The Water Report™

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RECLAIMED WATER & WATER RIGHTS IMPAIRMENT

DRAFT RECLAIMED WATER RULES IN WASHINGTON STATE

by Dave Monthie, DLM & Associates (Olympia, WA)

INTRODUCTION

In the State of Washington "reclaimed water" refers to highly treated wastewater that is suitable for, and legally authorized for, virtually every use of water except drinking. *See* RCW 90.46.010. Other states may refer to this type of water as "recycled" water or "reused" water.

For a variety of reasons, in recent years the use of reclaimed water has grown substantially throughout Washington. In 2005, the State had approximately 20 facilities authorized to produce and use reclaimed water — by 2010 there were 24. As of 2010, the State had identified another eight projects in construction, and another 40 projects in some phase of planning or design. This growth in reclaimed water use is likely to continue with the construction of new wastewater treatment facilities, the expansion and upgrading of existing facilities, and with the production and distribution of reclaimed water integrated into wastewater facility planning and construction. *See* list of existing reclaimed water facilities as of July 2008 at Washington Department of Ecology's (Ecology) website: www.ecy.wa.gov/programs/wr/rules/images/pdf/reclaim/Existingfacilities.pdf.

As holds true throughout the American West, Washington State thus finds itself undertaking the arduous task of coordinating two disparate systems of water administration: 1) the State's responsibility to protect the *quality* of its water both directly under State law and under authority delegated to it under the federal Clean Water Act's National Pollutant Discharge Elimination System (NPDES) permitting system — which focuses primarily on the reduction or elimination of contaminants discharged to water; and 2) the Prior Appropriation Doctrine of Western Water Law — which focuses primarily on prioritized rights to encourage the use of specified *quantities* of water for authorized beneficial purposes.

The potential for use of reclaimed water is getting more attention for a variety of water quality and water resource management reasons. As federal and State water quality discharge standards for NPDES-permitted wastewater treatment facilities become more stringent, the required water quality treatment levels (frequently obtained with membrane bioreactors) are resulting in wastewater that is already nearly meeting reclaimed water quality standards, thus substantially reducing what otherwise would be a significant investment in higher levels of treatment to meet reclaimed water standards. As part of a major, high profile, effort to clean up Washington's Puget Sound, the Puget Sound Partnership and other key stakeholders are promoting reductions in wastewater discharges to the Sound, thus pushing attention to alternative methods of "disposal." The Washington Department of Natural Resources, which owns and leases out State tidelands where wastewater discharges typically occur, is becoming more protective of the shellfish beds and other environmental assets, and more aggressive in pushing consideration of "upland" disposal of wastewater rather than discharges to water. In addition, in many areas of the State existing water resources are fully or over-appropriated and reclaimed water offers a supply of water that is perfectly suited to many uses — such as crop irrigation or industrial

Reclaimed Water

Source of Supply

Impacts to Existing Rights

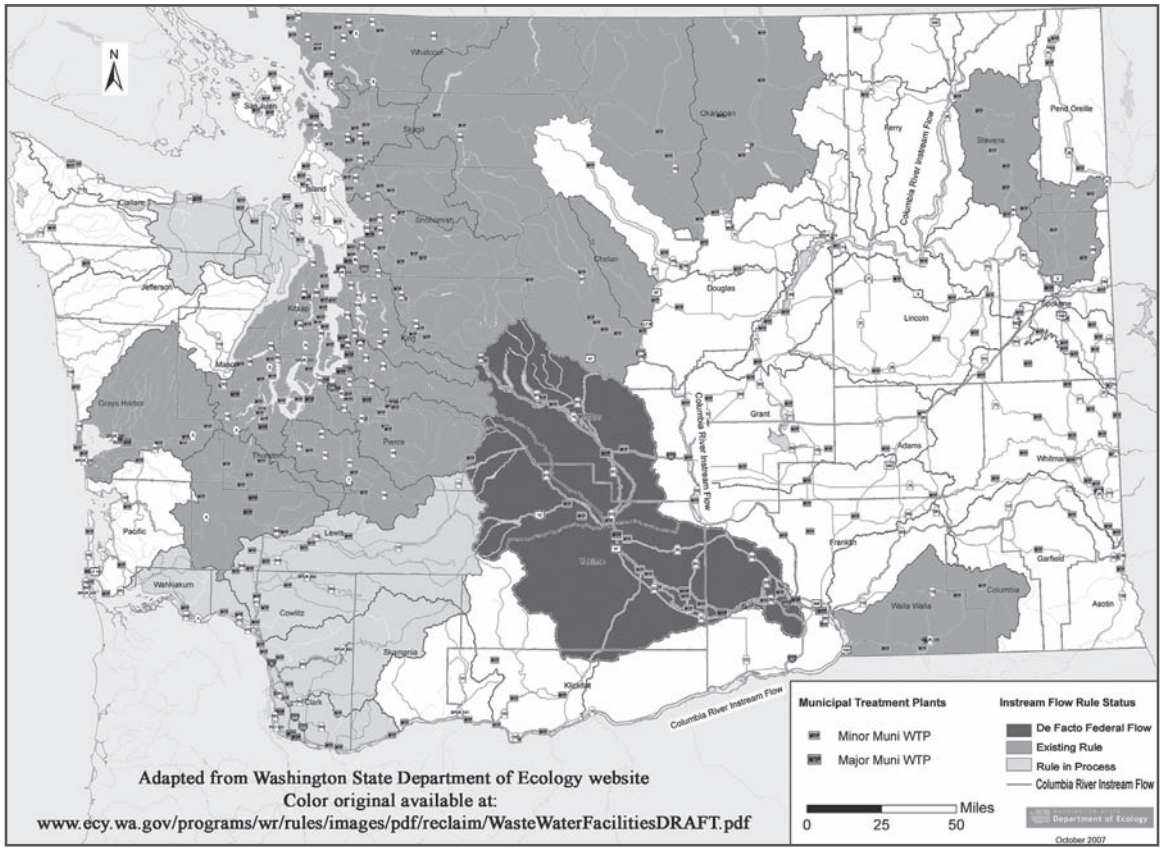
Impairment Claim

cooling. Many have also noted that reclaimed water is a "drought resistant" source of supply that, as the State and region anticipate the hotter/drier summer/fall climates due to impacts of climate change, may become increasingly important as a stable source of supply able to ameliorate what are likely to be major shifts in water supply from year-to-year.

This article will explore some background on reclaimed water and water rights, the process for evaluating options for incorporating water rights impairment analysis into reclaimed water projects, other major issues that have been identified, and some possible future outcomes of the current debate over the relationship of water rights impairment to reclaimed water projects.

RECLAIMED WATER PERMITS & WATER RIGHTS IMPAIRMENT

There are a number of water bodies around Washington State where wastewater discharges — particularly at low flow times of year — constitute a substantial portion of the flows in any given stream. In many of those streams, the State has issued consumptive water rights that, arguably, depend on the continuation of those wastewater discharges in order for water rights to be exercised fully. Additionally, many of these streams also have water *quality* problems subject to water *quantity* impacts, such as high temperatures or low dissolved oxygen levels, which are particularly problematic during low flow periods in summer and fall. For some streams, the State may have established "minimum flows" by rule (under Washington law, "minimum flows" are the equivalent of a water right, with a priority date as of the adoption of the rule (RCW 90.03.345)). Where a reclaimed water project may affect these discharges (either in timing or volume) by diverting the water to a different use before it is discharged, it could affect either consumptive or instream flow water rights, and give rise to a claim of impairment. The map below shows the location of wastewater treatment plants and river/stream reaches where there are formal instream flows established by rule. The color original appears at Ecology website: www.ecy.wa.gov/programs/wr/rules/images/pdf/reclaim/WasteWaterFacilitiesDRAFT.pdf.



Wastewater Treatment Plants & Instream Flow Regimes in Washington

Washington State law, since 1997, has specifically required that reclaimed water facilities not impair existing water rights downstream of freshwater discharge points (RCW 90.46.120) and this has led to the notion that reclaimed water project planning may need to include "water rights impairment analysis." Reclaimed water has thus been singled-out, as no other kinds of changes to wastewater discharges that have the potential to reduce flows or affect downstream water rights face this type of requirement.

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Reclaimed Water

Impairment Evaluation

Also in 1997, the State adopted "Water Reclamation and Reuse Standards" (September 1997) for reclaimed water projects — though these standards had only the legal status of "guidance" (i.e., they were not enforceable rules under the State's Administrative Procedures Act since they had not gone through formal rulemaking). However, until 2005, the Washington State Department of Ecology (Ecology) — which is responsible for issuing NPDES permits for wastewater facilities and associated reclaimed water facilities — had no written guidance specifically addressing water rights associated with reclaimed water projects. It is not clear how many reclaimed water projects up to that point had gone through any evaluations of potential water rights impairment. This lack of clarity may be due to the fact that permits for reclaimed water facilities are issued by the water quality program at Ecology, while water rights permits are issued by the water resources program at the same agency — and the interrelationship of the two programs/processes had never been clearly defined. [Ecology's reclaimed water rulemaking website (www.ecy.wa.gov/programs/wq/reclaim/ruledevelpmnt.html) contains a number of documents and other information on the reclaimed water program and the development of the rule. Most of the information regarding water rights impairment is posted under Ecology's "Water Rights Advisory Committee" link.]

New Guidance

Issues regarding the impact of water rights impairment analyses requirements on the reclaimed water permitting process moved front and center in 2005 with the production and use of a new draft guidance (eventually finalized in 2006) by Ecology. The new guidance arrived concurrent with a King County proposal to include reclaimed water within the construction and operation of a new wastewater treatment plant in the City of Carnation. This situation, examined in more detail below, brought heightened attention to the impairment analyses provisions of the law and raised concerns among potential reclaimed water purveyors as to how these provisions might be applied by Ecology. Those concerns are now being expressed in a State-wide reclaimed water rulemaking process managed by Ecology that has been underway since 2006 and which, it now appears, will not be completed until July 1, 2013 at the earliest.

"Impairment" Definition

Interestingly, there is no statutory definition of water rights "impairment" in Washington State's code. There is also no court decision on whether any change in streamflows caused by a modification to a wastewater discharge — whether for a reclaimed water project or for wastewater or water quality purposes — can give rise to a claim of water rights impairment. In an agricultural situation, there is one significant appellate court case, *Dept. of Ecology v. U.S. Bureau of Reclamation* (1992), 118 Wn.2d 761, that held that under the particular facts in that case, an appropriator can maintain "control and possession" of return flows, and is not obligated to provide those flows to a downstream water right holder, whose rights begin after the water is discharged and again becomes "waters of the state." In a recent decision, the Pollution Control Hearings Board ruled that a change to an existing water right that converted it to an instream water right, requiring it to remain in the water body with its senior priority, did not impair a downstream water right holder who had relied on discharge of that water in order to exercise their downstream right. *Burke and Coe v. Ecology and Trendwest* (PCHB 03-155)(2004).

Return Flows

Montana v. Wyoming

A recent US Supreme Court decision interpreting Western water law, *Montana v. Wyoming*, 563 U.S. ___ (Slip Opinion 5/2/2011), held that the use of more efficient water practices by Wyoming irrigators, resulting in less return flow available to downstream Montana water users, did not impair the water rights of Montana users because the quantity of water diverted and used by the Wyoming irrigators had not increased. While each state has its own water laws, it is possible that this Supreme Court decision will be influential, particularly since, as the decision noted, the issue of a "downstream" users "right" to return flows is very unsettled in the West. It is worth noting that reclaimed water legislation in Washington State in 2007 added to the "fundamentals of water resource management" by supporting reclaimed water as a type of non-traditional water conservation that the State should be encouraging. See RCW 90.54.020(7).

Agency Position

The need to formally address the issue of water rights impairment is becoming evermore urgent, particularly for those with existing or planned reclaimed water projects. In the first ten or so years of Washington State's reclaimed water program, the possibility of a claim of impairment due to the operation of a reclaimed water project was not a significant problem. As noted, it is not even clear how many such analyses Ecology did, or required to be done, for projects before 2005. Although the water rights impairment statute does not expressly require Ecology to conduct an impairment analysis, the agency has evidently taken the position that there must be some kind of determination on water rights impairment in its process for determining whether to permit a reclaimed water facility.

Underlying Water Rights

A traditional impairment analysis — examining whether a change in use of a water right impairs a downstream water right holder — is also difficult to undertake in the wastewater/reclaimed water context. This is simply because the increasing regionalization of wastewater facilities means that tracking down the ownership of the underlying water rights that ultimately generate the wastewater can be virtually impossible. King County's regional wastewater system, for instance, includes three regional plants, and two local plants, that receive water from 34 cities and districts, many with their own water rights. The LOTT Clean Water Alliance in Thurston County — a regional wastewater and reclaimed water system that serves the cities of Lacey, Olympia, and Tumwater, as well as Thurston County — currently operates two reclaimed water facilities, and would be hard pressed to determine which underlying water rights comprise any reclaimed water flow. The permit for the LOTT facilities at its Hawks Prairies reclaimed water plant is

Reclaimed Water

currently under review by Ecology as a field test of the draft reclaimed water rules. A substantial number of questions have arisen as to how impairment issues will be addressed for this facility, which contemplates uses that include groundwater recharge and mitigation for new water rights. [For information on LOTT"s programs, see their website at lottcleanwater.org]

Major challenges in incorporating water rights impairment analyses into reclaimed water facility planning, construction, and Clean Water Act (CWA) permitting arise from the fundamentally different processes and outcomes for which the CWA, in contrast to Western Water Law, has been developed.

WATER QUALITY PERMITS & WATER RIGHT PERMITS COMPARISON

Water Quality Administration

WATER QUALITY PERMITS FOR WASTEWATER FACILITIES AND RECLAIMED WATER FACILITIES:

- Fall under the purview of the State's administration of the CWA, which entails permits that are applied for, and issued, only after construction of a new or modified facility (pursuant to previously approved plans)
- Must be renewed every five years
- Are subject to additional conditions being attached with every renewal cycle (e.g., to meet more stringent water quality standards)
- Usually are issued within six months of application

Water Quantity Administration

WATER QUANTITY-BASED WATER RIGHTS PERMITS, NEW RIGHTS, OR CHANGES OF WATER RIGHTS:

- Are given a priority date as of the application date (for a new right) while a change of water right retains its original priority date
- Are evaluated for potential impairment against water rights existing as of the date of the application
- If granted, are given a status that is "senior" to any subsequent applications or rights issued from the same water source
- Are valid in perpetuity, assuming that requirements of State law are met (e.g., continuous beneficial use)
- Generally are issued before construction of facilities relying on the water right
- May take a considerable amount of time to get a decision after application is made (typically years)

Since the impairment process is presumed to be incorporated into, or a condition of, the reclaimed water permitting project, there are potentially clear disconnects in the process with regard to timing and certainty of decisions. As a practical matter, these disconnects have been compounded by the State's budget problems, which have in particular affected the staffing and priorities of the water resources program, and raised concerns as to whether Ecology will be able to produce timely water rights impairment decisions for reclaimed water projects.

Storage Issues

One other key impairment issue that has arisen is whether and how reclaimed water generators will be able to protect their water from future claims of impairment if it is effectively stored — e.g., as groundwater recharge or as an Aquifer Storage and Recharge project, both of which are authorized uses of reclaimed water in Washington. This issue could arise if the reclaimed water is physically available and used by a third party (presumably under a State-issued water right), but the reclaimed water generator elects to change how it uses the reclaimed water, and the third party claims impairment if that water is no longer available to it. Reclaimed water generators, and wastewater utility operators who may in the future produce reclaimed water, have asked Ecology for protection against such an assertion, but it is not clear whether such protection will be forthcoming.

Given all these complications, it is apparent that addressing these issues, and providing a clear path for reclaimed water projects, is essential to the future of such projects in Washington. The impending new State rules on reclaimed water and water rights impairment, while addressing some of these issues, may also create problems for existing reclaimed water facilities, and delay or even prevent some of the new projects from being built — most notably those projects that have, or will have, discharges to freshwater bodies.

WASHINGTON STATE'S RECLAIMED WATER PROGRAM

A WORK IN PROGRESS

"New Water Supply"

In 1992, the Washington State Legislature authorized the use of highly treated wastewater for beneficial purposes so long as the water protected both public health and the environment (chapter 90.46 RCW). The Legislature found that reclaimed water was a "new water supply" that could meet future water demands throughout the State. It called this new source of supply "reclaimed water" and declared that it was "no longer wastewater." It identified specific uses to which reclaimed water could be applied, including: consumptive uses; non-consumptive uses; and environmental uses. Among the uses authorized were: outdoor irrigation; industrial cooling and processing; restoration and enhancement of wetlands; recharge of groundwater aquifers; and augmentation of surface water and streamflows. In 1995, the Legislature directed Ecology and the State Department of Health (DOH) to develop standards for use. Those standards were completed in 1997 and essentially remain unchanged.

Reclaimed Water

States' Approaches

"No Impairment"

"Aluminum Can" Approach

Migrational Compensation Requirement

Reclaimed Water Permit Exemption

Other "Reuse" Categories

Case Studies

Impairment Evidence

The Attorneys Work Group and the 1997 Amendments

The original set of standards did not include any provisions for water rights or impairment because there was nothing in the statute on that topic. However, by 1995 it was apparent that there was a potential set of conflicts around reclaimed water and water rights. Stakeholders approached Ecology, and in 1996 the agency convened a volunteer "Attorneys Work Group" that developed a set of legal issues, canvassed western states as to the law in each, and produced a report that summarized the law, with a focus on the six states with the "most definitive" statutory or case law: Oregon, California, Montana, Arizona, New Mexico, and Wyoming. From these six states the Work Group developed two basic legal models, which it called the "No Impairment" approach and the "Aluminum Can" approach. The former model (reflecting components of the laws of Oregon, California, and Montana) essentially concludes that downstream water users are entitled to stream conditions at the time that their rights were issued, and that any modification of wastewater discharges to convert them to reclaimed water uses would constitute impairment of their rights. The latter model (reflecting elements of the law in Arizona, New Mexico, and Wyoming) viewed wastewater discharges as not a water supply subject to appropriation, but instead a waste product that the discharger was free to dispose of as it saw fit, including conversion to reclaimed water uses. Martin Walther and Robert Caldwell, "*A Survey of Reclaimed Water Rights for Selected Western States: Reports from the Attorneys Work Group Convened by the Washington State Department of Ecology, June to August, 1996*" (Ecology, 1997); available at Ecology's rulemaking website referenced above.

In 1997, the Legislature adopted Senate Bill 5725, which amended the Reclaimed Water Act in a number of ways, including water rights. These amendments included the following key provision with regard to water rights impairment, which the Work Group viewed as a "hybrid" of the two models:

> Facilities that reclaim water under this chapter shall not impair any existing water right downstream from any freshwater discharge points of such facilities unless compensation or mitigation for such impairment is agreed to by the holder of the affected water right. RCW 90.46.130

The 1997 amendments also added other provisions to clearly identify the owner of the wastewater facilities where the water was being reclaimed as the holder of the "exclusive" right to its use and distribution. These amendments also made it clear that the use of reclaimed water was exempt from water right permit requirements under both the surface water code (chapter 90.03 RCW) and groundwater code (chapter 90.44 RCW). RCW 90.46.120.

The new statutory provisions clearly addressed certain issues that had arisen as to ownership of the reclaimed water, the necessity to have a water right, and the obligation not to impair downstream water rights absent an agreement by the holder of those rights for acceptable compensation or mitigation.

After the 1997 changes to the law, similar language was added within the next few years regarding water rights impairment for other categories of "reuse" — specifically from agricultural and industrial process water. For both of those types of reuse, the "existing rights" that could not be impaired were those rights existing on July 22, 2001 and June 13, 2002, respectively. For these specific categories of reclaimed water use, water rights issued subsequent to those dates could not claim impairment by the reclaimed water facilities. The definition of reclaimed water was changed in 2009 so that it has to include at least some domestic wastewater, which the agricultural and industrial reuse categories do not. Thus, the provisions with regard to reclaimed water and water rights (as proposed in the draft rule) do not apply to these other types of "reuse" from agricultural or industrial process water. Reuse under those categories have their own statutory provisions regarding impairment.

The absence of a definition of, or a date associated with, the term "existing rights" for reclaimed water projects became an issue for the most recent advisory committee, and a topic that is addressed in Ecology's draft rule.

2006 Guidance Development

After the 1997 amendments, Ecology, DOH and other stakeholders continued to have discussions over the interpretation and implementation of the water rights impairment provisions. "*Case Studies in Reclaimed Water Use: Creating New Water Supplies Across Washington State*" (Ecology, June 2005). [Available from Ecology's Reclaimed Water website: www.ecy.wa.gov/programs/wr/rules/rwwrac.html]

As noted above, by 2005 there were nearly 20 permitted reclaimed water projects in the State — but there was no clear process for making decisions on impairment.

As touched upon above, in 2006 Ecology finalized a detailed guidance document — "*Water Rights Impairment Analysis Guidance for Reclaimed Water Facilities*" (2006 Guidance) — that had been developed internally at the agency in 2005 for evaluating and making decisions on water rights impairment related to proposed reclaimed water projects. The 2006 Guidance presumed that the project proponent would do extensive data compilation and analysis, and present the results to Ecology for review, comment, and ultimately decision. It also presumed that the process would include substantial stakeholder consultation and involvement at some point in the process.

Reclaimed Water

Ownership Assumption

2006 "Impairment" Definition

2006 Guidance Elements

Septic Systems

Wetlands Restoration

Instream Flow Issues

Some key parts of the 2006 guidance include:

(1) a definition of water rights impairment
(2) exclusion from the impairment analysis of any "foreign" water (i.e., water that originated from a different basin) that contributed to the wastewater discharge
(3) exclusion of consumptive uses already made by the holder of the water right (that may be met by reclaimed water).

The 2006 Guidance also adopted an analytic approach based on some simplistic assumptions, including that the wastewater discharger held the underlying water rights to the water that was used and ultimately delivered to the wastewater treatment facility — something clearly not the case for large, regional wastewater facilities receiving wastewater from multiple cities, towns, districts, developments, or other property owners. In its examples, the 2006 Guidance also appeared to conflict with the clear language of the 1997 law. For example, it stated that it would be an impairment to an upstream water right holder's right if a "call" were made by a water right holder downstream of a reclaimed water facility due to a reclaimed water facility's modified discharge, even though the statute limits impairment to downstream water rights. [The 2006 Guidance is available from Ecology's Reclaimed Water website, referenced above.]

The 2006 guidance defined "impairment" as follows:

"Impairment is a condition caused by someone or something other than a natural condition where a water right holder cannot carry out the beneficial use(s) for which the right was perfected using reasonable care and diligence. Ecology considers a reclaimed water impairment analysis in the same context as the issuance of a new water right pursuant to RCW 90.03.290 and RCW 90.44.060."

Notable elements in 2006 guidance concerning impairment include:

- A holder of a water right would be "impaired" by a reclaimed water facility if that person could not carry out any of their authorized uses — apparently to any extent (there was a corresponding obligation on the holder of the right to use reasonable care and diligence)
- Ecology would take the same approach to impairment analysis that would be taken if the reclaimed water facility were applying for a new water right, even though the Legislature had exempted reclaimed water facilities from those permitting processes in 1997. This evidently reflected a policy choice to not treat the conversion to reclaimed water as a change in an existing water right (authorized in RCW 90.03.380) — which would have created a different set of issues as to the holder of the underlying water right, the extent and types of prior uses, detriment or injury to "existing" water rights holders at the time of the change, and so forth. Moreover, this approach sidestepped the fact that the Legislature had already given the right to use of the water to the generator of the reclaimed water in RCW 90.46.130.

The 2006 Guidance did not receive any public review prior to its initial application (in draft form) by Ecology in relation to a wastewater treatment project proposal by King County, which included a reclaimed water element, intended to serve the City of Carnation, Washington.

The City of Carnation Reclaimed Water Proposal

In 2005, King County proposed to include a reclaimed water component to the discharge plans for new wastewater collection and treatment facilities in the City of Carnation (City). The City is a small town in eastern King County (County) with roughly 200 households. It sits at the confluence of the Tolt and Snoqualmie Rivers. It had no existing wastewater facilities, and had been experiencing a set of septic system failures that created a public health emergency and a moratorium on growth. The City approached the County about building and operating a wastewater treatment plant, while the City would construct and maintain the wastewater collection facilities. The County advocated using membrane bioreactor technology as easier to permit from a water quality perspective, and better environmentally. In the initial planning, reclaimed water had been integrated as part of the approach, with different reclaimed water use options. In discussing options with significant stakeholders — including interested Tribes, and the public interest group Trout Unlimited — a clear preference emerged for beneficially using reclaimed water instead of simply discharging wastewater to the river. A wetlands restoration site became the leading candidate for receiving the proposed reclaimed water.

Ecology's response to the proposal was that, despite there being no existing wastewater discharge that would be modified by any reclaimed water facility, it would consider the "discharge" from the existing on-site septic systems as being jointly modified by the wastewater plant/reclaimed water facilities, and would require an impairment analysis. The focus of the analysis was the one-mile stretch of river between the new plant's discharge point (which was also the planned point of delivery to the wetland) and the City. An initial analysis of water rights showed that there were not likely to be any out-of-stream water rights that would be affected, so the focus quickly shifted to instream flows. Ecology had adopted a rule that set "minimum" summer flows of between 700 and 1850 cubic feet per second (cfs), and as the "holder" of the instream flow right Ecology became the party under RCW 90.46.130 that could claim impairment, and would have to agree to any "compensation or mitigation" if such impairment existed.

Reclaimed Water

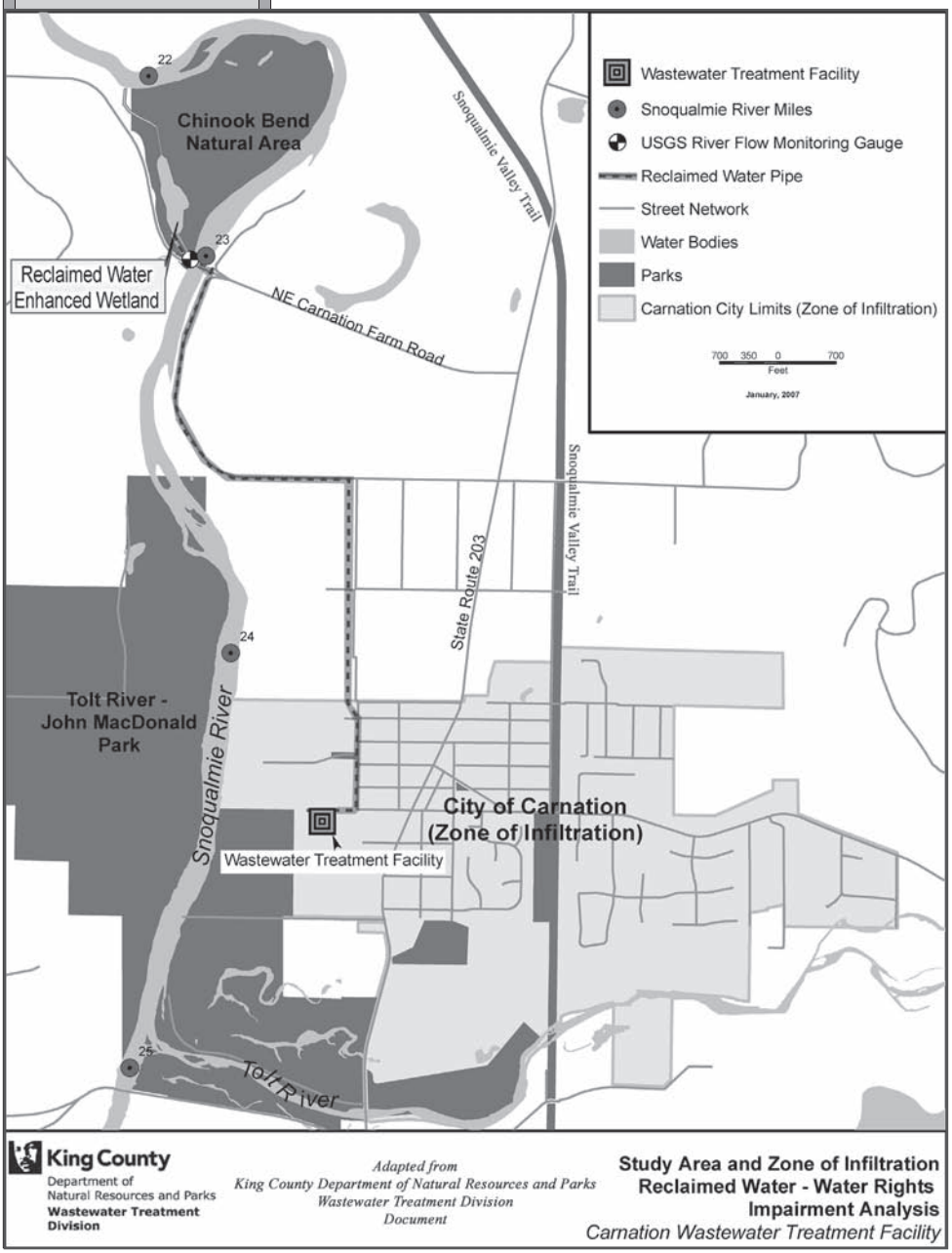
Impairment Analysis

Benefits as Mitigation

The City and the County questioned the value of such an analysis both because of the difficulty of precisely determining any difference in flows to the river from pre-project to proposed project conditions and because any difference would be fairly insignificant. The new wastewater plant was designed to discharge at startup only 0.1 cfs of water (the equivalent of several garden hoses), and only 0.5 cfs at full buildup. By contrast, the flows in the river during the winter can easily reach flood stage; during the summer, 80 years of US Geological Survey gaged data showed a summer mean of 1812 cfs, a summer mean minimum flow of 602 cfs, and the lowest summer monthly mean of 341 cfs in September. Historically, flows in the river routinely had not met the "minimum flows" that had been established by Ecology in rule.

Nonetheless, Ecology continued to request an impairment analysis. King County performed that analysis, comparing net flow to the river from septic drain fields to the net flow to the river from the proposed enhanced wetland. Inputs to the analysis included estimated "wastewater" flows from the septic drainfields, the size of the drainfield areas, the size of the proposed enhanced wetland, and relative rates of evapotranspiration. A more detailed hydrogeological analysis was decided against because it would have taken considerable time and high expenses — something that a small town could ill afford and was not desirable because of the need to address existing public health threats in a timely manner and end the growth moratorium.

The analytic process became iterative, with multiple meetings between Ecology and the County and City. It ended up taking nearly two years (from the summer of 2005 until an Ecology decision in April 2007). By comparison, the typical NPDES permitting process for a wastewater facility takes six months (though water rights decisions frequently take years). [The complete analysis is posted at Ecology's above-referenced website in the "archived" materials for the "Water Rights Advisory Committee"].



In the end, Ecology concluded that although the project would reduce, or contribute to a reduction of, instream flows in the one-mile reach of the river, and thereby impair the State's instream water rights, it accepted the overall net environmental benefit of the project — particularly wetland restoration — as providing sufficient mitigation or compensation for any such impairment. Ecology's Water Resources program issued a formal letter approving the impairment analysis done by the County, and provided 30 days notice to any party wishing to appeal the determination. There were no appeals. The project moved forward with construction, and is now producing reclaimed water that is being used to restore the wetland.

It is believed that this project generated the first formal approval letter by Ecology of an impairment analysis, which was appealable by any interested party, and which was issued prior to construction or issuance of the facility's NPDES permit. All three of these decision process aspects — i.e., 1) issuance of a separate decision on impairment; 2) the interim appealability of the decision; and 3) the timing of the decision — presented significant hurdles to the Carnation wastewater treatment project and later became significant items of contention in the reclaimed water rulemaking process. They remain issues of concern in the draft rule.

Reclaimed Water

2010: Detailed Provisions, Requirements

Reclaimed Water Rulemaking

In 2006, the Washington State Legislature directed Ecology to adopt new statewide rules to cover "all aspects" of reclaimed water by December 31, 2010. Over the next four years, using a general advisory group for the full rule and a separate advisory committee for water rights and impairment issues, Ecology provided reports to the Legislature on rulemaking progress. In late 2009 Ecology produced its first nearly-complete draft of a proposed reclaimed water rule (draft rule will be chapter 173-219 WAC). That draft, and succeeding versions of the draft rules produced by Ecology in 2010, included detailed provisions on the substantive requirements and procedures for a water rights impairment analysis for proposed reclaimed water projects. These provisions have become highly contentious and controversial because of the breadth of the definition of water rights "impairment" and the likelihood that they could substantially increase project costs or create such uncertainty that many reclaimed water projects would not be pursued.

Water Rights Advisory Committee (WRAC)

The Director of Ecology convened a "Water Rights Advisory Committee" (WRAC) to work solely on water rights impairment and other legal issues associated with reclaimed water. WRAC met from August 2007 to March 2010. Ecology included summaries of its work, including recommendations, in the periodic rulemaking reports that it was required to submit to the Legislature. WRAC's membership consisted of a broad array of interest groups, which at the outset included tribal staff. Towards the end of WRAC's existence, the tribes elected to pursue their interests and issues on reclaimed water through more formal, government-to-government consultations with the State.

The WRAC was chaired by a staff person from Ecology's water resources program, and was allowed to identify and prioritize the issues it wished to pursue. To some extent the topics were prioritized to address specific issues for which the Legislature had requested feedback, but individual members were encouraged to add issues.

Key Issues

High priority WRAC issues included:

- The standard for "impairment" (as considered during a new water right application), as opposed to a "detriment or injury" standard (which State law applies to water right changes)
- The underlying water right analysis process (who should do it; how extensive should it be)
- Analogies to other water rights concepts (return flows; possession and control)
- Ongoing impairment review after issuance of an initial permit for the reclaimed water facility
- Expansion of the impairment requirements to upstream water rights
- Integration of the impairment decision into the NPDES/reclaimed water permit process (timing; appealability)
- Appropriate placement of additional impairment provisions in statute, rule, or guidance
- Defining the term "existing rights" under RCW 90.46.130.

Western States' Divergence

One of the earliest steps taken by WRAC was to review a report prepared by the Environmental Law Institute (ELI) at Ecology's behest that essentially updated the work done some ten years earlier by the Attorneys Work Group on approaches taken by western states on reclaimed water and water rights. Like the study done ten years earlier, the ELI report concluded that there were no consistent patterns in how western states dealt with the issue. The case law in three states (Arizona, New Mexico, and Colorado) identified wastewater discharges as "private" or "artificial," and thus not available for appropriation as water rights. Other states with statutory provisions ran the gamut, from California's provisions that dealt with reclaimed water facilities as changes to water rights that require analysis showing they will not adversely affect other rights, to Oregon's approach that set a threshold (50% of the flow in the receiving waters) for an analysis, putting the burden on claimants to demonstrate impairment, but allowing them a preference for the use of the reclaimed water. Other states that were reviewed (Utah and Nevada) take an approach based on the state's technical and hydrologic analysis of impacts, and issuance of permits or permit conditions are based on the results of that analysis. In short, there was no clear consensus developed by western states toward resolving reclaimed water development and potential water rights impairment.

The WRAC also considered presentations made by members of the group to discuss different applications, approaches, and recommended changes. These included a discussion of the Carnation project by King County staff, a presentation on the Yakima Basin and its water management approach by staff of the Yakama Nation, and a proposal by a water purveyor in Kittitas County (upper Yakima basin) to use reclaimed water as a way of achieving a "water-budget neutral" outcome for new developments.

Adaptation Recommendation

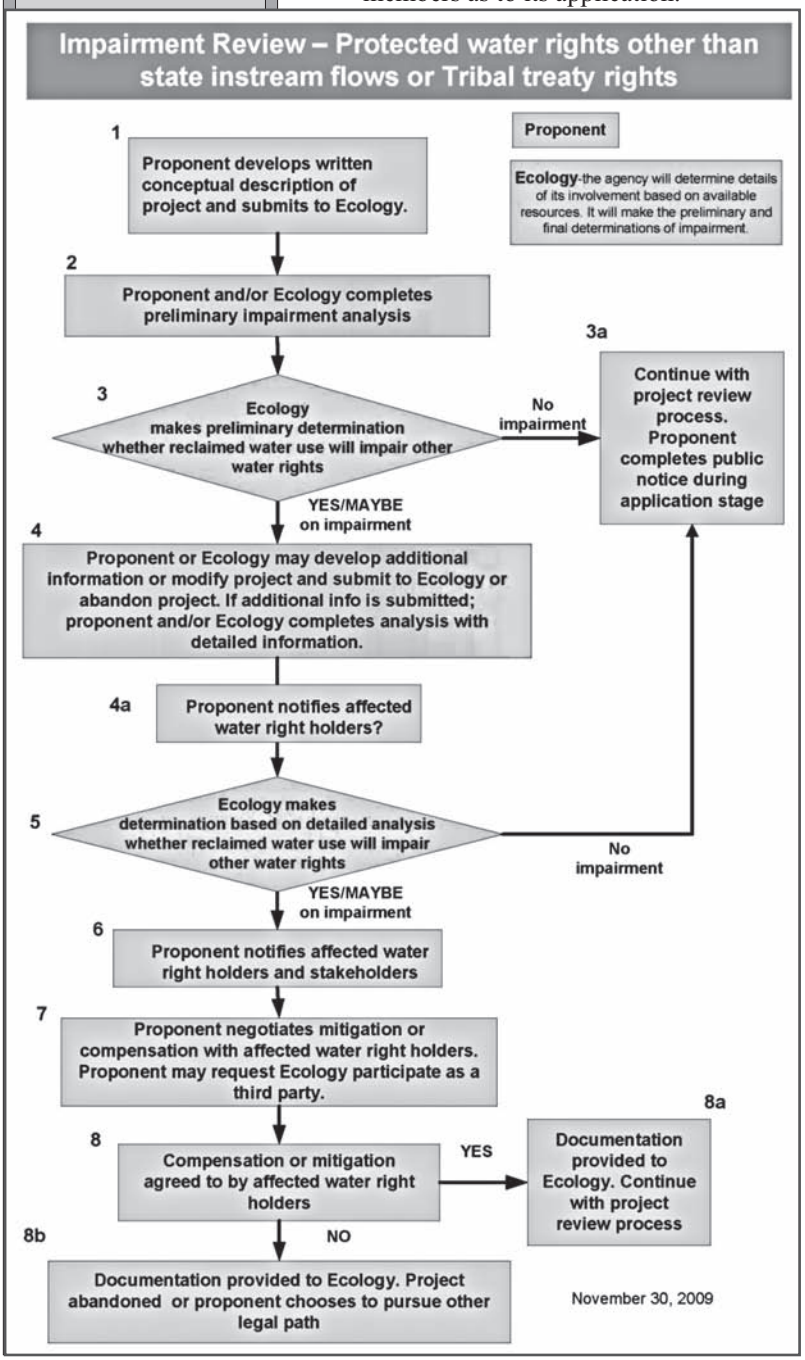
Over its nearly three years of existence, WRAC's deliberations and conclusions were described in the annual reports provided to the Legislature by Ecology on the overall rulemaking process. The group never reached agreement on a decision-making process, so its "recommendations" were at times developed by consensus, and at other times reflected majority views (duly reported as such by Ecology). A fundamental recommendation was that the existing statutory provisions not be modified until the rule was completed, and experience under the rule should drive future statutory changes.

Reclaimed Water

WRAC Recommendations

Other key WRAC recommendations included:

- Impairment decisions should be certain, and the process include an opportunity for timely appeal before a project proponent made significant capital investments that might be put at risk by an adverse impairment decision.
- Project proponents should be given the flexibility as to when the formal impairment analysis and determination should be made (e.g, as early as general planning, but also in facility planning, during construction, or no later than facility permit application).
- Ecology should be presumed to do the impairment analysis (unlike the 2005 Guidance), with a fallback of using the state's water rights cost-reimbursement process (where the applicant would pay Ecology and a contractor would do the analysis), or the proponent doing the analysis to Ecology's satisfaction.
- All key definitions should be placed in guidance and not in the proposed rule, in order to provide an opportunity to "test drive" the concepts with real projects and actual impairment analyses before locking them into a rule that would be difficult to change. This latter recommendation was particularly important, because WRAC had helped develop a definition of "impairment' that Ecology began to independently modify, with each modification by Ecology raising concerns among WRAC members as to its application.



The one product generated by WRAC was a proposed process for evaluating impairment, particularly as to impairment of instream flows. WRAC spent a considerable amount of time developing this evaluation process, with the intent of ensuring early, frequent, and meaningful engagement by all potentially affected parties — particularly Tribes — in the development of a reclaimed water project. The process included a Decision Tree (see this page) and formal consultation by the State with Tribes pursuant to various agreements the State and Tribes have around resource management issues.

The process outlined in this Decision Tree reflected the view of WRAC members that — because of the numerous and complex issues associated with water rights impairment, the lack of any history or legal precedents involving modifications to wastewater discharges by reclaimed water facilities, and the absence of any clear direction or trends in western states addressing the issue — it would be best to pursue the approach taken with the Carnation reclaimed water project, i.e., engagement of all interested parties to reach a negotiated solution that was sufficiently grounded in the law to avoid appeals.

By the last meeting of WRAC in March, 2010, it was clear that internal policy discussions at Ecology were driving the rulemaking in a direction that was to some extent consistent with WRAC's recommendations, but diverging from the recommendations in some significant ways. A complete draft rule was first published by Ecology in December 2009/January 2010.

In particular, Ecology decided that the rule would:

- Require an impairment analysis be completed, and a decision made, before construction of any reclaimed water facility could begin
- Contain new, broad, definitions of water rights impairment and instream flows (in the rule versus the new comprehensive guidance document)
- Specify that any reclaimed water not actually put to use during an initial five-year permit period for the facility would be available to Ecology for issuance of new water rights
- Potentially subject reclaimed water facilities to new impairment analyses during each five-year NPDES permit renewal cycle, if there were any changes in facility operations (e.g., different or expanded uses)

Reclaimed Water

WRAC History

Because of the impending rule completion deadline of December 31, 2010, and because it was apparent that additional input from WRAC would have marginal value to the Ecology rulemaking process, WRAC effectively disbanded. [A more or less complete history of WRAC, including its agendas, meeting notes, and documents provided to the group or discussed at its meetings is contained at Ecology's website: www.ecy.wa.gov/programs/wr/rules/rwwrac_archive.html. It has a very comprehensive set of historic and current materials on reclaimed water, water rights, and relevant issues.]

Current Ecology Rulemaking

In the summer of 2006, Ecology initiated the rulemaking process as directed by the Legislature, and convened the first meeting of the Rule Advisory Committee (RAC) in October 2006. [RAC materials are available at Ecology's website: www.ecy.wa.gov/programs/wq/reclaim/reclaimadvcomm.html]

As noted above, Ecology is precluded from adopting a rule before June 30, 2013.

Opponents' Concerns

RAC included a wide array of interest groups and other members, including those that were not particularly supportive of expanded use for a variety of reasons. There were concerns by some water utilities that reclaimed water could in some places be a competitor to their water supplies, and create a risk of stranded investments. In addition, some environmental organizations and Tribes expressed ongoing concerns over contaminants that would remain in reclaimed water, even after advanced treatment, and the risks that they might pose to public health or the environment. Reclaimed water proponents acknowledged those concerns and the need to address them, but pointed out that the Legislature had provided direction to Ecology and other State agencies to promote and encourage the use of reclaimed water, particularly in the 2007 comprehensive legislation.

"Fundamental Principles"

The 2007 legislature inserted the following language in the "fundamental principles" for water resource management:

> "Use of reclaimed water shall be encouraged through State and local planning and programs with incentives for State financial assistance recognizing programs and plans that encourage the use of conservation and reclaimed water use, and State agencies shall continue to review and reduce regulatory barriers and streamline permitting for the use of reclaimed water where appropriate." RCW 90.54.020(7).

Ultimately, ecology rewrote the "purpose" section of the rule as follows:

> The purpose of this chapter is to provide consistent, predictable, and efficient regulatory reviews, permitting processes and technical standards that encourage the generation and beneficial use of reclaimed water while preserving and protecting public health, the environment, and existing water rights. Draft WAC 173-219-020.

This language was ultimately accepted as a fair reading of what the Legislature had directed Ecology, DOH and stakeholders to do.

2010 Draft Rules

The first "complete" version of the draft rule was published by Ecology in January 2010. There were at least two more versions with substantial revisions published by Ecology in the spring (May) and summer (July) of 2010. [The most recent version of the draft rule is published at the rulemaking website: www.ecy.wa.gov/programs/wq/reclaim/reclaimadvcomm.html. For a fairly complete description of the rulemaking process, and the evolution of its content on a variety of issues, see Jeff Kray and Martin Prugh, "*Washington Refines its Regulations on Use of Reclaimed Municipal Waste Water*" (Marten Law Newsletter, 9/20/10): www.martenlaw.com/newsletter/20100910-reclaimed-waste-water-regulations. Your author contributed to the Marten Law article.]

While the current working version of the rule (July 2010 version) addresses a number of concerns raised by stakeholders over earlier versions, a significant number of issues remain, particularly for advocates of reclaimed water that view parts of the rule as potentially major impediments to future projects.

Key to the water rights impairment evaluations under the draft rule are the definitions of "water right impairment" and "instream flows."

Water Right "Impairment" Defined

Water Right Impairment

The current draft rule definition of "water right impairment" is as follows:

> "Water right impairment" means an interruption or interference in the availability of water, or degradation of the quality of water, caused by decreasing or ceasing a wastewater discharge in order to reclaim the water, that would: (a) Prevent an existing water right holder from partially or fully beneficially using the water right; or (b) Require an existing water right holder to make significant modifications in order to beneficially use the water right; or (c) For an instream flow water right established by rule or otherwise, cause the flow of the stream to fall below the instream flow more frequently, for a longer duration, or by a greater amount than was previously the case.

This definition of water right impairment is extremely broad, and does not exist anywhere else in Washington law. While the language was developed largely by and with the WRAC's participation, WRAC intended it to be used only in a guidance document. As a definition in rule, it has the force and effect of law, and cannot be modified except in another rulemaking proceeding.

Reclaimed Water

Proposed Impairment Process

The process for addressing impairment issues is laid out in draft WAC 173-219-100.

Basic draft rule elements for addressing impairment include:

- An evaluation conducted by Ecology or the applicant, with stakeholder/Tribal notification and engagement, to be done before approval for any construction to start
- A "preliminary determination" made by Ecology on impairment within 180 days of the completion of the evaluation, with the option of an indefinite extension on this deadline (after notice to parties)
- A requirement for the applicant to submit an agreement for compensation or mitigation to the impaired party if Ecology has determined that there is impairment
- Appeal of any impairment determination only as part of any appeal of a final permit issued for the project (i.e., the discharge permit issued by the water quality program)
- Finality of the impairment determination for the life of the project, unless the project owner changes the reclaimed water use in the future (e.g., expands the use, changes the use). This provision of the draft rule is open-ended, allowing Ecology to require a supplemental impairment evaluation if there are "other changes that may affect existing rights." It has also been noted that a reclaimed water project that includes mitigation or compensation — presumably negotiated in advance with affected parties — could avoid a finding of impairment.

Protections Absent

Notably absent from the draft rule is any protection for the project owner from future impairment claims after the impairment evaluation is submitted to Ecology, and after a preliminary determination is made. These would include claims made by third parties that file for water rights (or for rights established in instream flow rules adopted by Ecology) between the time of application by the reclaimed water project and the issuance of the final permit for the facility, as well as by third parties (particularly if authorized by Ecology) who make use of the reclaimed water that is generated, but not used, by the owner of the facilities. For the past several years, Ecology has been actively pursuing the adoption of new rules that will establish "minimum flows" in a number of basins around the State. Any such flows would have the status of water rights under Washington law, and any reclaimed water facilities approved before the adoption of such rules, but constructed afterwards, could be subject to a claim of impairment to those instream flows, unless they were anticipated and included in the impairment analysis and determination.

Groundwater Evaluation

Although absent from the definition of impairment itself, the draft rule's description of Ecology's evaluation process also expands the statutory language to include evaluation of groundwater rights in direct hydraulic continuity with the freshwater surface water body to which there was a wastewater discharge that the reclaimed water facilities are affecting.

Instream Flows Defined

Instream Flows

The current draft rule definition of "instream flows" is as follows:

> "Instream Flow" means either a stream flow level set in rule that is needed to protect and preserve fish, wildlife, scenic, aesthetic, recreational, water quality, and other environmental values, and navigational values, or a federally reserved water right for a stream flow. The term instream flow means a base flow under chapter 90.54 RCW, a minimum flow under chapter 90.03 or 90.22 RCW, or a minimum instream flow under chapter 90.82 RCW, or a federally reserved water right for a stream flow. Draft WAC 173-219-010.

Federal Reserved Rights

This definition of instream flows is also quite broad. It includes existing statutory provisions defining instream flows (essentially derived from RCW 90.54.020(3)(a)). However, without discussion with WRAC, and inconsistent with the position Ecology had taken in three years of discussions with that group, Ecology included in the draft rule definition any "federally reserved water right for a stream flow." While legally this may be correct — i.e, such water rights should be considered in impairment analyses — the practical issue is that to a large extent those are rights, particularly those claimed by Tribes, that have yet to be adjudicated or otherwise quantified. By including this term within the rule, it is likely to require additional time for the impairment analysis to address these rights, and could result in indefinite delays in reclaimed water projects if there is no agreement on what these instream rights are. There may be administrative approaches to this issue — e.g., conditioning permits on future adjudications — but there is so far no indication from Ecology, including in the new draft guidance manual, as to how this provision would be administered.

Quality Impairment

Other Draft Rule Aspects from Ecology

Other rule elements drafted by Ecology with little input from WRAC include:

- Inclusion of water quality degradation as a water right impairment (something that may occur any time a wastewater discharge is modified for a reclaimed water facility)
- Specificity around different impacts to streamflows that would constitute impairment to flows already failing to meet minimum flow requirements (e.g., as alleged in the Carnation situation)
- Inclusion of impacts to instream flows established by rule "or otherwise" (without specifying what this might be)

Reclaimed Water

Notably absent, and inconsistent with Ecology's interpretation of the statutory provision in its 2005 Guidance, is any reference to the exercise of any underlying water right (from which the reclaimed water would be generated), or the exclusion of foreign flows or existing consumptive uses.

Ecology has water resources program policy documents, intended as guidance to its staff, that are to some degree inconsistent with these provisions. Examples include: Policy 1200 (which defines impairment in the context of changes/transfers); Policy 1210 (definition of "return flow"); and Policy 2100 (with specific provisions on impairment determinations for water reclamation projects). [Those policies are available through the water resources program website: www.ecy.wa.gov/programs/wr.]

Use for Mitigation

Also of note is the draft rule's express authorization of the use of reclaimed water for water rights mitigation (draft WAC 173-219-110), and of the use of the State's waterways to transport and deliver reclaimed water to end users (draft WAC 173-219-540). Both of these uses will require extensive analysis and reporting in order to avoid claims of impairment of existing rights.

Ecology Responses to Concerns

Grandfathered Facilities

The most recent draft did address some of the concerns raised over provisions in earlier drafts of the rule. For example, Ecology withdrew language it had inserted that explicitly made available "unused" reclaimed water for appropriation. Facilities existing at the time of rule adoption are also not required to complete a new impairment analysis unless they propose new/changed uses. Whether this "grandfathering" will escape challenge if the existing facilities had no prior water rights impairment analysis done is a possible future issue.

"Unused" Water

The latest draft also improved language so that if the reclaimed water is not actually used by the generator in any five-year permit period, it may still be protected if the permit application describes the intent to use it in the future.

Ongoing Conerns

Time of Appeals

The provisions that preclude any interlocutory appeal of Ecology's determination of impairment, and only allow the appeal of that decision once the facility is completed, are being reviewed by Ecology, and may be addressed through changes in the facility permitting process that would allow the agency to issue those permits before construction.

There is still considerable concern that, with no firm deadline in the rule for making impairment decisions — particularly when coupled with Ecology's water resource program budget and priorities constraints — reclaimed water projects could be held up for years by the process.

Proposed Reclaimed Water Rule Delayed

Executive Order

In late August and early September of 2010, several key stakeholders and current or future reclaimed water purveyors — including King County, Spokane County, the City of Spokane, and LOTT — notified the Director of Ecology that they planned to appeal directly to the Governor to delay adoption of the proposed rule because of a number of concerns they had over the content and implementation of the rule, which included the provisions on water rights impairment. The Director agreed to delay formal transmittal of the rule to the Code Reviser for publication, pending further discussions. In October, 2010, Governor Gregoire issued an Executive Order to state agencies, directing them generally to suspend rulemaking on all nonessential rules in order to avoid creating additional costs to businesses that were already having difficulties in the current economic downturn. Ecology determined that the reclaimed water rule was not an essential rule, and its development would be delayed until January 2012. During its 2011 session, the Legislature enacted a bill intended to provide relief to local governments that — because of the same economic downturn, and reductions in staff and programs — did not have the resources to meet statutory deadlines for various types of planning and program implementation. That legislation included a provision that precluded Ecology from adopting a final reclaimed water rule before July 1, 2013 (ESHB 1478 (laws of 2011, chapter 353); Section 11). In effect, there is now a two-year period of time when Ecology will have further discussions on how to address water rights impairment in the context of reclaimed water projects. Those discussions, and ultimately the rule provisions, will have a significant impact on not only the development of the reclaimed water industry in Washington, but on broader water resource management and water right issues in the State.

Revised Guidance

Since Ecology will continue to receive permit applications, and will be having to make decisions on potential water rights impairment associated with reclaimed water projects, Ecology may incorporate some of these provisions into either formal or informal guidance that its program will operate under until at least July 2013. Concurrent with development of the rule, Ecology staff have been working on a revised version of the agency's technical guidance manual for reclaimed water projects. The draft document is entitled "*Reclaimed Water Facilities Manual: The Purple Book*" (January 2011). It was circulated to RAC members in March 2011 for comments. At the time of this article's publication it was not yet posted to the Ecology website.

Reclaimed Water

CONCLUSION

The increased use of reclaimed water in Washington appears to be inevitable, and is consistent with national and international trends of increased use that view highly treated wastewater as an asset that must be better managed. Reclaimed water has the potential for providing a supply of water in many areas of the State where it will make sense as a nonpotable source, replacing existing potable supplies, or precluding or delaying the expense of developing new sources of supply. It offers an approach to wastewater management that is more environmentally sound, at little to no increased cost to the wastewater utility. In the face of climate change, it is a potential drought-resistant source of supply that will be available as long as the use of water is the main approach to carrying human and other waste products to centralized facilities for treatment and disposal.

Future Protections Issues

In the face of this trend, the incorporation of water rights impairment analyses as currently contemplated in the draft reclaimed water rule is highly likely to add costs, time delays, and contention to the process of State approval for such facilities. Although specifically exempted from water rights permitting requirements, new reclaimed water facilities will have to go through a process that not only is the equivalent of a new water right evaluation, but also will subject those facilities to standards that are arguably more complex, and subject to higher standards, than water rights applications. In addition, having gone through the process the facilities and their owners will not have the future legal protection that holders of water rights have, and may be subjected to repeated impairment claims by an ever-expanding group of water users that have become dependent on wastewater discharges — or reclaimed water — for their water supplies. Although reclaimed water facilities are not required to obtain water rights permits, there is no statutory prohibition against getting a water right permit, similar to other state approaches (e.g., California).

Issues Remain

The draft rule goes a long way toward providing clarity and certainty for all affected parties as to the process for approving new reclaimed water facilities and uses. It is clear, though, that there are still significant issues to be resolved. With the two-year moratorium on rule development imposed by the Legislature, all interested parties — from the Governor on down — should continue to work on the approach to water rights impairment being proposed in the draft rule to ensure it will broadly serve water resource management interests of the State, rather than risk losing the substantial water potential offered by reclaimed water. The rule language proposed by Ecology is likely to do one of two things, or both — make new reclaimed water projects extremely hard to get approved if they are facilities that discharge (or have discharged) to freshwater, or provoke legal challenges as to whether the rule language is a reasonable interpretation of the law (RCW 90.46.130). A challenge could also be made to the rule itself (following adoption) under the rulemaking provisions of Washington's Administrative Procedures Act (RCW 34.05).

Interim Guidance

It is also important that Ecology, in the interim, provide clear guidance on how it plans to implement the statutory requirements until the rule is adopted. It is also important that stakeholders remain engaged in the process, and that attorneys who are advising clients with potential reclaimed water projects anticipate potential pitfalls for the projects, and ensure that these are avoided (e.g., by describing in permit applications all potential future uses of the reclaimed water).

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ESA Experimental Population

ESA EXPERIMENTAL POPULATION

NMFS' FIRST PROPOSED DESIGNATION A WIN-WIN FOR WATER USERS AND STEELHEAD

by David E. Filippi and Kirk B. Maag, Stoel Rives LLP (Portland, OR)

Please Note
As this article goes to press, the comment period for the Proposed Rule is coming to a close (July 18, 2011). Some of the analysis in this article draws from submitted comments. Further information on the Proposed Rule and comment period is available from the NMFS' website: www.nwr.noaa.gov/ESA-Salmon-Regulations-Permits/Section-10-Permits/Deschutes.cfm

INTRODUCTION

On May 18, 2011, the National Marine Fisheries Service (NMFS) published a Proposed Rule to designate steelhead being reintroduced above the Pelton Round Butte Hydroelectric Project (Pelton Round Butte) in Oregon's Deschutes River Basin as a "nonessential experimental population" pursuant to section 10(j) of the federal Endangered Species Act (ESA). 76 Fed. Reg. 28,715 (May 18, 2011). The purpose of the proposed designation is to temporarily lift certain ESA liability and consultation requirements to allow time for the development of conservation measures that will support the reintroduction efforts. *Id.* at 28,716. Once final, the designation will enhance the conservation of Middle Columbia River (MCR) steelhead, which is consistent with the purpose of the ESA. The designation will also protect those who engage in lawful activities, such as recreation, forestry, agriculture, and hydroelectric power generation, from liability for the unintentional "take" of a member of the experimental population, thereby reducing opposition to the reintroduction effort — one of the reasons Congress added section 10(j) to the ESA. For ESA purposes, the term "take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). Finally, the designation will serve as a model for the reintroduction of listed anadromous species throughout the nation.

BACKGROUND

Structure and Purpose of Section 10(j): Experimental Populations

Congress added section 10(j) to the ESA in 1982. Section 10(j) authorizes the US Fish and Wildlife Service (FWS) and NMFS (together, the "Services") to designate "experimental populations" of listed species for the purpose of reintroducing a species "outside [its] current range." 16 U.S.C. § 1539(j)(1). The Services share responsibility for implementing the ESA. Generally, FWS manages land and freshwater species, while NMFS manages marine and anadromous species.

Experimental Population

The Services may not authorize the release of an experimental population unless the Service with authority over the species "determines that such release will further the conservation of such species." *Id.* § 1539(j)(2)(A). A population that is released pursuant to section 10(j) qualifies as an experimental population "only when, and at such times as, the population is wholly separate geographically from nonexperimental populations of the same species." *Id.* § 1539(j)(1). Prior to the release of any population pursuant to section 10(j), the Service with authority over the species must determine by regulation whether "such population is essential to the continued existence of an endangered species or a threatened species." *Id.* § 1539(j)(2)(B). FWS has interpreted this to mean that an experimental population is "essential" if its "loss would be likely to appreciably reduce the likelihood of the survival of the species in the wild." 50 C.F.R. § 17.80(b).

Authorized "Take"

The designation of an experimental population affects the protections and prohibitions of the ESA as they apply to the members of the experimental population. The Services must treat each member of an experimental population as a threatened species, even if nonexperimental populations of the species are listed as endangered. 16 U.S.C. § 1539(j)(2)(C). This allows the Services to authorize the "take" of a member of the experimental population. *See id.* § 1533(d) (providing that the Services may prohibit the take of threatened species). The protections and prohibitions afforded an experimental population are further limited if the experimental population is nonessential. *Id.* First, unless the nonessential experimental population is located within the National Wildlife Refuge System or the National Park System, the population is treated as a species "proposed to be listed" under the ESA. *Id.* § 1539(j)(2)(C)(i). This means that federal agencies need only informally confer — rather than formally consult — with the relevant Service before undertaking actions that are likely to jeopardize the experimental population. *Id.* § 1536(a)(4). Second, the Services are prohibited from designating critical habitat for nonessential experimental populations. *Id.* § 1539(j)(2)(C)(ii).

"Nonessential Population"

Reintroduction Authority

"Before Congress added section 10(j), the federal government's authority to reestablish threatened or endangered species to their native range was unclear." Mimi S. Wolok, *Experimenting with Experimental Populations*, 26 Envtl. L. Rep. 10018 (1996). However, in *Wyo. Farm Bureau Fed'n v. Babbitt*, 199 F.3d 1224, 1233 (10th Cir. 2000), the 10th Circuit explained in dicta that the Services had the authority to reintroduce listed species prior to the enactment of section 10(j). [Editor's Note: "dicta" means that the court discussed an issue that was not required for its decision; thus, the "dicta" explains how a court would view such a situation in the future, but the court's statements cannot be cited as precedence in other litigation.] Despite the absence of explicit statutory authority for the reintroduction of listed species *before* the enactment of section 10(j), FWS took the position that it had implicit authority to reintroduce listed species under section 4 of the ESA. *See* Wolok, *supra*. As FWS stated in the preamble to its final rule

ESA Experimental Population

Reducing Opposition

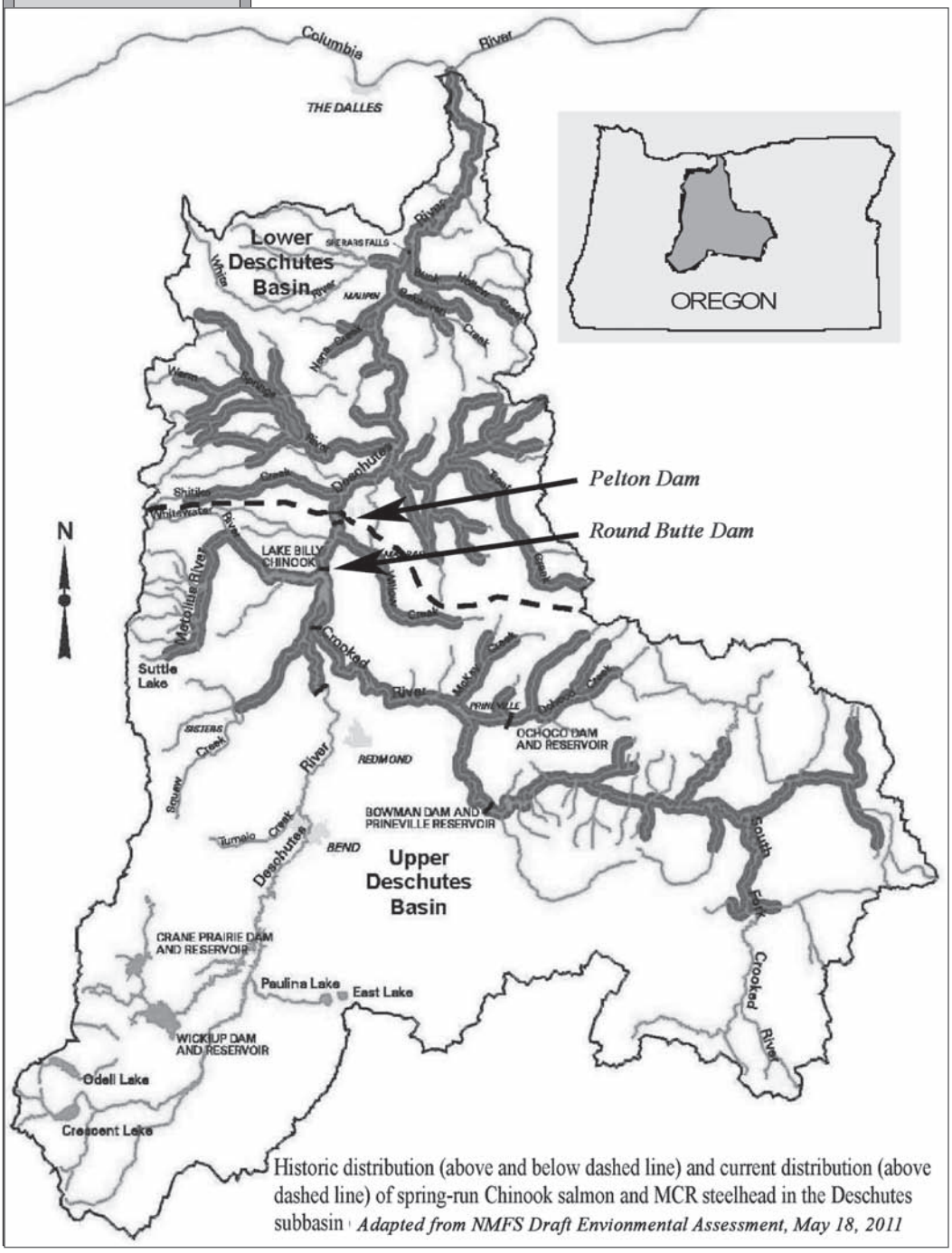
regarding experimental population designations, the ESA authorized FWS "to translocate listed species into unoccupied portions of their historic range in order to aid in the recovery of the species." 49 Fed. Reg. 33,885, 33,886 (Aug. 27, 1984). However, it was not until Congress enacted section 10(j) that the Services received explicit statutory authority to reintroduce listed species. *See* 16 U.S.C. § 1539(j)(2); Wolok, *supra*.

One of the primary purposes for Congress's enactment of section 10(j) was to reduce local opposition to reintroduction efforts.

As the Tenth Circuit explained in *Wyoming Farm Bureau*:

> Congress added section 10(j) to the Endangered Species Act in 1982 to address the Fish and Wildlife Service's and other affected agencies' frustration over political opposition to reintroduction efforts perceived to conflict with human activity. Although the Secretary already had authority to conserve a species by introducing it in areas outside its current range, Congress hoped the provisions of section 10(j) would mitigate industry's fears experimental populations would halt development projects, and, with the clarification of the legal responsibilities incumbent with the experimental populations, actually encourage private parties to host such populations on their lands.

199 F.3d at 1231-32 (citing H.R. Rep. No. 567, 97th Cong., 2d Sess. 8 (1982)); 16 U.S.C. § 1539(j)).



Historic distribution (above and below dashed line) and current distribution (above dashed line) of spring-run Chinook salmon and MCR steelhead in the Deschutes subbasin *Adapted from NMFS Draft Envionmental Assessment, May 18, 2011*

Congress viewed section 10(j) as an opportunity "to encourage the recovery of species through population reestablishment with the cooperation of, not despite, state and local groups." Wolok, *supra*. As such, Congress intended that regulations promulgated by the Services to designate experimental populations "should be viewed as an agreement among the Federal agencies, the state fish and wildlife agencies and any landowners involved." *Id*. (quoting H.R. Rep. No. 567, 97th Cong., 2d Sess. 34 (1982)).

A related purpose of section 10(j) was to "give greater flexibility to the [Services]" in managing the reintroduction of listed species. *United States v. McKittrick*, 142 F.3d 1170, 1174 (9th Cir. 1998)(quoting H.R. Rep. No. 567, 97th Cong., 2d Sess. 8 (1982)). "This flexibility allows the [Services] to better conserve and recover endangered species." *Id*.

FWS Regulations/Designations

Although not statutorily required, FWS promulgated general rules to govern its designation of experimental populations. 49 Fed. Reg. 33,885; *see* 50 C.F.R. § 17, subpart H. As required by section 10(j), FWS also promulgates specific rules associated with each experimental population that it designates. *See* 16 U.S.C. § 1539(j)(2)(B), which requires that the Services, by regulation, identify the experimental population and determine whether it is essential before releasing it; and 50 C.F.R. §§ 17.84-17.85 for FWS's special rules associated with experimental populations of vertebrates and invertebrates.

ESA Experimental Population

Multiple Designations

Since promulgating the general rules regarding designations, FWS has used its authority under section 10(j) to designate dozens of experimental populations. FWS has designated experimental populations for approximately 20 different species of vertebrates. *See* 50 C.F.R. § 17.84. For some of these species, FWS has designated multiple experimental populations. For example, *see id.* § 17.84(h)(9)(i)-(iv), which identifies four experimental populations of whooping crane and *id.* § 17.84(g)(9)(i)-(vii), which identifies seven experimental populations of black-footed ferret. FWS has also designated experimental populations for 17 species of mollusks in the Tennessee River and 16 species of mollusks in the French Broad and Holston Rivers in Tennessee. *Id.* § 17.85. FWS has not designated any of these experimental populations as "essential." *See id.* §§ 17.84-17.85.

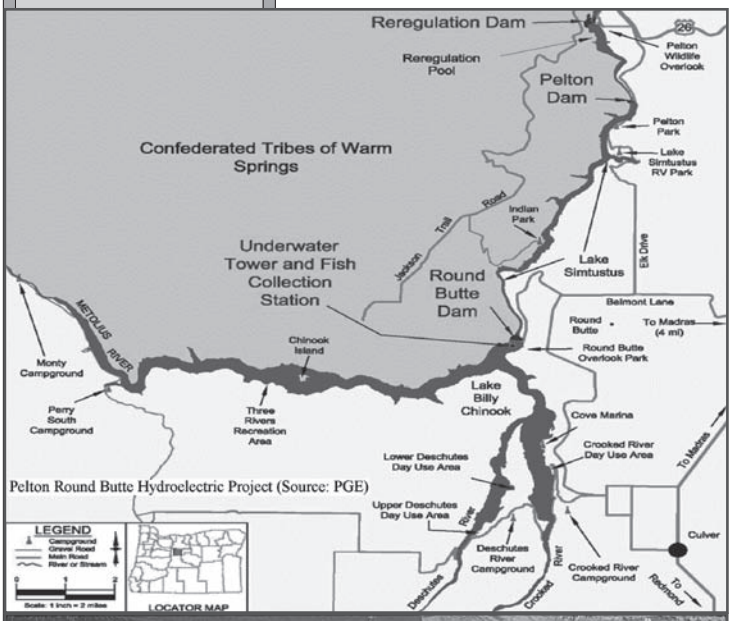
Unlike FWS, NMFS has not promulgated general rules regarding the designation of experimental populations. Nor has NMFS ever promulgated a final rule to designate an experimental population. Thus, NMFS explained in the Proposed Rule that, where applicable, NMFS considered the FWS regulations when drafting of the Proposed Rule. 76 Fed. Reg. at 28,718.

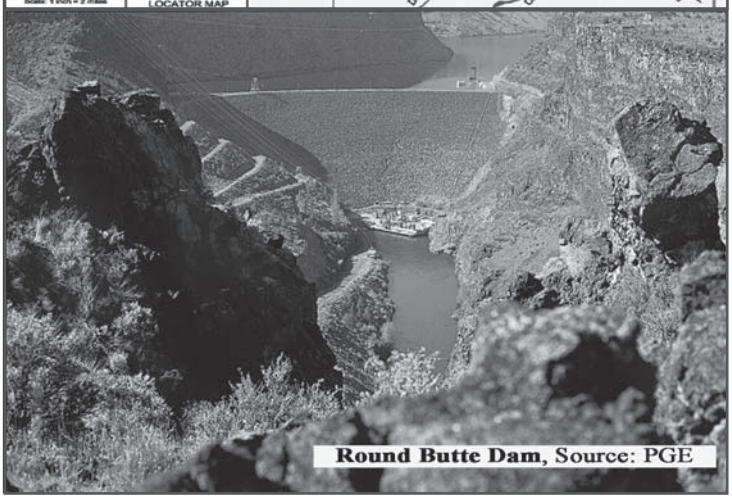
Reintroduction History

Reintroduction of MCR Steelhead

Unlike the reintroduction of experimental populations by FWS, the reintroduction of MCR steelhead by NMFS preceded the designation of an experimental population. The context of the reintroduction helps to explain why MCR steelhead were reintroduced above Pelton Round Butte prior to NMFS's designation of an experimental population.

Pelton Round Butte is comprised of three dams, two of which were completed in 1958 and one of which was completed in 1964. Although all three dams were constructed to allow fish passage, the number of fish passing above Pelton Round Butte dramatically decreased after 1964 when Round Butte Dam — the uppermost of the three dams — was completed. In 1968, fish passage was abandoned in favor of a hatchery program to mitigate for lost passage and habitat. Since that time, there has remained an interest in reestablishing anadromous fish runs above Pelton Round Butte. As a result of technological innovations and improved hydrodynamic modeling in the decades since the 1960s, the feasibility of reestablishing such runs significantly increased.




Round Butte Dam, Source: PGE

The federal hydropower license for Pelton Round Butte was set to expire in 2001. In order to relicense Pelton Round Butte, Portland General Electric Company (PGE) and the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWS) — co-owners of Pelton Round Butte — submitted to the Federal Energy Regulatory Commission (FERC) a license application that proposed the reintroduction of anadromous fish, including MCR steelhead, above Pelton Round Butte. In 2004, PGE, CTWS, and 20 other stakeholders signed a **s**ettlement **a**greement (Settlement Agreement) that would allow FERC to relicense Pelton Round Butte. Signatories included numerous environmental organizations, local municipalities, local counties, state agencies, and federal agencies. On June 21, 2005, FERC issued a 50-year project license to PGE and CTWS. FERC incorporated the conditions from the Settlement Agreement into the license, including a fish passage requirement. The investment by PGE and CTWS in infrastructure to support fish passage is reportedly already more than $100 million.

The Settlement Agreement contemplated that hatchery stock would be used for the reintroduction. Although MCR steelhead were listed as threatened in 1999, the hatchery stock that was to be used for reintroduction was not included in the listed population when the Settlement Agreement was signed. *See* 64 Fed. Reg. 14,517, 14,517 (Mar. 25, 1999). Because the hatchery stock was not listed, NMFS would have had significant flexibility in managing the reintroduced hatchery stock and water users would not have been exposed to ESA liability if their otherwise lawful activities resulted in harm to the reintroduced steelhead. However, by the time the first hatchery stock was released in Whychus Creek in 2007, NMFS had listed the hatchery stock as threatened, which limited NMFS's management flexibility and exposed water users to potential ESA liability. *See* 71 Fed. Reg. 834, 849 (Jan. 5, 2006). This also increased the potential for opposition to the reintroduction effort.

ESA Experimental Population

An argument could be made that the reintroduction of listed MCR steelhead prior to the designation of an experimental population was illegal because NMFS lacked the authority to reintroduce MCR steelhead without first issuing a regulation that "identif[ies] the population and determine[s], on the basis of the best available information, whether or not such population is essential to the continued existence of an endangered species or a threatened species." 16 U.S.C. § 1539(j)(2)(B). NMFS would likely argue that it was exercising authority other than its authority under section 10(j) to reintroduce the steelhead, but as explained above, whether NMFS has such authority is debatable. Nevertheless, the reintroduction was not challenged on this ground.

Concerns Addressed

To address the change in status of the hatchery stock, NMFS, the Deschutes Basin Board of Control (DBBC) and the City of Prineville (City) began analyzing potential options for increasing NMFS's management flexibility, incentivizing the development and implementation of conservation measures that would enhance recovery efforts, reducing the potential for opposition to the reintroduction effort, and eliminating ESA liability for the incidental take of a member of the reintroduced population. These options included both long-term strategies — such as the development of a **h**abitat **c**onservation **p**lan (HCP) and the designation of an experimental population — and short-term strategies, such as the issuance of enforcement discretion letters from NMFS. DBBC is an intergovernmental organization that is made up of the following seven Deschutes Basin irrigation districts: Arnold Irrigation District, Central Oregon Irrigation District, North Unit Irrigation District, Ochoco Irrigation District, Swalley Irrigation District, Three Sisters Irrigation District, and Tumalo Irrigation District.

Liability for Take

As a long-term strategy for protecting themselves from potential liability for the incidental take of reintroduced steelhead, DBBC and the City began developing an application for an ESA section 10 incidental take permit and an HCP. Once completed, the HCP will identify the impacts that will likely result from activities identified for liability coverage in the area covered by the HCP, the steps the applicants will take to minimize and mitigate such impacts, and the alternative actions the applicants have considered and the reasons the applicants have not undertaken those alternatives. 10 U.S.C. § 1539(a)(2)(A).

Take Permit Needs

NMFS cannot issue an incidental take permit unless:

- NMFS determines that the taking will be incidental
- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking
- The applicant will ensure that adequate funding for the plan will be provided
- The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

Id. § 1539(a)(2)(B).

Enforcement Discretion

In recognition of DBBC's and the City's ongoing support for the reintroduction effort and their development and implementation of a wide range of conservation measures, the Regional Administrator for NMFS issued enforcement discretion letters to DBBC in 2007 and 2008, and then both DBBC and the City in 2010. The first letter was for a one-year term, while the second and third letters were for two-year terms. These letters were intended to provide DBBC, and the City as of 2010, with time in which to continue development of an HCP and to provide NMFS with time in which to designate an experimental population of MCR steelhead. In the letters, the Regional Administrator advised that he would not request that NMFS initiate prosecution for the incidental take of reintroduced steelhead so long as DBBC and the City implemented the conservation measures described in the letters and DBBC and the City progressed toward the development and completion of an HCP.

THE PROPOSED DESIGNATION

consistency with the text and purpose of section 10(j)

This section will discuss the proposed designation's consistency with both the text and purpose of ESA section 10(j) and with past designations by FWS.

ESA Purposes

Elements of the proposal's consistency with ESA purposes include:

- The proposed geographic area of the experimental population is wholly separate geographically from nonexperimental populations.
- The experimental population will further the conservation of MCR steelhead.
- The experimental population is not essential to the continued existence of the species and, thus, the incidental take protection provided by the Proposed Rule is appropriate.

Geographic Barrier

Geographic Separation from Nonexperimental Populations

The proposed geographic area of the experimental population is above Round Butte Dam, excluding those areas that are made inaccessible by Bowman Dam and Ochoco Dam. A nonexperimental population of MCR steelhead does not currently exist above Round Butte Dam. Thus, NMFS correctly concluded that the experimental population would be wholly separate geographically from nonexperimental populations because Round Butte Dam provides a clearly defined and absolute barrier that will prevent members of the nonexperimental population from entering the geographic area of the experimental population. 76 Fed. Reg. at 28,721.

ESA Experimental Population

Natural Barriers

FWS has used dams and natural barriers as the boundaries for other experimental populations. For example, FWS concluded that a proposed experimental population of Rio Grande silvery minnows was isolated from existing populations of the same species by large reservoirs. *See e.g.*, 73 Fed. Reg. 74,357, 74,361-62 (Dec. 8, 2008). Because silvery minnows are "not known to survive in or move through large reservoirs," FWS concluded that "the reservoirs [would] act as barriers to the species' downstream movement…and [would] ensure that [the nonessential experimental population] remains geographically isolated and easily distinguishable from existing upstream wild populations." *Id.* at 74,361. Similar to the experimental population of silvery minnows, the experimental population of MCR steelhead will remain geographically isolated and easily distinguishable from existing downstream wild populations through the use of Round Butte Dam as the downstream boundary of the experimental population.

The use of Round Butte Dam as the downstream boundary of the experimental population is also consistent with Congress's intent in passing section 10(j) and with existing case law. Congress contemplated that various bases could be used to establish the boundary of the experimental population, including "location, migration pattern, or any other criteria that would provide notice as to which populations of endangered or threatened species are experimental." *Wyo. Farm Bureau*, 199 F.3d at 1233 (quoting H.R. Conf. Rep. No. 97-835 (1982), reprinted in 1982 U.S.C.C.A.N. 2860, 2875). As noted in the Proposed Rule, Round Butte Dam provides a clear boundary that provides notice as to which populations of MCR steelhead are experimental. 76 Fed. Reg. at 28,721.

Absolute Separation Unnecessary

The fact that reintroduced steelhead will not be geographically isolated from wild populations of MCR steelhead during their downstream migration does not undermine the conclusion that the experimental population is wholly separate geographically from wild populations of MCR steelhead. Section 10(j) contemplates that there may be times when members of a reintroduced population will be present in the same geographic areas as nonexperimental populations of the same species. *See* 16 U.S.C. § 1539(j)(1). At such times, the members of the reintroduced population lose their experimental status and, thus, receive the increased protections afforded the nonexperimental population. Such is the case here, where all MCR steelhead above Round Butte Dam will be part of the experimental population, while all MCR steelhead below Round Butte Dam will not be part of the experimental population.

Species Status Change

Further, federal courts have held that the geographic separation requirement contained in section 10(j) is satisfied even if individual animals are able to enter or leave the geographic area of the experimental population, resulting in a change in the status of that animal from nonexperimental to experimental or vice versa. *See Wyo. Farm Bureau*, 199 F.3d at 1233, which held that FWS did not err when it designated an experimental population of gray wolves even though individual wolves that were not members of the experimental population had entered the boundaries of the experimental population and *McKittrick*, 142 F.3d at 1175 (same holding). In a footnote in *Wyoming Farm Bureau*, the Tenth Circuit noted that the protection an individual animal receives under the ESA often depends on whether the animal is located on one side or the other of a political boundary — providing as an example the fact that brown pelicans are listed as endangered on the west side of the Mississippi-Alabama state line but are not listed on the east side of the state line (199 F.3d at 1236 n.4).

Furthering the Conservation of MCR Steelhead

Species Conservation

NMFS concluded that the proposed designation will further the conservation of the species. 76 Fed. Reg. at 28,716. Two of the reasons for this conclusion identified in the Proposed Rule are that the proposed designation will (1) "build support for the reintroduction effort among local landowners," and (2) "ensure that the conservation measures [developed to support the reintroduction effort] are informed by information gathered during the…designation." *Id.* These bases are sufficient to support designation of MCR steelhead as an experimental population.

Cooperative Approach

Instream Flows

First, as NMFS recognizes in the draft environmental assessment (Draft EA) that was developed in conjunction with the Proposed Rule, absent the designation of a nonessential experimental population, "there would be local opposition to the ongoing reintroduction effort." Draft EA at 2-1 to -2. This would undermine the cooperative approach that has surrounded the reintroduction effort. This cooperative approach has resulted in the investment by Deschutes Basin irrigation districts in a variety of conservation projects that have already resulted in reduced diversions by over 200,000 acre-feet annually, leading to higher instream flows in the Deschutes River and its tributaries. Recent projects by four of the irrigation districts alone have resulted in the piping or lining of 58 miles of canals, resulting in a return of 91.5 cubic feet per second of water for instream use. DBBC and the City have also undertaken the development of an HCP, which will further enhance the recovery of MCR steelhead.

Second, the proposed experimental population will allow NMFS and potentially affected local interests, including DBBC and the City, time to develop a better understanding of the types of conservation measures that will minimize and mitigate the potential effects on MCR steelhead from the otherwise lawful activities of those local interests. Absent the proposed designation, local interests will have an incentive to implement short-term conservation measures, rather than long-term conservation measures that have the highest potential to enhance recovery efforts. *See id.* at 4-7. This is because, when the potential for liability

ESA Experimental Population

is high, conservation efforts will be focused on limiting liability rather than on enhancing recovery efforts.

In addition to furthering the conservation of MCR steelhead, this Proposed Rule once final will help to further the conservation of other listed species because, as the first designation of an experimental population by NMFS, it would serve as a model for the reintroduction of other NMFS-listed species throughout the nation.

Incidental Take Allowance

The Proposed Rule notes that "[t]here is potential harm associated with the reduced section 9 protections during the time period of the designation." *Id.* at 28,720. However, the Proposed Rule also explains that NMFS "do[es] not expect changes to current conditions to significantly increase harm to steelhead during the NEP [nonessential experimental population] period." *Id.* It is important to note that one of the purposes of section 10(j) is to increase support for reintroduction efforts through the lifting of certain section 9 prohibitions for experimental populations. Because the designation of an experimental population will almost always result in reduced section 9 protections, that consideration should be given little weight in NMFS's decision to designate an experimental population. FWS includes similar incidental take allowances when it designates experimental populations. *See e.g.*, 73 Fed. Reg. at 74,362 (allowing the incidental take of the Rio Grande silvery minnow); and 63 Fed. Reg. at 58,828 (allowing the incidental take of black-footed ferrets).

Proposed Experimental Population Not Essential to Continued Existence of MCR Steelhead

Not Essential to Continued Existence

NMFS correctly concluded that the proposed experimental population is not essential to the continued existence of the species. 76 Fed. Reg. at 28,720-21. NMFS primarily relied on two findings to reach this conclusion. First, the reintroduction of the experimental population is only one of many ongoing recovery efforts for MCR steelhead, and the recovery of MCR steelhead would be possible even if the current reintroduction effort were unsuccessful. *Id.* Second, the steelhead used for the reintroduction effort will be surplus hatchery stock. *Id.* at 28,721.

FWS relied on similar findings to conclude that an experimental population of Rio Grande silvery minnows was not essential to the continued existence of the species. 73 Fed. Reg. at 74,361. The preamble to FWS's final rule provided the following explanation for the conclusion:

> [E]ven if the entire experimental population died, this would not appreciably reduce the prospects for future survival of the species in the wild. That is, the captive population could produce more surplus minnows and future reintroductions still would be feasible if the reasons for the initial failure are understood. As a result, any loss of an experimental population in the wild will not threaten the survival of the species as a whole.

Id.

The same is true for MCR steelhead.

"Nonessential" Designation

This approach is consistent with the legislative history and FWS regulations. As noted in the Conference Report associated with section 10(j), "in most cases, experimental populations will not be essential." H.R. Conf. Rep. No. 835, 97th Cong., 2d Sess. 34 (1982). FWS has explained that "a nonessential designation would be the most advantageous to encourage cooperation and should be most actively pursued." 49 Fed. Reg. at 33,888. As such, the designation of an "essential" experimental population is "a special case, not the general rule." *Id.* All of the existing experimental populations are designated nonessential.

Captive Propagation

FWS also explained that the likelihood of adverse impacts to the existing population would be further reduced "if captive propagation efforts are providing individuals for release into the wild." *Id.* The Conference Report lends support to this conclusion: "The Secretary shall consider whether the loss of the experimental population would be likely to appreciably reduce the likelihood of survival of that species *in the wild*." *Id.* (emphasis added)(quoting H.R. Conf. Rep. No. 835).

Consistent with the legislative history and FWS regulations, FWS has focused in past designations on whether a proposed experimental population would be established through the use of captive-raised animals. For example, FWS found that experimental populations established through the reintroduction of captive-raised animals, including the red wolf (56 Fed. Reg. 56,325, 56,328 (Nov. 4, 1991)), Mexican gray wolf (63 Fed. Reg. 1752, 1754-55 (Jan. 12, 1998)), black-footed ferret (68 Fed. Reg. 26,498, 26,501 (May 16, 2003)), and California condor (61 Fed. Reg. 54,044, 54,049 (Oct. 16, 1996)), were not essential to the continued existence of those species because the captive populations could produce more surplus animals to support future reintroduction efforts.

PROPOSED DESIGNATION EXPIRATION

PROPOSED EXPERIMENTAL POPULATION IS UNNECESSARILY LIMITED TO 12 YEARS

Problematic Expiration Date

Under the Proposed Rule, the designation would expire approximately 12 years after the first generation of adults return to the nonessential experimental population area. 76 Fed. Reg. at 28,716. This would allow for the return of three successive generations of reintroduced steelhead before the designation expires. *Id.* If NMFS retains the expiration date, the designation will be the first section 10(j) designation to include a specific expiration date.

ESA Experimental Population

The Proposed Rule acknowledges that other designations do not include an expiration date. *Id.* In the final rule that designated a nonessential experimental population of Rio Grande silvery minnow, for example, FWS did not provide a specific expiration date for the designation. 73 Fed. Reg. at 74,364. The preamble to that final rule states: "Our intent is for the 10(j) rule to remain in place until the status of the species improves to a point where listing is no longer necessary, as defined by the Draft Revised Recovery Plan or the final revised version, and the Rio Grande silvery minnow can be delisted." *Id.* Similar language that ties the expiration of a designation to biological factors can be found in the preambles to other 10(j) rules. *See e.g.*, 63 Fed. Reg. 52,824, 52,826 (Oct. 1, 1998) (establishing a nonessential experimental population of black-footed ferrets); 59 Fed. Reg. 60,266, 60,271 (Nov. 22, 1994) (establishing a nonessential experimental population of gray wolves).

Evaluation Period Urged

If NMFS decides to retain an expiration date in the final rule, the expiration should be tied biologically to the experimental nature of the population. Although the proposed expiration date is loosely based biologically on the return of three generations of adults following the first return of adult fish reared in the experimental population area, the Proposed Rule offers little biological rationale for the expiration date specified therein.

Since one of the stated restoration goals for MCR steelhead is the development of a self-sustaining run of MCR steelhead upstream of Pelton Round Butte, NMFS should extend the designation period for a fixed evaluation period after supplementation is terminated. The biological opinion for the Pelton-Round Butte Hydroelectric Project FERC Relicense anticipated that surplus hatchery steelhead fry from the Round Butte Fish Hatchery would continue to be outplanted for several generations. Thus, while data collected during the next 12 years will be helpful in assessing whether such outplanting has been successful, it will be of limited value in assessing whether the reintroduction is achieving the goal of creating self-sustaining runs.

As long as the population is supplemented, it should be considered "experimental" since self-sufficiency of an upper Deschutes natural-origin population cannot adequately be evaluated. An evaluation period following the end of artificial supplementation will be needed to assess the self-sustaining nature of the introduced population.

SIGNIFICANCE BEYOND THE DESCHUTES BASIN

Reintroduction Model

Once final, the Proposed Rule will likely provide a model for other reintroduction efforts. One reason is the coalescing of support that has emerged around this designation. For example, Oregon's entire congressional delegation supports this designation. In a March 9, 2010 letter to the Administrator of the National Oceanic and Atmospheric Association, all seven members of Oregon's delegation wrote in support of the effort to develop and implement this designation. The delegation's support is based on the premise that the Proposed Rule will serve as a model for successfully reintroducing listed species throughout the country while avoiding unnecessary controversies and unintended societal impacts.

Congressional Support

Oregon's congressional delegation stated, in part:

> We're pleased the National Oceanic and Atmospheric Administration, National Marine Fisheries Service is working with our constituents to use the Endangered Species Act to support the reintroduction of a federally protected species, and is doing so in a manner that promotes the social and economic needs of the broader community.

The designation was also supported by the Central Oregon Cities Organization, which represents Bend, Culver, La Pine, Madras, Maupin, Metolius, Prineville, Redmond, and Sisters. Redmond Mayor George Endicott, who chairs the Central Oregon Cities Organization, stated: "The designation protects central Oregon's economy and promotes the reintroduction of steelhead while mitigating any adverse impacts on the species while the communities are able to study potential impacts and develop plans to mitigate those impacts." Other reintroduction efforts, with the appropriate section 10(j) designations, will likely draw similar, broad-based support.

San Joaquin River

Outside of Oregon, the Proposed Rule will likely be of particular interest in the San Joaquin River Basin in California where spring-run chinook will be reintroduced into the San Joaquin River as part of a settlement agreement that was signed in 2006. That reintroduction will also be affected by legislation enacted subsequent to the 2006 settlement agreement. Under section 10011 of the Omnibus Public Land Management Act of 2009, Congress provided that "California Central Valley Spring Run Chinook Salmon shall be reintroduced in the San Joaquin River below Friant Dam pursuant to section 10(j) of the Endangered Species Act . . . ." However, a bill was introduced on May 11, 2011 that would repeal this section of the Omnibus Public Land Management Act of 2009. While NMFS is currently in the process of developing a proposed rule to designate an experimental population of spring-run chinook in the San Joaquin River, but interested parties are paying close attention to ensure that any such designation adequately protects water use activities from potential liability under the ESA once the reintroduction takes place.

Water Use Impact

ESA Experimental Population

Okanogan Reintroduction

As a further example, looking north of Oregon to Washington state, Upper Columbia River (UCR) spring Chinook was listed as an endangered species in 1999. 64 Fed. Reg. 14307 (Mar. 24, 1999). As part of the recovery plan, NMFS identified a potential reintroduction of UCR spring Chinook in the Okanogan basin, which is an area where the species was historically present but has since been extirpated. As with landowners and water users in the Deschutes basin, NMFS has recognized that such a reintroduction effort would need to be carried out "in a manner that does not increase ESA liabilities for landowners." Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan at 177 (Aug. 2007). The Proposed Rule provides a likely template for this reintroduction as well as for other basins contemplating reintroductions of listed anadromous species.

CONCLUSION

The proposed designation of MCR steelhead above Pelton Round Butte as a nonessential experimental population is consistent with the text and purpose of section 10(j) of the ESA, will benefit the recovery of MCR steelhead, and will protect local interests from liability for the incidental "take" of reintroduced steelhead. As such, the proposed designation has received broad-based support and should lead to the promulgation of a final rule designating an experimental population. Because the final rule would be the first such rule promulgated by NMFS, it will likely serve as a model for future designations by NMFS. Other anadromous fish reintroductions are already underway or are being contemplated. Those parties who are advocating for, or could be affected by, those reintroduction efforts should pay close attention to the developments associated with the proposed designation of MCR steelhead in the Deschutes Basin.

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The authors and Stoel Rives LLP represent the Deschutes Basin Board of Control (DDBC) and the City of Prineville (City) with respect to ESA-related matters, including the proposed designation of steelhead as a nonessential experimental population by the National Marine Fisheries Service. The views expressed by the authors in this article are solely those of the authors, and do not necessarily reflect the views of either DBBC or the City.

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Porosity Storage

Water Supply Needs Increasing

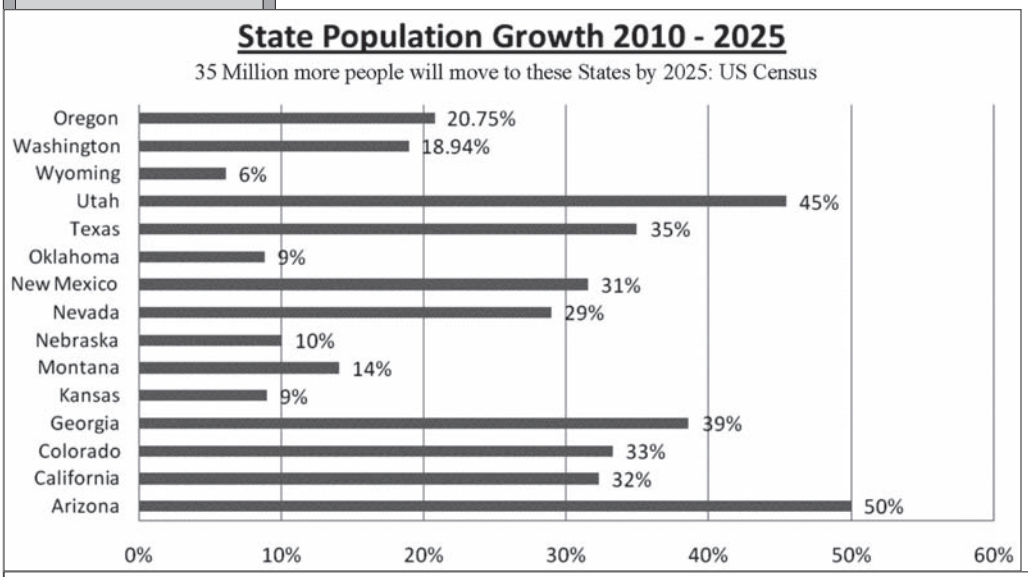
POROSITY STORAGE RESERVOIRS

A 21ST CENTURY SOLUTION FOR WATER STORAGE

by Matt Metcalf, PS Systems, Inc. (Lakewood, CO)
and William H. Fronczak, Perkins Coie (Denver, CO).

INTRODUCTION

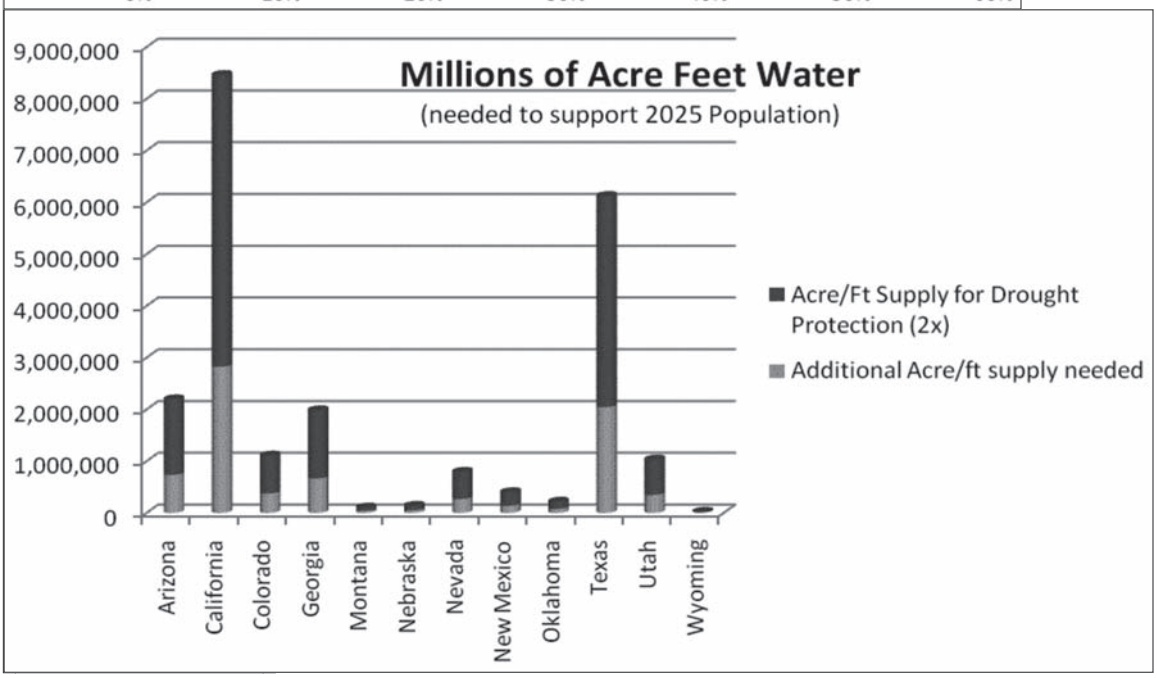
1.1 Billion. That's the number of people in the world — one out of every six — without access to clean water. Fortunately, as Americans, we have wealth and infrastructure to provide enough water to meet our needs for now. But what about tomorrow? Population growth and shift to the dry and arid southern and western US, recent droughts, global warming and antiquated water supply infrastructures will significantly strain future water supplies. Water rights will continue to become more valuable as water demand goes up, and new supplies become increasingly difficult and costly to attain. Supply side water conservation and 21st century innovations for water storage are critical now. Porosity Storage reservoirs store water in a near natural state, underground in alluvial deposits, atop bedrock, surrounded by water tight slurry walls. Porosity Storage overcomes many of the negative issues of traditional solutions, which we'll go into further in this article.



DEMAND FOR MORE WATER

As US population grows, a shift is in progress to states in the South and West. From 2000-2010 the South and West grew by 14.3% and 13.8% respectively, compared to only 3.9% growth in the Midwest and 3.2% in the North East. In the next 14 years, Utah, Arizona, Texas and Georgia will have grown by 35% or more.

With new population comes new water needs. Given the traditional formula of one acre-foot of water to supply two households for a year, at least 7.5 **m**illion **a**cre-**f**eet (MAF) of additional annual potable water will be needed by 2025 — for these states alone. If we factor in drought protection, at a conservative factor of 2x annual need, an additional 15 MAF of raw water storage is needed. This is just for public use water. It does not include the water needed for agricultural (crop & livestock) needs or other non-potable industrial needs. Providing more water requires a more economically feasible and environmentally friendly solution to store water.



Porosity Storage

Lake Mead Drawbacks

Evaporative Loss

ASR Costs & Uncertainty

PSR Benefits

Contaminant Slurry Walls

LAST CENTURY'S WATER STORAGE SOLUTIONS

Dams

Traditional dam (on and off stream) and reservoir systems were last century's solution to storing water. Dams take too long to permit and build, are too political, too expensive, and too destructive to the environment. Dams are being torn down rather than replaced. Water demand, drought, and global warming are having a severe impact on many dam systems in place. Lake Mead is a prime example.

At 115 miles long and occupying an area of over 1.5 million acres, Lake Mead is the largest man-made reservoir in the US. It supplies 90% of the public use water to the Las Vegas area and aqueducts send water to Southern California and Arizona. The rest of its waters flow to service Northern Mexico as well. In 1998, Lake Mead was full at an elevation of 1,219.6 feet — equivalent to 25.9 MAF of water. Drought and global climate change have dropped Lake Mead's water levels dangerously low. On November 27th, 2010, a record low of 1,081.89 was measured. The reservoir hadn't been this low since first full pool in 1941.

Lake Mead is filled by the Colorado River and its tributaries. A near record snow accumulation this year has helped boost Lake Mead to an elevation of 1,103 — as of July 5th. That produced a collective sigh of relief, but the reservoir is still 114 feet lower than 1998 and still only at 46% capacity. [Editor's Note: The US Bureau of Reclamation recently projected that Lake Mead will rise to 1115 feet elevation by the end of September (Personal Communication with Larry Walkoviak, USBR)]. Annual evaporative loss will vary based on capacity, but reports from the US Geological Service from 1953-1994 estimated 800,000 acre-feet of water, annually, were lost to evaporation. National security of such a large water source is also a major concern should terrorists (foreign, eco or local) target open reservoirs. While this example shows a reservoir operating within its designed purpose of spanning a drought period, one of the major problems is the ability of small to medium sized entities to meet their expanding needs near their service area.

Reclaimed Gravel Pits

All across Colorado and many other states, reclaimed gravel pits are used to store water. Like mini reservoirs, these water ponds are subject to high evaporative losses due to depth and surface area characteristics. Bringing this type of water storage vessel online is completely dependent on sand and gravel consumption and local economic value of sand and gravel. During the recent economic downturn, demand for sand and gravel has reduced significantly, causing multiple year delays in "reclaiming" the pit for water storage use. Location of gravel pits may also not be near where a city needs it — requiring potentially expensive infrastructure systems. Open water security, quality, and treatment of water are also serious issues.

Aquifer Storage and Recovery (ASR)

Storing water underground in natural or recharged aquifers started last century as a solution for water storage. This technology has some significant drawbacks, which makes implementation very limited. Water surplus (in supply and in treatment capacity) is often needed to "charge" or fill the aquifer. The Southwest's 11 year drought has had a huge impact on water surplus. Water then must be expensively treated twice — upon charging and when recovered. Finally, the biggest drawback is the actual amount of water that is recovered. Due to geologic and/or legal constraints, the ability to recover all of the water is uncertain and/or unlikely. System losses, treatment costs, and the lack of controlled water quantity and quality make ASR projects an expensive and uncertain solution.

21ST CENTURY TECHNOLOGY & SOLUTIONS FOR WATER SUPPLY MANAGEMENT

Porosity Storage Reservoirs

Successfully storing water underground and recovering it can now be done technically and at less cost than traditional solutions through a Porosity Storage Reservoir (PSR). Since this technology is new, the rest of this article will concentrate specifically on how this type of system is implemented and its benefits over older solutions.

Porosity Storage Reservoirs create a reservoir of water underground that is contained, controlled, retrievable, environmentally friendly, faster to implement, and at less cost than other options. PSRs also allow for surface development, and often require no environmental impact study. PSRs overcome surface evaporative loss and security issues that dams and reclaimed gravel pits cannot. Finally, PSRs can be built in many areas.

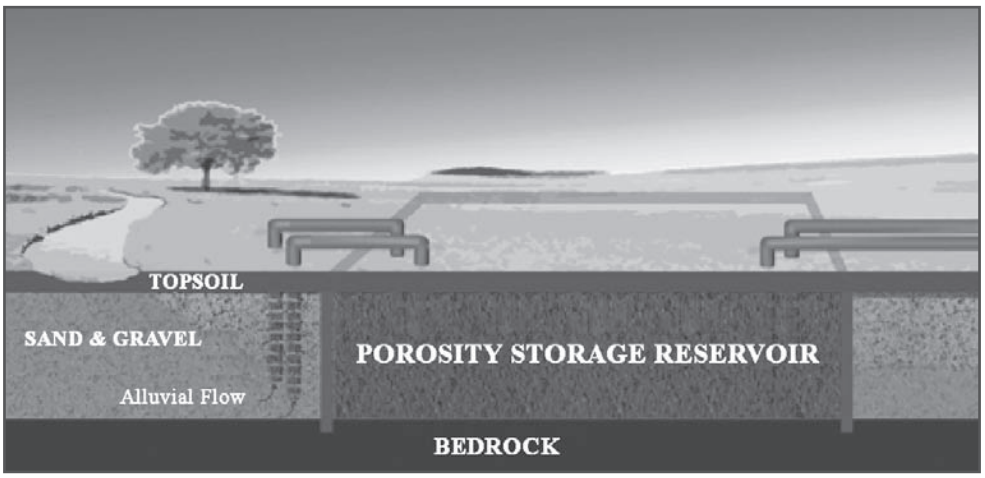
In Porosity Storage Reservoirs, water is stored underground in shallow alluvial deposits that are intentionally isolated, contained, measureable and controlled. The preferred method of containment is with the use of slurry walls. Slurry walls are made of natural materials and are self-sealing. Current technology allows walls to be constructed at depths as deep as 50 meters.

Porosity Storage

Practical Advantages

This storage vessel allows complete use of the stored water without impacting the surrounding water systems or natural habitats. Suppliers benefit from the advantages of storing water underground while maintaining dominion and control, an essential component of water resource management. Some of the benefits of this type of storage include the ability to choose advantageous locations, improved water quality and water quality consistency, no evaporative losses, short implementation timing, low permitting requirements, scalability to a large range of storage needs, conjunctive use of the land, and increased water security.

Pososity Storage Reservoir Depiction



Site Selection Factors

Porosity Storage Site Selection Process

Selection of the location best suited for a porosity reservoir is an extensive process with dozens of layers of data gathering, analysis, and review. These critical steps are necessary to ensure proper function through accurate design, implementation, and construction with accurate cost estimates.

Utilizing professional analysis, the PSR process involves:

- Analysis of land and location for geologic, legal, technical, and socio-political issues
- Legal analysis of water rights, including jurisdictional concerns
- Detailed geophysical analysis and modeling
- Hydrologic analysis for mitigation design and reservoir placement
- Environmental review
- Infrastructure design based on hydro-physical and geologic analysis

Multiple sites are evaluated and analyzed, allowing flexibility in reservoir site and budget — based on client parameters and needs. This thorough cost/benefit analysis saves time and money, and reduces delays.

Alluvial Deposit Sites

PSR Potential Locations

Available sites can be found in many parts of the United States and throughout the world. The most readily available sites are found in the alluvial deposits surrounding most river systems. Much of the arid Western US supports this type of water storage and offers substantial storage potential.

Site sizes can range from one hundred acres to thousands of acres of land with storage capacities of a few hundred acre-feet of water to tens of thousands of **a**cre-**f**eet (AF). For Example: one site located in Colorado was estimated at 405 surface acres and would have a potential storage capacity of 4,500 AF. This analysis was based on estimated porosity, system performance, and alluvial depth using the site identification process.

Performance Testing

Porosity Storage Reservoir Site Testing

After initial data has been gathered and reviewed, potential site testing and analysis are then completed. This process includes detailed near-surface geophysics, hydro-physics, wall compatibility, water compatibility, site alignment, and mitigation system design. A final economic and legal analysis is completed and communicated. At this stage, porosity testing and reservoir performance can be determined. Each portion of this analysis contains multiple specific points of analysis, which are vital to ensure legal and regulatory compliance, as well as the end-user specified performance standards. In most cases the site selection and testing process can be completed in six months or less.

Porosity Storage

Short Implementation

PSR Construction

After all geo-physic, hydrological, regulatory, land use, and legal issues have been answered and the project has been approved to proceed, design and construction move forward. Surface disruption often times lasts less than one year and involves only a small portion of the surface area. The site identification, design, and construction period can be completed in less than two years in most cases.

The extensive design and review process gives all parties involved several go/no-go decision points. This allows potential users the ability to control costs, timing, and spending. The initial review or identification of potential sites can be completed very quickly and cost effectively. This type of storage can be developed in a fraction of the time of other options. The short implementation time and low permitting requirements make Porosity Storage a fast, efficient, scalable water storage solution.

Beneficial Applications

Applications

PSR has a wide range of beneficial applications for water suppliers and end-users:

- **Scalability**: The ability to scale each reservoir to meet the needs of the user gives water providers increased flexibility for projects and development of new supplies independently.
- **Clean/consistent water**: Proper design and utilization can provide a sustainable natural process for filtering the water, which gives a consistent and reliable water quality that can significantly reduce the costs of treatment.
- **Supply-side conservation**: The ability to eliminate evaporative loss provides more water for use and less system losses, saving money and helping to conserve valuable natural resources.
- **Secure water supply**: Containing the water underground makes the water source more difficult to contaminate intentionally or unintentionally. Water is secure and monitored to ensure a clean water supply is always available.
- **Environmental assets**: Reservoirs can be placed under open space and other areas to provide environmental preservation. Disruption during construction affects only a fraction of the surface area and is temporary, often complete in months when coordinated and planned properly.

Time Value

Cost

The cost of this type of storage is extremely competitive when compared to current options. When factoring the 1:1 ratio of water stored to water recovered, little to no treatment costs, and security and environmental strengths, porosity reservoirs will be the de facto standard for water storage in the next 10 years. The ability to have PSRs up and running in less than three years provides a significant cost savings of time versus money (some dam/reservoir projects take 10-20 years to develop). The rising costs of construction over time make long-term projects increasingly costly, difficult to budget, and even more difficult to predict accurately. From 2003 through 2010, the ENR Cost of Construction index has risen 31.48% overall. Creating storage in such a relatively short time period can reduce the financial strain associated with developing water supplies significantly. This time value cost savings dramatically reduces the financial burden for communities and water suppliers.

CONCLUSION

proactive approach

Using Porosity Storage to create efficient storage in years instead of decades gives water professionals an additional option and increased flexibility to help secure their clients' water development needs now and for the future. Spending millions on large dam projects that take decades can be replaced by short timeline, efficient storage that can be explored quickly and cost effectively when the proper steps are taken.

Porosity Storage Reservoirs provide controlled, contained, secure, underground water storage. It's a 21st Century solution that works to solve the complex issues of water storage. PS Systems Inc. of Colorado currently holds three patents for this technology and has developed the processes described above.

For Additional Information:

William Fronczak, 303/ 291-2310 or WFronczak@perkinscoie.com

Matt Metcalf is the Director of Operations for PS Systems, Inc. in Lakewood, Colorado. PS Systems, Inc. is the inventor of this technology and current holds various U.S. Patents regarding this technology.

William H. Fronczak, Esq. is an attorney with Perkins Coie LLP in Denver. Mr. Fronczak is PS System, Inc.'s environmental and water right legal counsel and is a contact for the company regarding this technology.

WATER BRIEFS

FULLY APPROPRIATED NE

STATE SUPREME COURT DECISION

On June 3, the Nebraska Supreme Court (Court) reversed a 2009 determination by the State of Nebraska Department of Natural Resources (DNR) that the Lower Niobrara River Basin was "fully appropriated" as of 2008. *Middle Niobrara Natural Resources District v. Department of Natural Resources*, 281 Neb. 634 (June 3, 2011); Case No. S-09-1311. A "fully appropriated" designation requires the State's **n**atural **r**esources **d**istricts (NRDs), which regulate groundwater in the basin, to undertake significant and costly land management practices to sustain a balance between water uses and water supplies. The Court found that the DNR's determination was "arbitrary and invalid" due to the way DNR arrived at its determination. DNR will be required to revisit its determination that the river is fully appropriated following the Court's decision. The decision could potentially clear the way for new well permits and surface water appropriations in the basin.

In its 2006 and 2007 annual reports, DNR had determined that the Niobrara was *not* fully appropriated. DNR's fully appropriated designation "was triggered by a 'call' for diversion rights by NPPD [Nebraska Public Power District]. A call by a senior appropriator, meaning an appropriator with an earlier-in-time right to use water, is a request that the Department close the rights to divert water belonging to junior appropriators upstream of the senior appropriator" in order to increase the streamflow "to satisfy the senior appropriator's right to divert water." *Id*. at 636. NPPD holds three surface water rights in the Niobrara totaling 2,035 cubic feet per second with priority dates of 1896, 1923, and 1942 to produce hydropower. The appellants are four NRDs that regulate groundwater in the basin, who contended the basin wasn't fully appropriated and disputed DNR's 2008 methodology for its "fully appropriated" calculation. NPPD's call in March 2007 was the first time NPPD made such a call in 50 years. In May 2007, DNR issued closing notices to stop some 400 junior appropriators from diverting water for the benefit of NPPD's hydropower facility.

The Court's decision that DNR's "fully appropriated" determination was arbitrary and invalid was based on its finding that the DNR "failed to comply with its own regulations when it determined that the basin was fully appropriated by comparing the streamflow values at a specific diversion point or streamflow gauge to a senior appropriator's total appropriation rights. A review of its previous reports also show a complete lack of consistency in the way it has applied its 20-year averaging methodology. Finally, we conclude that the Department has failed to plainly describe its methodologies so that they can be replicated and assessed in compliance with § 46-713(1)(d)." *Id*. at 657-658. The statute cited by the Court requires DNR "to use the best available scientific data, information, and methodologies to prepare its annual report." *Id*. at 656. That statute also requires DNR, in its yearly evaluation of the state's river basins, to "provide sufficient documentation to allow these data, information, methodologies, and conclusions to be independently replicated and assessed." *Id*. at 638.

The Court also addressed the issue raised by the NRDs, that the director of DNR improperly assumed that NPPD's appropriations were valid. "The director's reasoning that a challenge to a call is irrelevant after the department has issued closing notices is incorrect. Until a challenge is decided, the director is not at liberty to conclude that it is without merit." *Id*. at 649.

The opinion clearly showed the Court's displeasure with the determinations made by DNR. Perhaps most telling is the statement by the Court that "the Department could have avoided this dispute by simply following its own regulations." *Id*. at 649.

On June 29, Brian Dunigan (Director of DNR) issued a "Revised Order of Final Determination" for the Lower Niobrara River Basin. The Order states that, "The Department's final determination is that the Lower Niobrara River Basin is not fully appropriated, and…A [new] stay is hereby entered on the issuance of any new natural-flow, storage or storage-use appropriations in the area of the Lower Niobrara River Basin below Mirage flats and above the Spence Hydropower facility." The new stay on appropriations was adopted to give the local natural resources districts time to develop "the necessary rules and regulations for prioritizing the issuance of new well permits." DNR News Release, June 7, 2011. The Revised Order included a provision that "the natural resources districts…shall adopt rules and regulations and existing stays shall remain in effect until adoption of those rules and regulations."

For info: James Schneider, Deputy Director, DNR, 402) 471-2363 or jim.schneider@nebraska.gov; Case available at: www.supremecourt.ne.gov/opinions/2011/june/jun3/s09-1311.pdf; Revised Order by DNR at: http://dnr.ne.gov/NewsReleases/NiobraraOrder62011.pdf

LAKE LANIER RULING GA/AL/FL

FEDERAL PURPOSE - WATER SUPPLY

On June 28, the US Court of Appeals, 11th Circuit (Court), issued a ruling that allows Lake Lanier to be used by Atlanta, Georgia and Gwinnet County for water supply purposes. In the *MDL 1824 Tri-State Water Rights Litigation,* Case No. No. 09-14657 (6/28/11) the Court reversed a lower court decision and eliminated a July 2012 deadline that would have forced Atlanta to find a new source of water for approximately three-fourths of its supply. In the more than twenty-year long litigation, Alabama and Florida sued the US Corps of Engineers (Corps) and Georgia over water rights in the Apalachicola-Chattahoochee-Flint (ACF) Basin, with the primary issue being whether or not water supply was an authorized purpose of the Corps' Buford Project (Corps' authority to operate Buford Dam and Lake Lanier).

The Court's decision held that water supply was one of the purposes authorized for Lake Lanier and remanded the case to give the Corps one year to determine its authority to allocate storage to water supply. The Corps was ordered to determine the extent of its authority under the 1946 Rivers and Harbors Act (aka "Newman Report") and then determine its authority pursuant to the 1958 Water Supply Act (WSA). "The authority under the WSA will be in addition to the Corps' authority under the RHA

WATER BRIEFS

and the 1956 Act." *Id.* at 84. The 1956 Act authorized the Corps to contract with Gwinnett County to withdraw 10 million gallons of water per day.

The case involved several jurisdictional issues and substantive claims that may also be of interest. The decision includes a discussion (although it is dicta and not of precedential value) that concerns a "taking" of riparian interests and the right of the federal government to make alterations to navigable waters. *Id.* at 80-82.

The Court's decision consisted of four parts. First, the Court held that the lower court did not have jurisdiction to hear the various consolidated cases because the Corps had not taken final agency action. Thus, the case was remanded to the Corps to take a final agency action. "Second, the district court and the Corps erred in concluding that water supply was not an authorized purpose of the Buford Project under the RHA." Next, the Court found that the 1956 Act regarding the Corps' contract with Gwinnett Count did not expire after 50 years and that Gwinnett County's contractual and just-compensation claims are without merit. "And finally, the Corps shall have one year to make a final determination of its authority to operate the Buford Project under the RHA and WSA." *Id.* at 6.

Even though the Water Supply Act was passed in 1958 — after Buford Dam had been constructed — the Court stated that the WSA "was designed to allocate some storage in multi-purpose projects like Buford to water supply." *Id.* at 16. After some discussion regarding the purpose of the Act and limitations on authorization, the Court decided that, "In the case of Buford, the WSA's grant of authority for water supply constitutes a supplement to any authority granted by the 1946 RHA." *Id.* at 17.

The 95-page opinion contains a detailed section regarding the history of the project and litigation, discussion of the relevant pieces of legislation, and insight into the 11th Circuit's view of authorized purposes for Corps' projects. Ultimately, as the Court notes, it "will provide some guidance and instruction for the Corps pertaining to its analysis of its water supply authority on remand." *Id.* at 34.

For info: 11th Circuit Decision and additional background info at Atlanta Regional Commission website: www.atlantaregional.com/environment/tri-state-water-wars

CRIMINAL CWA VIOLATION WA

DARIGOLD PLEADS GUILTY

On June 15, Darigold, Inc., the nation's fourth largest dairy cooperative, plead guilty in US District Court in Seattle to violations of the federal Clean Water Act (CWA), in connection with an October 2009 discharge of an ammonia solution from the company's dairy processing plant at Issaquah, Washington into the East Fork of Issaquah Creek. The release killed a significant number of fish, including several adult Chinook salmon, which are listed as threatened under the federal Endangered Species Act. Under the terms of the plea agreement, the government and Darigold will jointly recommend imposition of a sentence to include development and implementation of a corporate environmental compliance plan covering thirteen processing facilities located in five western states, payment of a $10,000 criminal fine, and payment of a $60,000 community service payment targeted toward protecting and restoring vital natural resources in the Issaquah Creek watershed. Darigold, also agreed to publicly apologize for its criminal conduct by publishing a statement in the Issaquah Press newspaper. Sentencing is scheduled for September 13, 2011.

According to the plea agreement, on October 7, 2009, members of the Washington State Department of Fish and Wildlife (WDFW) were conducting a fish survey on the East Fork of Issaquah Creek in the vicinity of the Darigold plant when they detected a strong odor of ammonia and noticed dead fish in the water. Further investigation revealed that during a repair of a refrigeration unit at the plant, an ammonia solution had been discharged to the roof of the building, and no steps were taken to keep the ammonia solution contained. The solution was allowed to run into an open roof drain which emptied into storm drains. The storm drains discharged directly into the East Fork of Issaquah Creek. Gerald Marsland, the Engineering Manager for Darigold's Issaquah plant directed the repairs and failed to take steps to prevent the ammonia spill. Marsland is charged with negligently discharging a pollutant and was scheduled for a plea hearing on June 16, 2011.

In October 2010, the Washington State Department of Ecology (Ecology) fined Darigold $10,000 for the discharge. The $60,000 community service payment will go to the US Fish and Wildlife Service's Puget Sound Marine Conservation Fund. The funds will be directed towards projects directly impacting the Issaquah Creek watershed. "The corporate environmental compliance plan to which Darigold has committed will require the company to address not only the conduct that lead to this spill, but other business practices impacting our environment," said US Attorney Jenny A. Durkan.

The case was investigated by the EPA and NOAA's Office of Law Enforcement with assistance from Ecology and WDFW. The case is being prosecuted by Assistant US Attorney Jim Oesterle, who leads the US Attorney's Office Working Group on Environmental Crimes.

For info: Emily Langlie, US Attorney's Office, 206/ 553-4110 or Emily.Langlie@USDOJ.Gov

FRACKING - DIESEL US

STAKEHOLDER INPUT

EPA has been holding technical seminars to solicit input and establish the scope of forthcoming guidance on the regulation of hydraulic fracturing operations that use diesel fuel as a fracturing fluid. The guidance is intended to implement EPA's 2010 determination that such operations require Class II injection permits under the Safe Drinking Water Act (SDWA). Although the Energy Policy Act of 2005 exempted most hydraulic fracturing operations from regulation under the SDWA, the exemption does not apply to the use of diesel fuel in hydraulic fracturing. Issues that EPA has identified for consideration in the guidance include the threshold proportion of diesel fuel used in drilling fluid to subject an operation to SDWA regulation; studies required to evaluate

the risk that drilling operations will contaminate drinking water supplies; and the minimum area around a wellhead that must be examined for drinking water impacts. EPA is expected to release full draft guidance later this summer after processing comments. EPA's presentation on the forthcoming guidance is available online.
For info: http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/

ENFORCEMENT REPORT CA
4TH ANNUAL REPORT AVAILABLE

The State Water Resources Control Board (Board) of California recently announced that its Annual Enforcement Report for 2010 is now available on the Water Boards website. The report uses many of the performance measures described in the Baseline Enforcement Report. It also includes a description of the enforcement activities of the Division of Water Rights.

The report covers calendar year 2010 and highlights the resources available for the Board's five core regulatory programs enforcement and the enforcement actions achieved with those resources. It illustrates some of the challenges faced by the Water Boards in bringing enforcement actions and provides an update on the status of the recommendations included in previous reports.

The "*Water Quality Enforcement Highlights*" noted in the report that "Violations receiving enforcement" increased from 6,668 to 8,300 (2009 to 2010), while the "Penalties Assessed" actually dropped from $20 million to $13 million for that time period.
For info: www.waterboards.ca.gov/water_issues/programs/enforcement/docs/annl_rpt2010.pdf

WATER BANKS WA
GROUNDWATER MITIGATION

Two new water banks starting up in Kittitas County, Washington will provide more water supply opportunities. Currently, new groundwater withdrawals must be offset by an existing senior (specifically, pre-1905) water right. In the upper Kittitas Valley, the SwiftWater Ranch Water Bank offers mitigation for new groundwater uses for projects in the lower Teanaway River Basin; and in the lower Kittitas Valley, the Williams-Amerivest Manastash Creek Water Bank will offer senior water right coverage from the Thorpe area downstream to the entrance of the Yakima River Canyon below Ellensburg.

"More options are becoming available in areas where mitigation water hasn't been available to new residential water users," explained Bob Barwin, with the Department of Ecology's water resources program. "Those with senior water rights are finding opportunities to market their water where they decide they no longer require it for their own use." Senior water rights offered through the banks provides mitigation for impacts to the Yakima River sustained by new groundwater pumping in the area. The mitigation water assures that new groundwater uses don't compromise the Yakima Basin Total Water Supply Available (TWSA) managed by the US Bureau of Reclamation Irrigation Project, serving senior water users downstream.

Water rights for both banking programs are being transferred into the state's Trust Water Right Program. The trust water rights will vary in effectiveness to serve as mitigation for new groundwater users, depending primarily on where the proposed new use of groundwater will be located. Ecology has also recently published its 2010 Report on Water Banking (see below).
For info: Joye Redfield-Wilder, Ecology, 509/ 575-2610 or jred461@ecy.wa.gov; Kittitas Water Exchange at: www.ecy.wa.gov/programs/wr/cro/wtrxchng.html; *2010 Report to the Legislature: Water Banking in Washington State* at: www.ecy.wa.gov/biblio/1111072.html

WATER/WASTEWATER-EPA US
TRIBAL WORKSHOPS

EPA is sponsoring a series of in-person training workshops for federally recognized tribes and Alaskan Native Villages across the country to help increase participants' skills and knowledge in the operation of wastewater and drinking water treatment systems. The training is intended for water system operators, wastewater system operators, tribal utility managers, tribal council members, and leaders involved with water utility management. There is no registration fee for the workshops. There is a cap of 50 participants at each session, and tribes and Alaskan Native Villages that received 2009 American Recovery and Reinvestment Act (ARRA) funds will be given priority.

Registration is now open for training workshops in Billings, Montana on July 26-28, 2011 and in St. Paul, Minnesota on August 9-11, 2011.
For info: Leon Latino, Office of Wastewater Management (EPA), 202/564-1997 or latino.leon@epa.gov; http://water.epa.gov/learn/training/tribaltraining/tcourse7_2011.cfm

FISH CONSUMPTION OR
REVISED WATER QUALITY STANDARDS

On June 16, the Oregon Environmental Quality Commission (EQC) approved new water quality standards designed to reduce or prevent toxic pollutants in Oregon waterways and add health protections for people using state rivers and streams for fishing, drinking water and other purposes. The new state standards will go into effect pending US EPA approval.

The Oregon Department of Environmental Quality (DEQ) developed the new standards over the past several years through a collaborative effort with EPA, tribal governments and a host of industrial, municipal and environmental groups, as well as through an extensive scientific review and public comment process. *See* Williams, *TWR* #32. The revised standards are expected to improve health protection for those using Oregon waters by requiring pollution sources to take targeted actions where needed to reduce toxic pollutants discharged into those waters. These actions will in turn help sources achieve the new water quality standards. Any needed reductions will be reflected in discharge permits these sources operate under and as called for in the federal Clean Water Act (CWA).

A gap in the level of human health protection provided by Oregon's existing water quality standards formed the basis of EPA's June

WATER BRIEFS

2010 disapproval of Oregon's 2004 proposed human health criteria for toxic pollutants. EPA determined that the human health criteria based on a 17.5 grams per day fish consumption rate did not adequately protect all Oregonians. After EPA rejected DEQ's 2004 rules, the criteria reverted back to even less protective values based on a fish consumption rate of 6.5 grams per day — equal to less than one 8-ounce fish serving a month. In 2006, DEQ enlisted the aid of public health experts to examine fish consumption studies relevant to Oregon, and subsequently proposed criteria based on a 175 grams-per-day fish consumption rate — equivalent to about 23 fish or shellfish meals a month.

EPA deems the 175 grams per day rate more accurate in depicting actual fish consumption by all Oregonians, including tribal members, who eat more fish than the typical Oregonian. EPA must approve the new toxics criteria based on the higher fish consumption rate, which will likely happen this year.

The new standards that include the protective toxics criteria are expected to affect cities and facilities that are permitted to discharge one or more regulated pollutants to state waters. Forestry, agricultural, construction and other activities may also be affected by the new standards. DEQ is clarifying how it will interact with the Oregon Departments of Agriculture and Forestry to help pollution runoff sources implement management practices to reduce toxic runoff from farm and timber lands.

As part of the revisions approved, DEQ will also offer new permitting implementation tools to assist dischargers in making changes. Several of these tools take into account levels of background pollutants already present in a discharger's intake water through intake credits and a site-specific background pollutant provision. If a facility cannot meet discharge limits based on the new standards, it may be able to qualify for a variance. It would then apply for a variance, which includes development of a pollutant reduction plan approved and monitored by DEQ. DEQ and EPA have coordinated and agreed on a process to review variances expeditiously.

For info: Neil Mullane, DEQ, 503/229-5327; DEQ's Human Health Rule webpage: www.deq.state.or.us/wq/standards/humanhealthrule.htm

WATERS OF THE US — US

CLEAN WATER ACT DEFINITION

EPA and the US Army Corps of Engineers have extended the public comment period by 30 days for the draft guidance on "*Identifying Waters Protected by the Clean Water Act*." In response to requests from state and local officials, as well as other stakeholders, EPA and the Corps will take additional comment until July 31, 2011 on this important draft guidance that aims to protect US waters. These waters are critical for the health of the American people, the economy and ecosystems in communities across the country.

The guidance has been the source of considerable controversy since it will determine how far jurisdiction under the CWA extends to "waters of the US." (*See* Glick, *TWR* #87) As noted on the website below, "over the past decade, interpretations of Supreme Court rulings removed some critical waters from Federal protection, and caused confusion about which waters and wetlands are protected under the CWA. As a result, important waters now lack clear protection under the law, and businesses and regulators face uncertainty and delay. EPA and the U.S. Army Corps of Engineers have developed draft guidance for determining whether a waterway, water body, or wetland is protected by the Clean Water Act."

This change in the public comment period will not impact the schedule for finalizing the guidance or alter the intent to proceed with a rulemaking. The original 60-day public comment period was originally set to expire on July 1, 2011.

Republican senators have weighed in on the guidance proposed, with 41 senators sending a letter to EPA Administrator Lisa Jackson and Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works, highly critical of the guidance. "More than clarifying [how the agencies understand existing requirements of the CWA], they greatly expand what could be considered jurisdictional waters through a slew of new and expanded definitions and through changes to applications of jurisdictional tests. This guidance document improperly interprets the opinions of the plurality and Justice Kennedy's opinion in *Rapanos*…by incorporating only their expansive language in an attempt to gain jurisdictional authority over new waters, while ignoring both justices' clear limitations on federal CWA authority… We respectfully request you abandon any further action on this guidance document."

For info: EPA website: http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm

WATER SETTLEMENT — NM

LOWER RIO GRANDE DISPUTES

An Agreement in Principle was reached on June 8 between the State of New Mexico, Southern Rio Grande Diversified Crop Farmers Association (SRGDCFA), New Mexico Pecan Growers Association (NMPG), and the Elephant Butte Irrigation District (EBID) to resolve longstanding disputes over surface water and groundwater in the Lower Rio Grande. The settlement resolves several important issues within the Lower Rio Grande Stream System Adjudication and parties have agreed to submit to the adjudication court terms consistent with conditions in the Agreement.

Among other terms, as part of the Agreement the State will adjudicate a surface water right for all 90,640 acres within EBID. Pursuant to this agreement, EBID members shall take full delivery of their surface water allotment. The non-State parties to the settlement understand and accept that the New Mexico State Engineer has an obligation to supervise the apportionment of groundwater in the Lower Rio Grande, including groundwater rights covered by this settlement. To meet his obligation, the State Engineer will, as necessary, implement priority administration in the Lower Rio Grande in accordance with the law. The non-State parties and EBID will work in good faith with the State Engineer and others to develop a regulatory framework for priority administration and/or alternative administration with the objective of

WATER BRIEFS

reaching and supporting a consensus on the details of the administrative systems.

The Agreement in Principle will be incorporated into a final settlement. Upon approval of a final settlement agreement by the Court, that final agreement will supersede an agreement reached by the State with pecan growers in 2008.

For info: Karin Stangl, SEO, 505/ 699-4923; Agreement copy will soon be posted on SEO's website under "Hot Topics" at: www.ose.state.nm.us

ESA WORKPLAN US

FWS & PLAINTIFFS' REACH AGREEMENT

The US Department of the Interior's Fish and Wildlife Service (FWS) recently announced that it is further strengthening a work plan that will allow the agency to focus its resources on the species most in need of protection under the ESA.

The FWS agreements with the Center for Biological Diversity and WildEarth Guardians (frequent plaintiff groups) announced on July 12th builds on a multi-year work plan that FWS filed in the US District Court for the District of Columbia on May 10, 2011. If approved by the Court, the work plan will enable FWS to systematically, over a period of six years, review and address the needs of more than 250 candidate species to determine if they should be added to the Federal Lists of Endangered and Threatened Wildlife and Plants. The agreement also includes additional scheduling commitments for a small subset of the actions in the work plan. The work plan is available at: www.fws.gov/endangered/improving_ESA/listing_workplan.html.

ESA "candidate species" are plants and animals for which FWS has sufficient information on their biological status and threats to propose listing them as endangered or threatened under the ESA. FWS maintains a Candidate List that is reviewed and published annually, entitled the "*Candidate Notice of Review*" (CNOR). A list of candidate species is available at: www.fws.gov/endangered/improving_ESA/listing_workplan.html

FWS also recently launched a joint effort with NOAA Fisheries Service to identify and implement administrative changes to the ESA aimed at accelerating recovery of imperiled species, enhancing on-the-ground conservation delivery, and better engaging the resources and expertise of partners to meet the goals of the ESA. See: www.fws.gov/endangered/.

For info: Vanessa Kauffman, FWS, 703/ 358-2138 or vanessa_kauffman@fws.gov

SPOTTED OWL RECOVERY NW

REVISED FWS PLAN

On June 30th, FWS released a final revised recovery plan for the threatened northern spotted owl, stepping up actions that so far have helped stem but not reverse the old-growth forest raptor's decline. The revised plan identifies three main priorities for achieving spotted owl recovery:

1) Protecting the best of its remaining habitat — The habitat protections provided under land use plans on federal land will continue to be a focus of recovery, but protection of other areas is likely needed to achieve full success (including some of the lands previously slated for potential timber harvest on federal lands, and possibly non-federal lands in certain parts of the owl's range where federal lands are limited);
2) Actively managing forests to improve forest health — making forest ecosystems healthier and more resilient to the effects of climate change and catastrophic wildfire, disease, and insect outbreaks. This involves an "ecological forestry" approach in certain areas that will restore ecosystem functioning and resiliency. This may include carefully applied prescriptions such as fuels treatment to reduce the threat of severe fires, thinning, and restoration to enhance habitat and return the natural dynamics of a healthy forest landscape. FWS recommends this approach in areas where it promotes ecosystem function and is in the best long-term interest of spotted owl recovery;
3) Reducing competition from barred owls, a native of eastern North America that has progressively moved into the spotted owl's range in Washington, Oregon, and northern California. Most of the recovery actions FWS has carried out since finalizing the spotted owl's 2008 recovery plan deal with the barred owl threat. A major part of this is developing a proposal for experimental removal of barred owls in certain areas to see what effect that would have on spotted owls, and then to evaluate whether or not broad scale removal should be considered. This portion of the 2008 plan was not significantly revised.

FWS will use the recovery plan to work with land managers in the Pacific Northwest such as the US Forest Service and Bureau of Land Management, as well as other federal and non-federal landowners, to advise them on habitat management activities that can benefit the spotted owl and contribute to improved forest health.

Because about 20 million acres of US Forest Service lands and about two million acres of Bureau of Land Management lands are potentially affected by recovery plan recommendations, the three agencies worked together on key recommendations related to forest management.

The revised recovery plan does not include recommendations from the 2008 plan for a new habitat conservation network of "Managed Owl Conservation Areas." Rather than creating a potentially confusing new land classification, the plan identifies the scientific rationale and parameters for habitat protection and will revise the spotted owl's designated critical habitat to reflect the latest scientific information about areas essential for the owl's recovery. Identifying this habitat through the critical habitat process — as the ESA intended — will be more efficient and provide land managers and the public with additional opportunities for review and comment.

For info: Janet Lebson, FWS, 503/ 231-6179 or janet_lebson@fws.gov FWS website: www.fws.gov/oregonfwo.

CALENDAR

July 14-15 NM
Natural Resource Damages Seminar, Santa Fe. Inn & Spa at Loretto. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

July 16 CA
American River: Ecology, Resource Management & Whitewater, Lotus. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

July 18-20 CA
Wild & Scenic Tuolumne River: Ecology & Water Resources Management Course, Groveland. On-river Lectures. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

July 18-21 FL
Membranes Are The Solution Conference & Exposition, Miami Beach. AMTA/SEDA 2011 Joint Conference. For info: American Membrane Technology Ass'n, 772/ 463-0820 or www.amtaorg.com

July 19 OR
Salmon, Science & the Urban Challenge Brownbag, Portland. Portland Bldg. Auditorium, 1120 SW Fifth Ave. (2nd Fl). For info: Rick Bastasch, City of Portland, 503/ 823-0275 or www.portlandonline.com/river

July 19-22 IL
National Assoc. of Clean Water Agencies Summer Conference, Chicago. For info: National Assoc. of Clean Water Agencies, 202/ 833-2672 or www.nacwa.org

July 20 CA
Agricultural Water Use Efficiency Workshop, Sacramento. Cal/EPA Bldg., 1001 I Street. Presented by State Water Resources Control Board. For info: Steve McMasters, SWRCB, 916/ 341-5716, smcmasters@waterboards.ca.gov or www.calepa.ca.gov

July 20-22 CO
36th Annual Colorado Water Workshop, Gunnison. Western State College. Presented by the Colorado Water Workshop. For info: Jeff Selen, CWW, 970/ 943-3162, jsellen@western.edu or www.western.edu/academics/water

July 21-23 NM
Rocky Mt. Mineral Law Foundation 57th Annual Institute, Santa Fe. Convention Ctr. For info: www.rmmlf.org

July 25-27 CO
National Water Resources Ass'n Western Water Seminar, Colorado Springs. For info: NWRA, 703/ 524-1544 or www.nwra.org/

July 25-27 CA
Wild & Scenic Tuolumne River: Ecology & Water Resources Management Course, Groveland. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

July 27-29 OR
Western States Water Council Summer Meeting, Bend. The Riverhouse Hotel & Convention Ctr. For info: WSWC, www.westgov.org/wswc/166mtg.html

July 27-29 CA
Environmental Forensics Course, Los Angeles. For info: ETI - ETC, 800/ 481-0321 or www.etietc.com

August 2-4 MT
Multiple Indicator Monitoring of Stream Channels & Streamside Vegetation Training, Miles City. BLM Office. First Come, First Serve. For info: Mike Philbin, BLM, mphilbin@blm.gov

August 3-4 OR
Ocean Renewable Energy Conference, Portland. Oregon Convention Ctr. For info: www.oregonwave.org/events/2011-conference/

August 4-5 NM
New Mexico Water Law SuperConference, Santa Fe. Inn & Spa at Loretto. For info: CLE International, 800/ 873-7130 or website: www.cle.com

August 8-9 CA
Groundwater: Cities, Surburbs & Growth Areas - Remedying the Past/Managing for the Future Conference, Los Angeles. Hilton Los Angeles Airport. For info: National Groundwater Ass'n, 800/ 551-7379 or www.ngwa.org/

August 11-12 AZ
Arizona Water Law Conference, Phoenix. Biltmore Spa & Resort. For info: CLE International, 800/ 873-7130 or website: www.cle.com

August 15-17 NC
ASIWPCA Annual Meeting 2011, Charleston. Francis Marion Hotel. For info: Ass'n of State & Interstate Water Pollution Control Administrators, www.asiwpca.org/

August 17 AZ
Drivers of Household Water Conservation in a Decade of Drought (WRRC Brown Bag), Tucson. Sol Resnick Conf. Rm., 350 N. Campbell Ave. For info: Jane Cripps, Water Resources Research Center, 520/ 621-2526 or jcripps@cals.arizona.edu

August 17 CA
2011 Regulatory Summit: Managing Water Quality in Today's Regulatory Environment, Pasadena. Hilton Hotel. Sponsored by Ass'n of California Water Agencies. For info: www.acwa.com/events/

August 21-25 CA
10th Annual StormCon Conference & Exposition, Anaheim. Anaheim Mariott. For info: www.instreamflowcouncil.org/flow2011

August 21-27 Sweden
World Water Week: Responding to Global Changes - Water in an Urbanizing World, Stockholm. For info: www.worldwaterweek.org/

August 23-25 MT
Settlement of Indian Reserved Water Rights Claims Symposium, Billings. Crown Plaza Hotel. Sponsored by Western States Water Council and Native American Rights Fund. For info: www.westgov.org/wswc

August 24 WEB
Talking About Water: Vocabulary & Images that Support Informed Decisions about Water Recycling & Desalination Webinar, WEB. For info: http://watereuse.org/

August 25 WA
Columbia River Toxics Reduction Working Group Meeting, Spokane. Dept. of Ecology. For info: Mary Lou Soscia, EPA, 503/ 326-5873 or Soscia.Marylou@epamail.epa.gov

August 25-26 CO
Colorado Water Law Conference, Denver. For info: CLE International, 800/ 873-7130 or website: www.cle.com

August 25-26 CA
CEQA Conference, San Francisco. Hotel Nikko. For info: CLE International, 800/ 873-7130 or website: www.cle.com

August 26 CO
Hydraulic Fracturing Conference, Denver. Grand Hyatt. For info: CLE International, 800/ 873-7130 or website: www.cle.com

August 26 CA
GIS for Watershed Analysis: Intermediate Course, Davis. UC Davis, Plant & Environmental Sciences. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

September 7 CA
Wetlands Regulation & Mitigation Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

September 9 OR
Oregon Environmental Cleanup: Portland Harbor & Beyond Seminar, Portland. For info: Holly Duncan, Environmental Law Education Center, 503/ 282-5220 or hduncan@elecenter.com

September 11-14 AZ
Watereuse Symposium, Phoenix. Sheraton Wild Horse Pass Resort. For info: http://watereuse.org/symposium

September 13-14 WA
2nd Annual Pacific Northwest Climate Science Conference, Seattle. UW - Kane Hall. For info: http://cses.washington.edu/cig/outreach/pnwscienceconf2011/

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CALENDAR

(continued from previous page)

September 15-16 NJ
Groundwater Contamination & Vapor Intrusion Cases Seminar, Newark. Sheraton Newark Airport Hotel. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

September 16 CO
Conservation Easements Conference, Denver. Grand Hyatt. For info: CLE International, 800/ 873-7130 or website: www.cle.com

September 18-20 AZ
2011 Annual Symposium of the Arizona Hydrological Society, Flagstaff. HighCountry Conf. Ctr. For info: www.azhydrosoc.org/2011_symposium.html

September 18-21 AK
International Symposium on Erosion & Landscape Evolution, Anchorage. Sponsored by American Society of Agricultural & Biological Engineers. For info: Sharon McKnight, ASABE, 269/ 932-7033, mcknight@asabe.org or www.asabe.org/meetings/erosion2011/index.htm

September 22 CA
Continuing Legal Education for Water Professionals, San Diego. Hotel Solamar. Sponsored by Ass'n of California Water Agencies. For info: www.acwa.com/events/

September 22-23 ID
Idaho Water Law Conference, Boise. Owyhee Plaza Hotel. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

September 22-23 CA
2011 ACWA Continued Legal Education for Water Professionals, San Diego. Hotel Solamar. Sponsored by Ass'n California Water Agencies. For info: www.acwa.com

September 23 OR
Solar Installation Seminar, Portland. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

September 24-28 GA
Meeting Competing Demands with Finite Groundwater Resources 2011 Annual Forum, Atlanta. Sponsored by Ground Water Protection Council. For info: www.gwpc.org/home/GWPC_Home.dwt

September 25-29 Brazil
Adaptive Water Management: Looking to the Future - XIV IWRA World Water Congress, Porto de Galinhas. For info: www.worldwatercongress.com/en/

September 26-30 WV
Strategic Conservation Using a Green Infrastructure Approach Conference, Shepherdstown. National Conservation Training Center. For info: Katie Allen, Conservation Leadership Network, 304/ 876-7925 or www.conservationfund.org

September 27-29 NV
2011 Truckee River Symposium, Reno. Desert Research Institute. For info: Tina Triplett, NWRA, 775/ 473-5473 or www.nvwra.org

September 27-29 OR
Rainwater Harvesting & Stormwater Control: 2011 ARCSA Conference, Portland. Monarch Hotel & Conf. Ctr. Sponsored by American Rainwater Catchment Systems Ass'n. For info: www.arcsa.org/

September 29-30 MT
Montana Water Law Seminar - 11th Annual, Helena. Great Northern Hotel. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

October 3-5 WS
2011 Urban Water Sustainability Leadership Conference, Milwaukee. For info: lloken@CWAA.us

October 4 WA
Perspective on Water Quality Issues Across Washington State - AWRA-WA Annual Conference, Seattle. Seattle University. For info: AWRA-WA: http://earth.golder.com/waawra/ASP/Home.asp