compared to the credit generation schedule The Freshwater Trust plans to achieve. It is important to note that each credit is equal to two kilocalories of shade benefit. Thus, in 2022, Medford will hold 300 million credits. These credits are projected to provide 600 million kilocalories in shade benefit by approximately 2030.*

i. Medford's Compliance Schedule Conforms to Federal Requirements

Medford's compliance schedule, as illustrated in Schedule C of the permit, conforms to federal requirements.[8] The schedule extends from 2012-2022, with compliance with a final excess thermal load limit at the end of 2022. NPDES Permit 100985, Schedule C, § 1. Medford has at least one obligation per year during that period, thus conforming to the requirement in 40 C.F.R. § 122.47(a)(3)(i). Although not required by the federal rules (because all requirements have been divided into yearly obligations), the compliance schedule also requires Medford to submit notices of compliance or noncompliance with interim requirements within 14 days of each milestone, and annual progress reports. NPDES Permit 100985, Schedule C, § 1(b)-(c). Thus, Oregon DEQ followed all appropriate regulations related to compliance schedules when crafting this particular schedule for Medford.

ii. Medford's Compliance Schedule Includes an Enforceable Sequence of Actions, and an Enforceable Final Effluent Limit and Date

The compliance targets in Schedule C of the Medford permit are enforceable obligations. In contrast, the goals articulated in the permit fact sheet are not enforceable. According to the permit compliance schedule, Medford must execute a contract with a trading partner by 3/1/2012; complete a planting project every year from 2012-2022; and hold a certain number of kilocalorie credits in its credit ledger:

---

[7] West Yost Associates, City of Medford Regional Water Reclamation Facility Facilities Plan, at Tbl. 1-5 (2012) (Medford Facilities Plan).

[8] If a compliance schedule is longer than one year, the schedule must include "interim requirements and the dates for their achievement." *Id.* § 122.47(a)(3). The time between interim dates cannot exceed one year unless a requirement will take more than one year to complete and is not readily divisible into stages. *Id.* § 122.47(a)(3)(i)-(ii). If a schedule cannot be readily divided into annual stages, the permit shall specify interim dates for progress reports. *Id.* § 122.47(a)(3)(ii).

in 2014 it must hold 35 million credits, in 2018 it must hold 88 million, and in 2022 it must hold 177 million. NPDES Permit 100985, Schedule C, § 1. These interim compliance targets ensure that Medford only has a 20% possibility of being out of compliance even if worst-case scenario conditions occur. *See* Medford Permit Fact Sheet, at 32. Appropriate to the science and mechanics on the ground, the compliance schedule says nothing of tree planting goals or mile requirements, even though the permit fact sheet includes such estimates for the purposes of illustration. *See* Medford Permit Fact Sheet, at 64 (providing mile/year estimates ranging from 1-3 miles/year). NWEA conflates the enforceable *obligation* to purchase and hold a certain number of credits by 2014, 2018 and 2022, with tree planting and mileage/year *goals* in the fact sheet. NPDES Permit 100985, Schedule D, § 7(a)(iii)(4) (interim yearly goals by which the success of the program will be judged "are not subject to enforcement action by DEQ."). The former are enforceable credit purchase milestones; the latter are objectives that vary. This makes sense because Medford purchased an outcome—300 million credits, which represents 600 million kilocalories in shade benefit that it expects these trees to provide by approximately 2030. This kilocalorie-based outcome can be achieved through a range of miles/year planting outcomes, depending on the mixture of riparian sites restored in the program.[9] For permit writers to obligate Medford to particular tree planting or mileage goals would handicap its ability to maximize ecological, economic, and social resources via implementation. Thus, because the success of this program is measured against objective and enforceable obligations to secure a set number of kilocalories per day credits on a schedule defined in the permit, Oregon DEQ acted reasonably when electing not to peg compliance goals to tree planting or miles/year restoration goals. Moreover, the permit also has enforceable interim and final effluent limits. NPDES Permit 100985, Schedule A, § 1(c).

iii. Medford Will Come into Compliance "As Soon as Possible"

Medford will also come into compliance "as soon as possible," as is required by 40 C.F.R. § 122.47(a)(1). Notwithstanding any discussion as to what the "Hanlon memorandum" requires (or the weight carried by an unpublished memorandum), Oregon DEQ provided sufficient, reasonable explanation as to how the compliance schedule associated with the water quality trading solution will bring Medford into compliance as soon as possible. First, because water quality trading requires recruitment of private landowners, followed by project planning and site preparation, and then implementation during an appropriate planting season, compliance cannot occur immediately. Oregon DEQ noted these considerations as part of its justification for the extended compliance period. Medford Permit Fact Sheet, at 34. Second, because there is little comparative data for water quality trading implementation, Oregon DEQ assumed that if Clean Water Services treats three times as much effluent as Medford and has "a more mature restoration program and is a larger organization with more funding," that it should be able to implement restoration at approximately three times the pace as Medford. *Id.* at 34 (noting that Medford plans to have one mile restored in the first year of the program, followed by three

[9] Miles/year restored is a readily-understandable proxy for communicating kilocalories of solar load blocked, but it is not a fixed number to be relied upon when assessing compliance or program success. For example, The Freshwater Trust has estimated that it will need to restore 24 miles of riparian habitat. It arrived at this estimate by assuming that the mix of sites restored in the program would have an average site uplift of 25,000,000 kilocalories/mile (24 miles multiplied by 25 million kilocalories/mile is equal to the 600 million kilocalories of solar load blocked that is associated with 300 million credits). However, individual project sites will generate kilocalorie/mile uplift values higher and lower than the 25 million kilocalories/mile average, meaning that the actual number of miles restored may not be exactly equal to the that original estimate. Therefore, depending on the mix of sites restored and the uplift characteristics of those sites, The Freshwater Trust will likely restore somewhere between 20-30 miles, while pursuing and delivering the specific kilocalorie criteria.

miles/year in subsequent years). Oregon DEQ acted reasonably in making this assumption—which results in a longer compliance period, even though, as discussed above and in footnote 9, the number of credits generated, not the number of miles/year planted, is the appropriate measure for evaluating compliance and program success. Moreover, Oregon DEQ appropriately recognized the dynamism of the restoration process and provided an adaptive link between programmatic estimates and actual progress on the ground, noting that "[i]f experience shows that Medford RWRF can be reasonably expected to make faster progress in accumulating thermal trading credits, DEQ will consider shortening the proposed schedule upon permit renewal." *Id*.

C. Oregon DEQ Reasonably Granted Credits to Medford Prior to Full Generation of Benefits Because Doing So Will Lead to Compliance

Oregon DEQ's decision to grant credits to Medford prior to the full generation of shade benefits reflects an innovative and reasonable decision-making process that will best protect the Rogue River watershed. First, Medford was a strong candidate for this type of compliance solution because it did not discharge above its excess thermal load limits from 2007-2011. Second, when evaluating the water quality trading solution for inclusion in Medford's permit, Oregon DEQ included conservative safeguards to ensure that the time lag between implementation and full shade maturity will not cause the facility to be out of compliance with its permit. In fact, Medford will not likely exceed its thermal load limits unless the watershed experiences drought conditions. Inclusion of such safeguards also complies with EPA guidance on the matter.[10] Third, the vegetation planted for Medford, which is planted so as to provide twice as much shade benefit over time as is required, will grow much more quickly than one might expect. And fourth, Medford's trading partner, The Freshwater Trust, has a contractual obligation to provide twenty years of monitoring and maintenance at all project sites, thus ensuring that the thermal benefits underlying Medford's credits actually come to fruition by approximately 2030. Combined, these realities more than reasonably address time lag concerns, and render moot the need for a pro-ration schedule. It also renders incorrect NWEA's statement that the trading ratio "does not appear to take into account the many years in which a credit is granted for *no thermal benefit whatsoever*." NWEA Letter, at 6 (emphasis added). Oregon DEQ therefore acted reasonably in deeming that thermal credits can be sold to and used by a permittee once they are generated.

i. Medford Has Not Exceeded its Excess Thermal Load Limit, and So Was a Good Candidate for the Water Quality Trading Solution and its Longer-Term Benefit Accrual

Medford was a good candidate for the selected compliance solution because it has not exceeded its excess thermal load limit at any point during the years for which discharge monitoring data are available from EPA. **Figure 2** shows the actual 2007-2011 monthly excess thermal load data from Medford, as reported in discharge monitoring reports.[11] In the figure, the red line illustrates Medford's excess

[10] EPA states in its permit writer toolkit that "[p]ermitting authorities should be aware of potential time lags between BMP installation and full pollutant reduction efficiency … If the trade agreement … does not dictate how and when credits become available for purchase, the NPDES permit should address the time lag." EPA, Water Quality Trading Toolkit for Permit Writers, at 4-5 (2009), *available at* http://water.epa.gov/type/watersheds/trading/WQTToolkit.cfm. Oregon DEQ has done this in the Medford permit.

[11] EPA Discharge Monitoring Report (DMR) Pollutant Loading Tool, http://cfpub.epa.gov/dmr/facility_search.cfm (last visited April 3, 2013).

thermal load limit from 2007-2011; the dotted blue line illustrates the final late October[12] excess thermal load limit (ETLL) Medford will have from 2022 at the end of the compliance schedule; the dark blue bars document Medford's actual excess thermal load, as reported by Medford, from 2007-2011; the light blue bars illustrate the gap, or "unused allowance" between actual recorded discharge loads and Medford's ETLL. In addition to demonstrating that Medford has not exceeded its thermal load limit in the past, Medford's recorded October discharges from 2007-2011 would not even exceed its more stringent October 2022 final ETLL (of 428 million kilocalories/day). This speaks to the fact that Medford was an appropriately conservative location to undertake this innovative solution.

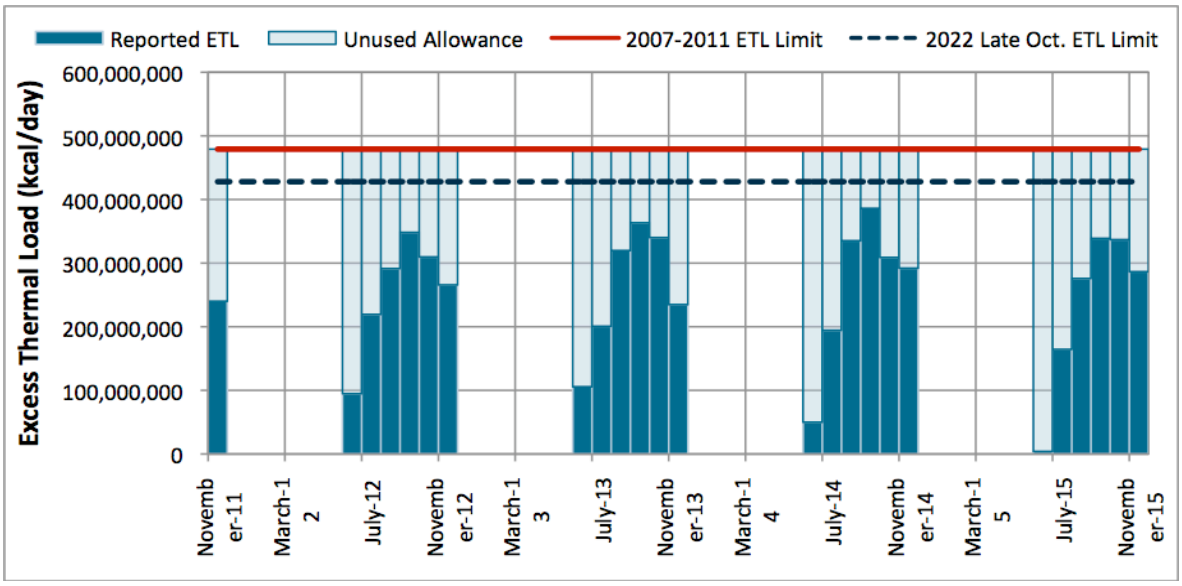

Figure 2: Medford's actual reported excess thermal load (ETL) from 2007-2011 has remained below its late October ETL limit (which is the strictest this limit will be).

ii. Medford's Projected Exceedance is Based on the Simultaneous Occurrence of Three Conservative Factors, Meaning that Maximum Projected Exceedance Conditions Are Unlikely to Occur

Another important factor is that Medford's projected late October exceedance is based on a worst-case scenario (a.k.a. a maximum projected exceedance). The worst case scenario calculation is based on the simultaneous occurrence of three conservative factors: 1) maximum projected effluent flow in the service area (based on 2012 facility design flow, which Medford's facility planner projected will increase by 42% from 2008 to 2030, as a result of population growth that may not come to fruition)[13]; 2) the warmest 7-day average daily maximum effluent temperature recorded for the late-October period in 2010 (the critical period with the most stringent wasteload allocation); and 3) 7Q10[14] low river flows.

[12] The late October excess thermal load limit represents the most stringent limit that will be placed on Medford at any point in a year. *See* NPDES Permit 100985, Schedule A, § 1(c).

[13] Medford Facilities Plan, at Tbl. 2-3 (the population growth estimates used by Medford were those included in Jackson County, Oregon's 2007 revised comprehensive plan; Medford is located in Jackson County).

[14] 7Q10 is the 7-day average low river flow that is statistically expected to occur once every ten years. USGS, Scientific Investigations Report 2008-5126, Estimating Flow-Duration and Low-Flow Frequency Statistics for Unregulated Streams in Oregon (2008), *available at* http://pubs.usgs.gov/sir/2008/5126/section3.html.

This scenario is illustrated in **Figure** 3. As such, to the likelihood of Medford ever having a permit exceedance is low, and so allowing for a longer-term solution was appropriate.

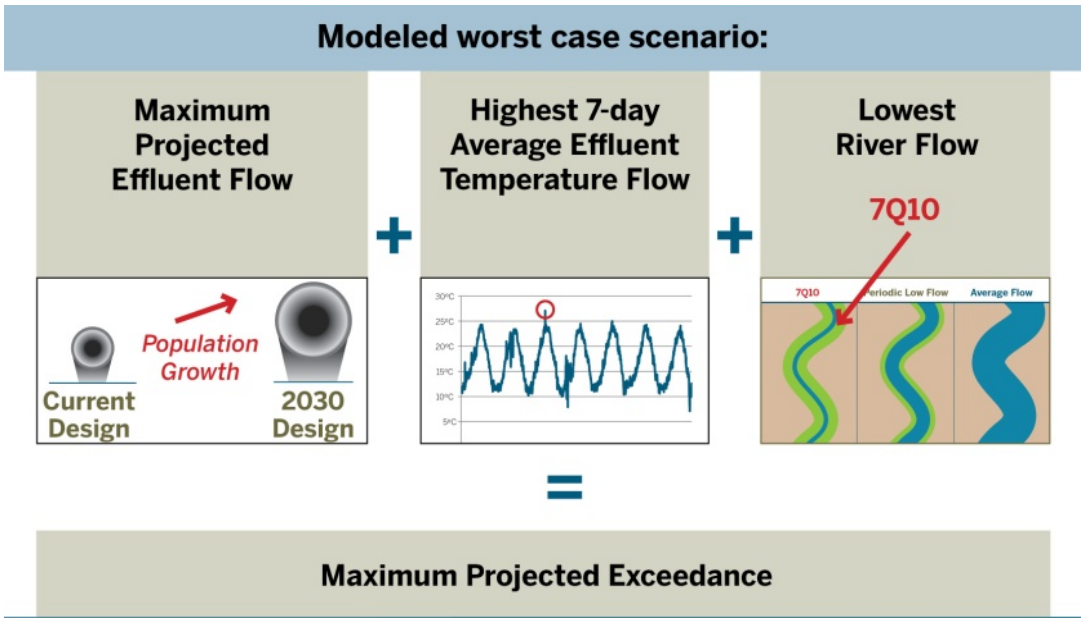

Figure 3: Medford's maximum projected exceedance will only occur if all three conservative factors occur simultaneously.

iii. Medford's Water Quality Trading Solution will Begin Providing Significant Shade Benefits After a Short Period of Time, and Will Result in Twice as Much Shade Generation by Approximately 2030

Even though credits are purchased in advance of full benefit accrual, Oregon DEQ was still well within its discretion to approve the Medford permit because the native "whips" planted as part of the program actually grow into tall, shade-producing trees much quicker than one might expect. For example, a growth curve[15] for Black Cottonwood (*Populus trichocarpa*)—a native species regularly planted by The Freshwater Trust in the Rogue River Basin that has a growth pattern representative of riparian plantings in the area—shows that with average regional conditions, Black Cottonwood starts, or "whips," grow to be 9 feet tall after just one year; 23 feet tall after five years; 43 feet tall after ten years; and 81 feet tall after twenty years.[16] Recognizing, however, that the shade generated from these trees does take time to develop, Oregon DEQ incorporated its 2:1 trading ratio[17] in the permit as an enforceable requirement

[15] Growth curves (a.k.a. site index curves) are established through observation and measurement of species growth, over time, given specific site conditions. *See* USFS Pacific Northwest Research Station, PNW-RN-533, Site Index Equations and Mean Annual Increment Equations for Pacific Northwest Research Station Forest Inventory and Analysis Inventories, 1985-2001 (2002).

[16] E.B. Peterson et al., B.C. Ministry of Forests, Black Cottonwood and Balsam Poplar Managers' Handbook for British Columbia, Forestry Canada, at 46 (1996), *available at* http://www.for.gov.bc.ca/hfd/pubs/docs/Frr/Frr250.htm.

[17] The trading ratio in Oregon is currently structured to address temporal loss and project variability. Oregon DEQ, Water Quality Trading in NPDES Permits, Internal Management Directive, §2.6 (2009), *available at* http://www.deq.state.or.us/wq/pubs/imds/wqtrading.pdf (Oregon DEQ Water Quality Trading IMD) ("DEQ

and required that Medford's trading partner generate twice as much shade benefit as Medford's 2022 projected exceedance. NPDES Permit 100985, Schedule D, § 7(c)(i). Therefore, the notion that long periods of time will elapse without generating shade benefit is incorrect.

iv. Medford's Trading Partner is Contractually Obligated to Ensure that the Time Lag Between Implementation and Shade Maturity is Bridged and Surpassed

In addition to the fact that Medford was a good candidate for trading given that it had never exceeded its prior effluent limits, the fact that three conservative factors must simultaneously occur to result in maximum projected exceedance, and the fact that riparian vegetation grows more quickly than might be anticipated, Medford also has a contractual assurance that The Freshwater Trust will monitor and maintain project sites for the duration of each 20-year project site lease. If, during the 20-year lease period, a project site is not growing as estimated in the planting plan, The Freshwater Trust is contractually obligated to take appropriate corrective action to ensure that the benefit promised is the benefit delivered.

D. Water Quality Trading Solutions are At Least as Durable and Long-Lasting as Technological Compliance Solutions, but Provide More Environmental and Economic Benefits

Oregon DEQ's decision to grant credits to Medford prior to the full generation of benefits is also supportable because the riparian restoration solution is at least as long-lasting and permanent as the other compliance options at Medford's or others' disposal. NWEA is concerned that the solution chosen by Medford is too temporary and impermanent because "the trees will be under contract with landowner for merely a 20-year lease" and that Medford will not be able to meet its effluent limits in the future "if any landowners involved in trading remove riparian vegetation after expiration of their 20-year leases." NWEA Letter, at 6. These concerns are not unique to a water quality trading solution when compared to technological solutions, and when understood in the full context of the program. In both cases, there are no permanent solutions. First, the durability and longevity of with the water quality trading solution is comparable to that of technology-based compliance solutions. Second, when compared to technological compliance options that Medford could have otherwise pursued (i.e. chiller or cooling pond), the water quality trading solution offers a much greater array of long-term benefits. Third, economic and legal incentives promote continued participation in the program. Fourth, in the event of landowner withdrawal or force majeure loss, the permittee will have an obligation to secure replacement projects so as to remain in compliance with the current permit, which it can accomplish according to standard compliance schedules.

---

typically uses a trading ratio of 2:1 to compensate for the time it takes for riparian restoration projects to provide effective shade and to account for the variability inherent in such projects."). The Freshwater Trust agrees with NWEA that the current Oregon DEQ 2:1 trading ratio may not account for all potential uncertainties, such as plant survival rates and site loss due to hydrological force, among other factors, and that water quality trading could benefit from additional guidance development around attenuation, calculation uncertainty, and margin of safety. Until then, The Freshwater Trust is confident that its credit calculation methodologies embed a healthy dose of conservatism as well. The Freshwater Trust also recognizes that the trading ratio is a policy decision that is ultimately left to the agency's discretion.

i. The Durability and Longevity of the Riparian Restoration Solution is Comparable to that of Technology-Based Compliance Solutions

It is incorrect to characterize the riparian restoration solution as a less durable and less long-lasting solution when all water quality compliance solutions share similar limitations. First, the Freshwater Trust's ten-year compliance solution is part of a twenty-year compliance plan developed by Medford that mirrors the timeframe that wastewater utilities typically use for planning for and implementing compliance solutions.[18] As facilities approach the end of their twenty-year planning periods, they will typically reassess the long-term viability of their facility plans. This review will usually take into account equipment wear, population growth, technological improvements, regulatory shifts, and environmental needs. In conducting these reviews, utilities often find that aspects of their technology are worn-out, outdated, or under-performing, thus requiring significant expenditures to upgrade or even replace the technology. Therefore, the use of a twenty-year lease period provides Medford with an option that conforms to its existing facility planning schedule. In fact, Oregon DEQ has afforded Medford an added measure of flexibility in pursuing its twenty-year planning goal by setting up the permit for a ten-year period even though Medford plans to rely on the water quality trading solution for the same twenty-year period it would normally rely on a technological solution. *See* Medford Permit Fact Sheet, at 34-35 ("[I]f experience shows the City is unlikely to accumulate the necessary credits within a reasonable amount of time, DEQ will request that Medford reconsider other options for coming into compliance.").

Second, *all* compliance solutions (technological and water quality trading) require periodic reinvestment, especially when the chosen solution is a new innovation. For example, manufacturers regularly discontinue production of parts required for routine maintenance of a range of technologies. Imagine if wastewater treatment facilities today were running on the pump and computer technology of fifteen-to-twenty years ago. Such aspects of change and variation are expected among technological and water quality trading solutions alike, and are made certain to the greatest extent possible through legal obligations imposed on the permittee, and through transparent monitoring and reporting requirements. As a final point, the nature of reinvestment associated with water quality compliance is the same for technological solutions (upgrade or replace) as with water quality trading (renew or replace leases).

ii. The Water Quality Trading Solution Provides Greater Long-Term Environmental Benefits than Technologically-Based Compliance Solutions, While Also Generating Ancillary Economic Benefits

When compared to technological solutions that have traditionally been installed at these types of facilities, the water quality trading solution approved by Oregon DEQ has more long-term ecological benefits. With a water quality trading solution, the underlying investment will *appreciate* over time into

[18] For example, the City of Medford conducted its wastewater treatment compliance assessment based on an approximately twenty-year timeframe. Medford Facilities Plan, at 1-2. Likewise, the City of Ashland, Oregon plans to implement almost all of its facilities improvements in the next eighteen years (2012-2030). City of Ashland, Comprehensive Sanitary Sewer Master Plan (2012), *available at* http://www.ashland.or.us/Files/Final%20Ashland%20CSSMP%20Adopted%204-17-2012.pdf. The Freshwater Trust signed a ten-year contract with Medford because the City's charter limits contract length to a maximum of ten years in duration. City of Medford Charter, ch. X, § 32. At the end of the contract term, Medford will decide to either purchase 100 million more credits in a subsequent contract to meet its 2030 projected maximum exceedance of 400 million kilocalories, or seek a new alternative. *See* Medford Facilities Plan, at 7-6, Tbl. 7-3.

a self-sustaining solution,[19] even though the utility may be able to depreciate its investment on its balance sheets. The water quality trading solution also provides multiple additional benefits for the watershed, including functional riparian habitat for wildlife and aquatic macroinvertebrate life cycles, year-round shading of the waterbody, nutrient-input avoidance, erosion control, and energy consumption savings. *See* Medford Permit Fact Sheet, at 34.

Though The Freshwater Trust focuses entirely on providing solutions that watersheds need, we recognize that municipalities, as a fiduciary for their ratepayers, also appreciate the significant local economic gains that water quality trading solutions provide, but that technology-based compliance solutions do not. All of the riparian plantings are made possible because of the participation of a local workforce (excavators, equipment operators, irrigation equipment suppliers, general contractors, and riparian restoration professionals), and the plant stock and supplies purchased from local nurseries. In fact, studies have shown that 80 cents of every dollar spent on restoration stays in the local economy, and every $1 million spent on restoration creates 15-20 jobs.[20] Moreover, when The Freshwater Trust plants riparian vegetation on private land, landowners are compensated with an annual rental fee that can help them continue to make ends meet so that they are not forced to sell their land into development. Thus, the long-term economic activity associated with performing riparian restoration at scale—jobs created, economic expenditures, and landowner fees—is measurable and does not similarly result from building grey infrastructure solutions. When approving the Medford permit, Oregon DEQ clearly recognized the environmental superiority of the riparian restoration solution while also appreciating the positive ancillary economic benefits that the solution will produce. Integrating environmental and economic factors in a way that leverages the strengths of each while driving compliance should be lauded; regulatory agencies rarely take such progressive action despite an increasingly integrated world that demands it and evolving tools that can achieve it.

iii. Economic and Legal Incentives Promote Continued Use of and Participation in the Program

The possible impermanence of the riparian restoration solution is overstated. In all likelihood, Medford will renew its thermal credit contract with The Freshwater Trust or a similarly equipped credit provider because this solution will provide more benefits than a new or heavily upgraded technological investment, but at a fraction of the cost. At most project sites, The Freshwater Trust will then simply renew the landowner lease for a new twenty-year term, and continue monitoring, maintaining, and reporting performance at the site to ensure that the riparian vegetation continues to provide the required shade benefit. This is likely to occur because a variety of legal risks, expenses, incentives, and disincentives encourage continued participation. First, landowners see few other economic opportunities in these riparian revegetation areas because most development must occur outside riparian setback zones, which have been subject to regulatory enforcement.[21] Second, once riparian

[19] This solution is "self-sustaining" because when a mature tree naturally falls (itself an ecosystem-benefiting event), riparian vegetation and/or another tree will naturally grow in its place, thus allowing the solution to function even in the absence of human intervention—something that is not possible for built solutions that require maintenance to function over time.

[20] M. Nielsen-Pincus & C. Moseley, Institute for a Sustainable Environment, University of Oregon, Economic and Employment Impacts of Forest and Watershed Restoration in Oregon (2010), *available at* http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/downloads/WP24.pdf.

[21] *See, e.g.,* Jackson Cnty. Land Dev. Ord. § 8.6.1(A) (no structure or development, including grading, can be located within 75 feet of the top of the Rogue River bank, or within 50 feet of the top bank of any Class 1 or 2 stream,

vegetation is installed, county and state laws and regulations limit conditions around its removal.[22] Third, The Freshwater Trust model is based on an average buffer width of 60 feet, which is rarely under full production and yet is generally in poor ecological shape. Finally, in addition to the expense of clearing and the risk of enforcement, there is very little revenue to be gained by harvesting restoration sites.[23]

iv. In the Event of Landowner Withdrawal or Force Majeure Loss, the Permittee is Responsible for Finding Replacement Sites, which can be Implemented on Standard Compliance Schedules so as to Remain in Compliance

In the event that a landowner does not renew a lease for the second twenty-year period or a site is lost as a result of a force majeure event, the permittee will always have the responsibility to replace the lost credits to safeguard against the risk of exceedance. The permittee is unlikely to fall out of compliance for the following reasons. First, just as if a technological solution fails or malfunctions, Oregon DEQ will place Medford on a compliance schedule to bring it back into compliance as soon as possible. In many

---

except in certain prescribed situations). These prescribed situations are generally narrow. *E.g.,* Jackson Cnty. Land Dev. Ord. § 8.6.1(B) (If designed to "minimize the intrusion into the riparian area and the removal of riparian vegetation[,]" the following uses may be allowed in riparian setback areas: water-related and water-dependent uses; drainage facilities/irrigation; replacement of existing structures so long as the same footprint is maintained; roads, driveways and pedestrian/bicycle paths; public use observation decks/parks). Other regulations impose similar requirements. *E.g.,* Josephine Cnty. Rural Land Dev. Code § 72.040(B) (most all development must occur outside riparian setback areas—50 feet on Class 1 streams such as the Rogue, and 25 feet on Class 2 streams—as defined by ODFW); OAR 660-023-0030 (if a county does not promulgate its own riparian corridor regulations, the state requires 75-foot setbacks for large streams, and 50-foot setbacks for smaller streams). The Oregon Department of Fish & Wildlife (ODFW) has prevailed in enforcing these setback requirements where a county's interpretation has been overly lenient. *See, e.g.,* ODFW v. Josephine County et. al. (Or. LUBA No. 2008-222).

[22] Regulations in the Medford area do not require that vegetation be restored, but they do require that it be retained. For example, Jackson County, Oregon requires that existing vegetation and tree cover "will be retained" on land within 75 feet of the top of the Rogue River bank and within 50 feet of any Class 1 or 2 streams, except in certain narrowly prescribed, regulator-approved situations. Jackson Cnty. Land Dev. Ord. § 8.6.4(A) (Non-native vegetation on this land may be removed if being replaced with native vegetation; a property owner may also remove vegetation as part of a landscape plan for water-related and water-dependent uses—landings, docks, dams, among others—if the landscape plan is approved by ODFW, or as part of approved forestry activities under the Oregon Forest Practices Act). Josephine County has a similar requirement: "streamside vegetation that provides shading of the surface waters shall be retained[,]" except in certain narrowly prescribed, regulator-approved situations. Josephine Cnty. Rural Land Dev. Code § 72.040(B)(2) (Development within these areas is restricted to a limited set of activities that require a site plan development permit review pursuant to Article 42.030—e.g. drainage facilities/irrigation; water-related and water-dependent uses; replacement of existing structures so long as the same footprint is maintained; roads, reclamation projects meant to enhance riparian/fish habitat; aggregate mining within the stream; Forest Practices Act authorized forestry; on-going maintenance to improve riparian vegetation; replacement of non-native vegetation with native vegetation; streets/roads). Other actions may occur in Josephine County if the action improves the riparian area, and either the remaining lot is not buildable or no more than 50% of the riparian area is occupied by development. *Id.* § 72.040(3). These 72.040(3) actions require a mitigation plan, and notice to ODFW, Oregon Department of State Lands, and Oregon DEQ. *Id.* § 72.040(3)(d)-(e).

[23] The tree and shrub species diversity requirements of riparian plantings, which require a species assemblage based on natural reference site conditions, will result in the generation of very little merchantable timber. Even if a landowner were willing to take the regulatory risk and bear the financial burden of removing riparian vegetation, there would be very little financial reward associated with merchantable timber value.

cases, however, a compliance schedule will not be needed because credit expiration will occur over a rolling, ten-year period,[24] meaning that the impact of individual landowner renewals and withdrawals will stagger over the 2032-2042 decade. Second, The Freshwater Trust will be in regular contact with landowners over the duration of the lease. Should an individual landowner not plan to renew, The Freshwater Trust will become aware of the need for additional project sites prior to credit expiration, and both entities will be able to plan accordingly. As such, any delays associated with supplying additional, sufficient credits would be managed and resolved on a similar timeline as delays caused by technological failures or breakdowns.

Combined, the discernible, phased nature of potential landowner withdrawal and standard corrective compliance schedules, similar to those that would be used to correct technological failures or breakdowns, will ensure that exceedance events will be either completely avoided or properly remedied on an appropriate timescale. Because of these factors, and as Medford is unlikely to actually reach its maximum projected exceedance level, there is unlikely to be any "unmitigated discharge" caused by landowner withdrawal from the program after twenty years. As such, Oregon DEQ was within its discretion to determine that the water quality trading solution is more than reasonable.

E. Oregon Only Allows the Generation of Credits Below Baseline

Under EPA and Oregon DEQ water quality credit trading policy, nonpoint sources must reduce pollutants below their TMDL load allocation—their baseline—before they can generate thermal credits to trade to a point source.[25] NWEA asserts that Oregon DEQ, when approving the Medford trading program, "gave no consideration whatsoever to baseline requirements for nonpoint sources involved in creating thermal credits. As a result, Oregon DEQ simply assumed that existing conditions – not TMDL Implementation Plans – are that baseline." NWEA Letter, at 2. In reviewing the TMDL and the permit, it appears to us that Oregon DEQ concluded that landowners are not required to plant vegetation along riparian areas to meet their load allocations, so they may generate credits by planting in these corridors.

We emphasize here that Oregon DEQ's approach to evaluating baseline conditions was based, in part, on its reliance on the State's Natural Conditions Criteria (NCC) in the Rogue TMDL. Recently, the U.S. District Court for the District of Oregon set aside EPA's approval of the NCC statewide. *Nw. Envtl. Advocates v. U.S. Envtl. Prot. Agency*, No. 3:05-cv-1876 (D. Or. Apr. 10, 2013) (Stipulated Order on Narrative Water Quality Criteria and Antidegradation Internal Management Directive). Moreover, NWEA filed another lawsuit in the U.S. District Court for the District of Oregon challenging all Oregon TMDLs approved by EPA from 2004 to 2010 that relied on the NCC, including the Rogue Basin TMDL. *Nw. Envtl. Advocates v. U.S. Envtl. Prot. Agency*, No. 3:12-cv-01751 (D. Or. complaint filed Sept. 27, 2012). As a result of these ongoing legal actions to TMDLs, The Freshwater Trust recognizes that the assumptions underlying the development and implementation of TMDLs in Oregon may be subject to change.

---

[24] Credits from a completed site are good for twenty years. Projects will be implemented over ten years, meaning that credit expiration will occur over a manageable, staggered period.

[25] *See* EPA, Water Quality Trading Policy, 68 Fed. Reg. 1608, 1610 (Jan. 13, 2003) (2003 EPA Trading Policy) ("[W]here a TMDL has been approved or established by EPA, the applicable … nonpoint source load allocation would establish the baselines for generating credits."); Oregon DEQ, Water Quality Trading IMD, at 20 (2012) ("Provisions of the *TMDL Implementation Plans* for designated management agencies [which are meant to achieve load allocations] would be the baseline for nonpoint sources.").

As far as The Freshwater Trust is concerned, if Oregon DEQ's TMDL analysis is unclear such that it hinders the implementation of the water quality solution that the river needs, then we would support Oregon DEQ revising that analysis, even if the existing analysis is legally defensible.

i. Baseline is Based on Meeting the Load Allocations; Credits are Derived From Restoration Efforts that Improve Site Conditions Beyond what is Required to Meet the Load Allocations

When Oregon DEQ issued the Rogue TMDL, it assigned a load allocation to nonpoint sources "consist[ing] of the sum of the natural background heat loads from solar radiation plus the heat load that corresponds to 0.04°C of the Human Use Allowance (HUA) above the criteria at the point of maximum impact in the Rogue River." Oregon DEQ, Rogue River Basin TMDL, at 2-3 (2008). According to Oregon DEQ, this "heat load corresponding to the HUA has been allocated to nonpoint source activities … to address anthropogenic heat loads in excess of background rates due to existing structures, or altered landscape features that are unlikely to achieve system potential shade." Rogue TMDL, at 2-3. Oregon DEQ did not seem to describe the areas that are "unlikely to achieve system potential shade," but they presumably include areas that, at the time the TMDL was adopted, lacked sufficient riparian vegetation to shade the river. Oregon DEQ also made clear that at least some of the nonpoint source sector's HUA allocation was available to trade to point sources. Rogue TMDL, at 2-32 ("The nonpoint source HUA allocation may be used by any of the nonpoint sources … or for heat trading.").

Under the Rogue TMDL, the heat load allocation for nonpoint sources was assigned to Designated Management Agencies (DMAs), who, in turn, were required to develop plans or rules for parties subject to their jurisdiction to meet the load allocation. Under the law, some DMAs were required to develop TMDL implementation plans, however, the Oregon Department of Agriculture (ODA)—the DMA that regulates nonpoint source pollution from private agricultural lands—was instead required to develop and implement area plans and rules to achieve the load allocation. OAR 340-042-0080 (3) (**"**In areas where a TMDL has been approved, agricultural water quality management area plans and rules must be sufficient to meet the TMDL load allocations."); Oregon DEQ TMDL Internal Management Directive, at 41 ("ODAs development of area plans and rules are the regulatory mechanism for meeting TMDL load allocations").

ODA's Inland Rogue area plan and rules do not require landowners to restore riparian vegetation. *See generally* Inland Rogue Agricultural Water Quality Management Area Plan (2010), *available at* http://www.oregon.gov/ODA/NRD/docs/pdf/plans/inland_rogue_2010_plan.pdf; Inland Rogue Agricultural Water Quality Management Program Rules, OAR 603-095-1400 *et seq.* Based on The Freshwater Trust's reading of the plan and rules, the closest requirement that relates to stream restoration is OAR 603-095-1440(3)(a), which states that "agricultural management of riparian areas *shall not impede* the development and maintenance of adequate riparian vegetation to control water pollution…") (emphasis added). This regulation, however, does not require landowners to plant vegetation. The same is true for local ordinances. *See e.g.,* Jackson Cnty. Land Dev. Ord. § 8.6.4(A) (existing vegetation and tree cover "will be retained" on land within 75 feet of the top of the Rogue River bank and within 50 feet of any Class 1 or 2 streams, except in certain narrowly prescribed, regulator-approved situations). At most, these regulations require landowners to *retain* riparian

vegetation (i.e. a negative obligation to not do something). The same can be said for pending CZARA regulations.[26]

When adopting the Inland Rogue area plan and rules, ODA concluded that landowners were not required to re-plant riparian areas to meet their assigned load allocation. Oregon DEQ implicitly agreed with this finding because, to our knowledge, it never asked ODA to reconsider its approach to nonpoint source pollution control as it must do if it disagrees with ODA's plan and rules implementing the TMDL. *See* OAR 340-042-0080(3).[27] Oregon DEQ then relied on ODA's area plan and rules as the regulatory baseline for nonpoint sources to meet the load allocation and as the regulatory baseline for credit generation. Because the plan and rules do not require private landowners to re-plant riparian areas, landowners can generate credits for use by Medford because the plantings result in "pollutant reductions greater than those required by a regulatory requirement or established under a TMDL." EPA Trading Policy, at 1610; Oregon DEQ, Water Quality Trading IMD, at 20 ("Credit can only be given for actions that are not currently required by existing regulation or are above and beyond the minimum regulatory requirement.").

ii. Oregon DEQ's Load Allocations to Nonpoint Sources Included a Human Use Allowance for the Purpose of Water Quality Credit Trading

On a related point, NWEA argues that the TMDL assumptions appear to leave little or no room for the type of trading used in the Medford NPDES permit. To paraphrase, NWEA seems to be concerned that, because the load allocation to riparian nonpoint sources has been translated into "effective shade curves" and that the nonpoint source effective shade targets represent "system potential riparian vegetative conditions," the Rogue TMDL, in effect, assumes landowners will replant riparian areas to meet the load allocation, so no more vegetation can be planted to generate credits for point sources. NWEA Letter, at 3-4.

The Freshwater Trust will defer to Oregon DEQ (the author of the TMDL) on the significance of the "effective shade curves" for purposes of meeting the TMDL wasteload and load allocations. Recall, however, that the TMDL load allocation "consists of the sum of the natural background heat loads from solar radiation plus the heat load that corresponds to 0.04°C of the Human Use Allowance (HUA) above the criteria at the point of maximum impact in the Rogue River." Rogue TMDL, at 2-3. This HUA was "allocated to nonpoint source activities along the Rogue River to address anthropogenic heat loads in excess of background rates due to existing structures, or altered landscape features that are unlikely to achieve system potential shade." Rogue TMDL, at 2-3. Thus, Oregon DEQ granted an allocation to nonpoint sources to *add* heat to the Rogue River. As stated in the TMDL, this "nonpoint source HUA

[26] The Oregon coastal nonpoint pollution control program (CNPCP) is intended to provide forest management protection of fish bearing streams. Tree retention obligations are not affirmative riparian restoration obligations. To date, EPA and NOAA have not yet completed their final approval or disapproval of Oregon's CNPCP pursuant to the terms of NWEA's lawsuit settlement in *Northwest Environmental Advocates v. Locke, et. al*., Civ. No. 09-0017-PK (D. Or. Sept. 27, 2010).

[27] In pertinent part "[i]f the department [DEQ] determines that the plan and rules are not adequate to implement the load allocation, *the department will provide ODA with comments* on what would be sufficient to meet TMDL load allocations. If a resolution cannot be achieved, the department will request the Environmental Quality Commission to petition ODA for a review of part or all of water quality management area plan and rules implementing the TMDL." OAR 340-042-0080(3) (emphasis added).

allocation may be used by any of the nonpoint sources … or for heat trading." Rogue TMDL, at 2-32. Thus, the TMDL is structured so that nonpoint sources can undertake re-planting projects that exceed their obligations under the TMDL and, in turn, generate credits to trade to point sources.

iii. Oregon Has an Opportunity to Improve Water Quality Trading Through Implementation of a Numerically-Based Baseline

While we disagree with NWEA's assertion that Oregon DEQ gave no consideration to baseline requirements for nonpoint sources that generate thermal credits, we believe that Oregon, like many states, should continually evaluate the best mechanisms to ensure nonpoint sources meet their load allocations before they generate credits. For instance, NWEA cites to Pennsylvania's numeric baseline trading policy, Pa. Code ch. 96.8(d), which we read as requiring nonpoint sources to undertake one of three actions to meet their respective baselines, including adjusting overall reduction at project sites by an additional 20%.[28] A realistic numeric baseline would provide an additional margin of safety for ensuring that trading is providing the maximum improvement in water quality that it can provide. Oregon DEQ's Trading Policy includes substantive guidance on how to address uncertainties related to the trading program through trading ratios, margins of safety, and monitoring for surrogates. Oregon Water Quality Trading IMD, at 16-17. The Freshwater Trust, as a proponent of trading when it can help achieve more rapid, watershed-scale recovery of Oregon's rivers, would gladly participate in an informed discussion about how to properly incorporate the best elements of any state's trading program into the Oregon program.

III. Conclusion

The Freshwater Trust hopes this letter clarifies how water quality trading, as practiced in Medford, complies with the law, and can maximize improvements in the health of our streams and rivers. Despite the complexities of its logistics and mechanics, this water quality trading program represents a new standard of rigor and accountability in conservation and a viable path toward new and meaningful environmental gains. These ends can be pursued in an aligned and coordinated manner. After all, the agencies and the advocates are tasked with the same mission and the same goals: to improve water quality on a scale and a timeline that matters. We intend to convert that theoretical alignment into practice.

Imperiled waters, species, and ecosystem have urgent and growing needs. For the last couple decades, water quality has continued to deteriorate. Our only chance to gain ground will be to find opportunities to cooperate; water quality trading represents just such an opportunity. We hope we can work together to build broad support for innovative, lawful solutions to address Oregon's and the nation's water quality.

---

[28] Of note, the Washington rule that NWEA asserts "incorporated existing nonpoint source responsibility to control pollution into its *water quality trading* regulations" is in fact an offset provision not a water quality regulation. WAC 173-201A-450(2)(e) (this regulation states that "[o]nly the proportion of the pollution controls which occurs beyond existing requirements for those sources can be included in the *offset* allowance") (emphasis added). Offsets, which allow a new source to mitigate the impacts of new development, are fundamentally different from trading, which allows existing sources to meet their current regulatory objectives through more economically efficient expenditures of ratepayer funds. Washington currently has only a draft policy on water quality trading. Wash. Dep't of Ecology, Washington Water Quality Trading/Offset Framework (2010 draft), http://www.ecy.wa.gov/programs/wq/swqs/WQTradingGuidance_1010064.pdf.

We look forward to working with you in the days ahead and urge you to maintain progress and momentum for action even while strengthening the foundation upon which good things happen. Thank you for your consideration and please contact me if you would like to discuss these issues further.

Yours in conservation,

Joe S. Whitworth
President

The Freshwater Trust
65 SW Yamhill St, Ste. 300
Portland, OR 97204
joe@thefreshwatertrust.org
503-222-9091 x 11

CC: Dan Opalski, Director, Office of Water & Watersheds
Christine Psyk, Associate Director, Office of Water & Watersheds
Karen Burgess, EPA NPDES Permitting
Hanh Shaw, EPA NPDES Permitting
Susan Poulsom, EPA NPDES Permitting
Dennis Ades, Oregon DEQ
Nina Bell, Executive Director, Northwest Environmental Advocates