

## **Response to Comments Tualatin River Watershed-based NPDES Permit**

The permit documents for the new National Pollutant Discharge Elimination System (NPDES) Watershed-based Waste Discharge Permit held by Clean Water Services (CWS) and Washington County Department of Land Use and Transportation were placed on Public Notice on November 14, 2003. Public Hearings for this permit were held on December 18, 2003. The public comment period ended on January 6, 2004. Attached is the Department's response to the substantive public comments received during the Public Notice period. A broad range of comments were received and many were similar in nature. This **Response to Comments** is organized with comments falling into three broad areas. The first responses are to the comments that were generally made regarding the wastewater treatment plants and the wastewater collection system. Another group of comments were made regarding the municipal separate storm sewer system (MS4) components of this permit action. The last responses are those made to the comments regarding the proposed water quality credit trading that is built into the permit action.

In tandem with this permit action, the Department is renewing all Phase I MS4 permits in the State of Oregon. It should be recognized some comments were given that were directed to the other MS4 permits as a whole. It should also be noted that since this watershed permit and the other Phase I MS4 permits share common language and intent, the comments on the state-wide permits were considered for this permit. Some modifications were made in the final watershed permit based on the comments on the state-wide MS4 permits.

**DEQ Response to Dissolved Oxygen Trading and General Comments on the Draft Clean Water Services' Watershed-based NPDES permit**

Commenter	Summary of General & DO Trading Comments	Responses
<p>Kelly Huynh USEPA Region 10</p>	<ul style="list-style-type: none"> <li>• The permit allows the addition of new pump stations and emergency overflows without permit modification.</li> <li>• Why are daily mass load limits suspended during periods when flow exceeds twice the design average dry weather flow?</li> <li>• Several questions were raised regarding the wet weather outfalls that have been added to the Durham and Rock Creek facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• The permittee is being asked to notify the DEQ if the addition of a new pump station with a designed overflow point occurs. The overflow point then will be added to the permit typically at the next permit renewal.</li> <li>• DEQ rules provide for this suspension of the daily limit provided the treatment facilities are operated with the highest and best practicable treatment and control during these periods. This conditional suspension was also in the previous permits issued to these facilities. Daily average flows that might trigger this have only been observed during the November through April wet weather periods.</li> <li>• The wet weather outfalls were necessary to accommodate a condition that has been observed several times in previous years. During periods of high plant flow and high river stage, the treated effluent (meeting all permit standards) was backing up into the chlorine contact chamber and spilling out at the plant site causing physical destruction and substantial safety risks. To remove this circumstance, CWS investigated pumping effluent to the river or the addition of secondary outfalls. It was determined that the secondary outfalls would be the most practical. It is intended (though not explicit in the permit) that these be used only during wet weather discharge and the permit requires that all effluent limits remain the same no matter the discharge point. Where appropriate the outfall notations have been amended in Schedule A in an effort to clarify the requirement.</li> </ul>
<p>Dave LaLiberte LaLiberte Environmental Associates, Inc.</p>	<ul style="list-style-type: none"> <li>• Will DEQ be performing an anti-degradation review since it is apparent that the permittee is planning increased loads over the next 20 year period?</li> <li>• Wet weather outfalls allow increased loading to the river and no mixing studies were completed to demonstrate that WQ standards will be met. He also raises the issue of overlapping mixing zones.</li> </ul>	<ul style="list-style-type: none"> <li>• The permit established loads based on the current loading and when/if projected loading increases do occur in the future, the Department will go through an anti-degradation review process with the permit renewal that includes those increased loadings.</li> <li>• The wet weather outfalls are to allow the controlled discharge of peak flows from these facilities. These flows were intended to go out through the existing outfalls but due to river stage the primary outfalls had a tendency to surcharge. The Department does not allow for increased mass loads to be discharged with this permit. The mass limits remain the same as the previous permit. The outfalls do overlap but all water quality standards must be met at the edge of the existing primary outfall mixing zone. Mixing zone studies were completed and reviewed by the Department during the plan review process for these outfalls prior to construction. The studies (<a href="#">Discharge Evaluation for Continuous Operation of Existing and New Rock Creek Wastewater Outfalls- CH2MHill, December 29, 1999</a> and <a href="#">Mixing Zone Study Report for</a></li> </ul>

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	<ul style="list-style-type: none"> <li>• Comments regarding treatment plant flows and USGS modeling</li>   <li>• Why is DO compliance evaluated at a non-critical point? CBOD and NBOD have different impacts on instream DO values that aren't considered in the permit.</li>   <li>• Will DEQ perform an anti-degradation evaluation because of the increased loadings of CBOD? Have the impacts on the Willamette due to increased CBOD discharges been evaluated?</li> </ul>	<p><u>Discharges from the Durham AWWTP to the Tualatin River, Oregon</u> – LimnoTech, Inc., August 23, 2000) are available for review in our office.</p> <ul style="list-style-type: none"> <li>• The Department agrees that the USGS has (and is currently) provided comprehensive modeling efforts for the Tualatin River. The results of this modeling and associated data were used extensively during the development of the Tualatin TMDL, upon which the current permit's effluent limits are partially based.</li> <li>• Based on the USGS work, we disagree with the allegations that increases in CWS facility flows will more likely lead to instream WQ violations for DO and phosphorus. (While this is a complicated matter that we won't fully address here, the primary points are: 1) phosphorus concentrations in the facility effluent are actually diluting instream concentrations, and 2) increased flows from the plants are reducing the impacts of the primary DO sink, sediment oxygen demand.)</li> <li>• The Department does agree, however, that increased facility effluent flows may have a detrimental impact on instream temperatures. The Department is not developing an alternatives analysis for temperature and so has not used the USGS modeling results to this end.</li> <li>• The permit includes a mechanism for determining allowable loads of oxygen-consuming materials (CBOD and NBOD) to be discharged from the treatment plants. While the mechanism utilizes the demand at a specific point (Oswego Dam), it is designed to ensure that the dissolved oxygen standard is not violated at critical (or any other) points. This was achieved through the use of a Streeter-Phelps spreadsheet analysis (as suggested by the commenter) and through the use of the CE-QUAL-W2 model of the Tualatin River originally developed by the USGS. These analyses and the effluent limits included in the permit are consistent with the wasteload allocations in the Tualatin TMDL.</li> <li>• The maximum allowable CBOD mass loadings in the proposed permit are the same as in the existing permit.</li> </ul>

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Charles Logue Clean Water Services	<ul style="list-style-type: none"> <li>• Two additional overflow points in the Durham system should be listed in the permit.</li> <li>• CWS contends there is no environmental benefit to Phosphorous reduction after September 30.</li>   <li>• CWS does not believe the allowable thermal load</li> </ul>	<ul style="list-style-type: none"> <li>• The Department has added "Emergency Overflow" points numbered D021 and D022.</li> <li>• The phosphorus effluent limits in the permit are consistent with the existing TMDL. A change in the Phosphorous reduction period would necessitate a change in the TMDL.</li> <li>• The note has been added because it has always been the</li> </ul>

	<p>included in Schedule A's limitations is appropriate. If the limit is included, CWS has asked that this note be added ... "Compliance with the allowable thermal load limitation shall be demonstrated when Permittee achieves the thermal load to offset requirements established in Schedule D.10 of the permit".</p> <ul style="list-style-type: none"> <li>• In Schedule A, Note 2, lack of resolution of the in-stream dissolved oxygen sampling protocol leaves CWS in a "precarious position".</li> <li>• Inclusion of direct reference to the Endangered Species Act is not appropriate in the introductory paragraph for Schedule B.</li> <li>• CWS asked that the biosolids sampling frequency requirement... "Once every 60 days" be changed to "Bimonthly".</li> <li>• Because stream conditions limit the continuous in-stream monitoring of dissolved oxygen, CWS asked that in-stream dissolved oxygen monitoring be only required during periods when the Tier 2 ammonia limitations are applied.</li> <li>• Schedule B, Note 12 needs to be corrected.</li> <li>• Suggested a slight rewording of the second paragraph of Schedule D.7.a.</li> </ul>	<p>Department's intention that the TMDL established thermal loads be achieved through offsetting of the thermal impact through the Temperature Management Plan activities.</p> <ul style="list-style-type: none"> <li>• The wording of this notation was intended to relieve some of CWS's concerns. The Department could place the DEQ's current dissolved oxygen sampling protocol in the permit, but instead has left this discussion for a later date. We believe this notation remains appropriate.</li> <li>• The Department does not agree and believes the introductory paragraph is adequate for what is intended... to identify this permit as a comprehensive and integrated approach to maintaining and improving water quality in the Tualatin River basin.</li> <li>• The dictionary lists two meanings for the term bimonthly. It can mean twice in a month or once every two months. Rather than leave it ambiguous we believe that indicating a sampling frequency of once every 60 days will get the biosolids sampling done at least 6 times per year as required in EPA Part 503 rules for wastewater facilities that produce more than 1500 metric tons and less than 15000 metric tons of biosolids annually.</li> <li>• The permit has been changed to make it clearer when the in-stream monitoring applies.</li> <li>• The Department corrected the third sentence of this note.</li> <li>• The proposed change was made</li> </ul>
<p>Sue Marshall, Travis Williams, Brian Wegener Tualatin Riverkeepers and Willamette Riverkeepers</p>	<p>Oxygen Demanding Pollutant Trading:</p> <ul style="list-style-type: none"> <li>• A trading ratio of 1:1 is not reasonable and should not be permitted.</li> </ul>	<ul style="list-style-type: none"> <li>• Please see response to the DO trading comment above.</li> </ul>

**DEQ Response to Storm Water Comments on the Draft Clean Water Services' Watershed-based NPDES permit**

Commenter	Summary of Storm Water Comments	Responses
<p>Greg Schifsky Citizen, Southwest Portland</p>	<ul style="list-style-type: none"> <li>• Need strict maintenance standards for parking lots, etc.</li> <li>• Need landscaping specifications with storm water mitigation facilities.</li> <li>• New and infill development must manage storm water on-site.</li> <li>• Must monitor and maintain storm water facilities adequately.</li> </ul>	<ol style="list-style-type: none"> <li>1. The permit requires each permittee to review their SWMP and to ensure that all necessary BMPs are in place to meet the MEP standard. This review will include public comment. The review is required to address the maintenance standards and requirements for post-construction controls.</li> <li>2. A monitoring program to evaluate BMP effectiveness is a required element of the permit (Schedule B.1.e.(1)(b) of the draft CWS permit).</li> </ol>
<p>Martha Denis Citizen, Tualatin</p>	<ul style="list-style-type: none"> <li>• Illegal dumping was observed, what can be done about it?</li> </ul>	<ol style="list-style-type: none"> <li>3. Under the MS4 permit, the permittee must have a program in place to respond to complaints of illegal dumping to the storm sewer system.</li> </ol>
<p>Albert Kaufman Citizen, Southwest Portland</p>	<ul style="list-style-type: none"> <li>• Concerned about amount of impervious surface</li>   <li>• Clear cutting near Hagg Lake and in the Tillamook State Forest should be stopped.</li> <li>• More day-lighting of streams.</li> </ul>	<ol style="list-style-type: none"> <li>4. The reduction of effective impervious area (EIA) and the recharging of groundwater is one of many possible BMPs that a permittee may use to meet the pollution reduction requirements of this permit. The permit requires each permittee to review their SWMP and to ensure that all necessary BMPs are in place to meet the MEP standard. This review will include public comment and it is expected that the permittees will address the EIA issue at this time.</li> <li>5. While clear cutting and the day-lighting of streams are important issues, we feel that they are not MS4 permit issues.</li> </ol>
<p>John Frewing Citizen, Tigard</p>	<ul style="list-style-type: none"> <li>• CWS, cities and the county should include provisions to address storm water flows from older developments.</li> <li>• The permit should require a program to map storm water drains and flows.</li>   <li>• Permit should include provisions to tie program funding to level of impervious area.</li> <li>• What is the plan for remedial action if water quality standards are not met?</li> </ul>	<ol style="list-style-type: none"> <li>6. The permit requires each permittee to review their SWMP and to ensure that all necessary BMPs are in place to meet the MEP standard for all discharges, including those from existing development. This review will include public comment.</li> <li>7. Permittees were required to submit maps showing the location of their outfalls and other pertinent information with their original permit applications. While the draft permit requires that each permittee submit updates of these maps with their future permit renewal submittals, we feel that this is not adequate and have revised the permit to also require that updates of the maps be submitted with the second annual reports.</li> <li>8. Please see response #4.</li> <li>9. As required in the permit, the permittees must develop benchmarks addressing the TMDL. If the benchmarks are not met, then the permittees' plans must be modified to address the shortfall.</li> </ol>

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	<ul style="list-style-type: none"> <li>• The incorporated cities of Wash. Co. should be included as co-permittees.</li> <li>• Include enforceable limits on storm water pollution.</li> </ul>	<p>10. Clean Water Services maintains intergovernmental agreements (IGA) and/or other relationships related to storm water quality with the cities of Washington County and Metro. In addition, the final permit will contain the requirement that CWS and Beaverton sign an enhanced IGA within 90 days of permit issuance. At this time, the Department feels these agreements are adequate to facilitate the appropriate management of the MS4. If, upon review of the SWMP revision (due with the second annual report) or any other submission, it is found by the Department that the conditions of the permit are not being met due to a lack of appropriate coordination and/or cooperation, then the permit may be reopened or renewed to include other municipalities as co-permittees.</p> <p>11. Please see response #59.</p>
Ann Clark Citizen, Durham	<ul style="list-style-type: none"> <li>• Durham quarry storm water impacts</li> </ul>	<p>12. While this specific site won't be impacted by the new permit, this issue falls under the new development requirements of the permit. The permit requires each permittee to implement a program to reduce storm water pollutants from new and significant development. The permit also requires the permittees to review their SWMPs and to ensure that all necessary BMPs are in place to meet the MEP standard for all discharges, including those from new and significant redevelopment. This review will include public comment.</p>
Ron Ellis Gaut Citizen, Tigard	<ul style="list-style-type: none"> <li>• Define rules, regulations and a permitting process that will have a meaningful and measurable impact on storm water runoff pollution.</li> <li>• We need a permit process that requires compliance in quantifiable terms.</li> </ul>	<p>13. The Department's intent with this permit is to have a meaningful and measurable impact on storm water pollution.</p> <p>14. Please see response #59.</p>
Pam Maher Citizen, Hillsboro	<ul style="list-style-type: none"> <li>• Correct ODOT runoff problems</li> <li>• Measurable TMDL standards should be included for road runoff.</li> </ul>	<p>15. ODOT discharges are covered under a different permit.</p> <p>16. Please see response #59.</p>
Sue Manning Citizen, Tigard MS teacher	<ul style="list-style-type: none"> <li>• Fowler Middle School parking lot upgrades failed to address storm water concerns.</li> <li>• Redevelopment projects should be required to upgrade storm water systems to address water quality.</li> </ul>	<p>17. Please see response #12.</p>
Ramsey Weit Citizen, Northwest Portland	<ul style="list-style-type: none"> <li>• The permit needs to include empirical standards/benchmarks for performance.</li> <li>• Standards for new development should be strengthened.</li> <li>• No storm water outfalls are identified in the permit. – at least the large ones should be identified.</li> </ul>	<p>18. Please see response #59.</p> <p>19. Please see response #12.</p> <p>20. Under the existing permit the permittees were required to identify large outfalls. This permit includes the requirement to map all outfalls. (CWS draft permit Schedule B.3.b.(2)(j))</p>

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	<ul style="list-style-type: none"> <li>• There seems to not be language in the permit about addressing runoff from existing development.</li> <li>• There is no specific implementation plan or schedule.</li> <li>• Monitoring of representative outfalls is needed.</li> <li>• Why not define MEP as “those actions necessary to achieve specific TMDL targets”?</li> </ul>	<p>21. There is a requirement in the permit to address existing development as part of the SWMP. Please see response #6.</p> <p>22. The SWMP is the specific implementation plan and schedule and is included in the permit by reference.</p> <p>23. The monitoring portion of the permit requires the permittees to develop a permit that (among other things) characterizes MS4 runoff discharges (Schedule B.1.e.(1)(e) of the draft CWS permit).</p> <p>24. MEP is a term from the federal Clean Water Act. EPA has intentionally not provided a precise definition of MEP to allow maximum flexibility in MS4 permitting. EPA has, however, provided some information on how MEP may be used in an evaluative process (Fed. Reg. Vol. 64, No. 235, Page 68754.)</p>
Susan Bexton Citizen, Southwest Portland	<ul style="list-style-type: none"> <li>• Non-storm water discharge from Smith Elementary School illustrates need for education.</li> </ul>	<p>25. While it appears that Smith School is in Portland and does not fall under CWS permitting, it is acknowledged that education on storm water and illicit dumping is important. This is a required part of the permit.</p>
Karen Cressa Citizen, Hillsboro	<ul style="list-style-type: none"> <li>• Concerned with new development and the lack of control of storm water.</li> </ul>	<p>26. Please see response #12.</p>
Tom Wolf Citizen, Hillsboro	<ul style="list-style-type: none"> <li>• Can instream impoundments be addressed within the permit?</li> </ul>	<p>27. The goal of MS4 permits is to address discharges from municipal storm systems. Since instream impoundments are not part of the MS4 system they are not addressed in the permit.</p>
Joe Blowers Fans of Fanno Creek	<ul style="list-style-type: none"> <li>• Concerned with lack of specific limits in the MS4. MEP does not ensure water quality improvements.</li> <li>• Define MEP to be those practices that meet the TMDL wasteload allocation.</li> <li>• Infiltrate groundwater.</li> <li>• Hold cities accountable as co-permittees.</li> <li>• Make urban streams part of the MS4.</li> <li>• Structural changes to the MS4 (disconnection of storm drains) should be required.</li> </ul>	<p>28. Please see response #59.</p> <p>29. Please see response #24.</p> <p>30. Please see response #4.</p> <p>31. Please see response #10.</p> <p>32. Urban streams are considered waters of the state and are not legally part of the MS4 system.</p> <p>33. The permit requires each permittee to review their SWMP and to ensure that all necessary BMPs are in place to meet the MEP standard. This review will include public comment. It is expected that this review will address the issue of structural changes to the MS4.</p>
Bob Fuquay Tualatin Riverkeepers	<ul style="list-style-type: none"> <li>• The permit should contain objective, performance based, quantifiably measurable goals for temperature, pollutants, turbidity, etc. It must also have enforceable penalties for non-compliance.</li> </ul>	<p>34. We believe the permit contains requirements to address, as much as is practical, objective and quantifiable goals.</p> <p>35. Penalties for non-compliance with this permit are described in Oregon Administrative Rules (OAR) 340-012.</p>
Jim Labbe Audubon Society of Portland	<ul style="list-style-type: none"> <li>• The list of co-permittees is incomplete.</li> <li>• MEP should be defined as the measures needed to meet the WLAs</li> </ul>	<p>36. Please see response #10.</p> <p>37. Please see response #24.</p>
Ronald Leistra	<ul style="list-style-type: none"> <li>• Build on the good work CWS has begun</li> </ul>	

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Citizen, Tigard	<ul style="list-style-type: none"> <li>• Process should result in specific definition of “MEP” that will meet the WLAs.</li> <li>• Consider having as part of the permit the requirement to eliminate existing storm drains and requiring filtrations systems for storm water.</li> <li>• Need precise accountability with clear consequences for failure.</li> </ul>	<p>38. Please see response #24.</p> <p>39. Please see response #33.</p> <p>40. We believe the permit contains the specific and appropriate requirements with penalties for failure to address the requirements.</p>
Jere Retzer Citizen, Southwest Portland	<ul style="list-style-type: none"> <li>• “The current proposals ignore existing conditions, do not include measurable or enforceable standards nor require coordination between government entities.”</li> <li>• “The current proposals do not include adequate enforcement, public education or involvement.”</li> <li>• “Any successful program has to include incentives, freedom to do the right thing and also innovative approaches including green street designs and public-private partnerships.”</li> </ul>	<p>41. The permit takes into account existing water quality problems through the 303(d) and TMDL provisions. We believe the permit contains the requirements to address, as much as is practical, object and quantifiable goals.</p> <p>42. The permit requires each permittee to review their enforcement and public education/involvement programs and to ensure that all necessary BMPs are in place to meet the MEP standard for all discharges. This review will include public comment.</p> <p>43. We agree that successful pollution control programs often include the elements and qualities noted here. The Department feels that the MS4 permits contain the requirements and necessary flexibility for permittees to continue developing programs with these traits.</p>
Joan Patterson Friends of the TRNWR	<ul style="list-style-type: none"> <li>• Permit fails to support certain beneficial uses by not holding the co-permittees accountable to the WLAs for storm water. There need to be clear numeric storm water limits to address WLAs.</li> </ul>	<p>44. Please see response #59.</p>
Sue Marshall, Travis Williams, Brian Wegener Tualatin Riverkeepers and Willamette Riverkeepers	<ol style="list-style-type: none"> <li>1. Non-permit, TMDL implementation issues: <ul style="list-style-type: none"> <li>• Agriculture: Request DEQ analyze the SB 1010 plan.</li> <li>• Forestry: Request that DEQ through the EQC petition the BOF to develop a Tualatin Basin Rule.</li> </ul> </li> <li>2. Storm water: <ul style="list-style-type: none"> <li>○ Has monitoring under the existing permitted informed adaptive management?</li> <li>○ Has DEQ evaluated the performance of storm water management to date?</li> </ul> </li> </ol>	<p>45. While agricultural and forestry impacts on streams are important issues, we feel that they are not MS4 permit issues.</p> <p>46. While the monitoring performed under the existing permit helped to develop the current TMDLs and to inform management decisions, it is intended that the process included in the new permit will be result in a stronger link to adaptive management.</p> <p>47. The Tualatin Subbasin TMDL development process included analyses of storm water impacts on water quality and assigned wasteload allocations to the MS4s. One of the goals of draft permit is to build in a specific evaluation process for storm water management.</p>

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	<ul style="list-style-type: none"> <li>○ Permit does not comply with ORS 468B.015 (also a WWTP issue).</li> <li>○ Permit does not comply with OAR 340-045-0035(2)</li>   <li>○ Contend that the 2000 SWMP is not being fully implemented.</li> <li>● Request that DEQ semi-annually review MS4 reports, etc.</li>   <li>○ There is no link in the SWMP to WLA s and no quantification. The permit does not provide reasonable assurance and fails to demonstrate MEP.</li> <li>○ Permit should include additional requirements demonstrated to be effective in controlling urban runoff (need more detail).</li> <li>● Antidegradation: An antidegradation analysis should be made addressing the impacts of new development, etc.</li> </ul>	<p>48. The permit complies with ORS 468B.015 by including effluent limits designed to address water quality standards and TMDL wasteload allocations, thereby protecting beneficial uses.</p> <p>49. Permit does include proposed effluent limits, biosolids limits (where applicable) and monitoring requirements. DEQ disagrees that the permit is in violation of OAR 340-045-0035(2). In a November 22, 2002 memorandum regarding TMDLs and NPDES storm water permits, the Environmental Protection Agency (EPA) stated that water quality-based effluent limits for NPDES-regulated storm water discharges may be expressed in the form of best management practices (BMPs). DEQ has required implementation of BMPs in the permits and, in accordance with EPA guidance, considers BMPs to be appropriate effluents limits for these permits.</p> <p>50. The other required permit element specified in OAR 340-045-0035(2) – biosolids limitations – is not applicable to MS4 storm water permits. In addition, DEQ believes that appropriate monitoring requirements are established for the permits.</p> <p>51. The SWMP that was submitted by CWS in 2000 is not currently in place – it was submitted as the SWMP for the new permit. This SWMP will be implemented through the new permit.</p> <p>52. The Department feels that annual submittal and review of the MS4 reports is appropriate. DEQ will make their findings on these reports available to the public upon request and will take appropriate enforcement action on identified permit violations.</p> <p>53. The new permit links the SWMP to the TMDL wasteload allocations in a quantitative manner and requires the permittees to perform a new evaluation of the SWMP in relation to MEP. (Draft CWS permit. Schedule B.3.b.(1) &amp; (2) and Schedule D.8.(c) and other sections)</p> <p>54. While the draft permit did, by reference, require the permittees demonstrate program effectiveness in specific areas (Draft CWS Permit Schedule D.8.(c)(2)) , the permit has been modified to expressly state what these areas are.</p> <p>55. The measures required by the permit and the SWMP are expected to result in a net reduction in pollutant discharges to receiving waters, even with increased urban development. First, construction and post-construction storm water regulatory programs required by the permits must be designed to minimize potential increases in storm water pollutant loads from new and re-development. This must be accomplished through enforceable regulations that require developments to install permanent BMPs to manage storm water on-site and/or treat storm water prior to off-site discharge. Second, any increase in</p>

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	<ul style="list-style-type: none"> <li>• Require zero net EIA increase with each development. <ul style="list-style-type: none"> <li>○ The design storm for SW facilities in Wash Co. is smaller than others and is therefore not MEP.</li> </ul> </li> <li>• Metro should be a “DMA”. Cities in Wash Co. control building permits and comprehensive plans and thus should be co-permittees.</li> <li>• Numeric effluent limits are needed in the permit to address wasteload allocations.</li>   <li>• The permit should require annual reporting of SWM fees collected, expended, and cumulative balance.</li>   <li>• Propose definition of MEP: “For the Tualatin River Watershed, MEP is that combination of storm water management practices and control facilities that will result in the reasonable assurance that the established waste load allocations for the MS04 discharges will be implemented.” <ul style="list-style-type: none"> <li>○ The permit needs to explain how all of the known constituents of storm water will be addressed to the MEP.</li> </ul> </li>   <li>• Request that the MS4 system be redefined to include the creeks.</li> <li>• Request that flows be regulated by permit.</li> </ul>	<p>pollutant loads from new development is expected to be off-set by reductions in existing urbanized areas. These reductions will be accomplished through on-going implementation of best management practices outlined in the SWMP and required by the permit.</p> <p>56. Please see response #4.</p> <p>57. This comment relates to post-construction runoff control: Please see response #12.</p> <p>58. Please see response #10.</p> <p>59. Although numeric effluent limits are not included, these draft permits do contain effluent limits in the form of narrative best management practices. In a November 22, 2002 memorandum regarding TMDLs and NPDES storm water permits, the Environmental Protection Agency (EPA) stated that water quality based effluent limits for NPDES-regulated storm water discharges may be expressed in the form of best management practices (BMPs).</p> <p>60. The draft permit requires that each annual report contain “A summary of total storm water program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year.” (Draft CWS Permit Schedule B 3)a))</p> <p>61. Please see response #24.</p> <p>62. The permit is based on implementing the existing SWMP and the requirement that this SWMP be fully updated to ensure the continued reduction of pollutants in storm water discharges to the MEP. It is required that this update be based on specific federal regulations and that it involve public input. It is also subject to DEQ approval.</p> <p>63. Please see response #32.</p> <p>64. The Department recognizes the connection between flow and water quality, but water quantity and flow are not directly regulated by DEQ through NPDES permits. The Oregon Water</p>

Commenter	Summary of Storm Water Comments	Responses
	<ul style="list-style-type: none"> <li>• Request that the permit require infiltration to mitigate for temperature impacts.</li>   <li>• Request that the permit require phosphorus as a benchmark for 1200Z permits</li> <li>• Enforceable standards for maintenance, etc. of public and private storm water facilities be included in the permit.</li> <li>• Request that the permit require monitoring address both MEP and TMDL standards.</li>   <li>• Request that the permit monitor for specific pesticides.</li>   <li>• Request increased monitoring for stream segments listed on the 303(d) list as “Potential Concern” or having “Insufficient/No Data”.</li> </ul>	<p>Resources Department is the agency responsible for water quantity and flow management. The Department does promote the use of storm water best management practices that have both water quality and quantity benefits. For instance, many “post-construction” BMPs are designed to facilitate on-site infiltration of storm water. Such a practice results in the treatment of contaminants and contributes to progress toward natural stream flow conditions</p> <p>65. The Temperature TMDL did not identify storm water as a discharge contributing to or causing temperature water quality standard violations (nonpoint sources were identified for the tributaries). Therefore, requiring the permittees to address temperature in this permit is not appropriate.</p> <p>66. While this is an important topic, the 1200z industrial permits are written by DEQ. This topic does not pertain to this permit.</p> <p>67. Please see response #1.</p> <p>68. We feel that the permit does include the monitoring necessary to address these standards. Please see (Schedule B.1.e. of the draft CWS permit).</p> <p>69. The permit follows federal regulations as they pertain to the appropriate monitoring parameters. If water quality standards are violated for any parameters, then these will be addressed through the TMDL process and associated enhanced monitoring.</p> <p>70. There are several reasons why we did not emphasize increased instream monitoring in this permit:</p> <ul style="list-style-type: none"> <li>• Since several TMDLs have already been developed in this subbasin, the focus of the monitoring efforts for this permit is on implementation.</li> <li>• Most of the stream segments in the Tualatin Subbasin impacted by MS4 discharges have significant associated ambient water quality data.</li> <li>• Many of the segments with a “potential concern” listing are based on sediment analyses for which we do not have criteria. Sediment toxic levels also do not result in water column problems. In addition, a TMDL has been developed for the Subbasin requiring reduction of sediment in all discharges.</li> </ul>

Commenter	Summary of Storm Water Comments	Responses
Alice Ellis Gaut Citizen, Tigard	<ul style="list-style-type: none"> <li>The permit has “no meaningful standards, no accountability, no basis for enforcement”</li> <li>Objective criteria must be determined and applied with local gov’t oversight.</li> <li>“MEP” must be defined as “that which in fact achieves optimum TMDL”</li> <li>The governmental and regulatory bodies in the permit areas must be required to apply and enforce standards in areas in their control and jurisdiction</li> </ul>	<p>71. See responses #35 and 59.</p> <p>72. See response #59.</p> <p>73. See response #24.</p> <p>74. We believe that the permit contains these requirements.</p>
Karen Cressa Citizen, Hillsboro	<ul style="list-style-type: none"> <li>Suggests that DEQ follow the example of Washington State and institute more stringent, statewide regulation.</li> <li>Need for reassessing storm water treatment as land uses change.</li> <li>Questions whether CWS has the jurisdiction to partner with the cities to control storm water.</li> <li>Will DO trading have an impact on tributaries?</li> <li>“BMPs” need to be better defined.</li> </ul>	<p>75. DEQ’s intent is to be as stringent as necessary to protect water quality. With this permit we feel that the most appropriate methodology is not to confine municipalities to certain management practices, but to establish an adaptive management process that achieves the same goals in as efficient a manner as possible.</p> <p>76. We agree that this needs to occur. We feel that the permit requires this issue to be addressed. Please see response #'s 1 and 6.</p> <p>77. Please see response #10.</p> <p>78. DO trading involves the two treatment plants. Since these only discharge to the main stem Tualatin River, none of the tributaries will be impacted by the trading.</p> <p>79. The specific BMPs to be implemented are not defined in order to give the municipalities flexibility to adopt the most effective and efficient programs. It is acknowledged that the permit needs to be more explicit on the required programmatic areas. These were included by reference in the draft permit and have been explicitly included in the final permit.</p>
Carolyn Krebs Citizen, Lake Oswego	<ul style="list-style-type: none"> <li>There is a lack of specificity in the permittees’ evaluation of management practices. Management practices in the current SWMP are inadequate.</li> <li>Some monitoring is considered by the permittee to be voluntary.</li> <li>Current monitoring is not adequate to track actual pollutant trends. The permit must require monitoring within the MS4 itself.</li> <li>How was DEQ’s antidegradation policy addressed?</li> </ul>	<p>80. The permit requires each permittee to review their SWMP and to ensure that all necessary BMPs are in place to meet the MEP standard. It is also required that the permittees submit details on their management practices related to their evaluation and implementation (please see CWS draft permit Schedule D.8.c.(2)). This review will include public comment.</p> <p>81. A monitoring plan designed to achieve specific goals is required under the permit.</p> <p>82. The permit requires the permittees to develop a monitoring program to track trends related to storm water pollutants. Our intent with the permit was to require monitoring within the storm water system. The language in the final permit has been modified to clarify this.</p> <p>83. Please see response #55.</p>

Commenter	Summary of Storm Water Comments	Responses
	<ul style="list-style-type: none"> <li>• The permit should address problems associated with flashy flows.</li> <li>• The cities in Washington County should be co-permittees.</li> <li>• Storm drains should be stenciled and should be disconnected.</li> </ul>	<p>84. Please see response #64.</p> <p>85. Please see response #10.</p> <p>86. The permit requires each permittee to review their SWMP and to ensure that all necessary BMPs are in place to meet the MEP standard. It is expected that this review will address specific issues such as storm drain stenciling and storm drain disconnection. This review will include an opportunity for the public to comment.</p>
Joseph Higgins Citizen, SW Portland	<ul style="list-style-type: none"> <li>• Need monitoring to assess the health of streams and sources of pollutants.</li> <li>• Permit should include numeric limits</li> <li>• Cities and local land use agencies must be held accountable</li> <li>• EIA must be reduced.</li> <li>• Need adequate storm water treatment facilities</li> <li>• Need to implement the Greenstreet standards.</li> </ul>	<p>87. The required monitoring plan must assess the effects of storm water pollution on receiving waters and must evaluate the source of pollutants.</p> <p>88. Please see response #59.</p> <p>89. Please see response #10.</p> <p>90. Please see response #4.</p> <p>91. Please see response #1.</p> <p>92. Please see response #1.</p>
Brian Wegener Tualatin Riverkeepers summary of their public forum, "A Community Response to Stormwater Pollution".	<ul style="list-style-type: none"> <li>• Define MEP as those practices that meet the TMDL allocation.</li> <li>• Citizens should be involved in monitoring.</li> <li>• Biomonitoring should be included.</li> <li>• Greenstreets should be implemented.</li> <li>• The permit should address the volume of flows and flashiness of streams.</li> <li>• Cities should be held accountable.</li> </ul>	<p>93. Please see response #24.</p> <p>94. While we agree that citizen involvement in monitoring can be very beneficial, we do not require the permittees to use citizens for monitoring storm water due to the technical and possibly dangerous nature of storm water monitoring.</p> <p>95. Biomonitoring can be a very useful tool for monitoring overall stream health. However, it is not the only tool, nor necessarily the best tool, for assessing storm water pollution runoff. We therefore do not prescribe biomonitoring as part of the monitoring program, but rather the permit requires the permittees to implement a monitoring program that addresses the stated goals.</p> <p>96. Please see response #1.</p> <p>97. Please see response #64.</p> <p>98. Please see response #10.</p>
Charles Logue Clean Water Services	<ul style="list-style-type: none"> <li>• Schedule B.3.b.(1)(d): Clarify that the 2nd annual report will not require an evaluation of progress towards reducing TMDL pollutant loads. Clarify that the proposed benchmarks will be included in the revised SWMP to be submitted with the 2nd annual report.</li> </ul>	<p>99. This issue has been clarified by modifying Schedule D 8)c)(3)(e) of the draft permit to reference only the appropriate subsection of Schedule D 8)c)(3)(a). Also, upon review of these sections, DEQ found that a reference to the performance measures was inadvertently excluded from Schedule D 8)c)(3)(e) (it is evident from Schedule D 8)c)(3)(a) that performance measures are an intended part of SWMP review). An appropriate reference will be included in the final permit.</p>

Commenter	Summary of Storm Water Comments	Responses
	<ul style="list-style-type: none"> <li>• Schedule B.3.b.(2)(h): Request deletion of “TMDL performance measures and” in the second sentence.</li> <li>• Schedule D.8.c.(3)(a): Request removing specific language referring to performance measures so that they are not used for the evaluation of progress in reducing TMDL loads, which is not appropriate.</li> <li>• Schedule D.8.c.(3)(c): Request the deletion of the word "additional" due to its implications regarding MEP.</li> </ul>	<p>100. DEQ considers the establishment of and reporting on performance measures to be an important part of addressing TMDL wasteload allocations. As such, the references to performance measures will be left in the permit.</p> <p>101. Please see response #100.</p> <p>102. DEQ feels that the adaptive management process regarding pollutant load reductions may lead to the need for additional (or alternative) control measures if they are practicable. This word will remain in the final permit.</p>
Liz Callison, Cynthia Eardley West Multnomah SWCD	<ul style="list-style-type: none"> <li>• Permit must comply with state land use laws (specifically, Goal 6 requires that new development comply with WQS).</li> </ul>	<p>103. DEQ's obligations with respect to statewide land use planning requirements are established by ORS 197.180 and the state agency coordination (SAC) rules adopted by the Environmental Quality Commission and Land Conservation and Development Commission. Under these rules, NPDES permitting decisions comply with the goals and are compatible with local comprehensive plans and land use regulations if the local government has an acknowledged plan and regulations and it provides DEQ with a land use compatibility statement (LUCS) confirming consistency. The affected local government has an acknowledged plan and regulations and has supplied DEQ with a LUCS.</p>
Liz Callison WMSWCD	<ul style="list-style-type: none"> <li>• Cities have no plan to address EIA.</li> <li>• Permittees have not taken action to address stream problems identified in various studies.</li> <li>• Portland and CWS have a conflict of interest in that they use stream corridors as their right of way for sanitary and storm sewer systems.</li> <li>• There is no effective program to ensure water quality standards are met (BES data re not being reviewed).</li> <li>• Comments on Metro's impl. of Goals 5 &amp; 6</li> <li>• Comments on Metro's land use policies</li> <li>• Watershed needs:</li> <li>• Facilitation of landowner participation and independent monitoring of water quality</li> <li>• Environmental overlay zoning regs are ineffective. Funding for restoration is lacking.</li> <li>• Groundwater recharge needs to be addressed</li> </ul>	<p>104. Please see response #4.</p> <p>105. Does not appear to be directly related to the MS4 permit.</p> <p>106. This issue appears to be related to 404 permitting and not the MS4 permit.</p> <p>107. The Department reviews data that is required by the MS4 permit to be collected. Data collected for other purposes (ESA compliance, etc.) is not required to be submitted and thus is not reviewed.</p> <p>108. Does not appear to be directly related to the MS4 permit.</p> <p>109. Does not appear to be directly related to the MS4 permit.</p> <p>110. While instream and riparian issues are a critical component of overall stream health, these particular comments do not appear to be directly related to the MS4 permit</p>

Commenter	Summary of Storm Water Comments	Responses
	<ul style="list-style-type: none"> <li>• Lack of monitoring. Inequities in taxation.</li> <li>• Stream maps are inconsistent</li> <li>• Problems with permits other than MS4</li> <li>• BES monitoring does not meet DEQ's QA protocol.</li> <li>• A specific publication should be distributed.</li> </ul>	<p>111. The permit requires monitoring to characterize storm water, the impacts on the receiving stream and other information. We believe this is adequate for MS4 issues.</p> <p>112. Under the proposed permit, the permittees are required to prepare maps of their MS4 outfalls. The permittees are not required to review stream maps from other sources.</p> <p>113. Does not appear to be directly related to the MS4 permit.</p> <p>114. We agree that appropriate QA protocols should be followed to allow water quality to be compared with state water quality standards. DEQ has amended the permit language to address this issue. (The language regarding protocols in the monitoring portion of the permit state that the protocols must be consistent with the quality assurance protocols described in the Department's 303(d) List data requirements.)</p> <p>115. Does not appear to be directly related to the MS4 permit.</p>
Dave LaLiberte LaLiberte Environmental Associates, Inc.	<ul style="list-style-type: none"> <li>• The list of outfalls on pages 2 and 3 of the draft permit appears to be incomplete (it does not include storm water outfalls). Will DEQ establish mixing zones for storm water outfalls?</li> </ul>	<p>116. The permit does not list each storm water outfall individually, but rather includes under the list of covered sources all storm water discharges from the MS4 (on page 3 of the draft permit). DEQ has no plans to establish mixing zones for the storm water outfalls.</p>
Sue Bielke The Biodiversity Project of Tigard	<p>Permit should include:</p> <ul style="list-style-type: none"> <li>• Adequate monitoring</li> <li>• Reduction of EIA</li> <li>• Accountability of cities and local land use agencies</li> <li>• Numeric effluent limits</li> <li>• Requirements for maintenance of private storm water facility and drains.</li> <li>• Elements to address flashy flows</li> <li>• Elements needed to address pesticides.</li> </ul>	<p>117. Please see responses #2, 70, 82, 87 and 95.</p> <p>118. Please see response #4,</p> <p>119. Please see response #10.</p> <p>120. Please see response #59.</p> <p>121. Please see response #1.</p> <p>122. Please see response #64.</p> <p>123. The permit requires each permittee to review their SWMP and to ensure that all necessary BMPs are in place to meet the MEP standard. This review will include public comment. It is expected that this review will address the pesticide reduction.</p>
Gayle Killam Citizen, North Portland	<ul style="list-style-type: none"> <li>• Several storm water comments</li> </ul>	<p>124. Please see responses given to state-wide MS4 comments from DEQ.</p>
Amber Reese Citizen, Sherwood	<ul style="list-style-type: none"> <li>• Would like to see the permit prohibit the further degradation of streams due to storm water (especially in Sherwood).</li> <li>• The permit needs strict schedule to meet allocations.</li> <li>• Requests that the permit require monitoring for pesticides as covered by Judge Coughenour's ruling.</li> <li>• Requests that the permit promote measures to restore natural flows.</li> </ul>	<p>125. Please see response #55.</p> <p>126. Please see response #59.</p> <p>127. This issue is not directly related to the MS4 permits. If necessary, this will be addressed through a separate permit related to spraying.</p> <p>128. Please see response #64.</p>

Commenter	Summary of Storm Water Comments	Responses
Steve Mullinax Citizen, Portland	<ul style="list-style-type: none"> <li>Mitigation and associated maintenance should be required for parking lots and other impervious surfaces.</li> <li>The cities of Washington County should be responsible for implementation of storm water policies.</li> <li>There should be consistent, long-term applications of multimetric biological monitoring such as IBI.</li> <li>The definition of MEP must be tied to practices meeting TMDL allocations.</li> </ul>	<p>129. Please see response #1.</p> <p>130. Please see response #10.</p> <p>131. Please see response #95.</p> <p>132. Please see response #24.</p>
Kathy Lehtola Washington County DLUT	<ul style="list-style-type: none"> <li>Washington County DLUT should be removed as a co-permittee prior to issuance of the final permit.</li> <li>Agree with the statement on page 3 of the permit that the permit is applicable only to the municipal NPDES permit boundaries within the urban area and storm water discharges from Rock Creek and Durham plants.</li> <li>The permit requires explanations of benchmark approaches to be submitted with the 2<sup>nd</sup> year annual report. The benchmarks and performance measurements are to be used to guide adaptive management and are required to be submitted during the permit renewal process.</li> <li>Municipal NPDES permit require controls to reduce the discharge of pollutants to the MEP. "Washington County acknowledges changes in the final draft permit language to clarify the legal standard for stormwater discharges is the MEP standard."</li> <li>The watershed permit section of the MS4 SWMP and all other sections relating to TMDLs as part of the MS4 apply only within the permit boundaries of the urban area. Nonpoint sources are not addressed in this permit.</li> <li>Benchmarks are not equated to WLAs. The use of the "triggers" concept leads to confusion.</li> </ul>	<p>133. Washington County DLUT and CWS have not yet signed an intergovernmental agreement that would transfer MS4 responsibilities to CWS. Therefore, Washington County DLUT is still listed on the final permit as a co-permittee.</p> <p>134. The permit requires the permittees to submit benchmarks (and performance measures, see below) with the 2<sup>nd</sup>-year annual report. This is required in Schedule B, 3.b.(1)(d) and Schedule 8, c.(3)(e) of both the public review draft and final permits. Schedule B, 3.b.(1)(d) requires that the second annual report contain "...information regarding TMDL pollutants as described in Schedule D, 8.c.(3)(e)...". Schedule 8, c.(3)(e) of the final permit reads: "If, at the time of permit issuance, TMDL wasteload allocations have been established for pollutant parameters associated with the MS4's discharges, each co-permittee shall, as appropriate, review their SWMP to determine its adequacy in reducing TMDL pollutant discharges to the maximum extent practicable and develop pollutant load reduction benchmark(s) in the SWMP as defined in Schedule D, 8.c.(3)(a)." Note: This section of the final permit has been modified as explained in response #99 to include performance measures.</p> <p>135. The Department agrees that nonpoint sources and associated load allocations are not addressed by this permit. In the final permit language for Schedule D, 8.c.(4)(e) (8.c.(3)(e) in the draft permit), the first sentence has been changed to read: <i>If, at the time of permit issuance, TMDL wasteload allocations have been established for pollutant parameters associated with the MS4's discharges ...</i></p>

Commenter	Summary of Storm Water Comments	Responses
	<ul style="list-style-type: none"> <li>• Recommend specific change in title of Schedule A to clarify that this permit also covers the MS4.</li> <li>• Request specific changes regarding co-permittee relationship.</li> <li>• Request removal of co-permittee references.</li> <li>• The section on adaptive management (p. 36) is too confusing.</li> <li>• Measurable goals must be realistic. The concept of “benchmarks” is not used in other permits (San Diego) nor cited in the CWA nor EPA guidance.</li> </ul>	<p>136. Schedule A of the permit does not have a title. The title of Schedule A.2. is “Controls and Limitations for Storm Water Discharges from Municipal Separate Storm Sewer Systems (MS4)”.</p> <p>137. This change has already been made.</p> <p>138. Please see response 133.</p> <p>139. This section of the final permit has received some clarifying changes.</p> <p>140. There is no precedent for the benchmark concept because EPA and other states are currently developing strategies for addressing TMDL wasteload allocations in MS4 permits. The examples used (San Diego’s MS4 permit and EPA Phase II guidance) do not address the issue of wasteload allocations. Until recently, this issue hadn’t been addressed comprehensively by most NPDES permitting authorities. EPA has assembled a work group to develop effective policies and to facilitate the sharing of ideas between states and EPA regions. DEQ staff participated in the most recent work group teleconference (December 11, 2003 and February 12, 2004), and the representatives of other states and EPA regions indicated that they were considering approaches similar to Oregon’s. These representatives recognize that achieving WLAs in a single permit term is not realistic, and therefore, are contemplating the establishment of interim “targets” or “benchmarks.”</p> <p>The Department feels that the concept of benchmarks and performance measures, as delineated in the permit, allows for the establishment of realistic and measurable goals aimed to achieving water quality standards.</p>

### **Comments Received on the Temperature Management Plan and Temperature Trading**

The comments received on the temperature management plan and, more specifically, the temperature trading process are very useful to the Department and we will be using them in two specific areas. First, the Department (Northwest Regional Staff) will use these comments as it works with CWS to develop the TMP (Temperature Management Plan) that CWS is required to submit within 90 days of permit issuance. Once the TMP is submitted, the Department will again be reviewing these comments as it reviews the submitted plan. Second, the Department (Headquarters Staff) will be using these comments in further discussions with its Trading Stakeholders group as they continue to explore the policy issues and options surrounding the entire temperature trading activity. These comments should be most valuable in developing final policy guidance for the statewide trading program. This latter group is working with the Department to assist with policy development for this program. The regional staff hopes to have the headquarters policy deliberations and determinations available when it reviews the final temperature management plan submitted by CWS in 90 days.

It should be noted that responses to the comments received are a reflection of the current policy discussions between the Department and its stakeholders and are still being refined. The Northwest Regional Staff will again examine these comments in light of the policy and guidance developed by the Department and the stakeholders group when reviewing the final temperature management plan for temperature trading.

CWS Permit  
Responses to comments regarding temperature trading

12/18/03(email)	Ramsey Weit	Citizen, Northwest Portland	Storm water and pollutant trading
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**“The plan seems premised on the future value of presently planted trees to reduce future temp as an alternative to building an admittedly expensive facility today to reduce effluent temperature. We won’t see the results for 20 years, and they may be inadequate then – at which point a more expensive plant will still need to be built.”**

**Response:**

Temperature management plans containing temperature trading programs will need to include ongoing monitoring efforts. This monitoring will need to be designed to insure that data is collected to determine if restoration efforts have been ineffective and that this data be collected in as short a time period as possible and be scientifically defensible. The Department is currently developing temperature trading guidance and policy to further address this issue. In the meantime, though it will certainly take longer to achieve cooler stream temperatures through riparian shading than it would through mechanical refrigeration for example, the Department perceives that riparian shading provides several ancillary benefits that would not be obtained through refrigeration. These include reduced erosion and improved habitat for wildlife.

We will not have to wait for twenty years before we see the benefits of a riparian shade program. The moment trees grow to a height to begin to shade the streams and river segments in the basin we will begin to realize benefits from this approach. It has also been suggested that we examine the possibility of requiring more shade than would technically be needed to assure that we meet the goals. The statewide temperature trading guidance and policy being developed will offer us some guidance here.

Though the temperature TMDL developed by the Department does include a wasteload allocation for Agriculture that can only be met through the establishment of riparian shade, the Department anticipates that riparian areas will become vegetated much more quickly if CWS is allowed to “jump start” restoration efforts through a temperature trading program. The Department will be looking closely at the final TMP to assure itself that the approach presented by CWS will provide shade benefits as rapidly as possible.

All of the suggestions made regarding pilot projects with the farming community are good ones, however they are not things that the Department can require CWS to do as part of this NPDES permit.

12/18/03(oral & written)	Sue Marshall	Tualatin Riverkeepers	Storm water, TMP, pollutant trading
01/02/04(email) 01/03/04 (fax) 01/05/04(mail)	Sue Marshall, Travis Williams, Brian Wegener	Tualatin Riverkeepers and Willamette Riverkeepers	TMDL implementation, Storm water, antidegradation, numeric SW limits, instream structures, co-permittees, TMP, pollutant trading

The letter attached to the 1/02/04 email from Brian Wegener includes all of the issues that the other commenters cover, plus it raises some additional issues, so the Department will offer some early observations regarding these comments as they pertain to a yet to be submitted Temperature Management Plan for temperature trading and as they may assist the Department as it deliberates the policy issues for the statewide temperature trading program.

**Page 14: “TRK has consistently raised the concern that the proposed trade: elevated temperature discharged from the treatment plants for planting trees in the agricultural community, is not valid as Agriculture has already been assigned an allocation that forms the basis of the Tualatin TMDL. Further, there is no assurance that this trade will achieve its goals as it is reliant on negotiated agreements with individual property owners. How many property owners have indicated an interest in signing up for the program to date? Additionally, there is no assurance that tree planting will result in a net gain in shading as SB 1010 and Forest Practices Act do not adequately address their share of the load allocations.”**

**Response:**

The Department is very much aware that the Agriculture community is also required to improve riparian shade under the TMDL. However, the Department is also aware that efforts to establish riparian shade on agricultural land are driven by voluntary efforts and that achieving the needed shade goals will likely take considerable time under that approach. Therefore, if we want to have riparian shade established at a more accelerated rate, we have to use the tools available to us today to get this started. We believe the temperature trading program will give us a tool to accelerate the riparian restoration effort and realize greater environmental gain even though we are using the point source to assist agriculture in meeting its responsibility. As we review the yet to be submitted temperature management plan for the temperature trading program, we will be keeping this concern in mind. The department has never argued that the trade program will result in a net gain in shading in the basin, only that via the trade, it will happen faster.

The current direction of the Department’s temperature trading guidance and policy discussion is to put a 20 year time limit on the credit that CWS gets for planting trees in agricultural areas. This is another part of the approach which will partially address this concern. It is true that there is no assurance that this trade will achieve its goals, as it is reliant on negotiated agreements with individual property owners. However, CWS has a responsibility to address their excess heat load. If they can not achieve it through a riparian shade alternative, they will have to look to other alternatives to achieve their goal. We do believe that with the additional CWS funding the agriculture community will

be able to leverage other funding sources and make the overall effort attractive to the individual property owners.

It is always the Department's expectation that the permit issued is achievable by the permittee. But if they fail to achieve permit limitations and/or conditions the Department will take the necessary compliance and enforcement actions.

TRK recommends the following for trading unallocated sources of temperature (page 15):

- **Increased infiltration of stormwater should be examined as an active means to reduce temperature via groundwater recharge that results in a reduction of temperature and in moderating stream flows as the water gradually seeps back into the streams.**
- **Active removal of existing in-stream ponds that are currently elevating stream temperatures.**

**Response:**

Your point about stormwater infiltration is well-taken, and DEQ views infiltration ponds as a desirable way to handle stormwater, however as a temperature trading option, we do not believe the technical information is available to support their use in this particular basin at this time. The problem is that stormwater would be collected in the winter and perhaps released for as much as a few months after that, but CWS has to meet their WLA throughout the summer. Measures that allow CWS to meet its excess heat load in say, June, but that are not able to provide cooling in say, late August, do not in the long run assist CWS in meeting its WLA. That is because cooling achieved in June cannot be used to offset excess heat in August. There is also the issue of soil permeability. Infiltration is not a practical strategy in areas dominated by heavy clay. That said, if CWS wishes to pursue this option and can demonstrate cooling throughout the summer months; DEQ will certainly not discourage them from doing so.

As for active removal of instream ponds, it seems doubtful that instream ponds could be responsible for warming comparable to CWS' excess heat load; however CWS will be encouraged to pursue this possibility.

**Page 15: There is not enough information in the draft temperature management plan to determine its adequacy.**

**Response:**

As has been stated before, the current temperature management plan contains only those actions directed at the treatment facilities themselves. It does not contain the trading program for addressing excess heat loads. That part of the temperature management plan will be submitted within 90 days from permit issuance. The Department will place that plan out on public notice and would expect you will comment on the complete temperature trading plan at that time.

**Page 15: We are particularly concerned with the projected increase in effluent discharge from the treatment plants. There is a need to carefully examine the flow**

**regime of the river in light of water supply projections that propose to remove flow in order to pipe municipal and industrial water from Hagg Lake directly to the drinking water plant rather than the river serving as the conduit. There are also scenarios proposed under the water supply study to greatly increase flow. What impacts will these changes have on temperature? Build out projections of the treatment plants are also a concern as it appears the volume of temperature elevated discharge will more than double by 2040.**

**Response:**

In future years the Department will also have to revisit the TMDL for temperature, and adjust load allocations and waste load allocations accordingly.

**Response to all comments on pages 15 and 16 regarding the 7 point temperature management plan that is proposed:**

**Response:**

More detail will be included in the TMP that is due 90 days from permit issuance.

**The temperature trading plan to plant trees in rural areas is an unproven strategy. The Conservation Reserves Enhancement Program (CREP) has had no participants in the Tualatin Basin. There is no proof that “enhanced CREP” proposed by CWS will have a sufficient participation level. Tualatin Riverkeepers and Willamette Riverkeeper asks that no credit be given for temperature mitigation until measurable results are realized. Trees take time to grow to produce shade, yet CWS’s tree-planting plan risks losing benefits just as they are achieved. The plan calls for 20 year contracts, which should expire just as growth of trees produces site potential shade.**

**Response:**

The Department believes it is worthwhile to pursue a riparian shade program to reduce water temperature conditions in the Tualatin basin. It has been shown in many studies that shade reduces the rate of stream warming. The establishment of a temperature trading program to assist in establishing riparian shade is a new approach and has many hurdles to cross but the Department believes it is an approach which needs to be examined. In addition to the benefit of reducing stream warming, riparian shading has several ancillary benefits.

CWS is in the process of developing the temperature trading program, with potential leveraging of federal funds in the CREP program. It may be just the right situation to encourage people to join up.

The Department does not have a final temperature management plan for the trading program and will not have one until 90 days after the issuance of the final permit. When the Department reviews the plan at that time, it will do so in light of the temperature trading guidance and policies developed at that time. At the current time, we are in the early stages of defining what a trading program would look like. One element of the trade is to identify the length of time that trade will be valid. The current suggested time is a twenty year period. If this is the period in the final CWS trading plan it would indeed

mean that after that period CWS would not receive credit for the riparian shade created under this particular program. It may also mean that for purposes of the CWS permit and temperature trade program, property owners may not have any continuing responsibility to maintain that shade. But it would not mean that the agricultural community as a whole may not want to maintain that shade as part of their own responsibility for providing lower stream temperatures.

**System Potential Shade has already been allocated to Agriculture.**

**DOA is required by SB1010 and the MOA with DEQ to produce a water quality management plan sufficient to achieve water quality standards at the earliest possible date. To achieve the temperature TMDL both the agricultural load allocation (system potential shade) and the waste load allocation for the wastewater treatment plants must be achieved. The trade assures that the waste load allocation for effluent will not be achieved and does not assure that the load allocation for agriculture will be achieved.**

**Response:**

The permit requires CWS to submit a Temperature management Plan which includes a temperature trade program within 90 days of permit issuance. The intent of that plan will be to address the excess heat load from the wastewater treatment plans. The Department expects the plan will have several different alternatives including flow augmentation as well as riparian shade. The Department also hopes to have completed the deliberations and discussions with the trading stakeholders group to have some more specific guidance and policy direction to use in reviewing the final CWS temperature plan. It is anticipated that the guidance will specifically speak to the use of temperature trading programs to jump start riparian shade programs and that this will be a supported policy at that time.

The evaluation of the 1010 plan and whether it will or will not address the load allocated portion of the Tualatin temperature TMDL is not a determination which can be made at this time. Nor is it necessarily a determination which has to be made for the Department to move forward with a temperature management plan using a temperature trading program to establish riparian shade. If the Department in its deliberations on trading programs in general, determines that the benefits of jump starting a riparian shade program using a temperature trading program out weighs that benefits of waiting for implementation of a riparian shade program under a 1010 plan process then it can move forward to implement such a program.

The Department disagrees with the statement, "The trade assures that the waste load allocation for effluent will not be achieved and does not assure that the load allocation for agriculture will be achieved." First, the trade plan is not going to be submitted to the Department until 90 days after the issuance of the permit. Without having a trade plan in hand it would be very difficult to agree with the above statement. Second, there are several different alternatives which can be used to mitigate the excessive heat load from the wastewater treatment plants. The trading program is just one tool for mitigating the excess heat load and it most likely is not the only tool which will be needed to mitigate the excess heat load but it is certainly a alternative which has potential for provide some of the needed mitigation.

**Request 18 – Tualatin Riverkeepers and Willamette Riverkeeper request that temperature trading be allowed only with temperature mitigation sources for which no TMDL load allocation or waste load allocation has been established.**

**Response:**

This comment will be forward on to the trading stake holders group.

**The most practical temperature mitigation solution, reuse, received minimal consideration in the temperature management plan. Trading of recycled wastewater for irrigation rights leaves cooler water in the stream adding a hydrological dimension to temperature mitigation that is not in the Agricultural load allocation. Unlike releases from Scoggins Reservoir, trading of effluent for in-stream water rights has the potential for benefits to tributary streams.**

**Response:**

The temperature management plan which CWS will need to submit within 90 days of permit issuance will contain a discussion of the various alternatives available to CWS and which alternative they will use, so it may be premature to draw a conclusion of how much reuse will play in the final plan.

DEQ has no objection to CWS pursuing reuse as a temperature mitigation solution, and does not view it as environmentally inferior or superior to other proposed alternatives for dealing with temperature. It will be up to CWS to determine which alternative or combination of alternatives is the most cost-effective for meeting their WLA.

12/22/03(mail)	Joe Blowers	Fans of Fanno Creek	Storm water, TMP
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**Comment: The Temperature Management Plan submitted by the applicants does not benefit the waters of the Fanno Basin.**

**Response:**

CWS has not submitted a final temperature management plan for which to draw this conclusion at this time. The Department has had discussions with CWS that they develop a strategy which identifies streams where riparian shade restoration could be targeted.

The impact of CWS' treatment plants on temperature is actually a very small portion of the overall warming problem exhibited throughout the basin, and the impact of those plants is limited to the mainstem of the Tualatin. Through trading, the Department will allow CWS to mitigate this impact on smaller tributaries where it is likely to have a greater positive impact on beneficial uses. DEQ can't require that CWS focus efforts on a particular stream, only that it provide a reasonable justification for doing so.

Responses to specific suggestions for dealing with temperature problems are provided below.

**1. Recharging the groundwater system by infiltrating stormwater.**

DEQ views infiltration ponds as a desirable way to handle stormwater, however as a trading option, they are not necessarily practical to address temperature issues in the summer and early fall. The problem is that stormwater would be collected in the winter and perhaps released for as much as a few months after that, but CWS has to meet their WLA throughout the summer. Measures that allow CWS to meet its excess heat load in say, June, but that are not able to provide cooling in say, late August, do not in the long run assist CWS in meeting its WLA. That is because cooling achieved in June cannot be used to offset excess heat in August. There is also the issue of soil permeability. Infiltration is not a practical strategy in areas dominated by heavy clay. That said, if CWS wishes to pursue this option and can demonstrate cooling throughout the summer months; DEQ will certainly not discourage them from doing so.

**2. Removing in-stream ponds which cause temperature loading through solar gain.**

The TMP will discuss CWS' efforts in this regard.

**3. Trading discharge from the Durham Wastewater Treatment Plant for irrigation water rights.**

As the commenter points out, CWS has long had reuse agreements with several water users in the basin. The economics of reuse are dependent on demand for the water and on the construction costs associated with building the necessary supply lines. It is up to CWS to determine which alternatives for offsetting their temperature impact are the most cost-effective.

12/30/03(email)	Jim Labbe	Audubon Society of Portland	Storm water, pollutant trading
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**Comment 3: It is critical that the proposed flow augmentation from Barney and Scoggins Reservoirs under the temperature trading component of the permit actually protects the targeted beneficial uses from thermal loading. Flow augmentation that does not actually reduce the impacts of thermal loads on salmonids and other aquatic life during the time of year when temperature is a potential limiting factor, should not be deemed a valid for receiving a temperature credit.**

**Response to Comment 3:**

The Department is aware that releases may be warm at certain times of the year and not provide a significant temperature benefit. When this is the case, DEQ cannot give CWS credit for flow augmentation to be applied against the temperature wasteload allocation. For the record though, there are likely to be other, difficult-to-quantify benefits to the river associated with flow augmentation.

**Comment 4: Item f on page 5 of the intergovernmental cooperative agreement calls for developing a methodology for defining temperature credits for CWS flow augmentation activities from wastewater treatment facilities at Durham and Rock Creek. We find the idea of granting temperature credits for increasing temperature elevated discharge to the Tualatin River troubling at best. Time and resources would be better-spent developing viable alternatives to these discharges.**

**Response to Comment 4:**

The intergovernmental cooperative agreement commits Department to reviewing CWS's justification for receiving temperature credit for their discharge. The justification must be sound for Department to approve it.

**Comment 5: We are concerned that the 20 year duration of the thermal credit for actively restoring riparian shade on agricultural and woodland properties is mentioned in the permit evaluation but not in the permit itself. The 20-year duration of the credit should be made explicit in the permit and should begin when trees are actually planted, not when the planting acreage is actually secured via a CREP program or conservation easement.**

**Response to Comment 5:**

The permit requires CWS to submit a TMP which will describe the details of how the temperature trading program will be implemented. One key provision of the plan will be the duration of the credit. The plan will be a permit modification, and as such will undergo public comment period and then become part of the permit. The Department expects that this plan will include the duration of time for the credit as well as the start date for the credit.

01/02/04(email)	Janelle St. Pierre	Ash Creek Forest Mgmt	Temperature trading
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**Comment 1: The permit should include the time limit of 20 years that is discussed in the permit evaluation. It is important to state in the permit that there is a limit to the length of the credit. Although trees will continue to grow, at some point they will achieve the desired height for adequate shading and will cease to provide additional shade benefits.**

**Response to Comment 1:**

The final permit will contain a duration for the temperature credit achieved via riparian shading.

**Comment 2: To ensure that a trading credit is valid for 20 years, particularly in the case of riparian shading, some provisions should be made to require landowner agreements and/or conservation easements on properties where shade credits are being generated. Clean Water Services Temperature management plan should include a discussion of different options for ensuring the long-term effectiveness of restoration efforts.**

**Response to Comment 2:**

The TMP will include this discussion of different options. While the Department cannot require CWS to enter into a particular type of agreement with landowners, CWS does need to provide adequate assurance of success for riparian restoration projects.

**Comment 3: The permit should include set trading ratios for flow augmentation and riparian shading. Any type of trading that involves uncertainty or a trade between a point-source and a non-point source should have at least a 2:1 trading ratio (ex. two shade equivalent units for each temperature unit coming from the treatment plant under consideration). This is discussed in general terms in Schedule C, section 7e of the permit, but a more specific discussion would strengthen the permit.**

**Response to Comment 3:**

The Department perceives that defining a trading ratio would serve to discourage trading. The Department does not view the trading alternative as somehow less desirable than a conventional, technology-based approach; therefore the Department does not wish to discourage it. As for accounting for uncertainty, the waste load allocation defined in the TMDL already includes a margin of safety.

**Comment 4: Since the Tualatin River has low-flow issues in the summer months, any reuse of reclaimed water from a treatment plant should be paired with an appropriate increase in instream flow to maintain adequate flow levels in the river and tributaries. Instream flow maintenance is discussed in the permit evaluation, but is not indicated in the permit.**

**Response to Comment 4:**

The Department cannot require a source to maintain instream flows; it can only regulate the level of pollutants that are discharged. However, CWS has expressed a commitment to maintaining flows in the Tualatin.

**Comment 5: While this is not mentioned in the permit language directly, there is a discussion of flow augmentation in the Intergovernmental Agreement that raises some concerns (Section VI, f). Clean water Services should certainly receive credit for the release of cooler water coming from Hagg Lake. However, there is mention of considering credits for effluent discharge as part of the flow augmentation discussion. Since the effluent is creating the temperature concern, this is not a type of flow augmentation that should be considered for credit.**

**Response to Comment 5:**

The Department has not committed to giving credit for effluent flow. CWS must provide a justification for why such credit is warranted.

**Final note: I hope that DEQ and Clean Water Services will consider developing a trading concept for wetland restoration as well as riparian shading along streams. There are opportunities in the Tualatin for large-scale wetland restoration projects, such as the Wapato Lake area off of Highway 47, which could also have a temperature reduction benefits.**

**Response to final note:**

This information will be provided to CWS.

01/04/04(email)	Karen Cressa	Citizen, Hillsboro	Storm water, trading
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**Response to comment that pollutant trading relating to dissolved oxygen will have no impact on tributaries:**

This is true. Water quality trading as allowed under the CWS permit, would not result in lower DO levels in Turner Creek because the type of trading allowed under this permit would only be between sources located on the Tualatin. To be more specific, the permit allows CWS to “trade” loads of oxygen-demanding substances (BOD and ammonia) between its Durham and Rock Creek treatment plants, subject to various restrictions. Both of these plants are located on the mainstem of the Tualatin River and they do not impact Turner Creek either directly or indirectly.

**Response to the comment that water quality trading might be just a statistical tool of averaging the cleanest water with the most polluted to arrive at a figure acceptable to the DEQ:**

The Department does not intend to use water quality trading in this way, and neither of the trades authorized by the draft permit could be described as a statistical tool for achieving water quality. The intra/inter plant trade involving BOD and ammonia only allows load shifting to the extent that water quality standards are not violated, with a margin of safety included. The proposed temperature trade would allow CWS to offset their temperature impact by planting trees along streams with inadequate shade. The Department views this as a better way to protect the resource than the “conventional” technological solution which would involve refrigeration, because of the ancillary benefits such as erosion control and improved habitat for wildlife.

01/05/04(email)	Rick Kepler	Oregon Dept of F & W	Pollutant trading
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**Comment 1: As the basin-wide permit is put into effect we expect a gradual improvement in water quality, but that current water quality does not degrade any further at existing point source discharge points.**

**Response to comment 1:**

Yes, the Department agrees with this comment. The comment is directed specifically at the trading program and a concern that trades will not allow water quality to degrade at the point of a treatment plant discharge if trades occur elsewhere in the basin. For example, if there is a trade for excess heat load discharged by a treatment plant is mitigated elsewhere in the basin at the point of discharge there is not a further degradation.

**Comment 2: Monitoring of overall water quality improvement will need to be robust and focused basin-wide to assure that water quality, basin-wide is improving. Additionally, there will need to be a standard set of criteria that is easily understood, so water quality improvements can be reliably tracked.**

**Response to comment 2:**

Yes, the Department agrees that as the watershed permit matures there should be great coordination between all agencies in the basin regarding water quality monitoring. This type of monitoring will provide greater understanding of water quality throughout the basin.

**Comment 3: There needs to be mechanisms put in place to assure that improvements made in the basin as a result of the permit and pollution trading are maintained overtime and that enough additional improvements are in place to offset any habitat improvement losses.**

**Response to comment 3:**

Yes, the Department agrees that wherever possible improvements made in the basin should be maintained. It is difficult however in the context of a NPDES permit to assure that individual riparian improvements are maintained. The permit can require that water quality be protected but the alternatives selected by the permittee are their responsibility. The loss of habitat is also a concern of the Department but the CWS cannot be held responsible for habitat losses that are not the result of actions by CWS.

**Comment 4: We encourage the use of flow augmentation as one means of addressing water quality. Increased stream flows benefit fish beyond just water quality improvements by providing additional habitat. Removing water from a stream to address water quality can be a concern and needs to be balanced against other fish needs.**

**Response to comment 4:**

The Department concurs.

**Comment 5: ODFW sees the provided draft temperature management plan as an outline of general concepts, since this plan is going to be the implementation**

**document to implement pollution trading for water temperature issues it will need to be greatly expanded adding much detail to how basin-wide activities will be pursued and how success of the plan will be measured. ODFW will be interested in assisting with the further development of the plan.**

**Response to comment 5:**

The TMP is only draft at this point and the final version will be expanded. Your offer to provide input is appreciated.

01/05/04(mail)	Dave LaLiberte	LaLiberte Environmental Associates, Inc.	TMP, pollutant trading, mixing zones, anti-degradation
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**Summary of Comment 1: What interim plan has DEQ to ensure temperature standards are met and that salmon and other fish are not adversely affected over the estimated 20 years it will take to achieve compliance using riparian shading?**

**Response to Comment 1:**

There is no interim plan. The department has required in this permit that CWS submit a temperature management plan to the Department within 90 days of the issuance of the permit which will describe how CWS will come into compliance with the TMDL and the waste load allocation for the wastewater facilities. The TMDL has a long term schedule for coming into compliance which does not require or assume that an interim plan will be in place that require that standards are met before the plan is fully implemented.

Because the excess heat loads from CWS discharges to the Tualatin are actually extremely small compared to heat load from nonpoint sources in the basin, it is expected that CWS will be able to put in place alternatives which will achieve the mitigation in a reasonable time period.

It definitely takes time for riparian shade to establish, but that is not a reason not to do it. In any case, some benefits from riparian restoration, such as reduced erosion and improved habitat for small wildlife, will begin to accrue prior to 20 years.

**Summary of Comment 4: No balanced comparison of basin costs and benefits was reasonably developed to compare temperature reduction alternatives for CWS facilities. Both DEQ in the Fact Sheet and CWS in the TMP have the responsibility of presenting accurate and comparable information. This has not reasonably occurred under this draft permit. For example, while exaggerated costs for effluent cooling were provided in the Fact Sheet and TMP, no costs whatever are provided for riparian shading.**

**Response to Comment 4:**

While the cost information in the draft TMP and in the Fact Sheet is not complete, it is also beyond the Department's purview to tell CWS which alternative(s) they must pursue based on cost. The Department's responsibility is to decide if CWS has proposed a method for dealing with their excess heat load that will bring them into compliance with their permit. CWS must convince their Board that they have chosen the approach which makes the most sense for the community and its environmental goals.

The Department expects a more complete review of costs in the final temperature management plan

**Comment 5: DEQ has made no provision for structuring and funding a trading forum to bring potential traders together. What is the basis for DEQ's assumption that traders will come together to achieve temperature compliance in the next 20 years if DEQ does not provide effective public outreach for the development and implementation of temperature credits?**

**Response to Comment 5:**

Implementing the trade will be the responsibility of CWS under the terms of their permit. It will not be the responsibility of the Department.

**Comment 6: The TMP does not consider basin effluent reuse as an alternative temperature reduction method. However, DEQ does indicate in the Fact Sheet (page 23, 4<sup>th</sup> paragraph) that reuse will be considered. How is the discrepancy reconciled between what DEQ is saying will be evaluated in the Fact Sheet and what is actually being evaluated in the TMP? Why was no preliminary benefits and costs comparison performed for basin effluent reuse as was done for effluent cooling?**

**Response to Comment 6:**

It is ultimately the responsibility of CWS to determine what is the most cost-effective way for them to comply with the terms of their permit. It is the responsibility of the Department to assess the validity of the measures that CWS proposes. The Department has advised CWS to include an analysis of the potential for and costs associated with reuse in their permit.

**Summary of Comment 7: DEQ has identified electrical energy source as an issue in the CWS permit, does DEQ intend to emphasize in the permit the use of electrical power from a sustainable source such as biogas?**

Though the fact sheet makes reference to the significant amount of electricity that would be required to power refrigeration equipment, the Department cannot insert a condition into an NPDES permit that would require CWS to reduce electric consumption or produce electricity from alternate means. That said, CWS' use of innovative technologies to reduce electric costs is laudable.

**Response to Comment 8, regarding Oregon's 2000 Resource Guide to Watershed-based Trading:**

The Department will use the most up to date guidance when reviewing the yet to be submitted final temperature management plan.

The old guidance discussed trades involving bacteria, nutrients and temperature. The Department has since decided, for a variety of reasons, not to pursue trades involving bacteria. The trading scheme described in the guide for nutrients is a reasonable model, however to date DEQ has not identified any sources that wish to pursue this sort of trade. The trading scheme described in the guide for temperature relies on a computer model that has been superseded by HeatSource, the model used to develop temperature TMDLs in Oregon.

The Department expects to develop new guidance on trading in the year 2004, drawing on current experiences with trading in Oregon and on more recent guidance developed by the EPA.