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Water Rights, Water Quality & Water Solutions in the West

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NATIONAL FLOOD INSURANCE & THE ESA

IN THE COURTS & ON THE GROUND

by Annette Pearson, Pierce County Public Works (Tacoma, WA)
&
Jim Lynch, K&L Gates (Seattle, WA)

Editors' Introduction: As past readers of ***The Water Report*** are aware, the National Flood Insurance Program has come under increasing scrutiny via federal Endangered Species Act consultations (*see* Anderson, *TWR* #91; Eberlien, *TWR* #92; Quasius & Laschever, *TWR* #103; and Lawrence, *TWR* #131).

In Washington State, concerned public agencies and development interests are grappling with working under the "Reasonable and Prudent Alternatives" set out in the National Marine Fisheries Service's (NMFS') Biological Opinion for Washington State's Puget Sound Region. A Biological Opinion for Oregon's program is expected soon, and NMFS has indicated California is next in line (*see* Light, *TWR* #133).

This is a rapidly evolving set of circumstances, with litigation often playing a central role. The anticipated wide range of impacts is, in many ways, just beginning to be assessed and worked upon. ***The Water Report*** is pleased to be sponsoring The Seminar Group's "**Floodplain Development: Regulation Under FEMA and ESA**" **seminar**, to be held **May 19th**, in Seattle (more information on page 9).

The following article presents an overview and analysis of the litigation propelling these issues, followed by a description of Pierce County, Washington's efforts in meeting the challenges of complying with the new regulatory regime.

LEGAL BACKGROUND & OVERVIEW

The Federal Emergency Management Agency (FEMA), an agency of the United States Department of Homeland Security, is the federal agency charged with administering the National Flood Insurance Program (NFIP). *See* Federal Interagency Floodplain Management Task Force, *A Unified National Program for Floodplain Management* (1986). Congress created the NFIP in 1968 by the National Flood Insurance Act (NFIA). 42 U.S.C. §§ 4001 *et seq*. The NFIA has subsequently been amended in 1973, 1994, 2012, and 2014. The NFIA authorizes FEMA to establish and carry out the NFIP. *See* 42 USC § 4011. The NFIP is codified at 44 CFR § 402.

FEMA "is required to identify flood-prone areas, publish flood-risk-zone data, and revise that data as needed." *Great Rivers Habitat Alliance v. FEMA*, 615 F.3d 985 (8th Cir. 2010). Community participation in the NFIP is voluntary, and FEMA does not have any direct involvement in the administration of local floodplain management ordinances. However, any federally regulated lender making a loan secured by improved real estate located in a designated flood-risk zone must, as a condition of making the loan, require the purchase of insurance through the NFIP or an equivalent policy. *See* 42 U.S.C. § 4012a(b)(1); *Paul v. Landsafe Flood Determination, Inc*., 550 F.3d 511, 513 (5th Cir. 2008).

Floodplain Insurance

Financial Shortfalls

ESA Requirements

ESA Trigger

Proximate Cause

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Failure to participate also may make federal disaster relief unavailable to non-NFIP communities that suffer from floods. 42 U.S.C. § 5154a(a). In addition to the flood insurance requirements, communities are required to adopt regulations consistent with FEMA's minimum eligibility criteria in order to be enrolled in the NFIP. 42 U.S.C. § 4012(c)(2); *see also* 42 U.S.C. § 4022(a)(1) (prohibiting federal flood insurance to communities that have not complied with the eligibility criteria).

By issuing federally subsidized insurance for buildings in flood-prone areas, FEMA's NFIP provides insurance that is generally not available on the private market.

The FEMA/NFIP is facing serious financial shortfalls. As of December 31, 2013, FEMA owed the US Department of the Treasury $24 billion — primarily to pay claims associated with Superstorm Sandy (2012) and Hurricane Katrina (2005) — and had not made a principal payment since 2010. *Overview of GAO's Past Work on the National Flood Insurance Program* GAO-14-297R(2014).

LITIGATION HISTORY

Federal agencies are precluded from conducting actions that may jeopardize listed species or adversely modify critical habitat. 16 U.S.C. § 1536(a)(2). Endangered Species Act (ESA) § 7(a)(1) charges federal agencies to aid in the conservation of listed species and ESA § 7(a)(2) requires federal agencies, through consultation with the United States Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS), to ensure that their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats.

Florida

The question as to whether the NFIP triggered ESA § 7 consultation, 87 Stat. 884, 16 U.C.S. § 1531 *et seq.* (1973) first began in 1984, when USFWS asserted that FEMA's administration of the NFIP in the Florida Keys potentially jeopardized the existence of the Florida Key deer — one of the first endangered species listed under the ESA in 1973. Under the ESA, the USFWS is responsible for threatened and endangered terrestrial and freshwater species.

In 1989, FEMA refused the USFWS's request for formal consultation, asserting that the ESA did not apply to the NFIP. In 1990, the National Wildlife Federation (NWF) and other wildlife organizations sued FEMA and the US Department of the Interior (USFWS' Department). NWF claimed that FEMA's action of providing low cost insurance to new development in the floodplain caused adverse impacts to the endangered Florida Key deer. NWF argued that there was proximate cause between providing this insurance, which provided the means to develop in the floodplain, which in turn jeopardized the existence of the Florida Key deer. *Fla. Key Deer v. Stickney* (Fla. Key Deer I), 864 F. Supp. 1222, 1230–31 (S.D. Fla. 1994).

The lawsuit sought an injunction requiring FEMA to comply with ESA § 7(a)(2) by formally consulting with USFWS about the NFIP's impacts on the Florida Key deer. NWF adopted the USFWS's argument that the NFIP encouraged new development that potentially jeopardized the existence of the deer. The district court agreed and granted final declaratory judgment in favor of NWF, which required FEMA to consult with the USFWS. *Id.* at 1240–42. The court retained jurisdiction over the case to enforce the injunctive relief.

FEMA did not appeal that ruling, and consulted with the USFWS regarding the impact of the NFIP on the Florida Key deer and eight other endangered or threatened species. In 1997, USFWS found that the NFIP was causing jeopardy and issued a jeopardy determination in its related **Bi**ological **Op**inion (Florida BiOp). The Florida BiOp provided "Reasonable and Prudent Alternatives" (1997 RPAs) to the manner in which FEMA administered the NFIP to avoid placing the Florida Key deer and other listed species in jeopardy. The 1997 RPAs provided for USFWS review of new development in the protected species' critical habitat.

In compliance, Monroe County, Florida — which includes the Florida Keys — required landowners to complete USFWS review in order to receive a building permit. During that review, the USFWS was to determine whether the proposed project "may" or "would not" adversely affect endangered or threatened species or designated critical habitat. Depending upon the answer, the USFWS would take appropriate action to ensure compliance with the ESA.

The 1997 RPAs also included "conservation recommendations" under ESA § 7(a)(1). Specifically, the USFWS recommended that FEMA provide incentives in the form of reduced insurance premiums for completion of a comprehensive, county-wide habitat conservation plan. FEMA adopted the 1997 RPAs and conservation recommendations in 1997.

In 1998, the NWF filed an amended complaint in the original lawsuit, adding the USFWS as a defendant and challenging the adequacy of the 1997 RPAs and the accompanying conservation

Floodplain Insurance

NWF Claims

RPA Adequacy Finding

Challenges Continued

Settlement

County Intervention

Failure to Consult

Effects Determination

Jeopardy Finding

recommendations under both the ESA and the federal Administrative Procedure Act. The NWF claimed that the 1997 RPAs failed to "insure that [the NFIP would not] jeopardize the continued existence of any endangered species or threatened species" or their critical habitat pursuant to 16 U.S.C. § 1536(a)(2); that FEMA was not adhering to the USFWS review suggested in the 1997 RPAs; and that the conservation program adopted by FEMA did not satisfy ESA § 7(a)(1).

Before the district court ruled on cross-motions for summary judgment, FEMA and the USFWS reinitiated consultation. The new consultation apparently arose from a provision of the 1997 RPAs that required a second consultation if Monroe County failed to complete a habitat conservation plan within four years — which, in fact, the County had failed to do.

In 2003, the USFWS issued a second opinion assessing the threat that FEMA's administration of the NFIP posed to the listed species in the Florida Keys. It concluded that the NFIP jeopardized eight of the ten species considered in 1997, but that the 1997 RPAs adequately protected the listed species.

After briefs for the appeal were submitted, FEMA and the USFWS concluded the third consultation as ordered by the district court. The USFWS issued its third opinion on the effects of the NFIP on endangered or threatened species in the Florida Keys on August 8, 2006, along with proposed "Reasonable and Prudent Alternatives" (2006 RPAs). FEMA adopted the 2006 RPAs.

Challenges to the RPAs continued, and on April 30, 2010 FWS submitted an updated BiOp to the Court with the understanding that settlement negotiations occurring between the parties might further amend the BiOp. FEMA and FWS subsequently filed the amended BiOp with the Court with revised RPAs. On January 11, 2011, the Court issued an order finding the April 30, 2010 FWS BiOP, as amended pursuant to the Settlement Agreement, to be in compliance with the 2005 Court Order and the ESA (*see* www.fws.gov/verobeach/ConservationintheKeys.html). There have not been any additional lawsuits regarding this BiOP.

Previously, in 2005, Monroe County had filed a Motion to Intervene with three issues: 1) concerns over the obligations placed on Monroe County by the RPAs; 2) the lack of opportunity to participate in the court proceedings; and 3) the RPAs placed an illegal and inappropriate burden on the County. The District Court initially denied Monroe County's Motion to Intervene in 2005, in response to which the County filed an appeal to the 11th Circuit (12/12/2005).

Six years later, the 11th Circuit dismissed that appeal and remanded to the district court with instructions to rule on the merits of Monroe County's Motion to Intervene. Ten days later, the district court denied the County's Motion to Intervene. The County then appealed that December 20, 2011 order to the 11th Circuit (Docket Number 12-11159-E). After the parties briefed the issues on appeal and the case was set for oral argument, Monroe County filed a motion to voluntarily dismiss the appeal without prejudice, which the 11th Circuit granted. [Editor's Note: When an appeal is dismissed without prejudice, the plaintiffs are not precluded from bringing the lawsuit with the same issues later].

Washington

In 2003, NWF began another legal challenge to FEMA's NFIP program for its failure to consult under ESA. In November 2004, Judge Zilly of the Western District of Washington ordered FEMA to initiate consultation with the National Marine Fisheries Service (NMFS) under ESA § 7. Under the ESA, NMFS in responsible for threatened and endangered marine (saltwater and anadromous) species (NMFS is part of the US Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) and is sometimes referred to as "NOAA Fisheries"). The consultation was to include several aspects of the NFIP program, including: floodplain mapping; minimum development standards; and the Community Rating System. *National Wildlife Federal and Public Employees for Environmental Responsibility v. FEMA, et al.*, 345 F.Supp.2d 1151 (2004).

In 2006, as part of this ESA consultation process, FEMA provided NMFS with a Biological Evaluation containing an effects determination that NFIP's agency actions may affect, but were not likely to adversely affect the following listed species: Puget Sound Chinook salmon; Puget Sound steelhead; Hood Canal summer-run chum salmon; and Southern Resident killer whales.

In 2008, NMFS published its Biological Opinion for Washington State's Puget Sound Region (WA BiOp). Contrary to NMFS' earlier effects determination, the WA BiOp. concluded that FEMA's NFIP agency actions jeopardized the existence of the listed species and that FEMA's actions would also likely adversely modify critical habitat for these same species. *Endangered Species Act – Section 7 Consultation Final Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat Consultation, Implementation of the National Flood Insurance Program in the State of Washington Phase One Document – Puget Sound Region* (Sept. 22, 2008) (FEMA BiOp), available at: www.fema.gov/media-library-data/20130726-1900-25045-6457/nfip_biological_opinion_puget_sound.txt.

Floodplain Insurance

FEMA Requirements

The WA FEMA BiOp contained RPAs, which required FEMA to do the following:

- Notify Puget Sound communities of its determination
- Design floodplain mapping procedures to reduce impacts, be prioritized based on sensitive salmon populations, and increase model accuracy
- Require local permitting authorities to consider impacts on fish habitat when issuing floodplain development permits, track all floodplain permits, and report activity to FEMA
- Change the Community Rating System program to achieve long-term objectives
- Address effects of levee vegetation maintenance and certain types of floodplain construction
- Provide mitigation to adversely affected habitat prior to full implementation
- Report annually to NMFS on its progress towards meeting these requirements

Compliance Options

FEMA began an outreach program to local communities to comply with the FEMA BiOp by going through one of three doors:

Door 1: Adopt the model ordinance FEMA had authored;

Door 2: Write ordinance that complied with all pertinent elements of the model ordinance; or

Door 3: Make an ESA compliance determination on a project-by-project basis.

In September 2011, NWF again sued FEMA for its NFIP. *National Wildlife Federation v. FEMA, et al.,* Case No. C11-2044-RSM (W.D. Wash.). NWF alleged that FEMA had failed to properly implement the WA BiOp RPAs. In October 2014, Judge Martinez granted FEMA's Motion for Summary Judgment affirming FEMA's approach to implementation of these RPAs.

From 2011 until the decision by Judge Martinez in late 2014, FEMA was unable to comply with the outreach component of the BiOp's RPAs because "[l]itigation support by NOAA leadership was costly and diverted staff and resources away from FEMA and NOAA resulting in no assistance to locals for over 3 years." *Final Report – Summary of Evaluation Findings for Door #2 Implementation in Washington State of the FEMA-NOAA Biological Opinion for the National Insurance Program* (Sept. 2015).

Eligibility Risks

Without implementing the changes called for by FEMA, the 122 communities could lose eligibility for federal flood insurance. To date, 97% of these communities are still going through the "project-by-project" process, as per Door 3.

Failure to Consult

Oregon

In 2009, the Audubon Society of Portland, Northwest Environmental Defense Center, the National Wildlife Federation, and the Association of Northwest Steelheaders sued FEMA in the United States District Court for the District of Oregon. *See Audubon Soc'y of Portland v. FEMA*, Case 3:09-cv-00729-HA (2009). Again, this lawsuit centered on failure to consult under ESA for FEMA's NFIP agency action of providing low-cost flood insurance. Species of concern included protected salmon and steelhead, and southern resident killer whales.

In July 2010, FEMA settled with the plaintiffs, agreeing to consult with NMFS under ESA § 7 (Case 3:09-cv-00729-HA Document 20 Filed 07/09/10). Consultation began when NMFS formally accepted FEMA's Program Level Biological Assessment on the NFIP in August 2012, which was revised by FEMA in March 2013.

In 2013, NMFS drafted a Biological Opinion (Oregon BiOp) stating that NFIP jeopardizes the protected species involved in the consultation. AECOM, *Program Level Biological Assessment for the NFIP, Oregon State* (February, 2013). The Oregon BiOp contained RPAs similar to Washington's.

Continuing Negotiations

In December 2014, NMFS informally released a redrafted RPA, for further review and comment. It requires FEMA to revise mapping protocols, development standards for floodplains, and has monitoring, reporting, compliance benchmarks, and required enforcement standards. The RPAs are still in negotiation.

Similar Actions

New Mexico, Arizona, Eastern District of California

Similar actions have been brought in other parts of the country. In New Mexico in 2001, the Forest Guardians, Sierra Club, and the Southwest Environmental Center sued FEMA for similar cause. Civil Action No. 01-0079-MCA/RLP. A settlement was reached and approved by the court on April 25, 2002.

In September 2009, plaintiffs filed motions to enforce the settlement agreement requiring FEMA to consult with USFWS under ESA § 7. In September 2010, plaintiffs withdrew their motions in order to facilitate settlement discussions. On February 11, 2011, the United States District Court for the District of New Mexico approved a stipulated settlement agreement between FEMA and WildEarth Guardians, obligating FEMA to:

FEMA Obligations

- Undergo consultation within 365 days
- Revise its floodplain mapping
- Revise the Community Rating System to apply discounts to communities that exceed FEMA's minimum eligibility standards

Floodplain Insurance

• Notify affected communities within 45 days of the settlement

WildEarth Guardians v. FEMA, Civ. No. 09-882-RB/WDS (Stipulated Settlement Agreement and Proposed Order)(Feb. 11, 2011). (Final Order available upon request from *The Water Report.*)

"Not Likely" Determination

FEMA commenced an informal consultation with USFWS. USFWS issued a letter of concurrence for the not likely to adversely affect determination because USWFS could not tie the direct effects of the NFIP to impacts to the listed species and levee improvements did not provide sufficient indirect effects to be defensible. (Telephone conference Dr. George Dennis, USFWS, February 23, 2016). Currently, New Mexico does not have the development pressure that exists in the coastal states. In Arizona in 2009, WildEarth Guardians filed a similar lawsuit against FEMA in the United States District Court for the District of Arizona. *See WildEarth v. FEMA*, No. CIV 09-480-DCB (First Amended Complaint for Declaratory and Injunctive Relief) (Nov. 20, 2009).

Delta BiOp Pending

That same year, the Coalition for a Sustainable Delta and Kern County Water Agency sued FEMA in the US District Court for the Eastern District of California. *Coalition for a Sustainable Delta and Kern County Water Agency v. FEMA, et al.*, No. 1:09-cv-02024 (E.D. Cal. 2009). On March 8, 2012, the Court entered judgment based on a settlement agreement between the parties. In the agreement FEMA agreed to consult with NMFS and USFWS for threatened and endangered species in the Sacramento-San Joaquin River Delta. While FEMA has submitted a Biological Assessment in this formal consultation under ESA § 7, to date inadequate materials have been provided to NMFS to conclude its analysis and publish a BiOp (telephone conference with Bonnie Shorin, NOAA Oregon/Washington Coastal area (Feb. 22, 2016).

PIERCE COUNTY ACTIONS

Enabling Development

As noted above, the WA FEMA BiOp centered on new development in floodplains being enabled by a subsidized insurance program with consequent adverse impacts to listed species and adverse modification of critical habitat. The rest of this article will describe Pierce County Washington's successful efforts to meaningfully deal with these evolving regulatory issues.

Public Works Impacts

While most local jurisdictions have been focused on the impacts to their development regulations, little thought was given to impacts the WA FEMA BiOp might have on normal maintenance and flood fighting operations of existing facilities. Pierce County Department of Public Works and Utilities, Surface Water Management Division (SWM) first encountered the ramifications of the WA FEMA BiOp during the ESA § 7 consultation between FEMA and NMFS which occurred in 2006 and 2009 over disaster relief funds SWM sought for revetment repairs following serious floods.

Flood Relief Funding

Between November 2 and 11, 2006, extreme rainfall flooded Western Washington. Washington State Governor Christine Gregoire requested a Presidential Declaration for a major flood disaster on November 22, 2006. On December 12, 2006, President George W. Bush issued a Presidential Disaster Declaration, which authorized FEMA to initiate flood relief funding for twelve Washington counties, and to authorize all counties to apply for eligibility for financial assistance under the Hazard Mitigation Grant Program.

In response to subsequent flooding in 2009, Pierce County Executive Pat McCarthy issued a Proclamation of Emergency on January 7. Washington State Governor Christine Gregoire followed with a request for a Presidential Declaration for a major flood disaster in Washington on January 21, 2009. President Barack Obama issued a Presidential Disaster Declaration on January 30, 2009, which authorized FEMA to initiate flood relief funds for eight Washington counties, and to authorize all counties to apply for eligibility for financial assistance under the Hazard Mitigation Grant Program.

Repair Projects

These federal emergencies resulted in damage to existing flood control revetment facilities in Fall 2006 and Winter 2009, along the Carbon, Puyallup, and White Rivers (Three Rivers). Many of the SWM-repaired projects from 2006 and 2009 qualified for disaster-relief funds administered by FEMA, which appropriates emergency funds related to the protection of public infrastructure and private properties that exist in flood-prone areas.

Emergency Operations

In 2009, SWM drafted and FEMA submitted a Programmatic Biological Assessment (PBA) that included 14 activities authorized for disaster relief reimbursement funds under the Stafford Act, PL-93-288, by FEMA. The identified action in the PBA included all 14 individual projects. The primary purpose of the emergency operations was to prevent channel migration and restore the levels of service back to at least equivalent to pre-flood conditions. The revetments were and are essential facilities to maintain continuity of flood protection throughout the Three Rivers system. The FEMA reimbursement-eligible portions included 1,815 feet (0.34 mi) of the Carbon River, 4,370 feet (0.83 mi) of the Puyallup River, and 550 feet (0.10 mi) of the White River. Listed species and critical habitat occurring within the project area include: Puget Sound Chinook (Oncorhynchus tshawytscha); Puget Sound steelhead (Oncorhynchus mykiss); and coastal/Puget Sound bull trout (Salvelinus confluentus). The common impact component — aside from temporary construction impacts — involved restructuring hardened riverbanks to ensure relatively high levels of service for flood protection.

Floodplain Insurance

Flood Risk Increase

Repair Impacts

M & O Impacts

By way of technical background, Pierce County (as well as many other counties and cities in Washington) suffer from unusually high river aggradation. [Figure 1]. This is due, in part, to glacial retreat providing a seemingly endless amount of gravel to our rivers. Unfortunately, the Three River system has some unique characteristics that magnify the potential flood risk from aggradation: 1) the White River is a new system, artificially created, for which we have little knowledge of area fluvial geomorphology or sediment recruitment; and 2) the Three Rivers' flows are far less than other river systems in western Washington, which increases resident time for sediment in various areas (larger, stronger flows increase the ability to move sediment) [Figure 2]. These factors coupled with weather pattern changes to more frequent, more intense storms, have increased flood frequencies and magnitude. Consequently, protection of flood risk reduction infrastructure is vital to the County to protect the public, infrastructure, and the environment.

The initial PBA made an effects determination that the proposed activities were "likely to adversely affect" — but not jeopardize — listed species. USFWS concurred in its BiOp stating that the proposed activities "…were not likely to jeopardize the continued existence of the bull trout and were not likely to have destroyed or adversely modified designated critical habitat… ." However, by letter dated November 9, 2009, NMFS did not concur with the determinations stating, in part "[t]he existing levee [sic (actually a revetment)]…repaired in this completed action alters and damages the natural river channel dynamics, disconnects the channel from the floodplain, constrains channel dynamics, prevents development of natural riparian vegetation and alters routing of stream substrate. Repairing these sites within this system has perpetuated these effects, adversely affecting listed salmon and steelhead species and the critical habitat designate for PS [Puget Sound] Chinook salmon." (US Department of Commerce, NOAA, 11/09/09 letter from Barry A. Thom to Mark Eberlein, FEMA). NMFS directed FEMA to initiate formal consultation and to further provide "voluminous" materials to begin that consultation.

The pre-consultation and consultation proceeded over the next five years. In September 2014, SWM learned that NMFS staff had reached a preliminary conclusion that the proposed action may jeopardize listed salmon species in the action area. Because this determination could have had significant negative impacts on SWM's river **m**aintenance and **o**perations (M&O), SWM was left with two options: 1) decline the disaster relief funding totaling nearly $2 million; or 2) continue working with NMFS to further evaluate the proposed action. SWM chose to pursue option 2.

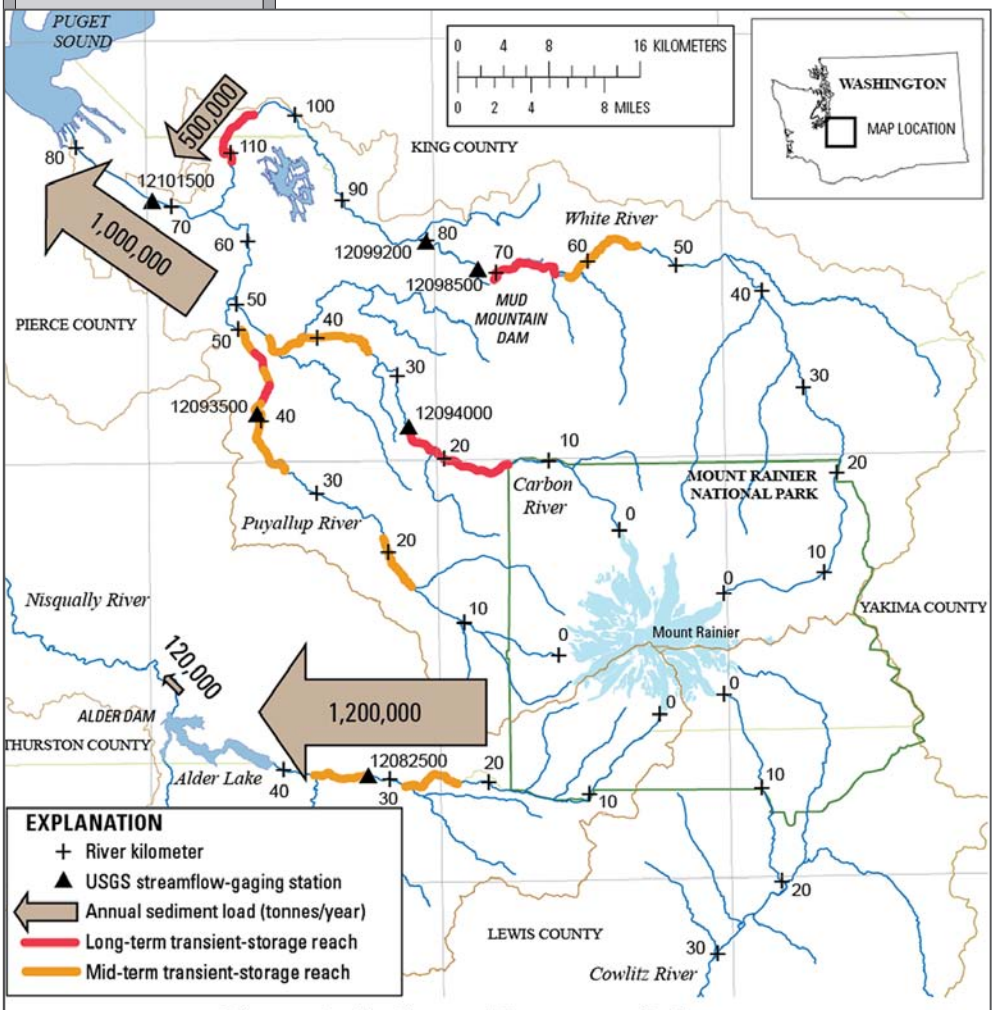

Figure 1: Sediment Transport & Storage

Engaging in the consultation process can sometimes present unique challenges for counties. First, under the ESA § 7 Consultation, FEMA was the action agency with direct contact with NMFS. As a result, SWM historically had not taken an active role in these discussions, and instead had relied on FEMA to complete this process. However, given the importance of this consultation, FEMA and SWM agreed that SWM would take a more active role in discussions with NMFS in the county's role as an applicant for funding.

Upon becoming involved, SWM began to carefully review the basis for the jeopardy determination through discussions with NMFS staff. These discussions resulted in an agreement that SWM should explain in more detail the history of its flood management program, and the significant habitat protection projects SWM had implemented over the preceding 20 years. This information

Floodplain Insurance

Environmental Baseline

Identified Projects

was then used by NMFS in its analysis of the environmental baseline for the action area, or "the past and present impacts of all Federal, State and private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that had already undergone formal or early Section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation in process." 50 CFR § 402.02 (2012).

Information was developed concerning the following projects:

- Ford Setback Levee – 1998
- Soldier's Home Setback Levee 2006
- Needham Levee and Groundwater Channel – 2009-2014
- Fennel Creek Floodplain Reconnection and Channel Project – 2013-2015
- Kapowsin Remnant Levee Removal – 2012
- Orville ELJ Revetment (16 ELJs) and 5 In-Channel Engineered Log Jams – 2013
- South Fork Restoration Project – 2013-2016
- Calistoga Setback Levee – 2014
- Bioengineering project – 2014

(Details of current projects at www.piercecountywa.org/index.aspx?NID=1828)

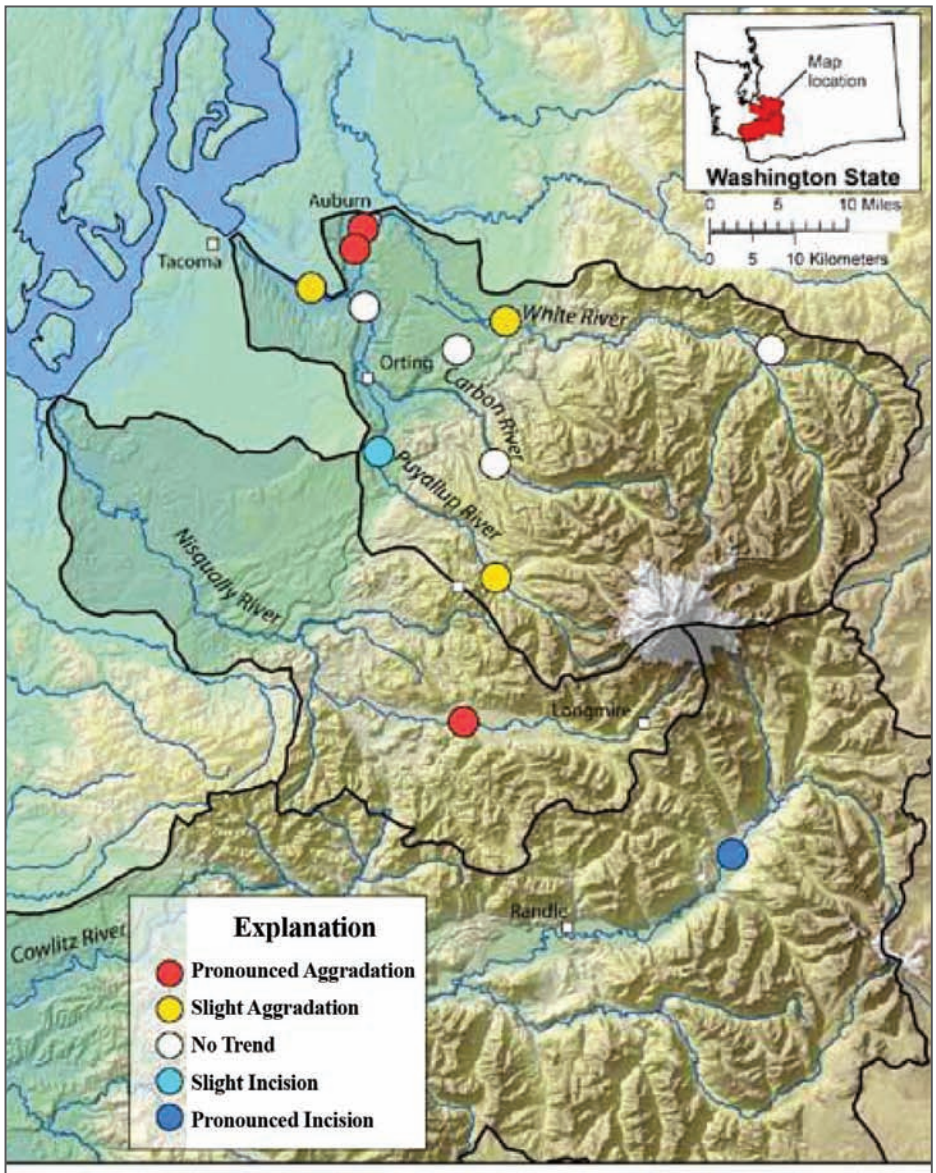

Figure 2: Area Aggradation
Trends at 12 Stream-Gaging Stations Around Mount Rainier

Floodplain Insurance

Habitat Improvements

SWM also provided additional information regarding the locations where levees and revetments had not been repaired, and the river had retaken the floodplain. Examples of how SWM documented the baseline conditions are shown in Figures 3 and 4.

After analyzing all the data, SWM and NMFS agreed that the environmental baseline section had failed to account for the following habitat improvements:

- 584 acres of floodplain reconnection
- 6.3 miles (32,830 LF) of unrepaired or setback levee
- 1,257 acres of floodplain acquired

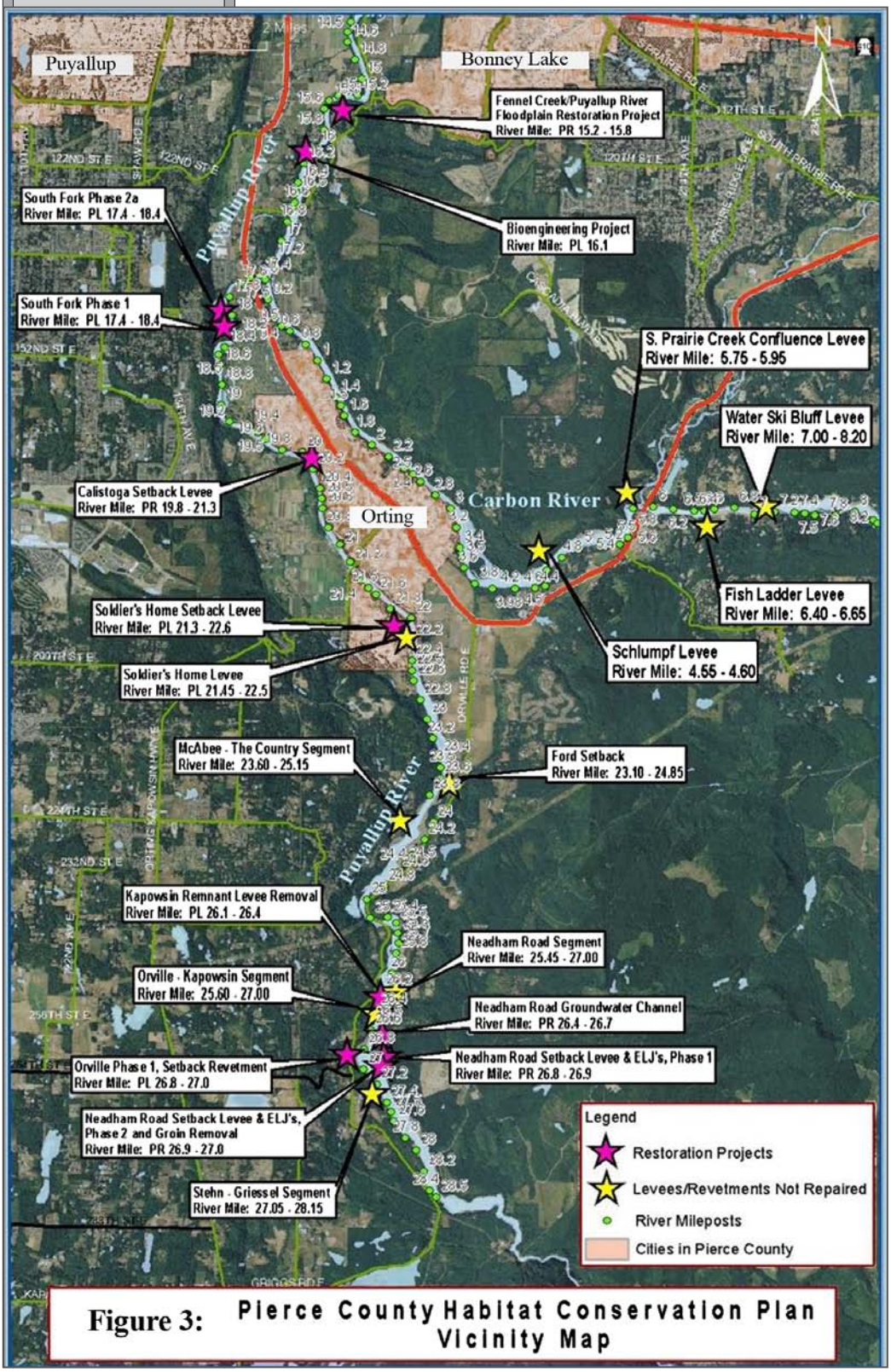

Figure 3: Pierce County Habitat Conservation Plan Vicinity Map

Through this process, SWM and NMFS worked together to update information contained in the draft BiOp. The final BiOp ultimately concluded the proposed action was "likely to adversely affect species and critical habitat." The BiOp identified Reasonable and Prudent measures, and terms and conditions, that require FEMA to condition its funding reimbursement so that Pierce County "directs 80% of the amount received toward implementation of a riverine or flood plain habitat restoration action… ." *Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion*, NMFS Consultation Number NWR-2013-10242, February 6, 2015.

CONCLUSION

Through the process outlined above, SWM, FEMA, and NMFS gained a better understanding of the County's considerable investment in habitat restoration and protection. Currently, SWM is actively working with the Resource Agencies to develop a Habitat Conservation Plan and Incidental Take Permit for recurring M&O activities. In the meantime, SWM continues to acquire lands within the flood prone areas of Pierce County, design future setback levees, and work with its partners to find solutions to the ever-pressing flooding concerns in Pierce County.

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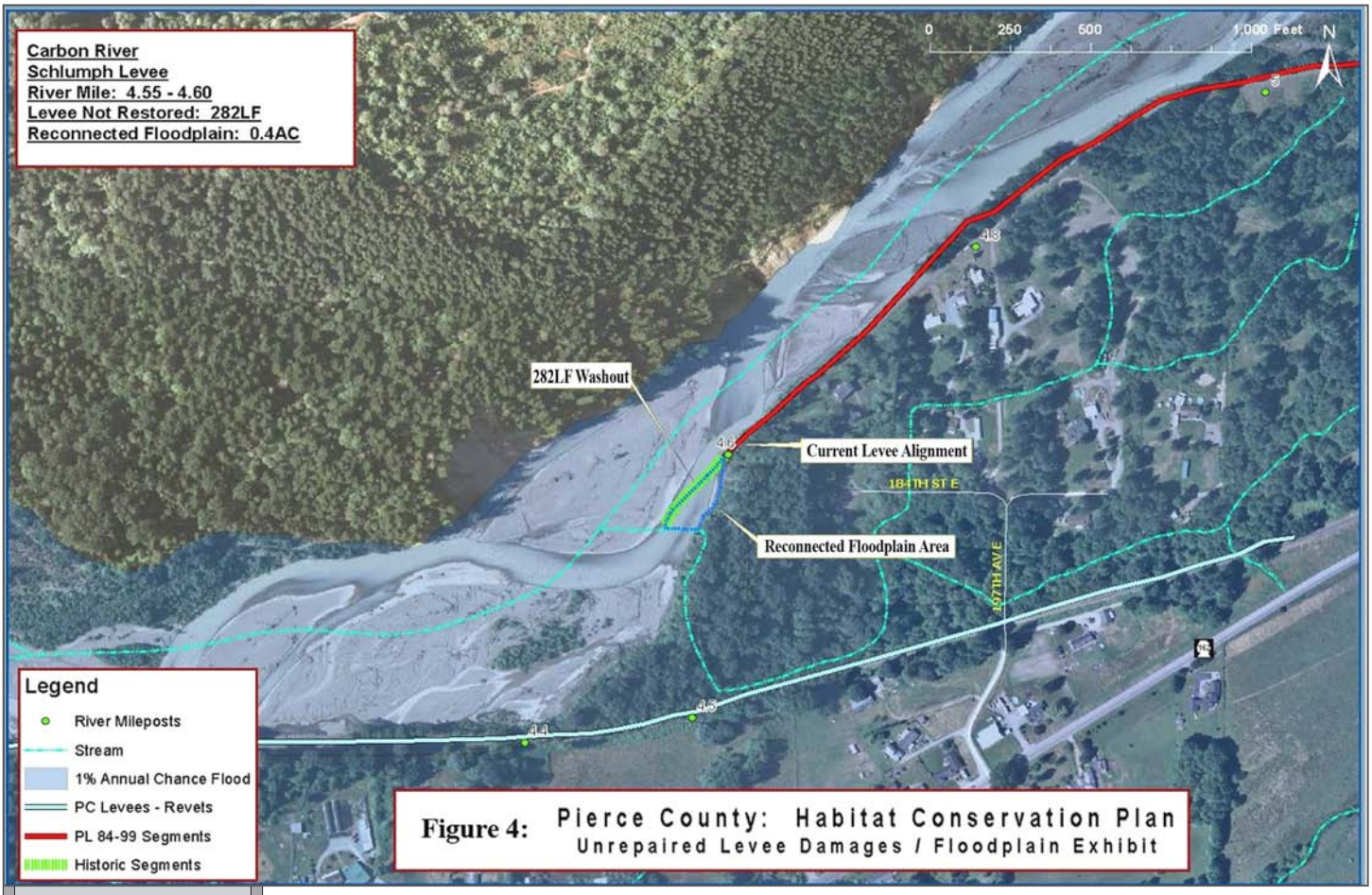

Figure 4: Pierce County: Habitat Conservation Plan
Unrepaired Levee Damages / Floodplain Exhibit

Special thanks to Rance Smith, *the SWM project engineer who doggedly pursued this FEMA reimbursement; FEMA managers that worked closely with SWM on this project; and NMFS staff whose patience and diligence saw us through this process.*

Annette Pearson currently serves as the Environmental Permitting Manager for the Surface Water Management Division in Pierce County Public Works. Her section manages complex natural resource issues and provides environmental documentation for capital and maintenance projects for Pierce County. Ms. Pearson has spent nine years of her career in the public sector and 20 years in the private sector. Focus areas include: floodplains; Endangered Species Act consultations; habitat restoration; water quality; and environmental permitting/documentation on the local, state and federal levels. She obtained her BS with an emphasis on molecular and cellular biology from the University of Washington, and she has a joint MS from Western Washington University in aquatic ecology and toxicology. Ms. Pearson is an active participant in the American Public Works Association. She currently co-chairs the Management and Public Administration Committee (MPAC). Pierce County is one of only three communities in the nation that have received a Class 2 rating in the Community Rating System (CRS) for the National Flood Insurance Program.

Jim Lynch, a partner with the international law firm K&L Gates, focuses his practice on regulatory compliance and environmental law with an emphasis on federal and state environmental statutes, including the Endangered Species Act (ESA), Migratory Bird Treaty Act, National Environmental Policy Act, and the Clean Water Act. Jim advises a number of large corporations, industry associations, and public utilities on complex environmental compliance and permitting matters. He currently represents a number of public and private energy companies on the development of financing and acquisition. Mr. Lynch represents Pierce County Public Works on various environmental issues.

Editors' Note

The Water Report is publishing a detailed look at issues surrounding protection of instream flows versus water availability for future development in the State of Washington. Two recent Washington Supreme Court decisions have highlighted the contrasting positions in this area, overturned decisions made by the Washington State Department of Ecology, and led to calls for legislation to "fix the problem."

In this issue of ***The Water Report***, we present two stand-alone articles that provide a detailed look at the issues from different perspectives. Dan Von Seggern's article posits that the protections for instream flows upheld by the Supreme Court are necessary for environmental protection and that other strategies for re-allocating water are available. This is followed by Thomas Pors providing his views of the "Water Availability Train Wreck" and arguing that changes are needed going forward.

In the next issue of ***The Water Report***, each of these authors will respond to the other's article, providing readers with a point/counterpoint view of the issues.

Water Allocation

LIVING WITHIN OUR WATER MEANS

PROTECTING INSTREAM RESOURCES IN WASHINGTON

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Increasing Demands

Climate Change Consequences

Wise Allocation

Water Code Principles

Prior Appropriation

Introduction

Washington's rivers, and the fish and wildlife they support, are under great pressure due to increasing demand for water. The state's water has been diverted for beneficial use out-of-stream for well over 100 years, and now supports productive agriculture, thriving industries, and a growing population. But there are limits to the resource and choices regarding water use must be made. Reduced streamflows are impacting salmon and steelhead runs, implicating both endangered species protections and treaty obligations to Native American tribes. In some cases, the amount of water claimed for out-of-stream uses exceeds the ordinary flow of the river. Because of this history of over-appropriation, in some areas more water cannot be taken out of the system without unacceptable impacts on fish, wildlife and other environmental values. If this means that water is not readily available for development, it is no accident; rather, it is evidence that we have reached a limit to what can be sustainably extracted.

Climate change will add to our water supply difficulties. As the atmosphere warms, more precipitation will fall as rain rather than snow and less water will be stored in the mountain snowpack. Receding glaciers will contribute less water to streams and rivers. Peak streamflows will occur earlier in spring than they do now, water temperatures will be higher, and rivers will be drier in summer. Low summer flows will reduce the water supply available for irrigation and put additional pressure on the fish and wildlife that depend on water instream. (*See* Mauger, et al.).

Development interests have attempted to frame the issue as a conflict between human use and environmental protection, claiming that basic needs of people are not being met. There have recently been calls to effectively remove any limits on domestic groundwater use. It is simply untrue, however, that human users of water are not being accommodated. A large fraction of the state's water is already being diverted for out-of-stream uses; the issue is actually one of allocating that water. What cannot be accommodated is unlimited water use for increased development anywhere in the state at no cost. Rather than simply trying to "find" more water — which nearly always comes at the expense of fish and the environment — Washington must learn to live within its water means by more wisely allocating the water that has already been appropriated. This is now being successfully addressed through water banking in some river basins. While this is a promising development, further innovative approaches are needed.

This article will review key aspects of Washington water law regarding water allocation and discuss two recent Washington Supreme Court decisions, *Swinomish Indian Tribal Community v. Ecology* and *Foster v. Ecology*, which impact appropriations of water for development. Possible strategies for reallocating water and for mitigating the impact of water withdrawals on streams will also be discussed.

Water: Public Resource in Washington

The Washington Water Code provides that all "waters within the state belong to the public" and that the right to use water may only be acquired by "appropriation for a beneficial use." RCW 90.03.010. (As used here, "Water Code" refers to numerous statutes governing water use, including the Water Code itself (RCW 90.03), the Minimum Water Flows and Levels Act (RCW 90.22), The Water Resources Act (RCW 90.54), and the Groundwater Act (RCW 90.44)). The 1945 Groundwater Code expressly extends application of the Water Code to "the appropriation and beneficial use of groundwaters within the state." RCW 90.44.020. Like other western states, Washington follows the Prior Appropriation Doctrine, which is organized around the central principle of "first in time, first in right." RCW 90.03.010.

Unlike the riparian system used in Eastern jurisdictions, the right to use water is not determined by land ownership or whether one's property abuts a lake or stream. Ownership of land does not give the landowner the right to appropriate water, but once water has been put to beneficial use on a particular

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Use Right

property, the right to use the water becomes appurtenant to the land so long as the beneficial use continues. The first person to appropriate water and put it to beneficial use secures the right to *use* that quantity of water, but not ownership of it. *Lummi Indian Nation v. State*, 170 Wn.2d 247, 252, 241 P.3d 1220 ("[g]enerally speaking, there is no private right to own the waters that flow across Washington State"); *Ecology v. Abbot,* 103 Wn.2d 686, 694 P.2d 1071 (1985) (all riparian rights not perfected within 15 years after passage of Water Act were extinguished); *Rigney v. Tacoma Light & Power*, 9 Wash. 576, 583, 38 P. 147 (1894) (no property in water itself, but a "simple usufruct while it passes along"). While there are extant riparian water rights in Washington dating from before the Water Code, any new appropriation of water is governed by the "first-in-time" system.

Beneficial Use

Any subsequent ("junior") user may only appropriate water to the extent that it does not interfere with rights of prior ("senior") user. A water right is valid only to the extent that the water is put to beneficial use; a rightholder may relinquish his/her right through an extended period of non-use. RCW 90.14.180. Waste of water is also prohibited: an appropriator must make "reasonably efficient" use of water, and acquires no right to water over and above what is needed for his or her actual requirements. *Ecology v. Grimes*, 121 Wn.2d 459, 471-2, 852 P.2d 1044 (1993). The "reasonably efficient" standard arguably requires that practicable conservation measures be employed in order to avoid using more water than what is necessary.

Permit Test

A proposed water user must file an application for a permit to appropriate water with the Washington State Department of Ecology (Ecology). RCW 90.03.250. Before issuing a permit, Ecology must make affirmative findings that: 1) water is available; 2) for a beneficial use; 3) that the proposed use of water will not impair a senior right; and 4) that the proposed use of water will not be detrimental to the public interest. RCW 90.03.290(3). This is known as the "four-part test." Where there is no unappropriated water available, or where the proposed use would conflict with a senior user or with the public interest, Ecology must reject the application. *Id*.

Permitting Exemptions

There is an exemption from the permitting process for certain small withdrawals of groundwater for domestic use. RCW 90.44.050 provides an exemption from permitting — but not from other Water Code provisions — for stock-watering, watering of a lawn or garden no more than one-half acre, or domestic or industrial use not exceeding 5000 gallons/day. While exempt from applying for a permit, these wells are not exempt from the priority system or the other provisions of the Water Code. Water for rural domestic development has largely depended on these "permit-exempt wells." As of 2001, Ecology estimated that there were from 500,000 to 750,000 such wells in the state, and that it could identify approximately 250,000 of these (*see* Nathan Bracken, Western States Law Council, *Exempt Well Issues in the West*, 40 Environmental Law 141 at 202 (2010)). Ecology estimated in a 2014 report that between 2008 and 2014, approximately 17,200 new permit-exempt wells were drilled statewide. *Permit-Exempt Domestic Well Use in Washington State* (2015), Ecology at 8. Based on Ecology's reported figures, permit-exempt wells accounted for approximately 16% of municipal and domestic water use. *Id*. at 12.

Authority To Measure

Ecology has the authority to meter all diversions or withdrawals of water, including permit-exempt wells. RCW 90.03.360, 90.44.060 and 90.44.050. In some cases, including new diversions or diversions in salmon-critical basins, it is obligated to do so. RCW 90.03.360 (Ecology *shall* meter new rights for diversion of surface water, diversions exceeding one cfs or from streams in salmon-critical regions). A 1996 lawsuit filed by American Rivers, the Center for Environmental Law & Policy (CELP), and several other environmental groups resulted in an order requiring Ecology to meter water users accounting for the top 80% of total water use in 16 Water Resource Inventory Areas (WRIAs) deemed to be Fish Critical Basins. (*See* www.ecy.wa.gov/programs/wr/measuring/compliance.html). Despite this, little of the water used in Washington (and essentially none of the permit-exempt well use) is actually metered. Ecology has not generally exercised this authority, citing resource constraints and the large number of exempt wells. *See Washington Department of Ecology, Responsiveness Summary and Concise Explanatory Statement, Chapter 173-173 WAC, Requirements for Measuring and Reporting Water Use* (2001) at 25. If water use is not metered, it is nearly impossible to determine how much water is actually diverted from streams or withdrawn from groundwater in a given river basin. This is especially important given the large number of permit-exempt wells now in use and legal interpretations that allow unlimited groundwater use for certain purposes. The Washington Supreme Court (Court) held in *Five Corners Family Farmers v. State,* 173 Wn.2d 296, 313, 268 P.3d 892 (2011), that there is no limit on permit-exempt water use for stock-watering; Washington AGO 2009 No. 6 at 9 also states that watering of lawn or noncommercial garden from permit-exempt wells is not limited to 5000 gallons per day.

Unlimited Groundwater Use

Instream Flows

Instream Uses Protected Through Instream Flow Rules

Water for instream uses, such as fish and wildlife habitat, recreation, and navigation, is at least theoretically protected by statute. The term "instream flow" as used here includes "minimum flows and levels" as used in RCW 90.22.010, "base flows" as used in RCW 90.54.020, and "instream flows" as used in Chapters 173-501 through 173-563 WAC. The Legislature has provided that the policy of the state includes "retention of waters within streams and lakes in sufficient quantity and quality to protect instream and natural values and rights." RCW 90.03.005. The Minimum Flows and Levels Act of 1969 gives Ecology authority to set minimum flows or water levels "for the purposes of protecting fish, game, birds or

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other wildlife resources, or recreational or aesthetic values of said public waters whenever it appears to be in the public interest to establish the same." RCW 90.22.010.

The Water Resources Act of 1971 further provides (using the mandatory term "shall") that:

> The quality of the natural environment *shall* be protected and, where possible, enhanced as follows: (a) Perennial rivers and streams of the state *shall* be retained with base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values. Lakes and ponds *shall* be retained substantially in their natural condition. Withdrawals of water which would conflict therewith *shall* be authorized only in those situations where it is clear that overriding considerations of the public interest will be served.

RCW 90.54.020(3) (emphasis added).

Ecology sets instream flows by rulemaking under the State of Washington's Administrative Procedure Act, Chapter 34.05 RCW. RCW 90.54.040. Once established, instream flows are water rights and in most respects are treated like any other water right, including protection from impairment by more junior rights. *Postema v. Pollution Control Hearings Board*, 142 Wn.2d 68, 82, 11 P.3d 726 (2000). Where an instream flow has been adopted for a stream or water body, any subsequent permit for withdrawal of waters must be conditioned to protect the instream flow. RCW 90.03.247. Instream flows operate only prospectively; they cannot require that senior users be curtailed in order to return water to the stream. As with any other water right, if water is not available in the stream because of senior users or climate conditions, the full amount of the instream flow is not available.

An instream flow rule may also restrict withdrawal of groundwater. Withdrawal of water from aquifers in hydraulic continuity with the stream has been shown to affect streamflows — for this reason, permit-exempt wells near streams, especially tributaries, can be problematic. *See* Barlow, et al.; and Osborn. A permit for a groundwater withdrawal that would impair a more senior instream flow must not be granted. *Postema,* 142 Wn.2d at 82; *Hubbard v. Department of Ecology*, 86 Wn. App. 119, 125, 936 P.3d 27 (1997). The language of some instream flow rules specifically address this issue, in some instances closing groundwater basins to further withdrawals and in some cases placing conditions on use of groundwater. *See* Groundwater Withdrawals (References, below).

Protection of Instream Values Requires Protecting Occasional High Flows

The statutory scheme recognizes that salmonid production is a central purpose of setting instream flows. RCW 90.22.060 directs Ecology to prioritize rivers for instream flows. The "primary goal" of this prioritization is to be the "achievement of wild salmonid production." It has been shown that fish production is directly related to streamflow. A study spanning more than 40 years showed that streamflow levels and the Puget Sound coho salmon catch two years later were closely related. *See* Matthews, et al.

When deciding on the flow level to incorporate in a rule, Ecology bases its decision partly on the amount of water that will protect fish and other instream values. For a discussion of factors Ecology considers when setting instream flows, see *A Guide to Instream Flow Setting in Washington State*, ed. Lynn D. Geller, (2003) Wash. Dept of Ecology Pub. No. 03-11-007. This process may result in an instream flow level that is not met at times in some, or even most, years. Flow levels are often described in terms of "exceedance flows." For example, a 90% exceedance flow is one that is met on average nine out of ten years, while a 50% exceedance flow is met on average five years out of ten.

This does not mean, however, that instream flows are being set at "theoretical" or "aspirational" levels. Rather, setting a flow that is not met in all years is consistent with preservation of instream resources and overall ecosystem function. The absolute amount of habitat available for fish is increased in high flow years, and there are also other important benefits associated with variable flows. Fish and other wildlife have evolved and adapted to historic streamflow conditions, which include both high and low flow years. The natural flow regime, including both high and low flows, is important for the overall health of river ecosystems. *See* Poff, et al. High flows in particular maintain the natural environment by cleaning stream channels and affecting their shape. High flows are also important in terms of compensating for poor habitat conditions in low-flow years. *See* Geller at 4 and 16.

Ecology routinely issues water permits (for uses other than instream flows) for water bodies that are fully appropriated, conditioning the permits on the instream flow. Over time, this essentially guarantees that the instream flow will become the maximum flow that is ever present in a stream. If an instream flow is set to protect only average habitat conditions, then the above-average conditions in good years will likely be eliminated, with the effect that overall fish production and population will decrease. A 5% exceedance flow would protect occasional high levels of fish production in high flow years and contribute to maintaining a population. Beecher, H.A (1990), *Standards for Instream Flows*, Rivers 1(2): 97 at 104. Adopting an instream flow that protects high flows as well as average- and low-flows is therefore consistent with the command in RCW 90.54.020(3)(a) for "preservation of wildlife, fish, scenic, aesthetic and other environmental values." Such an instream flow may preclude further withdrawals of water from a watershed. When this happens, it is an indication that the limit on what can safely be withdrawn — while protecting instream values — has been reached.

Water Allocation

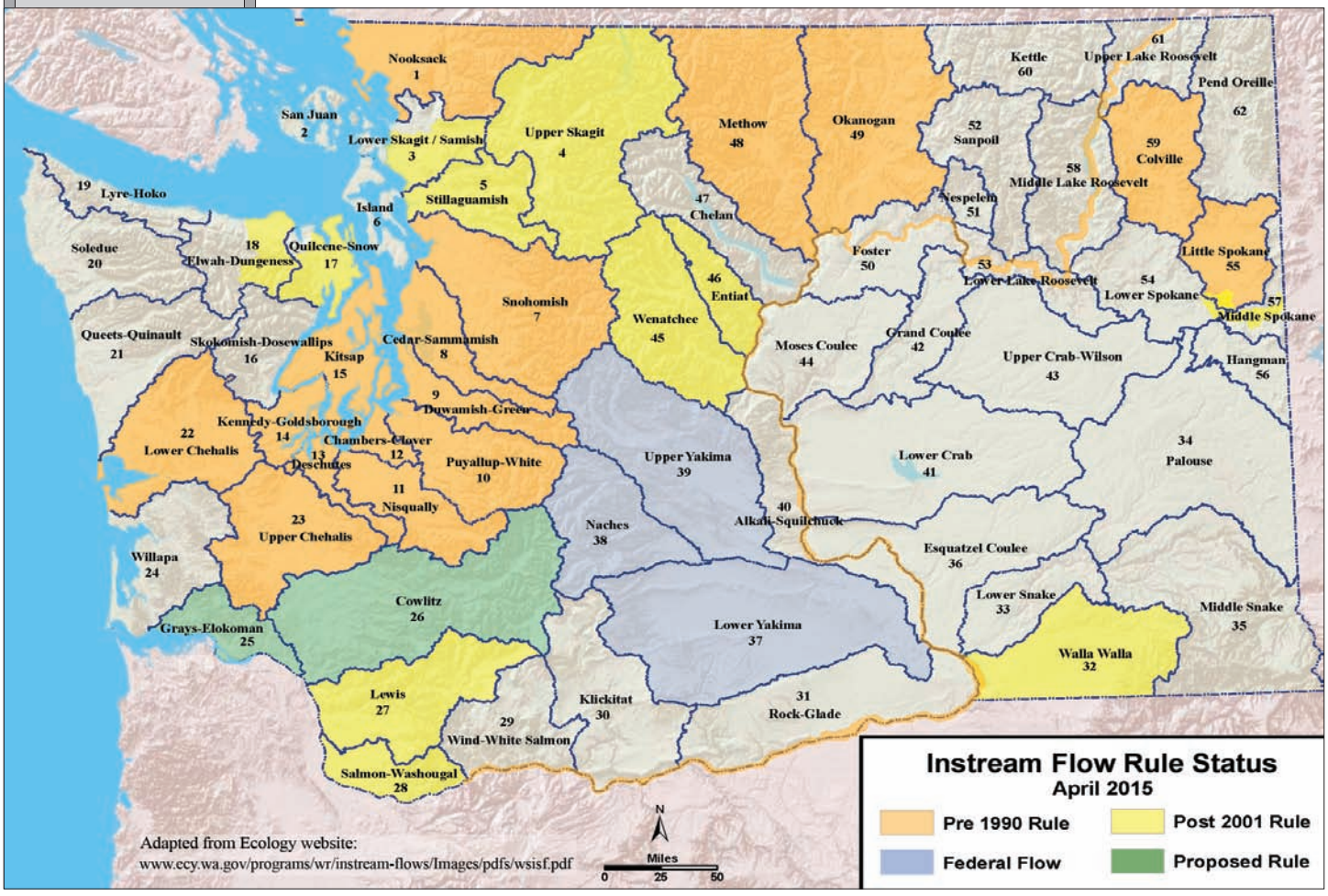
Appropriation History

Dungeness River Flows

Instream Flows Only Protect Water That Has Not Previously Been Appropriated

To understand why instream flows are set at levels that may restrict future appropriations of water, it is important to understand their context. Because of the historical appropriation of water, Ecology's instream flow setting is generally done long after most of the water in the river has already been spoken for. Instream flows established now or in the future will therefore be junior to water rights that account for much of a river's natural flow. Ecology began setting instream flows in 1980, long after the majority of other water diversions were established. Of the 62 Water Resource Inventory Areas (WRIAs) in Washington state, more than half do not have instream flows established as of this writing **(*see* Figure 1)**. If instream flows had been set for the remaining river basins, those flows would now be senior to (and protected from) the large number of permit-exempt wells that have recently been drilled. It may be impossible to protect an amount of water that represents the natural or "original" flow of a river; if so, instream flows can only prevent further degradation of the resource rather than preserving it intact.

As one example, the August-September 50% exceedance flow for the Dungeness River has been reported at 207 **c**ubic **f**eet per **s**econd (cfs). An adjudication proceeding in 1924 identified a total of 524 cfs in water rights on the Dungeness River mainstem. More recently, a survey of Ecology's Water Rights Tracking System database in 2000 showed surface water permits and certificates totaling 207.7 cfs. In 2002, another Ecology survey identified surface water permits and certificates allowing withdrawal of 340.66 cfs from the Dungeness mainstem. While there is obviously some uncertainty in these numbers, it is clear that authorized surface water diversions could potentially account for most or all of the flow of the river, particularly in the late summer low flow period (precisely when demand for irrigation water is at its highest). There are also large withdrawals of groundwater in the Dungeness basin. The 2000 Ecology survey showed certificated groundwater withdrawals of 41,089 gallons per minute (equivalent to 91 cfs). Groundwater in the basin is known to be in hydraulic continuity with the river, so it is likely that these withdrawals also reduce streamflow. (*See* Elwha-Dungeness Planning Unit, May 2005, at page 2.8-6; at 2.3-10; at 2.3-9; and at 2.3-11). More recently, under a 2012 *Memorandum of Understanding* with Ecology, the Dungeness River Agricultural Water Users Association agreed to limit its diversions to no more than one-half of the flow of the river, and not to divert water that would diminish flow to below 60 cfs (September 6, 2012, at 3-4). It was in this context, with the river potentially reduced to less than half of its historic flow, that Ecology adopted the instream flow rule to protect the remaining instream resources. WAC 173-518, effective January 2, 2013.



Water Allocation

Over-Allocation

Junior Instream Flows

"In-Kind" Mitigation

Water Banking

New Withdrawals

"Out-of-Kind" Mitigation

"Maximum Net Benefits"

Development

The Wenatchee River provides another example. The September 50% exceedance flow in the Wenatchee River watershed (WRIA 45) is 727 cfs, and irrigation permits and certificates total 594.5 cfs. For Icicle Creek, a major tributary to the Wenatchee River, the September 50% exceedance flow is 134.7 cfs. Irrigation permits and certificates on Icicle Creek total 261.3 cfs, with an additional 53.4 cfs water right for operation of a fish hatchery. (*See* WRIA 45 Planning Unit, April 2006, *Final Wenatchee Watershed Management Plan* at Table A-4). Even allowing that there may be some duplication of rights or other errors in these amounts, the lion's share of the water has already been allocated for other uses. Here, too, the instream flow — junior to the majority of the irrigation diversions — could only hope to protect a portion of the natural flow in the river. The Wenatchee basin instream flow rule (WAC 173-545) was adopted in 1983, and amended in 2005. The 2005 amendments reserved certain quantities of water for use even though they would impair the instream flow.

The point is that by the time Ecology is able to establish an instream flow, much, perhaps most, of a river's flow has already been appropriated. Ideally, we would be able to protect aquatic resources, including fish, at levels something like what existed pre-European settlement. Beecher (1990) suggested that the period from 1960-1982 might be an appropriate benchmark, as this would cover an adequate period of solar activity and would ensure that good records of streamflows and fish production were available. An instream flow, though, cannot and does not bar other senior uses of water, and it cannot and does not take water from senior users and return it to the stream. It can only protect part of whatever is left after more than a century of unchecked water appropriation. Setting an instream flow is analogous to encountering a person who has single-handedly eaten nearly an entire pie and requiring that he share the surviving slice or two with others.

Mitigation for Diversions or Withdrawals of Water

Where a diversion or withdrawal of water would impair an instream flow, it is sometimes possible to mitigate the impairment. "In-kind" or "water-for-water" mitigation refers to providing replacement water to compensate for a withdrawal. An example of in-kind mitigation is purchasing and retiring a senior water right for an amount of water equal to the new use, so that the total amount of water in the stream remains constant. Water banking generally relies on this strategy. A water bank has the ability to pool water rights and to make mitigation available as credits to buyers; a person who needs to obtain mitigation water can effectively do this through a single transaction with the water bank. Most commonly in Washington, water rights (purchased or donated) are placed into the state trust water rights program. RCW 90.42.080. For a discussion of water banking in Washington, *see* www.ecy.wa.gov/programs/wr/market/waterbank.html.

The instream flow rules that require mitigation for new water withdrawals generally specify that it be in-kind. In other words, the new water use is "water budget-neutral." *See* Mitigation Rules. The definition of "mitigation plan" in certain other instream flow rules also suggests that the mitigation contemplated is "in-kind." For example, the Stillaguamish instream flow rule does not require that permit-exempt uses be mitigated but provides that new withdrawals from closed streams may be allowed if the applicant submits a "scientifically sound mitigation plan." WAC 173-505-110(1)(b). The definition of "mitigation plan" in this rule includes a requirement that "the withdrawal with mitigation in place will not impair existing water rights, including instream flow rights... ." WAC 173-505-030(7). The Quilcene-Snow instream flow rule contains an identical definition of "mitigation plan." WAC 173-517-030(12)(a). This language is most readily interpreted to mean that the new withdrawal is to be mitigated with water in the river — any other strategy will result in impaired flows.

"Out-of-kind" mitigation, on the other hand, involves providing some type of habitat enhancement or restoration other than water in the stream. By definition, out-of-kind mitigation does not prevent impairment of the instream flow. Examples of out-of-kind mitigation are revegetating streambanks, removing levees that channel a river, or adding large woody debris to improve fish habitat. While there is no doubt value in such habitat projects, the obvious flaw with out-of-kind mitigation is that where fish are concerned, water is simply different: the best habitat in the world is of no use to fish unless there is water in it. For this reason, out-of-kind mitigation is not an acceptable way to compensate for impairment of an instream flow. *See* the discussion of *Foster v. Department of Ecology*, No. 90386-7 (Washington Supreme Court, October 8, 2015), below.

"Maximum Net Benefits" Must Consider All Water Use - Not Just Unappropriated Water

The Water Code, specifically RCW 90.03.005, provides that the waters of the state are to be used "in a fashion which provides for obtaining maximum net benefits" from both out-of-stream and instream uses:

> It is the policy of the state to promote the use of the public waters in a fashion which provides for obtaining maximum net benefits arising from both diversionary uses of the state's public waters and the retention of waters within streams and lakes in sufficient quantity and quality to protect instream and natural values and rights.

RCW 90.54.020(2) contains similar language. It has been suggested that the "maximum net benefits" analysis requires that an instream flow be set at a level low enough so as to allow further appropriations to support development. But these statutes cannot be read in a vacuum. Any consideration of "maximum net

Water Allocation

Historical Context

benefits" when setting an instream flow does not start from a blank slate, because most of the state's water had already been appropriated for out-of-stream use (and was already producing economic benefits) before the instream flow statutes were passed.

Considering maximum net benefits from "use of the public waters," as the Water Code requires, is not the same as considering maximum net benefits from "use of the public waters *that have not yet been appropriated*." When the out-of-stream benefits that are already being enjoyed through use of previously appropriated water are added to the analysis, "maximum net benefits" clearly demands that instream uses of water, too, be protected. Water was appropriated with no concern for instream or other environmental values for many years, and setting instream flows that are protective of the remaining environmental and other instream values is consistent with maximizing the benefits arising from both in- and out-of-stream uses. To do otherwise would render the protections of an instream flow meaningless.

OCPI Exception

"Overriding Considerations of the Public Interest" (OCPI) - Narrow Exception

Once established, an instream flow serves as a "water right for the river." Instream flows have the same protection from impairment as other water rights, and a permit for a diversion or withdrawal of water that would impair an established instream flow must not be issued. *Postema*, 142 Wn.2d at 95. The Legislature has provided only a single, narrow exception to this principle, which allows impairment of an instream flow only where "it is clear that overriding considerations of the public interest will be served." RCW 90.54.020(3)(a). This "OCPI" exception is not further defined, and no statute or rule sets forth criteria that are to be used to determine what constitutes an "overriding concern of the public interest." Despite this lack of clarity, Ecology invoked OCPI in rulemaking for several instream flows in order to "reserve" water for future use, even where such future use would impact instream flows and the environment. *See* WAC chapters 173-505 (Stillaguamish River); 173-517 (Quilcene-Snow watershed); 173-518 (Dungeness watershed); 173- 527 (Lewis basin); 173-528 (Salmon-Washougal basin); and 173-545 (Wenatchee River basin).

Clarity Lacking

Narrow Exception

Recent Washington Cases Dealing With OCPI and Instream Flows

The contours of the permissible use of OCPI have never been precisely defined. Two recent Washington Supreme Court decisions have partially defined the limits of the exception and discussed how Ecology may apply it. Notably, in both cases the Court stressed that the exception was to be applied narrowly.

The first of these, *Swinomish Indian Tribal Community v. Dep't of Ecology*, 178 Wn.2d 571, 311 P.3d 6 (2013) (*Swinomish)*, dealt with the application of OCPI to justify re-allocation of water from streamflows to development in the Skagit River Basin (WRIA 3). The instream flow for the Skagit River was established in a rule that became effective in 2001. WAC 173-503 ("Skagit Instream Flow Rule"). Because the instream flow was *not* met for approximately 100 days each year, any new withdrawals of water (including from permit-exempt wells) would be interruptible and could not provide year-round water supplies that would be used for development. RCW 19.27.097 requires that an applicant for a building permit provide evidence of an "adequate water supply for the intended use of the building." For a residential building, this requires an uninterruptible supply of water.

Skagit County sued to overturn the Skagit Instream Flow Rule. As part of a settlement of the litigation, Ecology amended the Skagit Instream Flow Rule in 2006. The amendments set aside water for various categories of future use in 27 "reservations." (Former WAC 173-503-073; -074 (invalidated by Supreme Court decision October 3, 2013)). A party could apply to beneficially use the reserved water despite the undisputed fact that use of water from the reservations would impair the pre-existing instream flows and adversely affect salmon.

In establishing the Skagit Instream Flow Rule's reservations, Ecology relied on the OCPI exception and used a simple balancing test in which the value of water for new domestic, municipal, industrial, agricultural, and stock-watering uses was weighed against the impact on aquatic resources and recreational uses, including what Ecology called a "small monetary loss to fisheries." *Swinomish*, 178 Wn.2d at 579. In addition to the gained economic productivity from the new beneficial water use, Ecology also cited the fact that new sources of water would otherwise be unavailable as a "benefit" of the reservation scheme. Ecology then concluded that the benefits of the reservations, taken in aggregate, outweighed the impact of the water withdrawals on instream resources. *Id*.

The Swinomish Indian Tribal Community (Swinomish) challenged the amended rule in Superior Court, arguing that Ecology's use of the OCPI exception was based on an incorrect interpretation of the statute and that it was improper to consider the benefits of all 27 of the reservations together. *Id.* at 580. After the trial court upheld the amended rule and dismissed the Swinomish petition, the Washington Supreme Court (Court) accepted review. Their decision held that Ecology exceeded its statutory authority in amending the rule to establish the reservations. *Id.* at 602. As in *Postema*, the Court again recognized that instream flows are water rights that enjoy the same protection from impairment by subsequent (junior) appropriations as other senior water rights, and that OCPI under RCW 90.54.020(3)(a) provides only a "narrow exception" to the rule preventing impairment of an established instream flow right. *Id.* at 585 (*citing Postema*, 142 Wn.2d

"INTERRUPTIBLE WATER RIGHT"
(FROM ECOLOGY WEBSITE)

An interruptible water right is one that — because it is junior in priority to other water rights, including instream flow levels — cannot be reliably used year-round. Senior water rights must be satisfied first, so more junior rights may be limited at certain times of the year. When the Skagit River falls below the instream flow levels, all junior water rights are subject to being turned off (interrupted) until the Skagit River meets the regulatory flow levels. The Skagit River has not met the flow levels prescribed in the rule an average of 95 days in each of the past 28 years. These low flow days are mostly concentrated in the late summer and early fall months.

Water Allocation

Authority Limited

Balancing Test Rejected

***Foster* Case**

"Gold-Plated" Mitigation

"Out-of-Kind"

"End Run" Rejected

Temporary v. Permanent Uses

Net Ecological Benefits

at 81-82). Because Ecology's interpretation of the OCPI exception "fails to give minimum flow water rights the protection the Legislature has determined is appropriate," it was "inconsistent with the statutory scheme." *Id.* at 597.

The *Swinomish* Court considered the OCPI provision of RCW 90.54.020(3)(a) in the context of other related statutes in the water code, and held that OCPI could not be used to simply reallocate water from instream flows to development. *Id.* at 584; 588. The Court specifically noted that the Legislature had not given Ecology "broad authority" to make development possible by reallocating water; rather, OCPI was meant to be applied in "extraordinary circumstances." *Id.* at 599; 576. The Court also held that the OCPI exception was not intended to be an alternative method for appropriating water when the four-part test of RCW 90.03.290(3) could not be met — terming Ecology's use of the exception as an "end-run around the normal appropriation process" that did not accord with the Prior Appropriation Doctrine or with the statutes implementing it. *Id.* at 590.

In addition to finding that the Skagit Instream Flow Rule's reserves did not rise to the level of an "overriding consideration of the public interest," the Court found that Ecology's simple balancing test was inadequate and that economic gains alone did not justify use of OCPI to impair an established instream flow. *Id.* at 600. The majority observed that the desire to find water for rural homes was "virtually assured of prevailing over environmental values" under Ecology's balancing test, and went on to note that the Water Resources Act explicitly contemplated protection of instream as well as out-of-stream uses. *Id.* The Court also observed that beneficial uses of water did not necessarily serve the *public* interest, specifically pointing out that uses such as permit-exempt wells for domestic use were private, not public. *Id.* at 587.

More recently, in *Foster v. Department of Ecology*, No. 90386-7 (Washington Supreme Court, October 8, 2015), the Court addressed the question of what constitutes an "overriding consideration of the public interest" as well as the issue of "out-of-kind" mitigation. In *Foster*, Ecology issued a large new groundwater right to the City of Yelm for future development. It was undisputed that Yelm's withdrawal of this water would reduce streamflows in the Deschutes and Nisqually Rivers as well as Yelm Creek. *Id.* at *2. (The Pollution Control Hearings Board's (PCHB's) decision as to water rights for Olympia and Lacey was not appealed). Together with the cities of Lacey and Olympia, Yelm proposed what was termed a "gold-plated" mitigation package, relying on habitat enhancements rather than on replacement water to mitigate for its full withdrawal. Part of the mitigation package included obtaining replacement water for the stream by purchase and retirement of irrigation rights. The irrigation season extends from April 15 through October 15, so the replacement water was not available in the "shoulder seasons" immediately before and after the irrigation season, times which are important for fish spawning. The habitat enhancements are "out-of-kind" mitigation and would not have fully compensated for the impacts of the water withdrawn (Ecology conceded that streamflows would be impaired at times important for spawning fish). *Foster*, Slip Op. at *2. Despite the undisputed loss of water from the streams, Ecology approved the permit, finding a net ecological benefit. The PCHB affirmed issuance of the permit, and Foster appealed to superior court. While Foster's appeal was pending, the Court issued its *Swinomish* ruling. The superior court considered the case in light of *Swinomish* and affirmed the PCHB.

On direct review, the Court overturned PCHB's decision and disapproved the permit, in a decision firmly grounded in its *Swinomish* precedent. *Id.* at *12. The Court noted that *Swinomish* did not allow the use of OCPI as an "alternative method for appropriating water when the requirements of RCW 90.03.290(3) cannot be satisfied." *Id*. at *11. As the Court noted: "Ecology's approval of Yelm's permit and its application of the OCPI exception makes the sort of end-run around the appropriation process that we expressly rejected in *Swinomish*." *Id.* In this analysis, Ecology may not use OCPI to impair streamflows to provide water for development in Yelm, just as the *Swinomish* court held that it could not do so to provide water for development in the Skagit River basin.

Foster also contains an analysis of permanent v. temporary uses of water. Through a line of reasoning based largely on use of the terms "appropriation" and "withdrawal" in parts of the Water Code, the Court found that "appropriation" referred to "assignment of a permanent legal water right," while "withdrawal" referred to "the temporary use of water." *See* Slip Op. at *9-10. This usage is not in complete accord with the way "appropriation" and "withdrawal" are used as terms of art, and this part of the opinion may lead to some confusion in the future.

Foster also examined the question of what constituted an "overriding consideration of the public interest." In *Swinomish*, the OCPI exception allowing impairment of instream flows was held to be a narrow one: "extraordinary circumstances" were required before an instream flow could be impaired. *Swinomish*, 178 Wn.2d at 576. *Swinomish* did not, however, describe the sort of extraordinary circumstances that would be required. In *Foster*, Ecology argued that the mitigation plan presented by Yelm and the other cities was itself an "extraordinary circumstance" because of the net ecological benefits projected to flow from totality of the in- and out-of-kind mitigation proposed. The *Foster* Court rejected this argument, stating "…the mitigation plan itself is not the 'extraordinary circumstances' meant to justify use of the OCPI exception." *Foster,* Slip Op. at *11. The Court observed that the purpose of the permit application was to provide water for municipal needs, which it noted is "far from extraordinary." ("And

Water Allocation

Replacement Water

Instream Flows Protected

"In-Kind" Requirement

Emergency Circumstances

Difficult Choices

municipal water needs, far from extraordinary, are common and likely to occur frequently as strains on limited water resources increase throughout the state."). *Id*. Finally, *Foster* makes it clear that mitigation for impairment of an instream flow cannot be accomplished through other "ecological improvements." *Id*. The Court noted that the legal injury involved was impairment of a senior water right (i.e., the instream flow), and that the injury was not mitigated by the parts of Yelm's mitigation plan that did not replace the missing water.

Impacts of *Foster* & *Swinomish* on Future Appropriations

Foster and *Swinomish* demonstrate judicial resolve that instream flows must be protected. Although they do not define what does constitute an "overriding consideration of the public interest" these cases do help determine what does not. Together, they hold that the OCPI exception will not justify impairing instream flows for municipal, domestic, or agricultural use simply based on the perceived economic value of the new uses. *Swinomish* also strongly suggested that OCPI may not be used to impair an instream flow to provide water for uses that are generally private, such as providing domestic water, rather than strictly public. Under *Foster*, it is clear that the "overriding consideration" must relate to the need for the water itself, rather than to the totality of a scheme to obtain water, including any benefits that are provided in mitigation.

Foster also holds that water withdrawals impairing senior instream flows are to be mitigated through replacement water (in-kind mitigation). Out-of-kind mitigation, such as the habitat improvements in *Foster*, does not compensate for impairment of instream flows.

What *Swinomish* and *Foster* did *not* do, however, was to define exactly when OCPI could be used. *Foster's* reasoning that OCPI cannot be used to allow an existing instream flow to be permanently impaired, together with *Swinomish's* holding that OCPI may not be used simply to find water for development, suggests that OCPI should be reserved for emergency circumstances.

Options to Enhance Water Supply

Until recently, water management, especially in rural areas, has largely focused on increasing total appropriations. By doing so, Ecology and water users have been able to avoid making difficult choices about how water will be used. However, the "new" water located invariably comes at the expense of fish and other environmental values. Recent establishment of water banking systems (*see* below) is a promising method of minimizing or avoiding these impacts.

We are now at the point where withdrawal of more water does represent a choice — a choice to harm the instream environment and the fish and wildlife that depend on it. Much — in some cases most — of the flow of our rivers has already been dedicated to out-of-stream uses. The challenge before us is to decide how to live within our means by wisely and efficiently allocating that water, rather than engaging in an ultimately futile attempt to keep finding "more." Even if instream flows and the environment were given no protection whatsoever, the day would still come when there is no more water to be taken. What then?

I submit that the problem is largely one of structural incentives in our water management scheme. Water is currently available at no cost to those with perfected water rights, but may not be available at any price for those (including new users) who lack water rights. There are several areas where changes in policy or possibly new legislation could help to reduce or eliminate disincentives to reallocation of water.

Conservation has great potential to reduce overall water use and to allow more users to share the water that has already been allocated. It will also play a key role in adapting to the reduced water supply that is expected to result from climate change. Key areas that should be explored are use of more efficient plumbing fixtures, low-water use landscaping, and more efficient irrigation techniques. However, current water pricing (or the lack hereof) provides little incentive to conserve. Further, the system has only just begun to address ways (such as water banking) to allow users to benefit financially from making water available for use by others. Opportunities to conserve water are likely to be different in different parts of the state, due to the different uses of water that predominate. For example, agricultural conservation might be stressed in Eastern Washington, while programs to encourage water savings in municipal/industrial uses might be more useful in Western Washington.

Water banking goes hand-in-hand with conservation, by providing a market for water that is conserved and therefore a financial incentive to use less water. Where senior rights can be purchased and placed in trust, a banking system can provide water-for-water mitigation. A one-time payment from a property owner to cover the cost of mitigation can allow development of water on his or her property, which greatly simplifies individual mitigation obligations. Water banks are successfully operating in several regions including the Yakima Basin and the Dungeness River watershed. Use of water banking should be encouraged, and expanded incentives for placing water into trust should be explored. The water banking system must also be transparent, and regulated to ensure that water used as mitigation is truly available at the appropriate times. There must be assurances that the mitigation water will be available at the appropriate times of year and for the lifetime of the mitigated use. For domestic use, mitigation will need to be provided in perpetuity. This may also require building in a margin of safety to guard against reductions in streamflow caused by climate change.

Water Banks

[W]ater banking is broadly defined as "an institutional mechanism that facilitates the legal transfer and market exchange of various types of surface, groundwater, and storage entitlements."

Water banks can be involved to differing degrees in water exchange. Banks have assumed the role of broker, clearinghouse, and market-maker. Brokers connect or solicit buyers and sellers to create sales. A clearinghouse serves mainly as a repository for bid and offer information. A market-maker attempts to ensure there are equal buyers to sellers in a market. Many banks pool water supplies from willing sellers and make them available to willing buyers. Banks can also provide a host of administrative and technical functions. From Ecology Publication No. 04-11-011

Water Allocation

Relinquishment Disincentive

Disincentives to conservation or reallocation of water should be eliminated where possible. Water rights attached to property may make up a significant part of the value of that property. Water rights or parts of water rights that are not used (generally for five consecutive years) can legally be considered relinquished. RCW 90.14.180. This means that using less water may result in diminishment of a water right, which would reduce the value of the property. This results in disincentives for conservation, and indirectly makes less water available for other uses. This is an area where new legislation might be useful in encouraging agricultural users to conserve water, which could then be made available for domestic use.

Growth Management

The problem is also largely one of distribution. The issues with domestic water availability in particular are largely due to population growth in areas that lack adequate water and are not served by municipal water systems. The State of Washington's Growth Management Act (GMA) was intended to direct growth to areas where services could be readily provided and to prevent sprawl. RCW 36.70A. The GMA should be followed so that growth is channeled to areas that can be served by water or that have an adequate groundwater supply. This is especially important considering the growth of Washington's population; counties simply cannot continue to avoid the issue of water availability by failing to consider protection of water resources in their zoning decisions. This issue is the subject of a case currently under consideration by the Washington Supreme Court. *Hirst v. Western Washington Growth Management Hearings Board* (No. 91475-3) addresses the extent of a county's obligation to include provisions in its Comprehensive Plan that protect water resources.

Storage Options

In areas where senior water rights cannot be found for purchase, local storage of water in cisterns or through **a**quifer **s**torage and **r**echarge (ASR) may allow mitigation of groundwater use. Streamflows in most parts of the state fall below adequate levels for only part of the year. Storage of water at times when flows are high, either for domestic use or for streamflow augmentation during the dry season, might provide local mitigation options. Ecology should work aggressively to develop methods for protecting instream flows through storage. A bill providing for study of storage options in the Skagit River basin has been passed by the 2016 Legislature (SB 6589; as of this writing, the bill is awaiting the governor's signature). ASR also offers the potential to mitigate water use, but there are issues relating to water quality and Washington State Health Department regulations that must be resolved. Here, too, legislative action might be of use in setting forth a framework for use of this method. In some cases, use of reclaimed or "recycled" water from wastewater treatment may be appropriate in the ASR setting. Ecology has restarted the process of rulemaking to provide regulations for use of reclaimed water, which was initially directed by the Legislature in 2005. Documents relating to Ecology's reclaimed water rulemaking process are located at www.ecy.wa.gov/programs/wq/ruledev/wac173219/0612documents.html.

Reclaimed Water

Metering

Finally, metering of water use is a key piece of the puzzle. There has been significant resistance to metering, particularly for agriculture or permit-exempt wells. However, we cannot allocate water wisely, assess the progress of conservation efforts, or properly mitigate water use unless we know how much water is actually being used. Some, but not most, instream flow rules require metering of new permit exempt water use. *See* Metering Rules. In the absence of metering, use must be estimated. For permit-exempt wells, these estimates vary widely. Ecology has used estimates ranging from 15 – 800 gallons per day for consumptive use from permit-exempt wells. *See* Consumptive Use Estimates. Some users object that these numbers are too high, but in the absence of accurate information Ecology is wise to use conservative assumptions.

Measurement Accuracy

It is also likely that use from permit-exempt wells is higher than the average in summer, exactly when instream flows are most likely to be unmet. If use by permit-exempt water users were underestimated, then water-for-water mitigation plans would fail to fully mitigate for the impact of water use, resulting in impairment of streamflows and more frequent conflict with other water right holders. On the other hand, if consumptive use were over-estimated, then excessive mitigation would be required of property owners. As discussed above, Ecology already has the authority to meter all water uses (including permit-exempt uses), and indeed is required to meter certain new diversions. The actual cost of metering is relatively low compared to the cost of drilling a well or developing a property and should not be a barrier (for example, the cost to install a meter on a domestic connection in the City of Bellingham is less than $1000. Eric Hirst, personal communication, February 20, 2016). Ecology should be encouraged to increase use of metering and to collect data on actual water use. However, Ecology's ability to enforce limitations on water use is currently hamstrung by substantial reductions in funding for enforcement staff. This may be another area where legislative action, including providing Ecology with additional resources, could be of benefit.

Conclusion

Water Unavailability

The current issues of water unavailability in some parts of Washington simply reflect the hard truth that withdrawals of water, primarily for development and agriculture, have reached the limit of what the resource can support. The majority of water in most streams has already been taken for other uses. Further appropriations will endanger instream resources, in conflict with treaty obligations, Washington law, and the imperative for recovery of threatened and endangered species. To the extent that particular water users are unable to find reliable supplies of water, the issue is largely one of how we choose to prioritize and distribute the water that is available for use. Simply appropriating more and more water at the expense of

Water Allocation

the environment is not the answer. Indeed, even allocating our entire water supply to human use would only delay the date at which that supply becomes inadequate. A solution will only be found when methods for efficiently allocating and using the water, that is already dedicated to human use, are developed and employed.

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Groundwater Pumping and Streamflows: see Barlow, P.M. and S. A. Leake, *Streamflow Depletion by Wells – Understanding and Managing the Effects of Groundwater Pumping on Streamflow*, USGS Circular 1376 (2012). The evolution of Washington law regarding hydraulic connectivity is described in Rachel P. Osborn, *Hydraulic Continuity in Washington Water Law*, 47 Idaho L. Rev. 23-49 (2010).

Groundwater Withdrawals: For example, WAC 173-510-050 (certain groundwater withdrawals in Puyallup watershed to be regulated like surface waters); WAC 173-517-100 (Quilcene-Snow watershed closed to groundwater withdrawals affecting closed surface waters); WAC 173-527-080 (groundwater withdrawals in Lewis River basin may not affect closed surface waters); WAC 173-532-040 (aquifers in continuity with Walla Walla River closed to groundwater withdrawal except for permit-exempt wells); WAC 173-539A-040 (no new groundwater uses in Upper Kittitas Valley unless water budget-neutral); WAC 173-548-050 (no withdrawals of groundwater in continuity with closed surface waters in Methow watershed); WAC 173-557-060 (Spokane River instream flows to be protected from permitted or permit-exempt groundwater withdrawals).

Metering Rules: WAC 173-505-090(2)(h) (Stillaguamish basin; metering required for non-domestic users of permit-exempt wells); WAC 173-517-180 (Quilcene-Snow watershed, all new permit-exempt well users must meter); WAC 173-518-060 (Dungeness watershed, all new users must meter); WAC 173-539A-070 (Upper Kittitas valley, all groundwater users must meter); WAC 173-545-090 (Wenatchee River basin, all water use from reservation must be metered).

Mitigation Rules: WAC 173-518-070 (Dungeness River; water use "may be mitigated" through credits purchased from water exchange); WAC 173-527-110(2)(b) (Lewis River basin; streamflow depletions to be offset with water to "maximum extent practicable" and for "at least half" of depletion); WAC 173-528-110(2)(b) (Salmon-Washougal basin, same as for Lewis); WAC 173-532-050(6) (Walla Walla River basin, certain new permit-exempt well users must provide "water-for-water" mitigation); WAC 173-539A-050(2) (Upper Kittitas; water user is to identify water rights that will offset new use of water).

Water Supply Solutions

Missed Opportunities

Legally Unavailible Water

Inflexible Standards

Policy History

Appropiate Implementation?

This article was originally presented by the author on July 27, 2015 at Law Seminar International's *Water Law in Washington* seminar. It has been updated to incorporate new case law (*Foster v. Ecology*) and new thinking about regulatory and legislative solutions.

WASHINGTON'S WATER AVAILABILITY TRAIN WRECK

POTENTIAL LEGISLATIVE & REGULATORY SOLUTIONS

by Thomas Pors, Law Office of Thomas M. Pors (Seattle, WA)

INTRODUCTION

Preservation of the quality and quantity of water in natural rivers, streams, and lakes is vital to the long-term health of our environment. The physical and legal availability of water is also essential to the economic health of our state and its diverse urban, suburban, and rural communities. The lack of availability of water leads inevitably to building permit moratoriums, missed opportunities for industrial and agricultural development, and stripping of virtually all value from land that cannot be used or built upon without an adequate water supply. The public policy question is not whether to protect either the environment or growing communities, it is how to sustainably protect the health of both the environment and communities.

Despite the comparative abundance of manageable surface and groundwater in the State of Washington, its water supply train has jumped the rails, making water legally unavailable for new uses wherever minimum flows have been established by regulation. The health of suburban and rural communities is being sacrificed to protect minimum instream flows in a manner that is unnecessary, unwise, and unsustainable. This article explains why and suggests both regulatory and legislative changes to accomplish water availability for both people and the environment, as originally intended by the Legislature in the Water Resources Act of 1971.

OVERVIEW

The current regulatory scheme for protection of minimum flows has evolved into an inflexible "legal impairment" standard that is inappropriate for the protection of environmental rights. It prevents the use of science and ingenuity to solve water allocation and protection issues by restricting access to a common and vital resource in contravention of state legislative policy. The status quo has produced excessive procedural burdens and costs, artificial water markets, and legal uncertainties for new and changing water uses in a growing economy. This is not a status quo the State should be proud of or protect. Active resource management, utilizing legal standards matched to the rights they are protecting, would do a better job of allocating and managing water, including for protection of healthy fisheries.

PROTECTING INSTREAM FLOWS

Protecting instream flows to preserve or enhance the functions and values of rivers, streams, and lakes is one of the predominant policy goals of Washington State's various water resources statutes. In 1969, the Legislature authorized the State Department of Ecology (Ecology) to adopt rules establishing "minimum flows and levels" to protect fish, game, birds, other wildlife resources, and recreational and aesthetic values. RCW 90.22.010-020. In 1971 the Legislature mandated the protection of the natural environment by preserving "base flows" of perennial rivers and streams "necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values." RCW 90.54.020(3)(a). In this environmental era, the state shifted from a pioneer policy of maximum utilization of resources to managing water resources for the "maximum net benefit of the people of the state." Without question, the people of the state benefit in numerous ways from the protection of instream flows. Forty years later, the question is whether Ecology appropriately implemented the fundamental policies of protecting and managing water resources for the maximum net benefit, or whether it protected flows in a manner that unnecessarily excludes other uses and sound principles of water resource management. If the latter, how can four decades of legally flawed instream flow regulation be fixed? These are the post-*Swinomish* and post-*Foster* questions.

WASHINGTON'S INSTREAM FLOW RULES

The problem began decades ago with Ecology's failure to balance the public's interest in water for instream and out-of-stream uses when it began adopting minimum instream flow rules in the 1970s. RCW 90.54.020(2) and 90.03.005 require that the State's waters be allocated according to the "maximum net benefits" for the people of the State, including both instream and out-of-stream beneficial uses of water. Ecology did not comply with this directive before adopting its instream flow rules at Chapters 173-500, et. seq., opting instead to protect instream flows first and allocate remaining waters later according to the **m**aximum **n**et **b**enefit (MNB) directive (*see* POL-2025, Ecology's Water Resources Program Policy: *Interpretive Statement on When to Perform a Maximum Net Benefits Analysis*). This has proven to be a short-sighted blunder, because Supreme Court precedent has essentially resulted in the inability to allocate water for any other uses in basins with adopted minimum flows. One unintended consequence of ignoring the MNB directive is the accidental and unprecedented closure of groundwater to further appropriation

Water Supply Solutions

Impairment Standard Needed

Basin-Specific Standards

Hydraulic Continuity

"Impairment" Definition

Aspirational Flows Set

Effective Closure

Zero Tolerance Standard

in basins with **m**inimum **i**nstream **f**low rules (MIFs). Even if Ecology wanted to reallocate water from minimum flows to other uses, the Supreme Court has determined that would be inconsistent with the prior appropriation doctrine and beyond Ecology's statutory authority. *See Swinomish v. Ecology*, 178 Wn.2d 571, 602, 311 P.3d 6 (2013). Thus, later turned out to be never.

The problem was compounded by Ecology's failure to develop and apply unique impairment standards for groundwater applications in basins with minimum flow water rights and streams closed by rule. The need for a new regulatory impairment standard was implied by language in the MIFs relating to future groundwater applications. In the Puyallup basin rule, for example, WAC 173-510-050 provides: "In future permitting actions relating to groundwater withdrawals, particularly from shallow aquifers, a determination shall be made as to whether the proposed withdrawal will have a direct, and measurable, impact on stream flows in streams for which closures and instream flows have been adopted...If the determination affirms such interrelationship, the provisions of WAC 173-510-040 shall apply." The intent of this rule provision is to exempt a subset of future groundwater withdrawals (those that do not have a direct and measurable impact on stream flows) from the regulations protecting minimum flow water rights and closed streams. Similar intentions were expressed in many other early instream flow rules, but those exclusions of groundwater from MIF regulation have been largely ignored by Ecology in modern permitting decisions.

Basin-specific standards could have been tailored to meet the purpose of minimum flow regulations in each regulated basin, and could have recognized the unique nature of minimum flow water rights as proxies for environmental values they are intended to protect. (See discussion below regarding how minimum flow water rights differ from out-of-stream water rights.) However, in the early 1990's Ecology established a hydraulic continuity policy that assumed *any* connection between a groundwater source and a regulated or closed surface water body was grounds for denial of ground water applications. Ecology subsequently denied over 600 such applications in one massive batch process that was appealed by over 130 applicants. The consolidated appeals resulted in the *Postema* decision, where the Washington Supreme Court held that hydraulic continuity was not enough by itself for Ecology to deny a groundwater application — it would also have to establish factually that the groundwater withdrawal would "impair" the minimum flow or cause diminishment of flow in a closed stream. *Postema v. Pollution Control Hearings Bd.*, 142 Wn.2d 68, 93, 11 P.3d 726 (2000).

In *Postema* the Supreme Court held, "[T]he statutes do not authorize a de minimus impairment of an existing right" — including MIF water rights. 142 Wn.2d at 81. However, the Supreme Court did not define how Ecology should determine that MIF water rights were "impaired." That would have been an ideal time for Ecology to define "impairment" specific to minimum flows, either on a case-by-case basis or by interpreting each of its MIF regulations. However, Ecology subsequently treated MIF water rights like any other water right and assumed that any diminishment of an MIF water right, even a single molecule of water, constituted impairment. Its focus shifted instead to mitigation plans and the use of the "**o**verriding **c**onsiderations of **p**ublic **i**nterest" (OCPI) exception to authorize mitigation that was not 100% in-kind, in-place, and in-time water replacement.

Ecology also adopted regulations using a methodology for setting and protecting MIFs that exceeds the Legislature's mandates to preserve "base flows" and allocate water resources according to the maximum net benefits for the people of the state. Rather than allocating waters actually present in rivers and streams, or identifying instream values to protect against subsequent water right applications, Ecology adopted MIFs at numerical levels that "would be beneficial for fish if those flows were present in the stream" (unlike other water rights that cannot exceed the availability of water). *See* Ecology, "*Introduction to Instream Flows and Instream Flow Rules*" online at: www.ecy.wa.gov/programs/wr/instream-flows/isf101.html. These aspirational numerical flows were then given the status of water rights with priority dates by operation of RCW 90.03.345. New water right permits, water right changes, and new exempt water uses are restricted from impairing those MIF water rights, which by design are not met at the time of their adoption up to 90% of the time. (Ecology's August 27, 2014 presentation to the Rural Water Supply Strategies Workgroup on instream flow science admitted to capping fish-friendly instream flow levels at the 10% exceedance level during low flow seasons, typically August through September. A 10% exceedance flow means that it is predicted to be available in the river only 10% of the time. In other words, such flows are predicted to be unmet 90% of the time. *See* www.ecy.wa.gov/programs/wr/wrac/images/pdf/pacheco_08272014_instreamflow.pdf).

Ecology, therefore, adopted aspirational MIFs knowing that actual stream flows were already insufficient to satisfy them, and without allocating water for other future uses in those basins. This effectively closed the basins to new appropriations because any new effect on the rivers and streams would automatically worsen the probability or degree of those predictably unmet aspirational flows. These aspirational flows are frequently misrepresented as a sign of already over-appropriated rivers and streams, but it is overlooked that MIFs that are not consistently met were designed that way from the outset. Coupled years later with the zero tolerance impairment standard of the *Postema* decision, this resulted in the accidental closure of groundwater to protect MIFs without any new public notice or rulemakings, in apparent contradiction to the rulemaking requirement of RCW 90.54.050. There was also no "maximum net benefits" evaluation of this allocation of all available groundwater in a basin to instream flow protection

Water Supply Solutions

Agency Authority

OCPI Exception

No Options

OCPI Tool Eliminated

Mitigation Limits

Unequal Burden

Aspirational Flow = Legal Rights

Dysfunctional Status Quo

while foreclosing future allocations of water to domestic and other uses. As of the date of this article, neither the Legislature nor the courts have reviewed whether these MIF rules exceed Ecology's authority to allocate water according to legislative policy declarations in the Water Resources Act, including the maximum net benefits policy, but such reviews are overdue. (A challenge to the validity of the Dungeness River MIF rule (chapter 173-518 WAC) is pending in Thurston County Superior Court. *Bassett and Olympic Resource Protection Council v. Ecology* seeks invalidation of the Dungeness Rule under the Administrative Procedure Act for, among other claims, exceeding Ecology's statutory authority).

CONTEMPORARY CONSEQUENCES OF THIS PROBLEM

Since the Washington Supreme Court's *Postema* decision, Ecology has had to rely on various disappearing tools to make water available for new out-of-stream uses in basins with MIF rules, including for rural domestic supply from exempt wells. In several basins it used the OCPI exception to amend instream flow rules to adopt new reservations of water for future out-of-stream uses. One such set of reservations in the 2006 amended Skagit Basin MIF Rule (Chapter 173-503 WAC) was overturned by the Supreme Court in the *Swinomish* case, where the Court found that Ecology had no authority to adopt reservations after MIFs were already adopted in a basin. *Swinomish v. Ecology*, 178 Wn.2d 571, 311 P.3d 6 (2013). Since the *Swinomish* ruling, Ecology informed local governments in Chelan County that a similar set of reservations in the Wenatchee Basin MIF Rule, Chapter 173-545, would not survive a legal challenge and to cease processing applications to allocate the reservations to several local governments and rural areas in need of water. The lesson of *Swinomish* is that once a MIF rule is adopted, it is too late to balance the needs for water between instream and out-of-stream uses. That leaves rural areas in places like Skagit, Chelan, and Clallam Counties, and growing communities and rural areas statewide, with few options other than purchasing existing water rights for mitigation — which may not be available.

In *Foster v. Ecology*, the Supreme Court extended its already restrictive interpretation of OCPI and held that Ecology could not use that tool to authorize permanent water uses that would otherwise impair MIF water rights, or to authorize out-of-kind mitigation designed to mitigate for that impairment. *Sara Foster v. Dep't of Ecology and City of Yelm*, Wash. Supreme Court Case No. 90386-7, Slip Opinion dated October 8, 2015. Since the *Postema* decision in 2000, Ecology approved dozens of water right applications using OCPI to authorize some portion of a mitigation package that wasn't strictly in-kind, in-place, in-time, water for water replacement. One consequence of the *Foster* decision is the removal of OCPI as Ecology's tool to work around the problem of having allocated all available water to minimum flows without preserving water supplies for domestic and other new uses. Another consequence is the Court's implied limitation of available mitigation to only water for water replacement, which will ultimately prove impossible to achieve in most permitting situations involving groundwater.

The elimination of exceptions and work-arounds to the MIF rules has pushed the process of allocating water for new uses to extremes that could not have been anticipated by the Legislature in 1971 when it adopted the water allocation fundamentals in chapter 90.54 RCW. Rural property owners in the Skagit basin, for example, cannot obtain building permits for single-family homes until mitigation projects beyond their control are implemented by Ecology and third parties. This has prompted at least one lawsuit against county government and could lead to constitutional challenges. *See*, e.g., *Fox v. Skagit County*, appeal pending, Court of Appeals No. 733150-I. Without a legislative solution, Ecology and local governments must rely on expensive and incomplete mitigation solutions in order to avoid or end moratoriums, which unfairly penalizes some sectors of society and enriches others. Rural landowners, farmers, and communities without reserves of inchoate water rights are being forced by the continuation of the status quo to subsidize the purchase of private water rights and establish mitigation banks. Such practices encourage speculation in water rights at the expense of the public and removes farm land from production. Many believe that these funds would be more effectively spent on regional conservation, habitat measures, and water quality mitigation. Many people, including legislators and Ecology officials, also believe that the level of administrative burden of enforcing MIF protections from minute impacts of exempt wells is excessive and unsustainable.

Restated, the consequence of protecting aspirational flow numbers as legal rights, instead of treating minimum flows as environmental rights that are proxies for instream functions and values, is an inflexible water allocation system built on false assumptions, inadequate public disclosure, and the failure to accomplish other fundamental state policy objectives for the allocation of state waters.

PROBLEMS WITH THE STATUS QUO

Ecology officials and stakeholders have been meeting publicly for the last two years to discuss post-*Swinomish* water allocation solutions for rural areas, but their efforts have been stymied by the lack of consensus on legislative or other solutions. New ideas need to be explored and vetted to move beyond common misconceptions and a dysfunctional status quo. Resistance to changing the status quo, however, is significant. It ranges from the perceived correlation between instream flow protection and the protection of tribal treaty fishing rights, sensitivities to altering the prior appropriation system, the shear complexity of the issues, anti-growth objectives of some MIF proponents, and simple fear of change. The resistance

Water Supply Solutions

Consequences

Flexibility Denied

Uncertainty: Legal Challenges

Access Denied

Enhancement Stymied

Negative Impacts

Distinct Nature

Out-of-Kind Mitigation

to alter the status quo is primarily based on misconceptions about the history and purpose of MIFs, failure to recognize the consequences of a broken water allocation system, and lack of open-minded stakeholder discussion about alternative standards that could yield positive consequences for both instream values and water supply for other uses.

One broad misconception is that the status quo is the best way to protect or enhance the instream values for which MIFs were adopted. Without the ability to consider environmental mitigation, however, Ecology is not allowed to evaluate a proposal's ability to manage water or provide mitigation in a way that offsets impacts to or improves instream values — such as water temperature or fish habitat. This leaves Ecology in the position of denying applications that have no appreciable impact on, or that could enhance, instream values. The ability to provide habitat or water quality enhancements is magnified for regional or county-wide projects, but the status quo does not give watershed planning groups, county governments, other resource management agencies, or innovative property owners/applicants a pathway for creating available water for new uses by improving instream values.

Second, the effect of aspirational MIF rules and the inflexible legal impairment standard have already caused the Legislature to consider numerous bills to fix the problem, thereby upsetting the status quo or leaving it in jeopardy. This trend will continue as additional basins face the kind of "legal unavailability of water" issues seen recently in Skagit, Kittitas, Whatcom, and Clallam Counties. Denying building permits due to legal unavailability of water in areas of water abundance like the Skagit Valley increases the likelihood of legal challenges to the MIF rules themselves, all of which creates uncertainty about the future effectiveness of existing MIF rules to accomplish their purpose. The status quo may be great for lawyers, but it hinders effective water management solutions.

Third, the status quo imposes the costs of protecting MIFs on suburban communities and rural property owners, including the agricultural community and businesses and trades based on agricultural services, home construction and sales. While the status quo (closure of water resources to new uses) is advantageous for citizens who live in water-abundant communities and like to travel, fish, and recreate in areas with protected natural rivers and streams, it is unethical to transfer the cost of closing the resource to those who lack access to it. Access to water is widely considered to be a fundamental human right. Our bedrock legal concepts of due process, equal protection, and proscription against takings without just compensation are seemingly violated by artificial closures and inflexible impairment and mitigation standards that deny reasonable access to water. It's only a matter of time until these legal rights are asserted against state and local government by those most-affected by the status quo.

Finally, Ecology is tasked by the Legislature with not only protecting instream values, but with enhancing them where possible. RCW 90.54.020(3). Ecology is stymied in its ability to approve applications for new water uses that could be conditioned to enhance the quality of river and streams through environmental mitigation. Thus the status quo is not helping Ecology accomplish the mandate to enhance the quality of instream resources.

To summarize, the misconception that the status quo is necessary to protect instream values is leading toward more litigation against the State, over-use of public funds and administrative energy on minute impacts, discrimination against rural land owners and land uses, an unfunded shifting of regulatory burdens from state to local governments, and creation of artificial markets for water rights that divert funding away from fish habitat restoration and innovative water resource management techniques. Stakeholder, agency, and legislative recognition of this fact could speed discussion and development of long-term solutions that are more just, reasonable, and efficient than perpetuation of a flawed status quo.

SOLUTIONS BACKGROUND

Before describing the potential legislative and regulatory solutions, it is necessary to describe how MIF water rights differ from out-of-stream water rights, including how and why they merit a unique impairment standard in order to fulfill the policy mandates of the Water Resources Act.

How Instream Flow Water Rights Differ from Out-of-Stream Water Rights

The root concept behind instream flow protection is that the public benefits from protecting instream values, not that the streams are legal persons holding inherent rights entitled to the courts' protection. Contrary to the Supreme Court's assumption in *Postema*, *Swinomish*, and *Foster*, MIFs are different by their nature than out-of-stream water rights. The Pollution Control Hearings Board (PCHB) has recognized that MIFs are regulatory, with a different bundle of sticks representing different aspects of a property right than water rights diverted or withdrawn from a source, used for a specific purpose, and subject to a set of conditions and qualifications. *See Okanogan Wilderness League v. Ecology and Kennewick General Hospital* (*OWL v. KGH*), PCHB No 13-146, July 31, 2104, Order on Motions for Summary Judgment at footnote 9, p. 23. The *OWL v. KGH* decision is of questionable value as precedent after *Foster*, but in the author's opinion the PCHB was on the right track by determining that Ecology had authority to approve out-of-kind mitigation, opening the door to a unique impairment standard for protection of MIFs.

Unlike other water rights, minimum flows do not derive their value from the diversion of water from a stream for a use that has economic value to its owner. The value of minimum flow water rights is the environmental value provided to the public by being left in the stream. It is therefore paradoxical

Water Supply Solutions

"Legal Injury" Appropriation Tests

that Ecology and the Supreme Court would reject an environmental injury/mitigation test for minimum flows in favor of a legal injury test, especially where the existence of any legal right or "legal injury" to minimum flow water rights is only hypothetical. It is also absurd to protect "legal rights" to an aspirational "minimum flow" that nature itself does not supply much or most of the time. There is no constitutionally protectable legal right to a flow level that exists only 10% of the time.

Another significant difference is that out-of-stream water rights require findings under the four-part test of RCW 90.03.290, including that water is available and its appropriation would serve the public interest. By creating MIFs, Ecology allocated water that was not available a large percentage of time, and Ecology did not make findings that MIFs were consistent with the public interest, i.e., with the maximum net benefits for the people of the state. MIFs were therefore established in a manner very different from out-of-stream water rights under the Water Code. In *Swinomish*, the Supreme Court held that the adoption of reservations required application of the four-part test of RCW 90.03.290 because reservations have the standing of appropriations under RCW 90.03.345. 178 Wn.2d at 588-89. RCW 90.03.345 applies equally to minimum flows, which creates legal uncertainty whether existing MIFs were appropriately adopted if there were no findings under the four-part test.

Distinction Recognized

The Legislature implicitly recognized a distinction between MIFs and out-of-stream water rights in 1997 when it mandated an end to the moratorium on issuing new water rights from the Columbia River. *Washington State Laws of 1997*, ch. 439 (ESHB 1110). Ecology complied by amending the Columbia Basin MIF rules to create an alternative case-by-case consultation process for permits issued after July 27, 1997, the purpose of which was to evaluate impacts on fish from a proposed permit. Chapters 173-531A and 173-563 WAC. In other words, WAC 173-531A-060 authorized a values-based approach to determining impacts and mitigation on fish as an alternative to the numerical MIF rules. This would not be possible under the Prior Appropriation Doctrine if MIFs were identical to out-of-stream water rights.

Value-Based Approach

POTENTIAL SOLUTIONS

Values-Based Impairment and Mitigation Standards for Instream Flows

Once before the PCHB opened the door to the evaluation of MIFs and stream closures differently than impairment of out-of-stream water rights. In *Squaxin Island Tribe v. Ecology* (Miller Land & Timber) the PCHB reconciled the groundwater standard contained in the Deschutes River MIF at WAC 173-513-050 ("clear adverse impact upon the surface water system") with the *Postema* standard for impacts to closed streams under the availability prong of the four-part test ("any effect on the flow or level of the surface water") to create a values-based impairment standard as follows:

Groundwater Standard

Availability

> Groundwater withdrawals in the Deschutes Basin constitute a clear adverse impact and are subject to that WAC chapter's provisions, if the withdrawals produce any effects which adversely impact the values identified in WAC 173-513-020. If the Squaxin Tribe is able to demonstrate such an impact, then the water is not available within the meaning of RCW 90.03.290 and the groundwater permits at issue must be set aside. Consistent with the finding in *Postema*, the terms "verified" and "clearly" as used in this rule mean ascertainable through best available science.

Squaxin Island Tribe v. Ecology, PCHB No. 05-137 (2006) (emphasis added).

New Impairment Standard

This attempt at melding the *Postema* impairment standard with the values underlying an MIF rule failed to catch on as a basis for Ecology decisions on water right applications, but it could serve as a model for a new regulatory impairment standard through interpretation of MIF rules, or as a legislatively-adopted impairment standard for MIF water rights and closed streams. This values-based approach begins with the recognition that MIFs are different than out-of-stream water rights — to serve the public interest, the evaluation of impacts and mitigation needs to match the environmental nature of these unique water rights.

Instream Values

Methodologies need to be developed for protecting instream flows by identifying and protecting instream qualities and values from degradation while opening the door to enhancing those values and providing new water uses for domestic, agricultural, and other beneficial uses of water. There is precedent for values-based water resource mitigation standards in our laws protecting wetlands and water quality. RCW 90.74.020 allows for compensatory mitigation approaches and recognizes the efficacy of out-of-kind/out-of-place mitigation in some scenarios. Ecology is required under this statute to "fully review and give due consideration to compensatory mitigation proposals that improve the overall biological functions and values of the watershed." This approach works in the wetlands context because wetland functions and values aren't protected by proxy water rights that are themselves protected by prior appropriation and an inflexible legal impairment standard. The use of wetland classification systems, setbacks, buffers, and monitoring programs are examples of the ability to identify differing values and degrees of impact and mitigation, as well as margins of safety and predictability.

Results Without Closures

The values-based impact/mitigation approach can lead to better results for instream values without closing entire basins to new water rights and exempt water uses, as happened in the Skagit and Dungeness watersheds. For example, enhancing streamside habitat to improve temperature, shading, and holding areas for migrating salmon may accomplish better protection of instream values than insisting on bucket-for-

Water Supply Solutions

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OCPI Criticism

bucket, in-kind, in-place, water replacement as with the current standards. It would allow more flexibility and opportunity to manage water resources for new and more efficient uses while creating opportunities to restore and enhance watershed functions on a watershed level. It would provide tools to identify and finance mitigation projects, allowing valuable public and private resources to be used to restore fish habitat, water quality, and other watershed functions instead of creating artificial water right markets that eliminate beneficial uses of water instead of restoring watershed functions.

Ecology has the authority to create these standards through interpretation of many of its own MIF rules, but not without potential opposition from environmental groups and litigation in favor of the status quo. The Legislature could solve that problem by clarifying the nature of MIFs as environmental rights and creating statutory authority for Ecology to authorize alternative standards for determining impairment and mitigation of instream values.

It is helpful in this context to remember that MIFs are proxies for instream values, including aesthetics, recreation, water quality, and fish habitat. An effect on the proxy, especially a small one, does not necessarily equate to an effect on the values protected by the proxy. In reality, an effect in one place may be offset by a benefit in another, such that one or more values being protected by the proxy may in fact be unaffected or even improved. On the other hand, if impairment (and hence mitigation) are based solely on protecting a proxy flow by use of the prior appropriation system, then opportunities to do a better job protecting the values inherent in the proxy are lost and MIFs will continue to function primarily as a means of preventing development.

A statutory values-based impairment and mitigation standard does not need to replace numeric MIFs or the *Postema* standard, but could be authorized by the Legislature as an alternative to the application of the current MIFs and standards. This is essentially what the Legislature and Ecology did with the alternative consultation process in the 1998 amendments to the Columbia Basin MIF rules at Chapters 173-531A and 174-563 WAC.

It is not an easy task to change or bypass existing impairment/mitigation standards without affecting the fundamentals of water resource policy. The goal is to find suitable standards and practices, preferably adopted by the Legislature to avoid future litigation, that result in real and effective mitigation of impacts on instream functions and values. One way to find the right projects and compromises on a watershed level is to authorize watershed planning units to propose and Ecology to adopt alternative standards to existing MIFs, using protection of functions and values in place of numerical flows. The Legislature could authorize and fund one or more pilot projects to develop such standards and put them into practice. Planning units in already impacted watersheds including the Skagit, Nooksack, Wenatchee, and Dungeness WRIAs may be a good place to start this process, which would involve stakeholders from across the spectrum of water users.

Mitigation Flexibility.

The Legislature could also focus on authorizing additional means of mitigating or avoiding impacts to MIFs. RCW 90.03.255 and 90.44.055 already require Ecology to consider the provision of water impoundments and "other resource management techniques" as a means of offsetting or avoiding impacts to MIFs and senior water rights. These statutes could be expanded to provide for out-of-kind mitigation of smaller withdrawals and flexibility in the time and place of in-kind mitigation with respect to resolving impairment of MIFs and effects on closed streams.

Consideration of Full Hydrologic Cycle.

Another alternative solution is a requirement that Ecology consider the full hydrologic cycle for new uses of water, both water right applications and exempt groundwater uses. This could increase the potential for new development without changing existing impairment standards.

The current impairment standards are overly cautious in that they focus only on one aspect of the effect of new development — i.e., the withdrawal of water. New uses of groundwater not only withdraw water from an aquifer, they are also incidental to land use changes including land clearing, septic systems, and stormwater retention/infiltration that returns water to the aquifers, often at a higher elevation and greater quantity relative to streams than their withdrawals. The current standards ignore these benefits and offsets. Statutory directives to consider the full range of hydrologic cycle effects should be developed, perhaps as amendments to RCW 90.44.055 and the domestic groundwater exemption at RCW 90.44.050. Serious consideration should also be given to exempting de minimus withdrawals, such as rural in-house domestic uses of groundwater, from the regulatory effect of minimum instream flows and stream closures. Exceptions may be needed in the Yakima Basin in order to protect adjudicated senior water rights, which could also be impaired by new groundwater uses.

Overriding Considerations of the Public Interest (OCPI)

The use of the OCPI exception has been criticized and litigated because it has assumed the position of the primary safety valve for Ecology from the accidental closure of groundwater and the otherwise unworkable instream flow impairment standard. The Supreme Court appears to have nailed the OCPI

Water Supply Solutions

Environmental Mitigation

OCPI Interpretation

Tribal Treaty Rights

Habitat & Flow

Habitat Preference

Alternatives

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coffin lid shut with the *Foster* decision, but motions for reconsideration were still pending in that case as of the publication date of this article.

The Supreme Court's primary objection to the use of OCPI for granting reservations and new water rights is their view that it is inconsistent with the Prior Appropriation Doctrine, which protects earlier established rights to water (senior rights) from impairment by subsequently established water rights (junior rights). This view is itself based on the belief that instream flow water rights are the same as out-of-stream water rights. If the Legislature clarifies the nature of MIF water rights as environmental rights and directs Ecology to consider appropriate environmental mitigation measures, there may still be a limited role for OCPI in the permitting and rule development processes. Legislative preservation of OCPI findings in existing instream flow rules after *Swinomish* would also preserve the tough bargains already made in several watersheds to increase instream flows in exchange for reservations of water for certain out-of-stream uses (*see* SB 5491 which passed both houses of the 2015 Legislature in different versions, and will be reintroduced for the 2016 Session).

OCPI is not a complete solution to the current conflicts, however, and should not be relied upon as the most practical alternative. The Supreme Court's interpretation of the exception as extremely limited and available only in extraordinary circumstances, which does not include water for municipal growth in the Court's view, and its recent interpretation in *Foster* that OCPI only applies to temporary withdrawals, severely limits its usefulness.

The Effect of Values-Based Standards on Treaty Rights

Any effort to reform instream flow protection and water rights permitting law must take into account the treaty rights of Washington's Native American tribes, including their senior instream flow water rights associated with treaty fishing rights. Concerning value-based standards effects, it must be understood that minimum flows adopted by regulation are not proxies for treaty water rights — they serve different purposes and are junior to most other water rights in the same watersheds — although they do function to prevent further appropriation of water. Also, the Tribes' implied instream flow water rights are not adjudicated as to quantity except in the Yakima Basin, and relate to the health of native fisheries in their "usual and accustomed places" rather than to historic flow rates. Thus, these senior unadjudicated water rights have at least as much correlation to fish habitat and water quality/temperature as they do to flow. Both flow and habitat are essential to fish, but there is no magic flow number that guarantees the Tribes' treaty rights. With or without a change to a values-based impairment standard for state-established MIF water rights, the Tribes' treaty water rights will be unaffected and remain the most senior rights in each basin.

In consultations with treaty tribes concerning pending water right applications, the author has learned that the creation or enhancement of fish habitat is often preferred by tribes to the exhaustive and expensive process of groundwater modeling and compensating for diffuse impacts to instream flow from groundwater withdrawals. Increasing riparian shade and rearing habitat may be more appropriate to the specific circumstances. There is precedent in the 1998 amendments to the Columbia River MIFs (Chapters 173-531A and 173-563 WAC), which require consultation with tribal and governmental fisheries managers to create a mitigation package that would be acceptable as an alternative to MIF conditions on a water right permit. The consultation for the irrigation water right in *OWL v. KGH* resulted in a $6 million mitigation payment package that Ecology would use to fund habitat projects, and was not contested by the Columbia River tribes as an alternative to replacing flow. A functions and values approach to mitigation of impacts to instream flows could also integrate consultation with tribal, state, and federal fisheries managers, as well as best available science, to insure that fisheries resources and tribal treaty rights were not impacted.

CONCLUSION

It is an enormous challenge to change a water resource protection system four decades in the making, including several Supreme Court decisions interpreting key statutes and phrases. The status quo, however, already violates state water resource policy and has painted Ecology's water rights permitting program into a corner where few options remain to appropriate water for any purpose other than instream flow protection. The use of an environmental values-based approach to protecting instream flows from the effects of new water rights and exempt water uses would resurrect the crippled water rights permitting program and allow science-based water availability determinations. It would also accomplish the dual objectives of preserving instream resources and allowing new water uses consistent with the public interest.

The views expressed in this article are the author's alone and not representative of or in pursuit of any particular client's goals.

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WATER BRIEFS

TRIBAL GROUNDWATER CA

EQUITABLE DEFENSES DENIED

On February 24, US District Judge Jesus G. Bernal granted partial summary judgment to the Agua Caliente Band of Cahuilla Indians (Tribe) and the federal government, holding that the Defendants, Desert Water Agency and the Coachella Valley Water District, could not raise the equitable defenses of laches, balance of the equities, or unclean hands against Agua Caliente's declaratory relief claims. The ruling comes in a battle over groundwater in the Coachella Valley Groundwater Basin aquifer. *Agua Caliente v. Coachella Valley Water District, et al.*, *Order Granting Plaintiffs' Motions for Partial Summary Judgment* (Feb. 24, 2016).

The Tribe filed a complaint for declaratory and injunctive relief against the defendants on May 13, 2014, and the federal government intervened on the Tribe's behalf on June 5, 2014. The Plaintiffs, the Tribe and the federal government, "allege that the Defendants — who are responsible for developing groundwater wells and extracting groundwater" from the aquifer — "continually cause the groundwater to be in a state of 'overdraft,' meaning the outflows from the aquifer exceed the inflows." *Order* at 2. "Plaintiffs also allege that Defendants' attempted solution to the overdraft — the importation of water from the Colorado River — degrades the quality of water in the aquifer." *Id.* The Tribe is seeking declaratory relief to determine the Tribe's ownership interest in the groundwater and the pore space of the aquifer, plus injunctive relief to bar the Defendants from replenishing the aquifer with inferior quality Colorado River water and to prohibit the aquifer to be overdrafted. *See* Moon, *TWR* #134 for additional lawsuit coverage.

Defendants asserted as affirmative defenses (to the Plaintiffs' claims) the equitable doctrines of laches, balance of the equities, or unclean hands. "Plaintiffs argue that Defendants are prohibited from asserting these defenses to Plaintiffs' claims for declaratory relief, because as a matter of law, such defenses are inapplicable to claims brought by the United States, including claims where the United States acts in its sovereign role as trustee for Indian tribes." *Order* at 3.

The case is currently in the second of three phases. Phase II has four distinct legal questions to resolve, including the purely legal questions of the applicability of Defendants' equitable defenses. The *Order* provides details about the three phases and other legal and factual questions in the case, in addition to laying out Judge Bernal's reasoning supporting his denial of the equitable defenses raised by the Defendants.

On March 24, 2015, the Judge ruled on the critical Phase I legal issues in the case. He found that the "federal government impliedly reserved groundwater as an appurtenant source of water when it created the Tribe's reservation." (March 24, 2015 Order, Doc. No. 115 at 8). He also ruled that the Tribe has no derivative right to groundwater based on an aboriginal right of occupancy since that right was extinguished long ago. *Id.* at 13. The Defendants filed an interlocutory appeal of the March 2015 Order to the Ninth Circuit Court of Appeals; the remainder of the district court proceedings — besides the equitable defenses — were stayed by Judge Bernal until the Ninth Circuit rules on the interlocutory appeal regarding the Tribe's ownership rights. The parties are currently preparing briefs on the issues for the Ninth Circuit.
For info: *Order* available from TWR upon request; additional background info at: www.narf.org/cases/agua-caliente-v-coachella/

EPA ENFORCEMENT US

EPA PRIORITIES FOCUS

On February 18, the US Environmental Protection Agency (EPA) announced its seven National Enforcement Initiatives for fiscal years 2017-2019, which focus on national pollution challenges where EPA's enforcement efforts will protect public health. The fiscal year 2017-2019 National Enforcement Initiatives are: 1) Keeping Industrial Pollutants Out of the Nation's Waters (new initiative); 2) Reducing Risks of Accidental Releases at Industrial and Chemical Facilities (new initiative); 3) Cutting Hazardous Air Pollutants (expanded initiative); 4) Reducing Air Pollution from the Largest Sources; 5) Ensuring Energy Extraction Activities Comply with Environmental Laws; 6) Keeping Raw Sewage and Contaminated Stormwater Out of the Nation's Waters; and 7) Preventing Animal Waste from Contaminating Surface and Ground Water.

EPA selects National Enforcement Initiatives every three years to focus resources on environmental problems where there is significant non-compliance with laws, and where federal enforcement efforts can make a difference. The initiatives will cover three fiscal years, and focus on employing Next Generation Compliance strategies to enhance enforcement cases and build compliance. Next Generation Compliance is EPA's strategy to address today's pollution challenges through a modern approach to increase compliance, utilizing new tools while strengthening vigorous enforcement of environmental laws. EPA's new work will address sources of pollution that pose direct public health and environmental threats to communities.

EPA touted its accomplishments, pointing to significant progress it has achieved under its National Enforcement Initiatives, including: more than 98 percent of cities with large combined sewer systems and more than 90 percent of cities with large sanitary sewer systems are under enforceable agreements or have permits that put them on a schedule to address untreated sewage discharges into America's waterways; and since 2011, EPA has concluded 217 enforcement actions at concentrated animal feeding operations for violations of the Clean Water Act, and 196 enforcement actions at natural gas extraction and production sites.
For info: Enforcement Results at EPA website: www.epa.gov/enforcement/enforcement-annual-results-fiscal-year-fy-2015

RESOURCE PROTECTION WEST

COLORADO RIVER RESEARCH GROUP

A new, concise report was issued in February by the Colorado River Research Group entitled "*Prioritizing Management and Protection of the Colorado River's Environmental Resources.*" In just four pages, the Group lays out its vision for giving equal footing to the natural assets of the Colorado River with other uses, when decisions are made about river management. The report argues that currently decision-makers to not do this and instead, "[I]n our single-minded effort to maximize consumptive use of the basin's waters, we have radically altered the natural environment, leaving many components of the basin ecology on life support."

WATER BRIEFS

The Group recognizes that there are a "number of large environmental mitigation programs in place across the basin" but maintain that this "incomplete patchwork" is not enough. "Comprehensive restoration of the entire river network requires cultivation of a basin-scale vision and strategy for environmental management integrated within emerging strategies concerning water allocation and hydropower production."

The report goes on to discuss "Deficiencies to Address" and "Elements of a More Effective Approach."

For info:
www.coloradoriverresearchgroup.org

DRINKING WATER US MAPPING TOOL

On February 19, EPA released DWMAPS — the Drinking Water Mapping Application to Protect Source Waters. This robust, online mapping tool provides the public, water system operators, state programs, and federal agencies with critical information to help them safeguard America's drinking water. DWMAPS allows users to learn about their watershed and understand more about their water supplier. With DWMAPS, users can see if sources of their drinking water are polluted and if there are possible sources of pollution that could impact their communities' water supply.

"A key part of having safe drinking water is protecting the sources — the streams, rivers, and lakes where utilities withdraw water," said EPA Administrator Gina McCarthy. "DWMAPS is the latest example of how EPA is using technology and digital tools to better protect public health and the environment. Utilities and state drinking water program managers can also use DWMAPS with their own state and local data. It allows them to identify potential sources of contamination in their locations, find data to support source water assessments and plans to manage potential sources of contamination, and evaluate accidental spills and releases.

DWMAPS also integrates drinking water protection activities with other environmental programs at the federal, state, and local levels. DWMAPS can provide users with information to update source water assessments and prioritize source water protection in any location or watershed in the country. DWMAPS helps users: identify potential sources of contamination in locations defined by users; find data to support source water assessments and plans to manage potential sources of contamination; evaluate accidental spills and releases, identifying where emergency response resources for accidental releases must be readily available; and promote integration of drinking water protection activities with other environmental programs at the EPA, state, and local levels.

The mapping system will not display locations of Public Water System facility intakes, but it does contain a wide variety of data useful to the protection of drinking water sources. EPA developed DWMAPS in consultation with EPA regional drinking water programs, state drinking water regulators, and public water systems.

For info:
DWMAPS available at: www.epa.gov/sourcewaterprotection/dwmaps

PUBLIC LANDS ISSUES WEST MOUNTAIN WEST SURVEY

The new Colorado College State of the Rockies Project Conservation in the West Poll released January 11 revealed strong public support for efforts to protect and maintain national public lands. The poll surveyed the views of voters in seven Mountain West states on key public lands issues affecting the region, including proposals to designate new national monuments in the West, establish new environmental and safety standards for oil and gas drilling, and prioritize renewable energy production on public lands.

The poll asked voters about efforts to turn national public lands owned by all Americans over to state or private control. 58% percent of respondents oppose giving state governments control over national public lands. 60% of respondents oppose selling significant holdings of public lands like national forests to reduce the budget deficit. In Nevada, just 30% of respondents identify as supportive of Cliven Bundy, the local rancher who led an armed confrontation with federal authorities in April 2014.

The poll also looked at energy issues at a time when price fluctuations and market changes make the future of oil, gas, and coal industries unpredictable.

Voters' views included:

- 52% of respondents approve of continuing drilling and mining at the current pace, but with increased safeguards for land and water — significantly outweighing alternatives, including increasing drilling and mining (10%), maintaining the current pace without additional safeguards (10%), and stopping all drilling and mining (22%).
- 76% of respondents want to continue tax incentives for solar and wind energy production.
- 58% of respondents support increasing the royalty fees paid by companies that drill for oil and gas or mine for coal and minerals on national public lands.
- 80% of respondents agree with a proposed Obama Administration rule to require oil and gas producers who operate on national public lands to use updated equipment and technology to prevent leaks of methane gas during the extraction process and reduce the need to burn off excess natural gas into the air.

Additional key findings include:

- Ahead of the 2016 elections, 75% of respondents say issues involving public lands, waters, and wildlife are an important factor in deciding whether to support an elected public official, compared to other issues like health care and education.
- 83% of respondents believe the drought is a serious issue and in Colorado River Basin states (CO, NV, NM & UT) strong majorities favor using the current water supply more wisely over diverting more water from rivers in less populated areas.
- 75% of respondents support the renewal of the Land and Water Conservation Fund.
- 80% of respondents believe the US Forest Service should be allowed to treat the largest and most expensive wildfires as natural disasters in order to have access to emergency disaster funding.
- 72% of respondents say national public lands, such as national forests, national monuments, or wildlife refuges help their state economy.

This is the sixth consecutive year Colorado College has gauged the public's sentiment on public lands and conservation issues.

The 2016 survey is a bipartisan poll conducted by Republican pollster Lori

WATER BRIEFS

Weigel of Public Opinion Strategies and Democratic pollster Dave Metz of Fairbank, Maslin, Maullin, Metz & Associates. Nevada voters were included in the survey for the first time this year.
For info: www.coloradocollege.edu/stateoftherockies/conservationinthewest/

ADJUDICATED BASINS CA
GROUNDWATER EVALUATION

The California State Water Resources Control Board (State Water Board) recently announced the release of a report, titled: "*An Evaluation of California's Adjudicated Groundwater Basins*" — prepared by Ruth Langridge with the Center for Global, International and Regional Studies at the University of California, Santa Cruz, with assistance from Abigail Brown, Kirsten Rudestam, and Esther Conrad. Prepared under contract with the State Water Board, the report details the history, development, current management, and general condition of the state's adjudicated groundwater basins, and evaluates accomplishments, challenges, and how management practices could be improved. Overall the report found that sustainable groundwater management was not the primary objective of groundwater basin adjudications, which were principally focused on resolving conflicts among water users.

This report was written and prepared by researchers at UC Santa Cruz, and presented for information purposes only. The views and opinions expressed in the report do not represent findings or opinions of the State Water Board or its staff.
For info: Ruth Langridge, rlangrid@ucsc.edu or www.waterboards.ca.gov/water_issues/programs/gmp/resources.shtml

ILLEGAL IRRIGATION WA
FINE ISSUED

The Washington Department of Ecology (Ecology) announced on January 6 that it had issued a $16,000 penalty for unauthorized irrigation in Skagit County. A blueberry farm on Cockreham Island along the Skagit River has been cited for illegally watering 200 acres of blueberries last summer after repeated warnings from Ecology to cease the illegal use.

Ecology has fined U.S. Golden Eagle Farms (Golden Eagle) $16,000 for unauthorized use of public water resources. The company has rights or claims that allow irrigation on 250 acres, but watered at least 450 acres this summer on its farm between the communities of Lyman and Hamilton. Inspectors estimate the farm used between 210 and 267 acre-feet of water beyond its authorized 470 acre-feet per year. Excessive watering was documented during four visits to the farm in the summer of 2015.

The citation is not directly tied to last summer's severe drought, which caused historically low stream flows in the Skagit basin. The low river levels triggered irrigation water cutoffs that affected thousands of acres of cropland along the Skagit's lower reaches below Mount Vernon.

According to Ecology, Golden Eagle was warned numerous times that they were using more water than allotted. Ecology has provided the company with information about the scope of water rights for its fields on Cockreham Island since 2011.

The company filed an application on May 29, 2015 to modify its water rights and claims to allow watering of all of its blueberry acreage, starting in 2016. Ecology expects to act on the request, after public review and comment, prior to this year's growing season.

Golden Eagle can appeal the penalty to the Washington State Pollution Control Hearings Board.
For info: Tom Buroker, Ecology, 425/649-7270 or www.ecy.wa.gov/water.html

CROPLAND RECHARGE CA
GROUNDWATER RECHARGE

Groundwater overdraft has become a serious problem in many parts of California as water is being extracted at far greater rates than it is being replenished. For example, as noted on Sustainable Conservation's website, groundwater in the Kings River basin is pumped at an average rate of 125,000 to 150,000 acre-feet per year above its sustainable yield. J. Stacey Sullivan, Policy Director for Sustainable Conservation, in a January presentation to the California Water Commission, pointed out that using existing cropland for groundwater recharge could provide a very effective way to recharge groundwater.

With above average precipitation forecast for the winter, Sustainable Conservation has been working with farmers, the Kings River Conservation District, UC Davis, and others to explore the feasibility of applying flood water on existing cropland to recharge groundwater. This technique could potentially be a cost-effective way for groundwater sustainability agencies to recharge groundwater basins rather than relying on dedicated recharge basins, which are only used in those years when there are rains and heavy runoff.

Sullivan's presentation focused on his organization's efforts to capture this year's anticipated rainfall to recharge groundwater basins in the San Joaquin Valley. "Sustainable Conservation has been working to promote on-farm groundwater recharge opportunities since 2011," he said. "We believe we have a unique opportunity in 2016 to demonstrate the efficacy of this practice and to position it as an important part of California's strategies for groundwater storage and replenishment. We think farmers can play a much greater role in ensuring a reliable water supply for agriculture, and after four years of drought, and the passage of SGMA, we feel they are motivated to do so as well."

"The idea of recharging groundwater using active farmland came to us from Don Cameron at Terranova Ranch in western Fresno County, which is an area of serious groundwater overdraft," he said. "Don's been experimenting and promoting this concept for 20 years. It's really basically very simple. You take unused peak flood flows, in Don's case from the Kings River, apply it to cropland with a suitable soil profile to allow it to percolate into the groundwater aquifer. This mimics the natural floodplain process that created both the farmland and recharged the aquifers for a millennia." Sullivan noted that UC Davis "recently published a map that shows that there are 3.6 million acres of farmlands that has high potential for recharge based on the top 6 feet of soil."

Sullivan compared the costs of on-farm recharge to the costs of dedicated recharge basins. "We found the costs running between $40 and $107 per acre-foot, and the range on that is very much on whether or not there's existing flood irrigation capacity on the land, or whether you'd need to put something in. But even with adding additional canals, it's still cheaper than building

WATER BRIEFS

a dedicated recharge basin at $124 an acre-foot and obviously, if we're going to start talking about significant surface storage, those numbers go up by a factor of 10 or more."
For info: J. Stacey Sullivan, 415/ 977-0380, ssullivan@suscon.org or www.suscon.org/watersheds/index.php

SEWER OVERFLOWS KS
STORMWATER VIOLATIONS

EPA Region 7 reached an administrative settlement with the City of Leavenworth, Kansas (City), that requires the City to develop a plan to eliminate unlawful sewer overflows, and to resolve municipal stormwater violations under the federal Clean Water Act. The City is also required to pay a cash penalty of $46,200, and implement a Supplemental Environmental Project. EPA investigations in November and December 2013 found unauthorized sewer overflows to local waterways and failure by the City to effectively implement a comprehensive stormwater management program plan as required by its municipal separate storm sewer system permit. To resolve the violations, under separate compliance orders with EPA, the City will develop and implement a stormwater management program plan to reduce pollution into urban stormwater to the maximum extent practicable by December 2016. Another compliance order requires the City to prevent and eliminate unlawful sewer overflows by December 2020.

In addition to the $46,200 penalty, the City will complete a Supplemental Environmental Project to implement water quality upgrades as an expansion of its storm sewer project. The project is estimated to cost approximately $38,800, and will be designed to reduce erosion and pollutants, and capture and filter runoff from adjacent roadways prior to its discharge into the stream.
For info: Angela Brees, EPA, 913/ 551-7940, brees.angela@epa.gov or www.epa.gov/npdes/municipal-wastewater

INFRASTRUCTURE US
INNOVATIVE/MULTIPURPOSE FINANCE

Residential towers in Milan, Italy, use filtered gray water from their buildings to irrigate trees — an example of innovative water use. Stanford's Water in the West program has developed financing frameworks that could be used to encourage such uses. A new report by researchers at Stanford University offers a framework to fund water projects based on lessons learned from the energy sector.

"Our sophisticated water system is slowly reaching the end of its lifetime and is in need of renewed investment due to population growth, urbanization, climate change impacts, environmental degradation, aging infrastructure, and ever-increasing operation and maintenance costs," said report co-author Newsha Ajami, Director of urban water policy at Water in the West. "Tackling these modern challenges calls for new thinking and innovative, multipurpose infrastructure solutions." The new report also calls for significant investment, which is harder than ever to come by when traditional federal and state government funds are limited. Local utilities and municipalities are often too cash-strapped to meet existing operations and maintenance obligations, let alone finance new projects. The report identifies financing tools and techniques from the electricity sector with potential to bridge the financing gap to next-generation water systems. Among the report's recommended solutions is the use of innovative, multipurpose water projects called "distributed solutions." Designed to be implemented at a local level, such projects include "green infrastructure" built to manage stormwater, or homes and offices designed to flush toilets with gray water rather than potable water. Providing incentives for such small- to medium-scale projects at the local level can be more efficient and economical than relying on more traditional funding.

The report recommends four central elements, essential to upgrade the nation's water infrastructure: Catalyzing change through external forces - Regulations such as direct enforcement, economic incentives and innovative pricing structures that have proved successful in the electricity sector can similarly be used to promote adoption of innovative water projects; Establishing public and private funding - In the electricity sector, distributed clean energy projects — such as customer-, community- or utility-scale solar and wind energy systems — often rely on a diverse set of public and private funding sources. Similarly, the water sector should take advantage of funding sources such as bonds, end-user fees and venture capital; Using resource pathways to facilitate flow of funding - Once funding for a project has been acquired, stakeholders should be able to access these funds through resource pathways. Pathways used in the electricity sector include loans and grants, rebates, tax credits and on-bill initiatives. They could be used in the water sector to promote cost-sharing opportunities among customers or to eliminate upfront costs.

Given the many diverse stakeholders and complex transactions involved, distributed solutions can be difficult to manage under a traditional project management scheme. Novel governance tools such as net metering, end-to-end service companies and project or financial aggregation have been useful in the energy sector and hold promise for use in the water sector.

These financing mechanisms can help incorporate distributed water projects into the nation's existing water infrastructure, offering increased flexibility in responding to a changing climate and meeting future water quality and quantity needs. "The water sector must secure adequate funding if it is to move into a more sustainable and resilient future," Ajami said. "This framework could be used not only for distributed solutions, but by the water sector as a whole to secure the capital needed to upgrade our nation's urban water systems for the 21st century."
For info: Newsha Ajami, Director of Urban Water Policy, 650/ 724-8162, newsha@stanford.edu or https://woods.stanford.edu/

GREEN INFRASTRUCTURE US
NEW EPA REPORT

EPA's Green Infrastructure program has released a new report, "Tools, Strategies and Lessons Learned from EPA Green Infrastructure Technical Assistance Projects." The report provides results from EPA's green infrastructure technical assistance program for communities looking for the best solutions to their unique challenges. This quick-reference guide matches problems with real world, tested solutions and offers readers resources for further information. The report also includes a handy guide to technology and a table of benefits to share with potential collaborators and stakeholders.
For info: www.epa.gov/green-infrastructure

CALENDAR

March 16 CA
Imagine H2O Water Gala '16 - Annual Celebration of Water Innovation & Entrepreneurship, San Francisco. The Palace Hotel Ballroom. For info: www.imagineh2o.org

March 17 CA
Defining the New Normal: 2016 Executive Briefing, Sacramento. DoubleTree by Hilton, 2001 Point West Way. Presented by Water Education Foundation. For info: http://www.watereducation.org/foundation-event/2016-executive-briefing

March 17-18 MT & WEB
Buying & Selling Ranches in Montana Seminar, Billings. Hilton Garden Inn. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

March 21 AZ
#AzWaterFuture: Tech, Talk & Tradeoffs - Water Resources Research Center Annual Conference 2016, Tucson. UA Student Union, 8 am-5 pm. For info: https://wrrc.arizona.edu

March 21-24 IL
Illinois Section American Water Works Annual Conference & Expo (WATERCON) 2016, Springfield. Crowne Plaza Hotel & Conf. Ctr. For info: https://isawwa.site-ym.com/page/2015conf00

March 21-25 DC
Western States Water Council Spring (180th) Council Meeting & Washington, D.C. Roundtable, Washington. Grand Hyatt Washington Hotel. For info: http://www.westernstateswater.org/upcoming-meetings/

March 22 WEB
2016 Water Market Outlook: Performance, Growth & Trends in the Water Rights & Water Resource Development Sector, Webinar. Presented by WestWater Research. For info: www.informationforecastnet.com/email/WaterMarketOutlook-021816-E2-3.html

March 22 DC
White House Water Summit, Washington. For info: www.whitehouse.gov/webform/share-your-input-activities-and-actions-build-sustainable-water-future

March 24 MT
Trends in Environmental Law CLE, Helena. Radisson Colonial Hotel. Sponsored by the Montana State Bar. For info: MSB, www.montanabar.org

March 29-30 TX
34th Annual ABA Water Law Conference, Austin. Hyatt Regency Austin. For info: http://shop.americanbar.org/ebus/ABAEventsCalendar/EventDetails.aspx?productId=202302853

March 29-30 MT
River Restoration & Bank Stabilization Workshop, Billings. Presented by the Montana Water Center. For info: Stephanie McGinnis, 406/ 994-6425, mcginnis@montana.edu or www.montanawatercenter.org/riverrestorationcourse

March 31-April 1 OR
Pacific Northwest Timberlands Management Conference, Portland. World Trade Center. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

April 4-5 CA
Weathering Change: The Impact of Climate & the Sustainable Groundwater Management Act on California's Water, Davis. UC Davis Conference Center. For info: Carole Hom, UC Davis, clhom@ucdavis.edu or http://ccwas.ucdavis.edu/State_of_the_Science_and_Policy_Workshop/2016/

April 6-9 CA
34th Annual Salmonid Restoration Conference: Salmonid Restoration in Working Watersheds, Fortuna. RiverLodge. For info: http://calsalmon.org

April 7-8 TX
Water Acquisition & Management for Oil & Gas Development: Legal & Regulatory Requirements, Houston. JW Marriott Houston Galleria. Presented by Rocky Mt. Mineral Law Foundation & Institute for Energy Law. For info: www.rmmlf.org

April 7-8 HI
Western Governor's Species Conservation & Endangered Species Act Initiative Workshop, Oahu. Hawai'i Convention Ctr. For info: http://www.westgov.org/

April 11-13 DC
Federal Water Issues Conference, Washington. Washington Court Hotel. Presented by National Water Resources Ass'n. For info: www.nwra.org/upcoming-conferences-workshops.html

April 11-14 IL
National Ass'n of Environmental Professionals Annual Conference, Chicago. Palmer House Hilton. For info: www.nwaep.org/event-1973831

April 13-16 CA
Central Valley Tour 2016, Central Valley. Valley Tour. For info: www.watereducation.org/general-tours

April 14-15 NM
Law of the Rio Grande Conference, Santa Fe. La Fonda. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

April 18 OR
Cleanup Costs - Who Pays? How Much? (Conference), Portland. World Trade Center. For info: Environmental Law Education Center, 503/ 282-5220 or www.elecenter.com

April 18-19 WA
Clean Water & Stormwater Seminar, Seattle. Courtyard Seattle Downtown. For info: Law Seminars Int'l, 800/ 854-8009, registrar@lawseminars.com or www.lawseminars.com

April 19-20 UAE
Global Water Summit 2016, Abu Dhabi. Jumeriah at Etihad Towers. Organized by Global Water Intelligence. For info: www.watermeetsmoney.com/agenda

April 20-21 CA
25th California Water Policy Conference, Davis. UC Davis Conference Center. For info: http://cawaterpolicy.org/

April 20-22 NC
2016 Design-Build for Water/ Wastewater Conference, Charlotte. Charlotte Convention Ctr. Presented by DBIA, AWWA & WEF. For info: www.dbia.org/Conferences/

April 21-22 CA
2016 Green California Summit & Exposition: Greening the Golden State, Sacramento. Sacramento Convention Center. Presented by Green Technology. For info: http://www.green-technology.org/

April 24-27 CO
Solving Groundwater Challenges Through Research & Practice: National Ground Water Ass'n 2016 Groundwater Summit Technical Conference, Denver. For info: www.groundwatersummit.org/

April 25-27 AK
Water-Energy-Environment: 2016 Spring American Water Resources Association (AWRA) Conference, Anchorage. Sheraton Anchorage. For info: www.awra.org/meetings/Anchorage2016/

April 29 AK
Permitting Strategies in Alaska Seminar, Anchorage. Dena'ina Civic & Convention Center. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

The Water Report
Water Rights, Water Quality & Water Solutions in the West
260 N. Polk Street • Eugene, OR 97402

CALENDAR

(continued from previous page)

May 2-6 FL

10th National Monitoring Conference: Working Together for Clean Water, Tampa. Tampa Convention Ctr. Sponsored by the National Water Quality Monitoring Council (NWQMC). For info: http://acwi.gov/monitoring/conference/2016/index.html

May 3 NV

Hydrology & Water Management Seminar, Reno. TBA. For info: Law Seminars Int'l, 800/ 854-8009, registrar@lawseminars.com or www.lawseminars.com

May 3-4 TX

Environmental Trade Fair & Conference, Austin. Austin Convention Ctr. Sponsored by Texas Commission on Environmental Quality. For info: www.tceq.texas.gov/p2/events/etfc/etf.html

May 3-6 CA

ACWA 2016 Spring Conference & Exhibition, Monterey. Monterey Portola & Marriott Hotels. Presented by Association of California Water Agencies. For info: http://www.acwa.com/events/acwa-2016-spring-conference-exhibition

May 6 WA

Source Control: Preventing Contamination & Re-Contamination Conference, Seattle. WA State Convention Ctr. For info: Environmental Law Education Center, 503/ 282-5220 or www.elecenter.com

May 9 CO

Colorado Water Law Conference, Denver. Grand Hyatt. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

May 16 WA

Environmental Due Diligence Seminar, Seattle. TBA. For info: Law Seminars Int'l, 800/ 854-8009, registrar@lawseminars.com or www.lawseminars.com

May 16 TX

Endangered Species Act Conference, Austin. Omni Hotel at Southparrk. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

May 18-19 WA

2016 WateReuse Pacific Northwest Conference, Spokane. Red Lion Hotel at the Park. For info: https://watereuse.org/news-events/conferences/

May 18-20 CA

California Water Ass'n 2016 Spring Conference, Sacramento. The Citizen Hotel. For info: www.calwaterassn.com/upcoming-conferences/

May 19 WA & WEB

Floodplain Development: Regulation Under FEMA & ESA Seminar, Seattle. Hilton Seattle. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

May 19-20 CA

San Diego Tour 2016, San Diego. Desalinization Plant. For info: www.watereducation.org/general-tours

May 19-23 TX

Lower Rio Grande Valley Water Quality Management & Planning Annual Conference, South Padre Island. La Isla Grand Resort. Presented by Texas A&M University - Kingsville. For info: https://moneyconnect.tamuk.edu/C20209_ustores/web/store_main.jsp?STOREID=122