



The Water Report™

Water Rights, Water Quality & Water Solutions in the West

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in Colorado**

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INSTREAM FLOW MANAGEMENT IN WASHINGTON

ADAPTING TO INTERRELATED OBLIGATIONS

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INTRODUCTION

It has long been recognized in Washington State that water quantity, water quality, fish habitat, and development are interrelated. The State has also long recognized its obligations towards ensuring sustainable native fish populations and that water supplies are available to support community needs. Although the laws in our state have acknowledged these connections and obligations for decades, state and federal Supreme Court decisions in 2015, 2016, and 2018 placed these issues at the forefront and tested the boundaries of how these obligations are to be fulfilled.

Sweeping new legislation, passed by the Washington State Legislature in 2018, established a new framework for managing water resources for rural domestic use in light of declining fish populations. The new law resolved many uncertainties that recent court cases raised regarding the State's obligations towards protection of instream flows. However, it is far from a comprehensive solution to the ultimate goal of managing water to maintain productive and sustainable fisheries. In fact, the new law highlights several challenges of water resource management in Washington State (Washington) into the future, including: challenges around reallocation of water rights; obligations to protect tribal treaty rights; conjunctive water and land use management; and climate change. These challenges point to areas in which the State, tribes, and local governments will need to work together to seek collaborative and potentially innovative solutions in order to achieve long term success.

LEGAL BACKGROUND

Washington's Legislature adopted the State's Water Code in 1917. The law set up the system based on the Prior Appropriation Doctrine and created a structure for allocation of water rights. This was followed in 1945 with the Groundwater Code, which extended the Prior Appropriation Doctrine and regulation to groundwater. The Groundwater Code also established a class of water rights called "permit-exempt uses." While most new uses of groundwater require a permit from Ecology, as in most western states, some groundwater uses are exempted from the permitting process.

PERMIT-EXEMPT GROUNDWATER USES ARE:

- A single home or groups of homes (up to 5,000 gallons per day);
- Livestock (no quantity limit);
- A non-commercial lawn or garden one-half acre in size or less (no quantity limit); and,
- Industrial purposes (up to 5,000 gallons per day).

Although these permit-exempt uses do not require a water right permit, they are still subject to the priority system under the Prior Appropriation Doctrine and other state water laws and cannot impair existing water rights.

Instream Flow

Minimum Flows

Beneficial Uses

Key Decisions

"Impairment" Standard

Hydraulic Continuity

Washington saw significant growth in population and agricultural production through the mid-20th century, which brought with it increased water use and declining streamflows. In 1969, the State passed the Minimum Instream Flow Law (chapter 90.22 RCW). Under this law, the Washington Department of Ecology (Ecology) was given the authority and responsibility to establish minimum instream flow levels for streams "for the purposes of protecting fish, game, birds or other wildlife resources, or recreational or aesthetic values" (RCW 90.22.010). Once established, instream flows operate like a water right for the river — they have a priority date (the date of the rule's adoption) and Ecology cannot grant any new water rights that would conflict with instream flows. Two years later, the legislature passed the Water Resources Act of 1971 (chapter 90.54 RCW), which solidified instream flow protections for fish and wildlife, recreation, and environmental and aesthetic values as beneficial uses of water. The Legislature directed that "the quality of the natural environment shall be protected and, where possible, enhanced" (RCW 90.54.020). Together, these laws established the structure for protecting stream flows that we have in place today.

WATER RESOURCE MANAGEMENT CASE LAW

Since 1971, Ecology has adopted instream flow rules for 29 water resource inventory areas (WRIAs) (see Figure 1). The adoption of these administrative rules, and subsequent litigation which followed, has defined and directed the State's water resource management program. Three key State Supreme Court (Court) decisions have occurred in the last 20 years.

Postema v. the Pollution Control Hearings Board, 11 P.3d 726 (2000): This case established that de minimis impacts constitute impairment of water rights, no matter whether they are observable or significant. Appellants contested Ecology's denials of applications for new groundwater uses that were in hydraulic continuity with water bodies that were administratively "closed" through instream flow rules. Ecology had determined that instream flow levels would not be met for significant portions of the year, and any new appropriation would impair minimum flows. The water bodies were closed in the State administrative rule due to a lack of water availability. At issue in the case were Ecology's obligations when analyzing an application to withdraw groundwater that is in hydraulic continuity with surface water. In upholding Ecology's denial of the groundwater permit applications, the State Supreme Court ruled that an established instream flow is "an appropriation subject to the same protection from subsequent appropriators as other water rights." *Id.* at 735. They continued that "any effect on the flow or level of the surface water" in closed streams would constitute impairment and thus would be prohibited. *Id.* at 742. In practice, this meant that Ecology was obligated to deny all applications for groundwater withdrawal that would have any negative effect on stream flows that were not above adopted instream flow levels — regardless of how small the withdrawal's effects.

Swinomish v. Ecology, 311 P.3d 6 (2013): The Court established that Ecology could not use a water code provision called "overriding consideration of public interest" (OCPI) to justify water use that impairs existing instream flows. In 2001, Ecology adopted an instream flow rule for the Skagit River Basin (chapter 173-503 WAC). Five years later, Ecology amended the rule to establish reservations of water that would provide a legal source of water for rural homes and businesses when the Skagit River falls below the instream flow levels. Ecology justified the reservation by using a tool in statute called the "overriding consideration of public interest." The Swinomish Indian Tribal Community appealed the rule revision, arguing that Ecology had acted beyond its statutory authority by applying OCPI to create reservations and allowing aggregate uses of water to impair previously established instream flows. In its decision, the State Supreme Court ruled in favor of the Tribe and invalidated the Skagit rule revision creating a reservation of water. They further ruled that OCPI is a narrow exception and requires extraordinary circumstances before the minimum flow right can be impaired. [See Moon, *TWR* #116.]

Foster v. Ecology, 362 P.3d 959 (2015): The State Supreme Court overturned Ecology's approval of a water right permit for the City of Yelm that would have provided water for future growth. [See Moon, *TWR* #141.] Ecology had conditioned the permit on an extensive mitigation package, which included mitigating the total quantity of water through "in-kind mitigation" and mitigating small impairment during the spring and fall with habitat improvements ("out-of-kind mitigation"). Ecology determined that the project was in the public interest and used an OCPI standard to approve the application. In their decision, the court ruled that:

- Ecology cannot use OCPI to justify a permanent allocation of water;
- No impairment of instream flows is permissible, regardless of magnitude or whether the ecological impact was fully mitigated; and
- Ecology cannot use out-of-kind mitigation, such as habitat improvements, to address impairment of instream flows.

The Water Report

(ISSN 1946-116X)
is published monthly by
Envirotech Publications, Inc.
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Eugene, OR 97402

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Subscription Rates:
\$299 per year
Multiple subscription rates
available.

Postmaster: Please send
address corrections to
The Water Report,
260 North Polk Street,
Eugene, OR 97402

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LAND USE AND WATER RESOURCE MANAGEMENT CASE LAW

In Washington State, the 1990 Growth Management Act (GMA) requires coordinated land use planning by counties and cities to promote development in urban growth areas and to limit sprawl into rural areas to maintain the rural character of communities. The GMA also requires local governments to ensure that comprehensive plans protect groundwater resources and that new developments demonstrate there is an adequate water supply before approval. The *Kittitas* (2011) and *Hirst* (2016) decisions clarified how these requirements applied to counties.

In *Kittitas v. E. Wash. Growth Mgmt. Hearings Bd.*, 256 P.3d 1193 (July 2011), the State Supreme Court held that both legal and physical availability of water were required before a land use or permit approval, and that county government's rules and land-use planning must consider the impact of rural subdivisions on groundwater as part of its permitting process. The ruling stated that, "to only require the county to assure water is physically underground effectively allows the county to condone the evasion of our state's water permitting laws." *Id.* at 1210. [See Water Briefs, *TWRs* #88 & #90.]

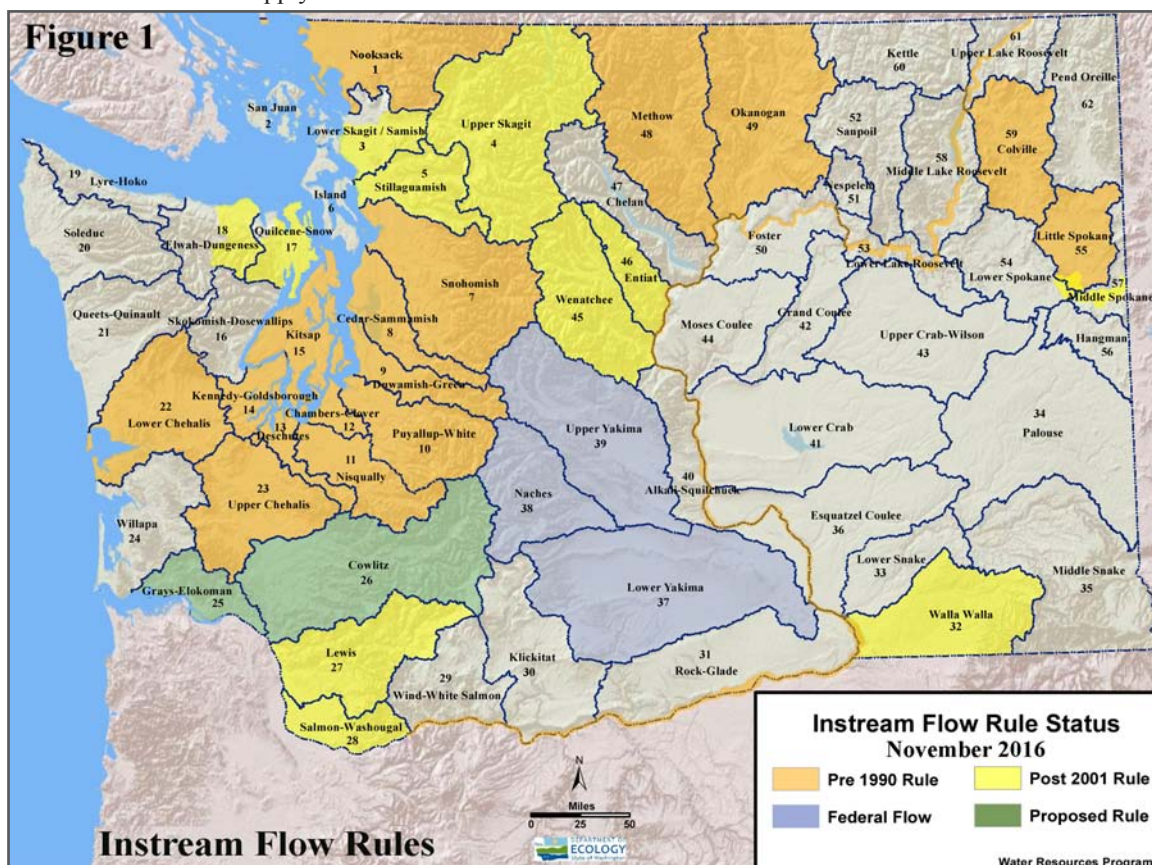
In *Hirst (Whatcom County v. Hirst, Futurewise et al.)*, 381 P.3d 1 (2016), appellants contended that Whatcom County was permitting new development that allowed new uses of water that impaired instream flows adopted in state rules for the Nooksack River (chapter 173-501 WAC). [See Moon, *TWR* #153; Dickison & Haensly, *TWR* #155.] The State Supreme Court ruled that the county:

- Failed to comply with GMA's requirements to protect water resources;
- Has an independent obligation to ensure that any new uses, including permit-exempt uses, do not impair instream flows and closures when making water availability determinations; and
- Cannot rely on the exclusion of permit-exempt groundwater from regulation in the adopted instream flow rule; counties must make an independent decision about legal water availability.

The *Hirst* decision had statewide implications for counties in how they managed rural development relying on permit-exempt wells. It expanded the duties of water management for local governments — no longer could counties rely on the State's instream flow rules to establish water resource management standards. Now they had to make their own independent evaluation of water availability. Counties also had to ensure that adopted instream flows were protected from impairment from new permit-exempt uses in their land use and permitting decisions. In response to the *Hirst* decision, development restrictions were enacted immediately by Whatcom County and soon thereafter in two other counties. Some counties continued to issue new building permits while evaluating the decision, notifying applicants of potential risks with their water supply status.

Instream
FlowGrowth
ManagementPhysical
AvailabilityPermit-Exempt
UsesLegal
Availability

Figure 1
Status
of
Instream Flow
Rules
Across
Washington
State



TRIBAL FISHERIES TREATY RIGHTS AND WATER RESOURCE MANAGEMENT

**Instream
Flow****Right to Fish**

In 1854 and 1855, Territorial Governor Stevens (on behalf of the United States) negotiated eight treaties with 21 tribes in what is now Washington State. Under the “Stevens Treaties,” the tribes retained the right to fish in their “usual and accustomed” areas. In what became known as the Boldt Decision, the federal district court in 1974 confirmed that Stevens Treaty tribes retain the right to take an equal share of harvestable fish in the state. *United States v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974). The US Supreme Court upheld the Boldt Decision in 1979. *See Washington v. Washington State Commercial Passenger Fishing Vessel Ass’n*, 443 U.S. 658 (1979). [See also Stay, TWR #99 and Mecham, TWR #154.]

Habitat Right

In the “Boldt II” phase of this case (Phase II), the federal district court ruled in 1980 that the right of taking fish also included a right to ensure availability of habitat to support fisheries. *United States v. Washington* (Phase II), 506 F. Supp. 187 (W.D. Wash. 1980). On appeal, the Ninth Circuit addressed Phase II of the case in *United States v. Washington*, 759 P.2d 1353 (en banc) (9th Cir. 1985), reversing the declaratory judgment entered by the federal district court that the “State had a duty to refrain from degrading or authorizing the degradation of the fish habitat to an improper degree.” *See Order Dismissing Without Prejudice Phase II and Certain Subproceedings in Phase I*, Case No. 9213, W.D. Wash. (June 22, 1993), pp. 1-2. Eventually, the Phase II proceeding was dismissed (without prejudice) on June 22, 1993, for procedural reasons by the federal district court — however, the court made it clear that the issue of an “environmental” right regarding fishery habitat could be reconsidered if the plaintiffs came forward with specific allegations of “concrete facts which underlie a dispute in a particular case.” *Id.* at 2.

**“Environmental”
Right****Culverts Case**

In 2001, Stevens Treaty tribes filed the “Culverts Case” dealing with hundreds of fish-blocking culverts that had been identified by State inventories. The Culverts Case is the culmination of the 40-year series of court proceedings that relate to tribal treaty rights to fishery resources in the state. (*See Du Bey, Fuller & Miner, TWR #174* for a comprehensive summary of the Culverts Case decision — the overview here is provided specifically in the context of water resources management). The Tribes asserted that Washington is violating fishing rights protected under the Stevens Treaties by constructing and maintaining stream culverts that prevent (or diminish) the passage of fish. The federal district court ruled in favor of the Tribes stating that “the right of taking fish, secured to the Tribes in the Stevens Treaties, imposes a duty upon the State to refrain from building or operating culverts under State-maintained roads that hinder fish passage and thereby diminish the number of fish that would otherwise be available for Tribal harvest.” *United States v. Washington*, 20 F.Supp.3d 828, 899 (W.D.Wash. 2007). The judge issued a permanent injunction requiring that the state repair more than 600 state-owned culverts that were blocking fish passage. Washington State appealed the injunction on several grounds, including concern over the broader implications of the decision on resource management (while the State argued the timeline on culvert removal, it did not contest the benefit of removing most of the culverts).

Fish Passage**Food “Forever”**

In 2016, the Ninth Circuit Court of Appeals upheld the district court’s ruling. They wrote: “Even if Governor Stevens had not explicitly promised that ‘this paper secures your fish,’ and that there would be food ‘forever,’ we would infer such a promise.” *United States v. Washington*, 827 F.3d 836, 852 (9th Cir. 2016). On appeal to the US Supreme Court, the court ended with a 4-4 vote, which resulted in affirming the lower court ruling in favor of the appellants.

**Stream Flow
Right?**

While the decision specifically relates to the impacts to tribal treaty rights caused by culverts, it may have broader water resource management implications in Washington State. It is unclear as to how the Court of Appeals’ decision relating to the provision of the Stevens Treaties recognizing a tribal right to fish will intersect with the doctrine of tribal reserved water rights. Stream flow levels are directly related to the amount of habitat in that stream. Tribal reservation water rights and treaty based fish habitat water rights have been quantified in very few areas of the State. In those areas, it is unclear how a tribal claim to a requirement for instream habitat and the stream flow to support that level of habitat would be administered by Ecology, and how that would affect other water right holders as well as future rural domestic water users.

MANAGING WATER, LAND USE, AND INSTREAM RESOURCES
TODAY AND INTO THE FUTURE**Government’s
Responsibilities**

Following the *Hirst* and *Foster* decisions, there was significant uncertainty around the state and local governments’ responsibilities towards protection of instream flows — how far did this responsibility extend, whose responsibility was it, and how was the responsibility to be implemented? Legislative engagement became critical to reconcile and balance competing interests for water resources.

Instream Flow

Sweeping Legislation

Net Ecological Benefit

Mitigation

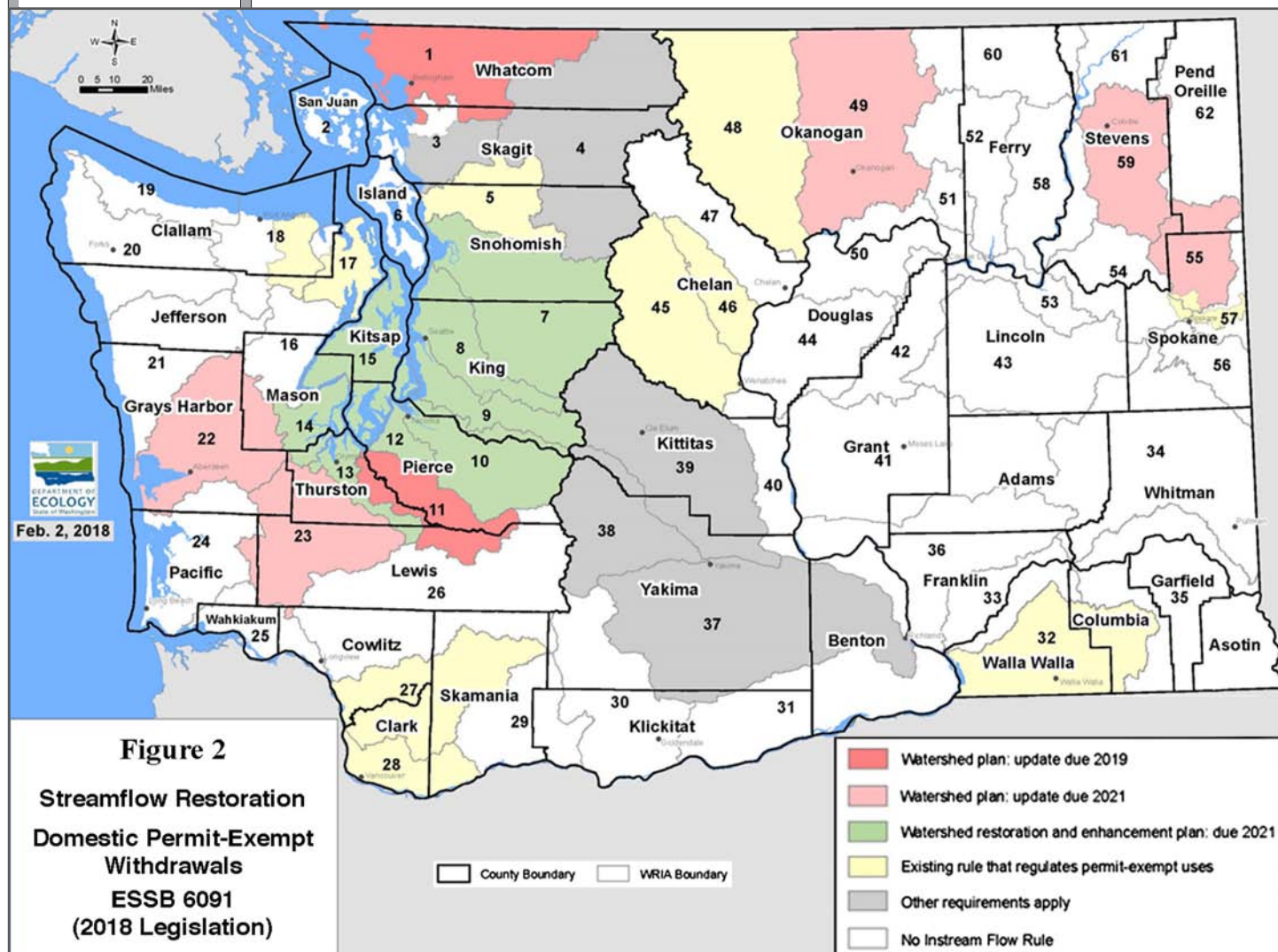
Figure 2 Regulation of New Permit-Exempt Wells

After an embattled 2017 legislative session and interim, the Washington Legislature passed ESSB 6091, a sweeping law that reframes how the state and local governments are to manage water for domestic use. [See Pitre, *TWR* 169.] The Streamflow Restoration Act (Act: now codified in chapter 90.94 RCW) establishes a comprehensive framework for managing new domestic permit-exempt withdrawals in basins with established instream flow rules. The Act also creates a mechanism for significant streamflow restoration. The Act authorizes potential impairment from new permit exempt wells to instream flow levels adopted in state rules. The impacts from the new wells are to be offset by completing flow enhancement projects that improve streamflow, funded in part by a \$500 fee assessed on new homes using permit exempt wells. In addition, the legislature appropriated \$20 million in the FY 2017-2019 biennium for streamflow restoration projects and authorized \$300 million over the next 15 years.

The Act also creates planning processes in each WRIA directly implicated by the *Hirst* decision. Planning groups include local, state, and tribal governments, plus water resource stakeholders. The plans must identify projects sufficient to create a net ecological benefit for instream resources for each WRIA when contrasted to the projected 20-year demands from permit-exempt well water use. Planning occurs in the *Hirst*-affected basins with specific timeframes for plan completion (see Figure 2).

The Act also establishes a “joint legislative task force on water resource mitigation” (RCW 90.94.090). The task force is directed “to review the treatment of surface water and groundwater appropriations as they relate to instream flows and fish habitat, to develop and recommend a mitigation sequencing process and scoring system to address such appropriations, and to review the Washington Supreme Court decision in *Foster v. Department of Ecology*, 184 Wn.2d 465, 362 P.3d 959 (2015).” The task force must make its recommendations to the legislature by November 15, 2019.

Though the new law addresses many of the uncertainties raised by recent litigation, there are several key elements of the new Streamflow Restoration Act discussed below that highlight challenges for water resource management in Washington State into the future.



<div data-bbox="151 178 306 258">Instream Flow</div> <div data-bbox="144 300 315 363">Reallocation Limits</div> <div data-bbox="139 474 319 541">Conjunctive Management</div> <div data-bbox="128 648 331 682">Impact Timing</div> <div data-bbox="142 789 315 819">Water Banks</div> <div data-bbox="147 1140 310 1203">Impairment Standard</div> <div data-bbox="128 1350 331 1554"> <div data-bbox="159 1350 293 1413">“Perfect” Mitigation</div> <div data-bbox="215 1423 240 1446">v.</div> <div data-bbox="203 1455 254 1482">Net</div> <div data-bbox="128 1491 331 1554">Environmental Benefit</div> </div> <div data-bbox="139 1734 319 1766">Pilot Projects</div>	<div data-bbox="380 142 1058 172"> Limits to Water Reallocation and Impact on Water Banking </div> <div data-bbox="380 176 1516 422"> <p>The <i>Foster</i> decision makes water reallocation significantly more challenging. When Ecology reviews an application for a new appropriation or change to an existing water right, the agency cannot approve the application if there would be impairment to any existing water right, including an adopted instream flow. [Editor’s Note: a “change” is also known as a “transfer” in other western states; the “impairment” standard may be familiar to other water users elsewhere as the “no injury rule.”] Because the <i>Foster</i> decision specified that offsetting ecological impacts is not acceptable mitigation, the standard in Washington is that the numerical flow levels cannot be impaired, no matter how small the impact is from the new appropriation.</p> </div> <div data-bbox="380 426 1516 766"> <p>Washington manages surface and groundwater conjunctively and the state considers impacts to all affected surface water bodies from any proposed groundwater withdrawal (new or change). Thus, all flow impairment to a stream or river system with an established instream flow that is not being met <i>throughout</i> the year must be completely offset (by in-kind, in-time, and in-place mitigation). In a state with complex hydrogeology and disconnected aquifers that have hydrologic connections to many surface water bodies, the process of approving changes that involve groundwater uses can be extremely challenging. Even when a change application involves eliminating seasonal surface water diversions to change to groundwater withdrawals, the <i>Foster</i> decision results in Ecology having to evaluate the potential impairment caused by shifting the <i>timing</i> of the impact on the surface water body. The difficulty in reallocating water is the impetus behind the Legislative Task Force and pilot projects for more flexible mitigation projects authorized in RCW 90.94.090 in the Act.</p> </div> <div data-bbox="380 770 1516 1297"> <p>Water banking in Washington has increased in the past two decades (<i>see</i> recent article in <i>TWR</i> #171 by Dan Haller which details water banking activities in Washington). However, even with the increase in water banking activity, there remain significant barriers to the use of this tool for water reallocation. Where water banks have been successful, the banks have generally relied on senior agricultural water rights combined with infrastructure that readily moves or stores water. For example, in the Yakima basin (which does not have state instream flow rules but is under federal flow regulation), water banks have allowed landowners to develop in large parts of the basin, despite the fact that the basin is over-appropriated. However, limitations in banking are evident where complex hydrogeology may limit the usefulness or the geographic extent in which specific senior water rights can mitigate new uses. This challenge is especially prevalent in Western Washington where numerous smaller independent streams and tributaries to larger rivers are often impacted without adequate mitigation to address the impairment caused by new groundwater withdrawals (despite the fact that those impacts may be small and only measureable with groundwater models). As there are only limited areas where in-kind, in-time, and in-place mitigation is available, the rigid impairment standard set forth in the <i>Foster</i> decision makes finding water banking solutions that are broadly useful more difficult. This is especially true for dispersed rural development. Such mitigation is also significantly more difficult in basins with closures or adopted instream flows that are not met.</p> </div> <div data-bbox="380 1302 1516 1612"> <p>The Act did not change the state’s fundamental duty to protect instream flows — a responsibility solidified in the <i>Postema</i> and <i>Foster</i> decisions. However, the Act did change the framework by which the state and local governments could more feasibly implement streamflow protection for dispersed impacts that could not have been effectively managed across the entire state under previous authorities and case law. Under the Act, so-called “perfect” streamflow mitigation is not needed for each new individual permit-exempt well. Instead, local planning efforts must identify cumulative impacts from new permit-exempt wells and address the impacts at a broader scale. Importantly, the legislature emphasized that the functions and values represented by the flows cannot simply be offset. Flow functions and values must be improved so that the projects within plans — when weighed against the cumulative water withdrawal impacts from permit-exempt wells — attain a “net ecological benefit.”</p> </div> <div data-bbox="380 1617 1516 1831"> <p>Further, the Act did not change the “perfect mitigation” standard established in <i>Foster</i> as it relates to Ecology’s permitting decisions. Instead, the Legislative Task Force will be evaluating how a more flexible standard might be implemented, which includes a sequenced mitigation approach that prioritizes perfect mitigation. The sequenced mitigation approach is permitted in a set of pilot projects. It is not clear if the Legislative Task Force and pilot projects will identify new policy options that the legislature will then act upon, or whether the strict mitigation standards established in the <i>Foster</i> decision will be an ongoing challenge for water reallocation and water banking in Washington.</p> </div> <div data-bbox="380 1835 1516 1957"> <p>Perfect mitigation is prioritized, as part of the mitigation approach being evaluated. Project proponents cannot consider “less than perfect” mitigation until after attempting to find perfect mitigation. Net ecological benefit does not come into play until the point that mitigation being proposed is less than perfect. Pilot projects are still being discussed and there aren’t any formal proposals yet.</p> </div>
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<div data-bbox="154 178 308 262">Instream Flow</div> <div data-bbox="154 300 308 363">Flow Distinction</div> <div data-bbox="138 436 321 541">"Time Immemorial" Rights</div> <div data-bbox="138 682 321 745">Unquantified Rights</div> <div data-bbox="138 892 321 955">Culvert Case Precedence</div> <div data-bbox="138 1140 328 1203">Instream Flow Protection</div> <div data-bbox="138 1455 321 1518">Land Use Management</div> <div data-bbox="154 1560 308 1623">Stormwater Runoff</div> <div data-bbox="138 1770 328 1833">Low Impact Development</div>	<div data-bbox="378 144 1205 172"> <p>State Adopted Instream Flows v. Tribal Treaty Fisheries Reserved Rights</p> </div> <div data-bbox="378 178 1523 359"> <p>During the 2017 and 2018 legislative sessions, significant discussion and debate focused on the authorities and obligations the State has toward protection of instream flows adopted under chapters 90.22 and 90.54 RCW <i>versus</i> the protection of senior water rights — including tribal reserved right claims for instream flows to ensure habitat protection. Under existing law, instream flows established under chapters 90.22 and 90.54 RCW are not tribal treaty reserved rights. However, administratively protected flows function to protect senior water rights from impairment, and so in practice, the end result may be the same.</p> </div> <div data-bbox="378 365 1523 640"> <p>The State's obligation to protect tribal treaty reserved rights becomes clear in basins in which these rights have been adjudicated. As established in the Yakima Basin adjudication (<i>Ecology v. James Acquavella, et al.</i>), the Yakama Nation has instream flow rights to maintain habitat necessary to support fish life which are "time immemorial" water rights (i.e., having a priority date equaling "time immemorial"). New water use in the Yakima Basin cannot impair these senior rights; the State and US Bureau of Reclamation (Reclamation) is mandated to manage flows to protect those rights. Through the court decisions in the Yakima Basin adjudication, a co-management process with state, tribal, and federal governments has resulted. Reclamation's dominance in basin water supply makes it the key player in administering the Yakama Nation's adjudicated treaty fisheries water right.</p> </div> <div data-bbox="378 646 1523 861"> <p>However, in other basins which have not been adjudicated there is more uncertainty about the specific flows, flow regimes, and management structure that must be enacted to protect tribal treaty rights. The Yakima Basin adjudication took more than 40 years to complete and has been estimated to have cost over \$40 million. While we expect that future adjudications could be done somewhat more efficiently due to process improvements, completing adjudications throughout the state would require a commitment of hundreds of millions of dollars. This level of commitment currently seems unlikely; thus, managing water resources in most basins will continue with uncertainty surrounding tribal treaty senior water right claims.</p> </div> <div data-bbox="378 867 1523 1050"> <p>The Culverts Case raises new questions about how water management and instream flows overlay with tribal treaty obligations. As discussed in the last issue of <i>TWR</i> (#174), the potential implications of the Culverts Case reach beyond that specific decision. However, as that article noted, because the Supreme Court's decision was a tie, the precedential value of the decision outside of the context of culverts "may be limited." This means there will continue to be uncertainty about water management processes and different expectations for how state water resource management should treat tribal instream flow rights.</p> </div> <div data-bbox="378 1056 1523 1392"> <p>The approach taken in the Streamflow Restoration Act raises one example. In the new law, the State authorized impairment to instream flows caused by new domestic permit-exempt wells, in conjunction with the establishment of a planning effort to identify and build projects to restore streamflows. However, the court in the Culverts Case ruled that Washington has a tribal treaty obligation to maintain habitat sufficient to sustain adequate fishery resources. Under this thinking, some may believe it a logical extension to examine whether the State has the authority to subjugate state-adopted instream flows to permit-exempt wells. The State has a treaty obligation to maintain habitat at least as it relates to culverts; as water quantity contributes to that habitat, how does the ruling apply to an obligation to ensure that instream flows are not affected by new domestic uses? And, as it relates to habitat protection ensured by treaties, what amount of impact equates to impairment of those rights? We expect that these questions will be tested through the court system, and in the coming years could drive the future direction of water management in our state.</p> </div> <div data-bbox="378 1398 917 1425"> <p>Conjunctive Water and Land Use Management</p> </div> <div data-bbox="378 1432 1523 1707"> <p>The <i>Kittitas</i> and <i>Hirst</i> decisions gave Washington a clear entryway into conjunctive water and land use management. Central to the Streamflow Restoration Act is the intent that there should be adequate water available to support development. However, few requirements about land use management made it into the final version of the law. The Act specifies that in selected basins with planning efforts, building permit applicants for a home relying on a new permit-exempt well must "manage stormwater runoff on-site to the extent practicable by maximizing infiltration, including using low-impact development techniques, or pursuant to stormwater management requirements adopted by the local permitting authority, if locally adopted requirements are more stringent." RCW 90.94.030 (4)(a)(vi)(C). While an important requirement, some have asked to what degree this is enforceable, especially over time as properties change ownership.</p> </div> <div data-bbox="378 1713 1523 1986"> <p>The sparse inclusion of requirements aimed at conjunctive water and land use management in the Act point towards the challenge of requiring and enforcing conjunctive management, and to a future opportunity to do more towards this goal. While the state and many local governments have developed strong requirements on low-impact development, these regulations are not consistently applied throughout the state, nor are they often tied with overall water management decisions. One specific challenge is the level at which water and land use are usually regulated. While water is typically permitted and managed at the state level, most development regulations and decisions are made by city and county governments. Given the different regulatory spheres, tools, and capabilities, how should these entities work together to ensure that land use decisions match (and ideally enhance) water availability?</p> </div>
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<p>Instream Flow</p> <p>Habitat Offsets</p> <p>Supply Variability</p> <p>Flow Decrease Drivers</p> <p>Moving Baseline</p> <p>Climate Change Impacts</p>	<p>One useful tool in helping the State towards better conjunctive management between water and land resources would be to deepen our understanding of the quantitative relationship between streamflows and habitat improvement. There is broad agreement that habitat improvements — such as riparian restoration, upstream forest preservation, and increasing woody debris — often result in a boost in streamflows. The degree to which an individual project directly causes an increase in flows, however, is difficult to quantify. Gaining a better understanding of this relationship would yield greater evidence of the value of restoration projects, and perhaps allow regulators to connect new development with a required level of habitat offset.</p> <p>Climate Change</p> <p>In Washington, climate change will likely increase the variability of our water supplies. Increasing temperature, declining snowpack, and earlier snowmelt are expected to shift streamflow timing earlier in the calendar year. Expected lower flows during the late summer are likely to make it more difficult to maintain adequate streamflow for salmon and other instream resources.</p> <p>Ecology maintains an environmental indicator that evaluates low streamflow conditions for 66 gauges across the state on the basis of long-term trends. This indicator tracks changes in streamflow regardless of the causes. Analysis of low-flow trends for 1975 through 2017 points to weakly decreasing streamflows for 17 gauges and strongly decreasing flows for 16 gauges (<i>see</i> Figure 3). Many of these gauges are located upstream of cities and farms, indicating a driver on streamflows that cannot be controlled by water allocation decisions. Ecology does not yet know the driver behind those streamflow declines. It could be a signal of long-term climate change impacts, decade-scale climate cycles, or even possibly be related to forestry management decisions. We continue to evaluate the changes and are collaborating with other state and federal agencies to understand the data.</p> <p>Under the Streamflow Restoration Act, “[T]he department of ecology is directed to implement a program to restore and enhance streamflows by fulfilling obligations under this act to develop and implement plans to restore streamflows to levels necessary to support robust, healthy, and sustainable salmon populations.” RCW 90.94.010. Under the law, streamflow restoration will be occurring over the next 15 years. However, this work will be occurring in a non-static environment. Some models predict that changes to streamflows caused by climate change will eventually be greater — potentially much greater — than the cumulative impacts from new permit-exempt wells. Will planning groups include this “non-stationarity” attribute in the WRIA plans? And if they do, what is the best mechanism to go about doing so? In initial discussions, there has been preliminary debate about choosing the right baseline against which to measure impacts. One question is whether the baseline should be set to the current environmental conditions, or whether it would be more accurate (and prudent) to account for climate change.</p> <p>Planning processes to implement the Act may have to account for the potential climate change impacts on streamflows. Climate change may turn out to be a major risk to success of the legislative goal for “restoring streamflows.” In basins where there are no significant diversions or groundwater withdrawals, fisheries resources may still be threatened by climate change impacts. WRIA plans may succeed in creating a net benefit in regards to permit-exempt well impacts, but what if climate change creates a much larger negative impact? How can overall success — protecting and restoring flows to maintain healthy and productive fisheries — be attained if the state water resource management structure is not addressing a key driver of streamflow changes? Should the law and the planning processes be used to leverage the focus and attention to also look at other stressors? What additional tools may be needed for overall success beyond water allocation and regulation under prior appropriations?</p>
<p>AWRA-WA Annual Conference October 16th See Agenda Page 10</p>	<p style="text-align: center;">CONCLUSION</p> <p>While the new Streamflow Restoration Act resolves significant uncertainties raised by the <i>Kittitas</i>, <i>Foster</i>, and <i>Hirst</i> decisions as it relates to rural domestic water supplies, there remain several poignant questions and challenges for water management in our state. Furthermore, as Washington has only been implementing the new law for six months, it is far too early to evaluate the success of the new regulatory and planning framework. We have identified several current and future challenges that may require new tools and approaches to address. Major challenges include: water reallocation; protection of tribal treaty rights; conjunctive water and land use planning; and climate change. These issues and others will continue to push water managers towards developing comprehensive and innovative new management structures.</p> <p>At the AWRA-WA Annual Conference in October, speakers will discuss this new water management framework and evaluate progress to date within the context of legislative goals. Panels will also include broader discussions of water resource management within the context of future uncertainties and risks. While there are many uncertainties about how best to manage water resources, having deliberative conversations and seeking new and sometimes technically or politically challenging solutions may highlight the pathway toward success.</p> <p>FOR ADDITIONAL INFORMATION: CARRIE SESSIONS, Ecology, 360/ 407-6094 or cses461@ecy.wa.gov DAVE CHRISTENSEN, Ecology, 360/ 407-6647 or davc461@ecy.wa.gov</p>

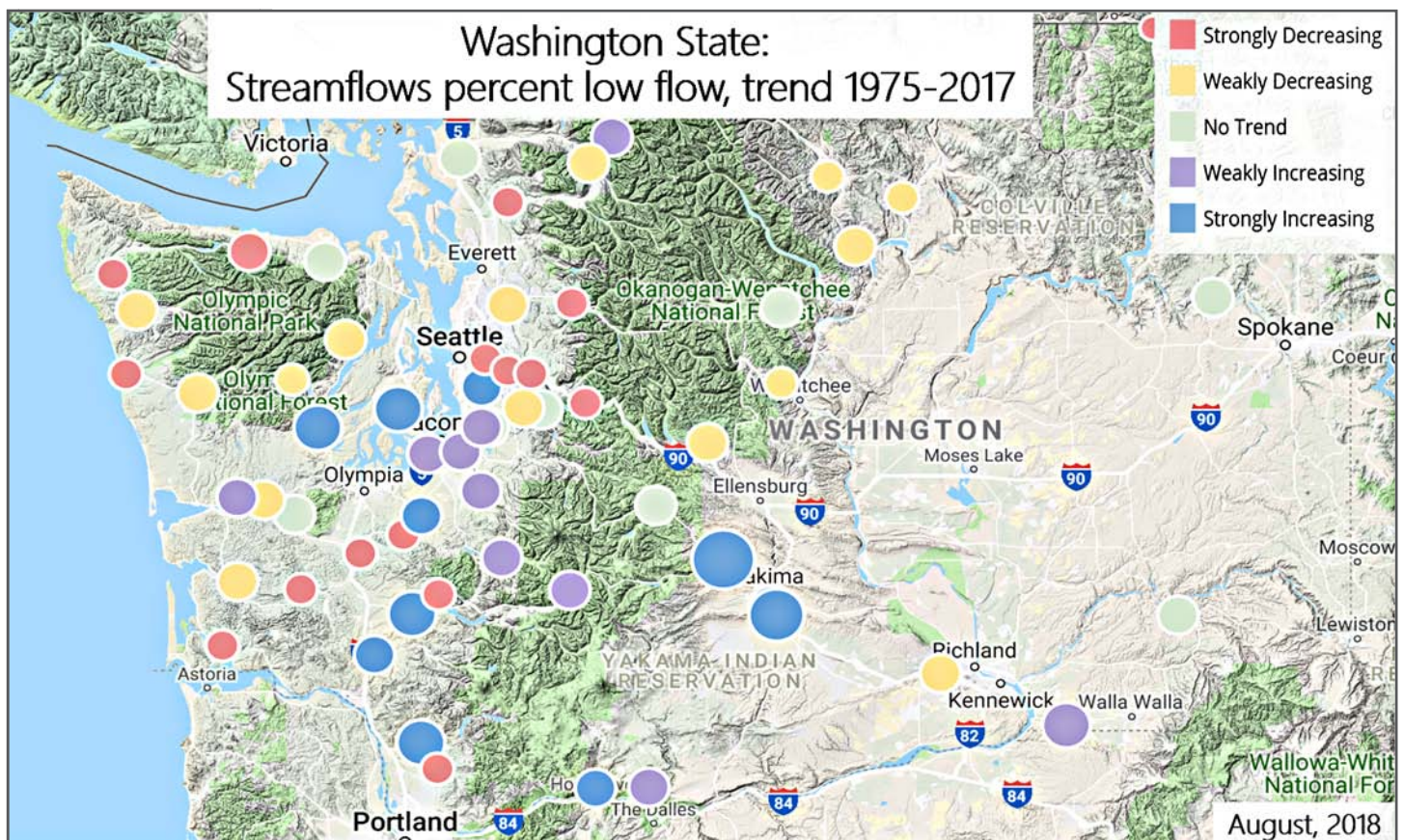


Figure 3
Long-term trends of low streamflow conditions at gauges across the state.
The size of the circle represents the strength of the trends
with stronger trends represented by larger circles.

Carrie Sessions is the Legislative and Policy Analyst for the Department of Ecology's Water Resources Program. In that role, she leads the development of statewide policies, analyzes proposed legislation and coordinates the agency response, and works with stakeholders and the legislature on implementation challenges of existing laws, rules, and policies. Prior to joining Ecology, Carrie did policy and economic analysis on the state, federal, and international levels, including work for consulting firms and for the United Nations Environment Program. She also spent several years teaching applied leadership. Carrie is a graduate of Colorado College and holds an MPA and an MS from the University of Washington in environmental policy and economics, with an emphasis in water resource management.

Dave Christensen is the Program Development Section Manager with the Washington Department of Ecology's Water Resources Program. He has been in his current position for five years leading a team that develops state rules and policies, and provides program support for key water resources functions statewide. Since coming to Ecology, his team has focused on resolving current challenges to address instream flow protections while working with local communities to meet water supply needs. Dave has over 20 years of experience overall working for local and state government, private and nonprofit organizations addressing environmental and public health issues. He holds a BS degree from the University of Washington in Fisheries Biology and an MS in Limnology and Oceanography from the University of Wisconsin.

2018 ANNUAL AWRA-WA CONFERENCE

American Water Resources Association - Washington Section Event

“Hirst, Foster, Boldt and Beyond: A New Era in Water Management?”

October 16th / Seattle, Washington / The Mountaineers Seattle Conference Room

Agenda

Keynote Speaker

Leon Szeptycki is a Professor of the Practice and Executive Director of Water in the West at the Stanford Woods Institute for the Environment. Water in the West is an interdisciplinary research program that engages Stanford in developing solutions to water scarcity and water management challenges in the American West.

Session 1 - Introductory Session: This session will focus on legal cases that preceded the adoption of chapter 90.94 RCW in the 2018 Legislative session. Speakers include State, Tribal and environmental attorneys.

Speakers: • **Alan Richman**, Washington State Attorney General’s Office

• **Patrick Williams**, Law Office of M. Patrick Williams

• **Lauren King**, Foster Pepper PLLC

Session 2 – Implementation Session: This session will cover implementation of chapter 90.94 RCW in three different watersheds, with speakers from three different lead agencies who have been tasked with updating watershed plans and getting agreement from planning participants.

Speakers: • **Kristen Harma**, Chehalis Basin Partnership

• **Mike Hermanson**, Spokane County

• **Mark Personius**, Whatcom County

Session 3 – Net Ecological Benefits: This session is a technical session focused on the concept of “Net Ecological Benefits.” Chapter 90.94 RCW requires that watershed plans meet the net ecological benefit standard, but did not define that standard. Panelists will talk about the interrelationship between water quantity, water quality, fish habitat, and how to measure Net Ecological Benefits.

Speakers: • **Kiza Gates**, Washington Department of Fish and Wildlife.

• **Phil Roni**, Cramer Fish.

Session 4 – Climate Change/Impact Session: This session will cover current scientific understanding of potential impacts to water resources from climate change. Panelists will talk about climate modeling, predicted groundwater response and changes we’ve already seen in our surface water systems.

Speakers: • **Rick Dinicola**, United States Geological Survey

• **Dr. Nick Bond**, University of Washington Climate Research Center

• **Jennifer Johnson**, United States Bureau of Reclamation

• **John Chandler**, Puget Sound Energy

Session 5 – Looking Forward Panel Session: This panel will discuss future considerations and policy issues related to water resource management. Panelists will examine what changes to policy might be needed to respond to the “New Era of Water Management.”

Panelists: • **Leon Szeptycki**, Water in the West

• **Mike Schwisow**, Washington State Water Resources Association

• **Darrel Williams**, Tulalip Tribe

• **Mary Verner**, Washington State Department of Ecology

Followed by a two-hour Reception Dinner & Networking Opportunity

2018 AWRA Washington Annual State Conference

October 16, 2018

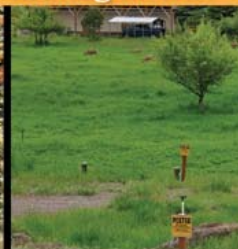
Seattle, WA



**American
Water
Resources
Association**
Washington Section

Hirst, Foster, Boldt, and Beyond:

A New Era of Water Management?



Details and Registration at: www.waawra.org

Water Availability

Applications Denied

Availability Methodologies

Groundwater Applications (Interbasin)

Boondoggle Over?

Appeal of Instructions

LAS VEGAS GROUNDWATER APPLICATIONS

APPLICATIONS DENIED BY STATE ENGINEER
ISSUES CONCERNING “WATER AVAILABILITY” REMAIN

by David Moon, Editor

Introduction

On August 17th, the Nevada Division of Water Resources (NDWR) issued a ruling (Ruling #6446) denying groundwater applications that are part of the Southern Nevada Water Authority (SNWA) Groundwater Development Project. However, there is a caveat concerning the durability of Ruling #6446. NDWR is expressing doubts about the methodology it was obligated to use in issuing the application denials.

The SNWA Groundwater Development Project is designed to reduce SNWA's reliance on Colorado River water and provide flexibility to respond to drought conditions on the river system. While generally unstated, the Project's proposed water appropriations are designed to keep Las Vegas humming — particularly now that the Colorado River as a water supply source seems much less reliable than it once did.

Ruling #6446 was based on court-ordered methodologies and the applications' denials are at odds with previous NDWR application approvals. The NDWR's administrator (State Engineer Jason King) has expressed a lack of agreement as to the applicability and accuracy of the court-ordered methodologies. He has announced the intention to appeal certain of the court's instructions (Remand Issues 2 and 4, see below).

The crux of these ongoing disputes is the question of how to determine “water availability.”

Background

The current circumstances have roots stretching back nearly three decades. “In 1989, the Las Vegas Valley Water District filed 146 water right applications for interbasin transfers of groundwater to the Las Vegas Valley. Twenty-five of the applications sought to appropriate the underground waters of Spring Valley, Cave Valley, Dry Lake Valley and Delamar Valley.” Ruling #6446, *In the Matter of Applications... Filed to Appropriate The Underground Waters of Cave Valley, Delamar Valley, Dry Lake Valley, and Spring Valley* (August 17, 2018), page 3. The Southern Nevada Water Authority later assumed ownership of the applications from the Las Vegas Valley Water District. The Nevada State Engineer (State Engineer) held a hearing in the fall of 2011 on the Southern Nevada Water Authority's 1989 groundwater applications in Spring, Delamar, Dry Lake and Cave valleys. In a ruling issued on March 22, 2012, the State Engineer granted SNWA 61,127 acre-feet per year (AFY) from Spring Valley and 22,861 AFY from Delamar, Dry Lake and Cave valleys.

Ruling #6446 was NDWR's fourth ruling regarding SNWA's water rights applications to pump groundwater from four rural eastern Nevada basins to the Las Vegas area. The ruling denies SNWA's applications in the Spring Valley, Cave Valley, Dry Lake Valley, and Delamar Valley groundwater basins. NDWR previously approved each of these SNWA water rights applications in 2007, 2009, and 2012 rulings.

With the recent ruling, the long-running battle over Las Vegas' plan to import groundwater from eastern Nevada has reached a major turning point. Opponents of the plan are claiming victory. “With the denial of these applications by the State Engineer, this ill-conceived multibillion dollar boondoggle is now dead in the water,” said Abigail Johnson of the Great Basin Water Network. “After a string of court victories, we have a decision showing that the water is not available for this project without hurting the area's existing water rights and environment.”

At first glance, Johnson's enthusiasm seems well founded since the State Engineer's ruling did, indeed, deny each of SNWA's applications in Spring, Cave, Dry Lake, and Delamar Valleys. The ultimate decision, however, has yet to be rendered since the State Engineer has “misgivings” about the methodology required by the District Court to be utilized by the State Engineer in determining “water availability.” State Engineer Jason King announced that he “intends to appeal two of the District Court's mandated instructions, specifically regarding the methodology for determining availability of water in the four groundwater basins. The methodology required by the Court sets a precedent inconsistent with the long-standing application of Nevada water law and water appropriation statewide.” Press Release, Department of Conservation and Natural Resources, Division of Water Resources (August 17, 2018).

Water Availability

Remand Order

Remand Issues

Remand Order of District Court: Mandated Analysis of “Water Availability”

Although the State Engineer issued Ruling #6446 (Ruling), the twist in this case is the on-going dispute concerning the determination water availability. “All water right applications subject to this Ruling are denied as a result of the analysis mandated by the Seventh Judicial District Court of Nevada (District Court) pursuant to Remand Issues Numbered 2 and 4.” *Ruling* at 109. Thus, NDWR’s August 17th Ruling is a direct result of a Remand Order issued by Nevada’s Seventh Judicial District Court on December 13, 2013.

As part of its response to the District Court ruling, NDWR held a two-week hearing in the fall of 2017 for all interested stakeholders. Participants included: SNWA; local governments; tribes; and environmental groups from Nevada and Utah. During the hearing, subject-matter experts presented numerous exhibits — including hydrology studies, reports, models, and more — to help address the remanded issues.

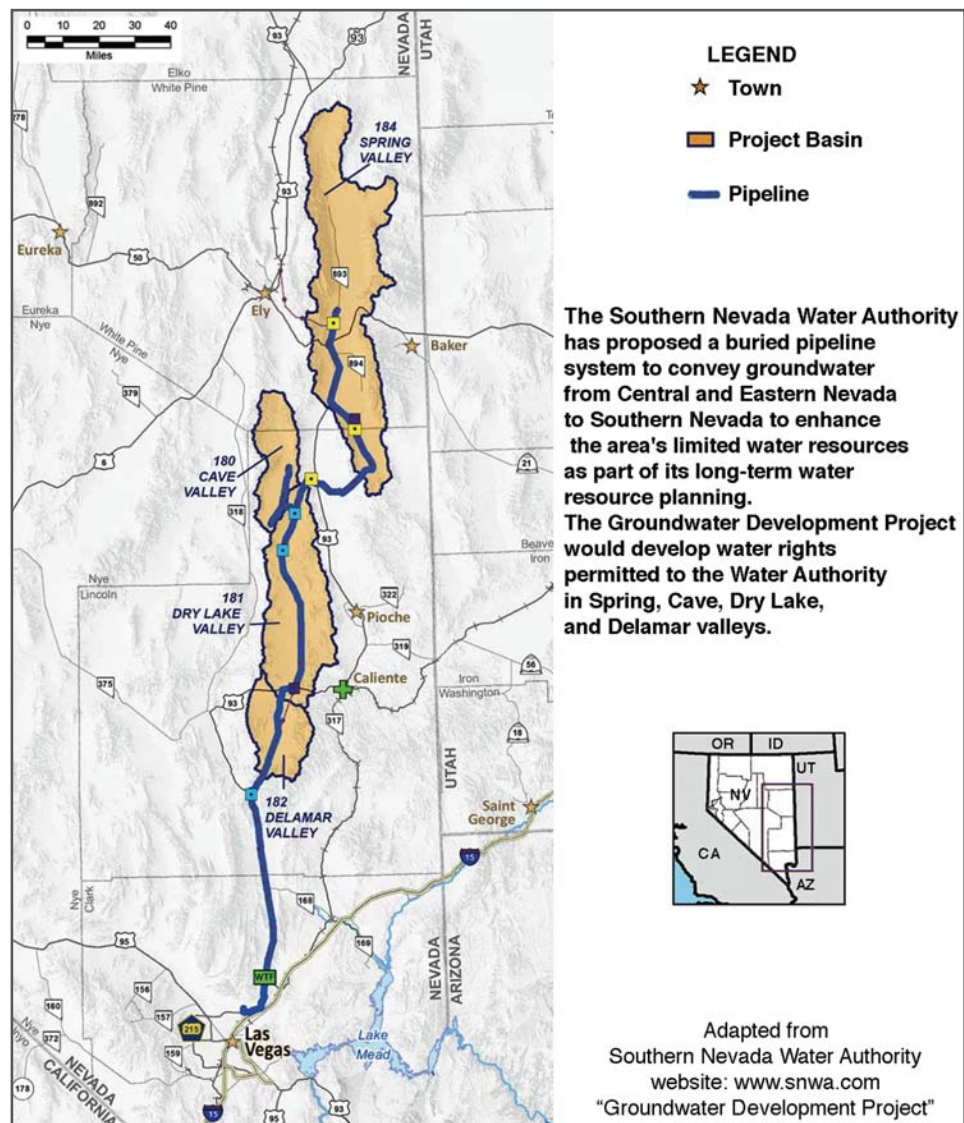
The 2013 Remand Order directed NDWR to address four specific issues (*Ruling* at 109) relating to the previous approval of SNWA’s applications to appropriate water.

The two remand issues which the State Engineer intends to appeal are:

- Remand Issue 2: “A recalculation of water available from Spring Valley assuring that the basin will reach equilibrium between discharge and recharge in a reasonable time;”
- Remand Issue 4: Recalculation of the appropriations from Cave Valley, Dry Lake and Delamar Valley to avoid over appropriation or conflicts with down-gradient, existing water rights.”

Ruling at 109 (Summary of Decision).

Following the District Court’s Remand Order in 2013, the State Engineer “filed a direct appeal to the Nevada Supreme Court, which dismissed the appeal on February 6, 2015, for lack of jurisdiction over a non-final order.” *Id.* at 4.



Water Availability

With regard to the methodology used to determine availability of water for Ruling #6446, the State Engineer *followed* the Remand Order of the District Court to arrive at the decision to deny most of the applications. The State Engineer asserted, however, that NDWR did not waive any right to *challenge* the Remand Order later on appeal. “Additionally, although the State Engineer is fully complying with the Remand Order, the State Engineer’s misgivings regarding aspects of the Remand Order have not been examined through an appeal, despite his efforts to commence appellate review and to obtain writ relief after the Remand Order was issued.” *Ruling* at 8.

Key Findings of Ruling #6446

The NDWR’s Press Release (August 17, 2018) set out what it perceives as the key findings of Ruling #6446:

Based on the District Court’s 2013 direction and the input received during the subsequent 2017 hearing, the NDWR ruling issued today includes the following key findings.

Key Findings:

- Each of SNWA’s applications in Spring, Cave, Dry Lake and Delamar Valleys are denied based upon the directives of the District Court’s remand order; and two of SNWA’s applications in Spring Valley are also denied based upon the finding that those applications will threaten the Swamp Cedar Areas of Critical Environmental Concern, and thus are detrimental to the public interest.
- The State Engineer determined that SNWA’s Monitoring Management and Mitigation (3M) Plan satisfies the District Court’s remand order and the requirements set forth by the Nevada Supreme Court in *Eureka County v. State Engineer*, 131 Nev. Adv. Op. 84 (2015).
- The State Engineer determined that SNWA’s Spring Valley Monitoring Management and Mitigation (3M) Plan satisfies the District Court’s remand order by providing for the inclusion of Millard and Juab Counties, Utah. While the NDWR ruling focused on compliance with the District Court’s remand orders, the Nevada State Engineer intends to appeal two of the District Court’s mandated instructions, specifically regarding the methodology for determining availability of water in the four groundwater basins. The methodology required by the Court sets a precedent inconsistent with the long-standing application of Nevada water law and water appropriation statewide.

NDWR Press Release (August 17, 2018)

Denial Rationales

The *Ruling* at page 110 sets out three different bases for the denial of various groundwater applications:

- ET Capture Rule (Applications 54003-54015 and 54019-54020): “...denied on the ground that the Applicant has failed to demonstrate a reduced award based on evapotranspiration (ET) capture that has some prospect of reaching equilibrium within a reasonable time.”
- Public Interest (Applications 54014-54015): “...denied on the ground that granting the applications would prove detrimental to the public interest.”
- Conflict with Down-Gradient, Existing Rights (Applications 53987-53992): “...denied on the ground that the Applicant’s methodology failed to provide satisfactory proof that any groundwater appropriated to the Applicant in the Cave, Dry Lake and Delamar Valleys would not conflict with down-gradient, existing water rights.”

The ET Capture Rule relates to Remand Issue 2, while Remand Issue 4 is concerned with the down gradient, existing water rights. Depending on the outcome of the State Engineer’s planned appeal, water rights connected to those issues could potentially be reinstated. *Ruling* at 110. In regard to the “public interest” finding, though, the State Engineer is not planning any appeal and specifically noted in the *Ruling* that “regardless of whether any of the denied water right applications are reinstated as a result of any future judicial process, Applications 54014 and 54015 cannot be approved and are denied because they threaten to prove detrimental to the public interest as it relates to protecting the Swamp Cedars ACEC.” *Id.*

The critical part of the *Ruling*, though, is the State Engineer’s decision to appeal Remand Issues 2 and 4:

However, it is the State Engineer’s statutory duty to conserve, protect and enhance the water resources of the state...and it is his belief that these two remand instructions run counter to those duties and represent poor water policy for all Nevadans. Although the State Engineer believes there is water to appropriate in the four subject groundwater basins (*see* previous Rulings 5726, 5875 and 6164-6167), he is precluded from doing so as a result of the scope of those remand issues, which imposes new water policy into the science of water appropriation in Nevada.

Id. at 109.

Reinstatement of Applications

New Water Policy Disputed

Water Availability

“Uncaptured ET”

Diversion Points v. Conceptual Wellfield

Perennial Yield

Discharge v. Recharge

Maximum Use

Basin-Wide Water Budget

Water Availability

Water Policy and the Science of Water Appropriation

The 111-page Ruling details the myriad problems the State Engineer asserts is inherent in the District Court’s Remand Order, particularly concerning the recalculation requirements imposed on the Applicant decades after the applications were filed. The Ruling presents an extremely detailed and thorough review of the history of the case, and the facts and water law involved in the State Engineer’s decision — plus the State Engineer’s explanation and rationale detailing why the two remand instructions should be reversed.

Remand Issue 2: Water Availability Calculations

The discussion regarding Remand Issue 2 runs from page 9 to page 32 of the Ruling, with the crux of Remand Issue 2 revolving around “uncaptured evapotranspiration.”

The District Court accepted the State Engineer’s initial calculation of available water as 61,127 acre-feet annually (AFA), but required that number to be reduced by the amount of uncaptured ET. The District Court’s remand instruction was based on its evaluation of evidence in the 2011 record that pertained to whether Spring Valley would reach a new equilibrium in a reasonable amount of time based on the prior award...of 61,127 acre feet. The District Court determined that the evidence in the 2011 administrative record showed that after 200 years, “SNWA will likely capture...[84%] of the E.T.”

Id. at 9.

The parties presented evidence at the 2017 hearing to attempt to comply with the District Court’s remand instruction requiring the recalculation of water available from Spring Valley. “However, the parties disagreed whether the State Engineer should be limited to considering only the Applicant’s 15 points of diversion under the Applications; or, whether the State Engineer could consider some other conceptual wellfield, as the District Court did in the Remand Order.” *Id.* at 10.

The State Engineer maintains that the Remand instructions are inconsistent with Nevada water law because they require considering potential changes in pumping rates or points of diversion that are *not* described in the application. An important point made by the State Engineer is that “...although the Remand Order imposed new requirements for this remand proceeding, the State Engineer is statutorily required to look only at the applications before him.” *Id.* at 15. The Ruling also includes a section that delicately points out (in its title) that “The State Engineer Previously Indicated He Was Disinclined to Consider Conceptual Applications or Wellfield Designs.” *Id.* at 14.

The State Engineer also maintains that the remand instruction “forces the State Engineer to completely disregard prior policies and practices in determining how much water is available for appropriation.” *Id.* at 19. “Perennial yield, as historically applied, has been used as a guideline to determine the quantity of water available for appropriation based on a basin-scale water budget. The State Engineer prefers relying on discharge as opposed to recharge in establishing the perennial yield of a basin because *measurements* of discharge are generally more accurate than *estimates* of recharge.” *Id.* at 19-20 (emphasis in original). Based on the Remand Order, “...the State Engineer is shackled into determining water availability based on capturing discharge in a *reasonable amount of time*. Given Nevada’s arid geography, such requirements imposed by the Remand Order are antithetical to the doctrine of prior appropriation and to the prevailing policy which encourages the maximum beneficial use of the state’s waters.” *Id.* at 20 (emphasis in original).

The Ruling also points out the inherent difficulties with “[e]liminating the long-established practice of using a water budget to establish a perennial yield for each basin” which “runs counter to the specific direction from the Nevada Legislature.” *Id.* at 21. The State Engineer maintained that “a major purpose behind this legislative requirement is to ‘provide the needed certainty in water availability.’” *Id.* at 21-22. “Application of the District Court’s remand instruction eliminates the basin-wide water budget approach in favor of individual determinations of water availability made on a case-by-case basis. This would disrupt the current, accepted method of water resource administration in Nevada, and would result in inconsistent and variable estimates of the amount of groundwater available for appropriation in any given basin.” *Id.* at 22.

The position of the State Engineer, after pages of detailed discussion about the facts and technical points involved and Nevada water law, was succinctly summed up in the Ruling under a section entitled “The New ET Capture Rule is Manifestly Unfair to the Applicant as Applied in this Case.”

Nearly 30 years have passed since these Applications were filed. In that time, the Applications have been granted twice under the method used by the State Engineer to

Water Availability

Extra-Statutory Requirements

determine water availability — a method that has not been repudiated by the Legislature and which has been affirmed by the Nevada Supreme Court. The Applications have been remanded to the State Engineer two times. Now, on the second remand, the District Court has imposed new requirements concerning ET capture and timed equilibrium that have never before been required in Nevada. The GDP [SNWA's Groundwater Development Project] was not designed as an ET capture project, as conceded by the Applicant, and the applicant is not permitted to change Applications now to make it an ET capture project. Despite the fact that there tens of thousands of acre-feet of water available for appropriation in Spring Valley, the new requirements of the Remand Order constrain the State Engineer to deny the Applications decades after their filing based upon a new legal standard. The imposition of extra-statutory requirements by the Remand Order decades later on remand, in the opinion of the State Engineer, not only sets harmful water policy for the state, but is manifestly unfair to the Applicant and should be examined under an exception to the law of the case.

Id. at 22-23.

Equilibrium Timing

The Ruling finds fault with the Remand Order's analysis regarding the ET capture question. "The District Court performed its own analysis of the ET capture question and suggested there was an amount that could simply be subtracted from the prior award allowing the basin to reach equilibrium in a reasonable amount of time. The Court's analysis is incorrect." *Id.* at 24. The basis for the State Engineer's conclusion might best be understood by our readers who are technical experts themselves:

First,...the 84% ET capture value was from a model simulation for a wellfield with 81 wells, but the project as described under the subject Applications includes only 15 wells. Second, the Remand Order appears to indicate that the District Court believed the State Engineer could balance the water budget simply by reducing the quantity of water awarded to the Applicant by 9,780 AFA, to 51,347 AFA. Even if the 84% capture figure was germane, the existing project could never reach equilibrium because applying this factor to *any* appropriation value will not result in directly capturing that amount of ET in any given time frame. Simply reducing the quantity of water awarded to the Applicant will have little impact on the time it takes for the basin to reach a new equilibrium because it does not honor accepted science and is mathematically incorrect.

Id. at 24.

Riparianism Reintroduced?

The State Engineer also found "alarming" the "appropriation scheme based on the approach recommended by the Protestant's experts" because it was "in conflict with Nevada's established prior appropriation system." The Protestant's proposed appropriation system "would favor property owners whose property is located nearer to ET discharge zones over property owners whose property is located farther from such areas. *Id.* at 25. "The practical effect of strictly applying the remand instruction, as advocated by the Protestants, would be to reintroduce principles of riparianism into Nevada's groundwater law — principles that were specifically rejected by the Nevada judiciary over 130 years ago." *Id.* at 25-26.

REMAND ISSUE 4: Conflicts with Down-Gradient, Existing Rights - Maximizing Beneficial Use

The Remand Order requires the State Engineer to "recalculate the appropriations from Cave Valley, Dry Lake Valley and Delamar Valley to avoid over appropriations or conflicts with down-gradient, existing water rights." *Id.* at 32. A recalculation was ordered to "address the contention that, after accounting for the water awarded to the Applicant..., insufficient water may remain in the downgradient basins to fulfill existing water rights." *Id.* This is an issue that many western states face — and Washington in particular has struggled with due to its strict interpretation regarding "impairment." What should the standard be and how should it be applied to prevent conflict or injury to existing water rights?

The Ruling laid out the approach of the State Engineer to avoid any significant conflicts, including a mitigation plan:

Conflicts With Existing Rights

Mitigation Plan (3M Plan)

The State Engineer addressed the uncertainty of potential conflicts in the far future by requiring a monitoring, management, and mitigation (3M) plan. The plan was designed to measure the actual effects of pumping in the CDD [Cave Valley, Dry Lake Valley, Delamar Valley] basins, which can then be used to revise groundwater models and alter groundwater pumping to prevent conflict, with provisions for mitigation if conflicts were

Water Availability	<p>to occur. Additionally, a portion of the Cave Valley water budget was reserved to account for subsurface outflow that discharges to springs in White River Valley. This reasoning for approving the applications in 2011 with a 3M plan differs from other recent examples where the State Engineer denied applications to appropriate water because the best available science demonstrated that conflicts were likely to occur within a planning horizon of up to several years or decades, and no monitoring plan was needed to evaluate uncertainties.</p> <p><i>Id.</i> at 32-33.</p>
“Conflict” Standard (Timing)	<p>The Ruling then contrasts the State Engineer’s view of avoiding conflict versus the District Court’s view. “The State Engineer found in Rulings 6165, 6166, and 61667 that if no measurable impacts to existing rights occur within hundreds of years, then the statutory requirement of not conflicting with existing rights is satisfied. The District Court disagreed, finding that NRS 533.370(2) provides that applications shall be rejected if a finding of a conflict is made, regardless of whether that conflict will take a long time to manifest itself.” <i>Id.</i> at 33. Thus, the strict interpretation required by the District Court’s Remand Order amounts to a strict de minimus timing rule where any impact, <i>no matter how remote in time</i>, requires a denial of a new appropriation. It also avoids consideration of the adaptive nature of the mitigation proposed.</p>
“Avoid Conflicts”	<p>The State Engineer reviewed methods used and calculations made by the Applicant to show that groundwater was available, but eventually alluded to the distinction in the Remand Order’s directive between “to avoid over appropriation or <i>to avoid conflicts</i> with down-gradient existing water rights.” <i>Id.</i> at 35. The State Engineer’s emphasis on the strict standard for recalculating appropriations “<i>to avoid conflicts</i>” led to the finding that the Applications must be denied.</p>
Strict Standard	<p>Nevertheless, the District Court’s Order identifies conflict by using a system-wide steady state condition without considering time scale, aquifer transience, and planning horizons. In so doing, the District Court interprets NRS 533.370(2) to presume that a conflict exists unless otherwise demonstrated, and irrespective of the time it may take to manifest. On this basis, under the Remand Order, the State Engineer finds that there was not substantial evidence to indicate that no conflict would occur with existing downgradient rights and the applications are subject to denial.</p> <p><i>Id.</i> at 37.</p>
Groundwater’s Nature	<p>Concerning groundwater’s nature, the State Engineer quotes the Texas Supreme Court in <i>Houston & Tex. Central R.R. Co. v. East</i>, 81 S.W. 279 (Tex. 1904): “Because the existence, origin, movement and course of such waters, and the causes which govern and direct their movements, are so secret, occult and concealed that an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty, and would therefore be practically impossible.” Contrasting that 1904 viewpoint with today, the State Engineer points out that while “great strides have been made concerning the knowledge and science of groundwater movement and occurrence, much remains to be discovered.” <i>Id.</i> at 38.</p>
Reasonable Planning Horizon	<p>The State Engineer states that it is “poor water policy to presume the existence of a conflict when it is obscured by the uncertainty of what can be determined within a reasonable planning horizon.” The Ruling points to the policy of “maximizing beneficial use of the waters of the driest state in the nation.” <i>Id.</i></p>
Maximizing Beneficial Use	<p>As originally stated by the Legislature in 1913, the State Engineer is duty-bound to grant applications unless a conflict exists. The State Engineer believes that when looking at potential conflicts within a regional groundwater flow system, unless a conflict is shown to be likely within a reasonable planning horizon, it is permissible to appropriate what may be the same water by subsequent applications, particularly where such appropriations are subject to safeguards such as vigorous 3M Plans... .</p>
3M Plans	<p style="text-align: center;">3M Plans: Monitoring Management and Mitigation</p> <p>A large part of Ruling #6446 dealt with Remand Issue 3, which addressed Monitoring Management and Mitigation (3M Plans). <i>See Id.</i> at 38-104. The Remand Order required the State Engineer to “define standards, thresholds or triggers so that mitigation of unreasonable effects from pumping of water are neither arbitrary nor capricious in Spring Valley, Cave Valley, Dry Lake Valley and Delamar Valley.” <i>Id.</i> at 38. The Remand Order also required “[t]he addition of Millard and Juab counties, Utah in the mitigation plan so far as water basins in Utah are affected by pumping of water from Spring Valley Basin, Nevada.” <i>Id.</i> at 38-39. This article does not fully examine the Ruling as it concerns 3M Plans.</p>

**Water
Availability****Assumption of
Reinstatement****Traditional
Cultural Property****“Public Interest”
Standard****More to Come**

Even though the State Engineer’s ruling denied SNWA’s groundwater applications, the State Engineer went ahead and answered the remand questions in detail regarding the 3M Plans based on the assumption that “reinstatement of any water granted under the Applications in Rulings 6164, 6165, 6166 or 6167, through any later proceedings” may occur. *Id.* at 39. In other words, for the sake of efficiency the State Engineer considered the evidence and testimony and issued his rulings on validity of the 3M Plans — assuming that his appeal of the water availability methodologies (Remand Issues 2 and 4) would be successful. The State Engineer concluded that “the Spring Valley 3M Plan and the Cave Valley, Dry Lake Valley and Delamar Valley 3M Plan are approved with enhancement set forth in this ruling and any other such amendments required by the State Engineer at a later date pursuant to his authority under Nevada law.” *Id.* at 110. The Ruling also addressed the interstate impact of SNWA’s project, concluding that the Applicant “adhered to the Remand Order by providing for the inclusion of Millard and Juab Counties, Utah, in the Spring Valley 3M Plan insofar as water basins in Utah may be affected by pumping groundwater from Spring Valley, Nevada.” *Id.*

The Swamp Cedar ACEC: “Public Interest” Standard & Tribal Concerns

There are two applications that were treated separately by the Ruling from the other applications due to their location “within an area designated as a Traditional Cultural property that is listed on the National Register of Historic Places.” *Id.* at 105. The Swamp Cedar Area of Critical Environmental Concern (ACEC) “was selected as an area of focus in the Spring Valley 3M Plan in part due to Tribal concerns identified during the 2011 water rights hearing.” *Id.* at 55; *see also* 81-89. For Applications 54014 and 54015, the State Engineer is not planning on appealing the Ruling, unlike the applications affected by Remand Issues 2 and 4, due to utilization of the “public interest” standard.

Having found that the protection of cultural resources within a registered historic place is in the public interest, and that the Applicant’s 3M Plan is not adequate where the unreasonable result may occur prior to the investigation trigger being reached, the State Engineer concludes that approval of Applications 54014 and 54015 threatens to prove detrimental to the public interest and must be denied.

Id.

Conclusion

Ruling #6446 is clearly not the last court decision to be rendered on SNWA’s groundwater applications. “The Nevada Division of Water Resources is dedicated to protecting, managing, and enhancing Nevada’s precious water resources,” said Jason King, State Engineer, NDWR. “In an effort to protect the integrity of Nevada’s water laws, the NDWR intends to appeal sections of the mandated instructions that threaten to upend the historical application of Nevada water law and water rights.”

Bradley Crowell, Director of the Nevada Department of Conservation and Natural Resources noted that the issues regarding water availability have an effect beyond the SNWA applications: “As the driest state in the nation, protecting Nevada’s limited water resources for the benefit of all Nevadans is the foremost responsibility of our State Engineer and the Nevada Division of Water Resources. This responsibility is grounded in our well-established state water law and policy. As such, the State Engineer’s intention to appeal key portions of today’s ruling that have ramifications beyond the scope of the SNWA applications is essential to protecting water rights throughout Nevada and appropriately managing the beneficial use of Nevada’s water resources today and for future generations.” Press Release (August 17, 2018).

The NDWR is in the odd position of appealing their own Ruling in regard to the two remand instructions (Remand Issues 2 and 4). The appeal will go back to the District Court, although it is unclear if the appeal will be heard by the same judge or not. Regardless of the outcome at that level, this case appears destined to wind up once again in front of the Nevada Supreme Court.

FOR ADDITIONAL INFORMATION:

Ruling #6446 is available on the NDWR’s website: www.water.nv.gov.

Stormwater

Nuisance
v.
AssetReduction
Strategies

Capture Uses

Water Supply

Dry Weather
RunoffDrinking Water
Issues

STORMWATER CAPTURE & REUSE

STORMWATER MANAGEMENT OPTIONS IN CALIFORNIA

by Sean Porter, Apex Companies, LLC (San Diego, CA)

Introduction

Historically, stormwater has been viewed as something to control. As a consequence, most stormwater projects were tailored towards reducing flood risk, damage to property, and/or reducing pollution.

In California, stormwater is being examined through a different looking glass — more like a “must-have” asset than a nuisance. Who doesn’t want free water?

With California’s drought-prone environment, water is at a premium. Depending on its quality, water in California costs between \$800 and \$3,000 per acre-foot. Not only does stormwater capture and reuse make sense from a water conversation standpoint, it also makes sense from a water quality standpoint. One of the drivers for stormwater capture is California’s Senate Bill 985 (2014) which requires water agencies to consider wet-weather and dry-weather water capture in future water-saving plans and water-recycling projects (*see* References, below).

Volume reduction has long been recognized as a method to reduce the loads of stormwater pollution to receiving waters. This article will present some unique stormwater capture and reuse projects, municipal ordinances, and regulatory compliance options currently being utilized or considered across California.

Stormwater Pollution

Recently, pollution reduction strategies have been at the forefront of many stormwater projects. California’s municipal, construction, and industrial stormwater permits are integrating Total Maximum Daily Loads (TMDLs) and other responses to 303(d) Water Body Impairments established under the federal Clean Water Act. Typical pollutants targeted for reduction or elimination include: trash; sediment/solids; metals (e.g., zinc, copper, lead); organics associated with petroleum; and nutrients (e.g., nitrate and phosphate). Many of the **best management practices** (BMPs) installed as part of these permits are designed to reduce these pollutants. One popular BMP is implementation of Low Impact Development (LID) measures. Porous pavement, bioswales, rain gardens, and diversion of roof downspouts are several popular LID BMPs designed to reduce runoff volume. These BMPs serve to remove pollutants before they can come in contact with surface waters.

In addition to pollution reduction, many municipal stormwater projects have been designed to capture stormwater and redistribute it for other uses. Redistribution end uses include: irrigation; groundwater recharge; non-potable reuse (e.g., toilets, cooling, process water); and possible potable reuse.

Orange County

In the case of Orange County Sanitation District’s (OCS) Groundwater Replenishment System (GWRS), wastewater flows to the GWRS where it undergoes a state-of-the-art purification process consisting of microfiltration, reverse osmosis, and ultraviolet light with hydrogen peroxide. Stormwater captured within the wastewater treatment plant’s drainage system is also combined with wastewater and directed to the GWRS. According to OCS the product water is near-distilled-quality. Approximately 65 million gallons (246,000 cubic meters) of this treated water are pumped daily to Orange County Water District’s percolation basins in Anaheim. This GWRS water naturally filters through sand and gravel to the deep aquifers of the groundwater basin to increase the local drinking water supply. [*See* Markus, *TWR* #59.]

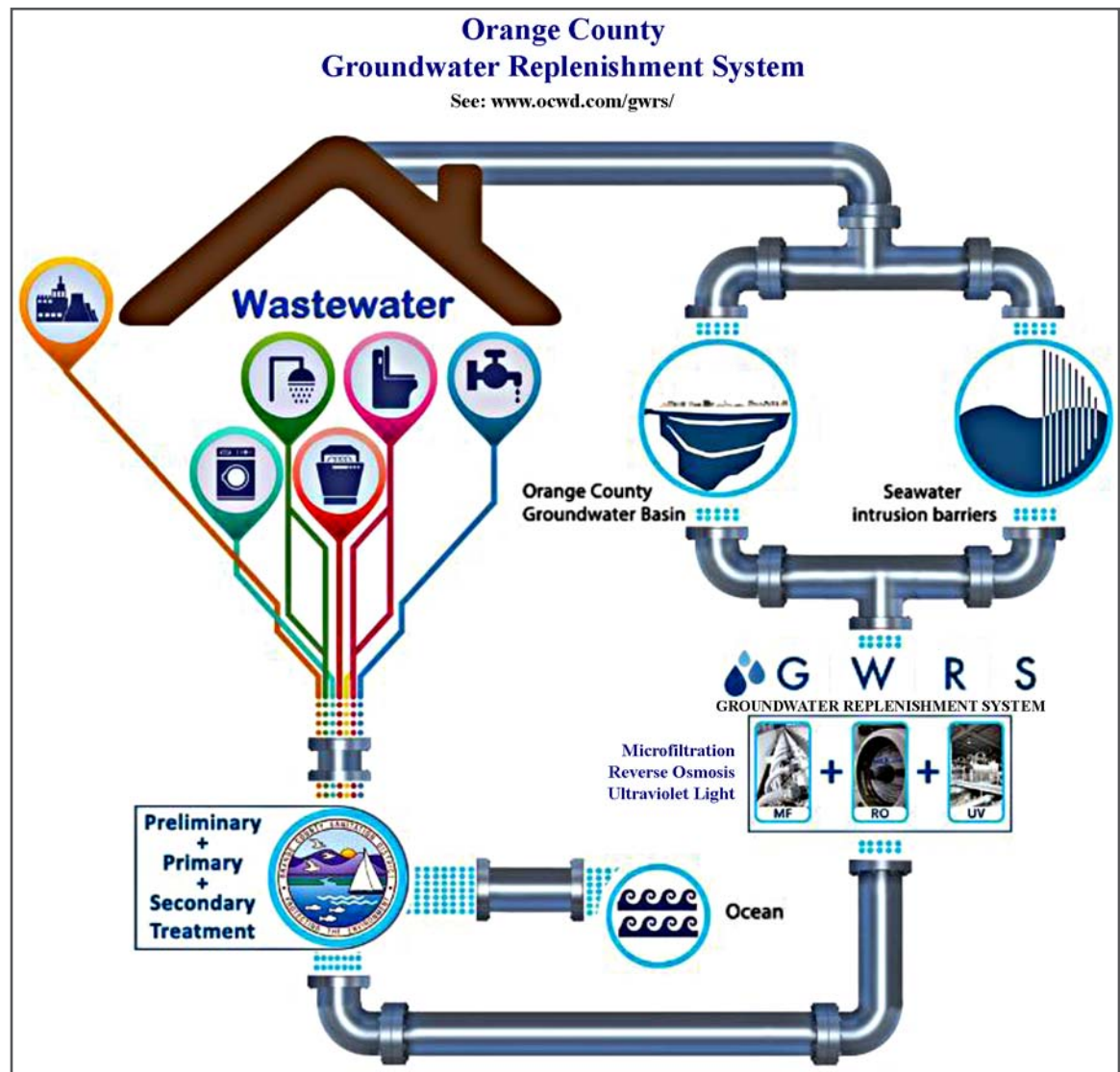
Dry Weather Flows

Rainfall in California is not consistent throughout the year. A defined wet season extends through winter from October to May. Monsoonal storms can occur during the dry season. However, year-round dry weather runoff exists in many urban stormwater channels. The Southern California Coastal Water Research Project found that dry weather flows account for up to 20% of the total annual load during wet years and greater than 50% during dry years (*see* References).

Dry weather runoff in urbanized channels in the Los Angeles area accounts for a significant annual discharge. There is an average flow rate of approximately 1,100 gallons per second in the Los Angeles River alone. Dry weather flows are diverted to the sanitary sewerage system or infiltrated for later withdrawal. This diverted water is not currently available as a potential drinking water resource due to water quality issues, a lack of regulatory framework, and insufficient infrastructure.

Stormwater

Feasibility Considerations



The Arroyo Calabasas & Bell Creek join to form the Los Angeles River

Photo by Craig Dietrich

Flickr: Origin of the Los Angeles River in Canoga Park, CC BY-SA 2.0,
<https://commons.wikimedia.org/w/index.php?curid=31420818>

Many have discussed the feasibility of using dry weather runoff as source water for direct or indirect potable water supply or non-potable uses. Such uses can include: collecting the dry weather flows to sell as graywater; collecting and injecting for later groundwater withdrawal; collecting and pumping to spreading grounds and treatment; and advanced purification for potable use. The many feasibility considerations and variables include: water chemistry and flow rate; distribution risks; operator certification needs; potential downstream receiving water health and eco-system disturbances; and public perception challenges.

Since the infrastructure does not currently exist to use dry weather flows for anything other than infiltration, directing these dry weather flows to spreading grounds for infiltration for groundwater replenishment is probably the best way to reuse dry weather flows.

Stormwater

Multiple Purposes

Implementation Examples

Urbanization Impacts

Volume Generated

LID Infrastructure

Rain Gardens

Stormwater Capture

According to the Natural Resources Defense Council, infiltration of runoff to recharge groundwater and rooftop rainwater capture in urbanized southern California and the San Francisco Bay would provide an additional 420,000 to 630,000 acre-feet per year to local water supplies (*see References*). Municipal green infrastructure projects are typically designed to improve water quality and not usually designed to recharge groundwater. We are beginning to see more green infrastructure projects focused on the multiple aims of: reducing runoff volume; improving water quality; and recharging groundwater.

In addition to enhanced BMPs to promote stormwater infiltration, the Pacific Institute found that several municipalities and counties have made substantial progress in achieving the goals of stormwater capture and reuse. These entities have also established funding mechanisms to complete the projects, laying the groundwork for many more future efforts (June 2018 *Stormwater Capture in California Report* (*see References*)).

Pacific Institute findings include:

City of Santa Monica — Citywide goal to source all water supply locally by 2022

City of San Francisco — Ordinances passed to require developers to incorporate direct reuse of stormwater onsite

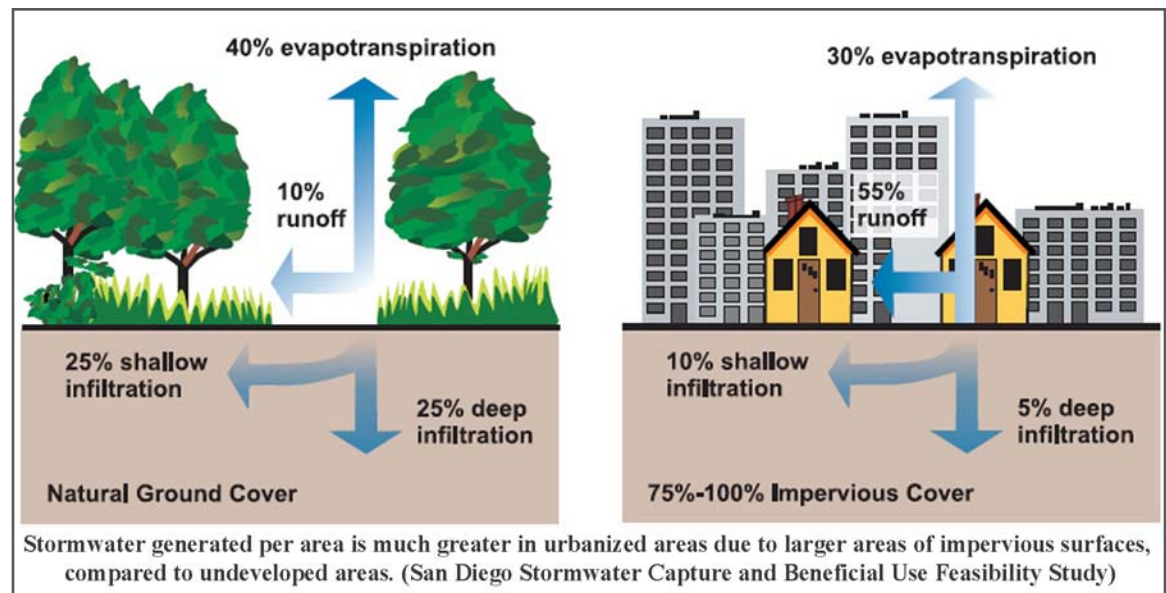
City of Los Angeles — Creation of health guidelines for alternate source non-potable water use

Santa Clara Valley — Developed options for public-private stormwater capture projects

Fresno County Flood Control — Development fees used to reduce flooding while replenishing the local drinking water aquifer

Culver City — Instituted parcel tax for clean water and clean beaches

San Mateo County — Integrated approach to address transportation's impact on water quality



The Urban Setting

Within urbanized areas — where more impervious surface exists than open space and undeveloped areas — the volume of stormwater generated per area is substantially greater than in non-urbanized areas. Large open spaces — which could be used to retain stormwater for infiltration or later withdrawal — are virtually impossible to find within the urban setting.

New regulations for development projects encourage the use of LID measures to increase retention time of stormwater and allow for filtration and infiltration to reduce the impacts of pollutants and peak flows on receiving waters. If designed correctly, LID infrastructure can be used to store, infiltrate to groundwater, and/or reused for irrigation. Green streets and green infrastructure programs are on the rise throughout California.

In one example, the City of Avalon (located in the Los Angeles Basin) Green Alley Project is working to create walkable and bikeable thoroughfares that incorporate stormwater LID practices. Through the use of porous pavers and LID features, this project helps direct stormwater back into groundwater. In another example, the University Park Neighborhood Rain Gardens Project broke ground in early 2015, creating 35 rain gardens in and around the University Park neighborhood, which is adjacent to the University of Southern California in Los Angeles. These rain gardens capture the stormwater runoff from approximately 184 acres of land — simultaneously improving water quality and replenishing groundwater supplies.

Stormwater



Rainbarrel

www.sandiego.gov/water/conservation/rebates/rainbarrel

On a smaller scale, residential rain barrel programs are available in some cities. Rain barrels are used to collect rainwater from hard surfaces such as rooftops. According to the City of San Diego Rainwater Harvesting webpage, when residents install a rain barrel at their homes they are helping to maintain a healthy urban watershed by reducing the demand on the potable water system (*see* References). The captured stormwater can be used to irrigate lawns and gardens. Rain barrel use reduces the amount of wet-weather runoff that is collected and sent to the public stormwater system and also reduces the amount of water that goes untreated into San Diego bays and estuaries.

The amount of water that can be collected from a rooftop depends on several variables, including: the dimensions of the rooftop; the collection capacity; and the amount and timing of the rain received. In San Diego, residential customers are eligible to receive up to \$1 per gallon of barrel storage capacity (up to 400 gallons and \$400 per property) under a rainwater harvesting (rain barrel) rebate program. Similarly, the Los Angeles Metropolitan Water District, in partnership with the Los Angeles Department of Water and Power, is offering a rebate for rain barrels 50 gallons or larger.

As part of many municipal green streets programs, there is an array of stormwater volume reduction BMPs installed such as: open-bottom planter boxes; rain gardens; and bioswales. Each of these LID-type projects encourages infiltration — which can help replenish groundwater resources. According to the US Environmental Protection Agency (EPA), green streets can incorporate a wide variety of design elements including: street trees; permeable pavements; bioretention; and swales (*see* References). Although the design and appearance of green streets will vary, the functional goals are the same: provide source control of stormwater; limit its transport and pollutant conveyance to the collection system; restore predevelopment hydrology to the extent possible; and provide environmentally enhanced roads.

Successful application of green techniques will encourage soil and vegetation contact and infiltration and retention of stormwater. LID and Green Streets features in the urban setting can help to replenish groundwater and can reduce pollutants such as Total Suspended Solids (TSS), metals, and nutrients.



Low Impact Development (LID) projects encourage infiltration, reduce surface water runoff, and promote groundwater recharge.

City of San Francisco

In 2012, the City and County of San Francisco adopted the Onsite Water Reuse for Commercial, Multi-family, and Mixed-Use Development Ordinance. Commonly known as the Non-potable Water Ordinance, this ordinance amended the San Francisco Health Code by allowing for the collection, treatment, and use of alternate water sources for non-potable applications in individual buildings and at the district-scale (*see* References). Then, in 2015, it became a mandatory requirement for all new construction of 250,000 square feet or more to install and operate an onsite non-potable water system to treat and reuse available graywater, rainwater,

and foundation drainage for toilet and urinal flushing and irrigation. New development projects of 40,000 square feet or more of gross floor area are required to prepare water budget calculations assessing the amount of available rainwater, graywater, and foundation drainage, and the demands. This captured water can be used for irrigation, toilet flushing, and/or heating and cooling. In the case of San Francisco, mandatory capture and reuse projects for new development projects means that stormwater is being looked at in a new light. [For a full description of this program, *see* Kehoe, TWR #161.]



San Francisco Stormwater Projects

San Francisco locations of installed stormwater projects. Pins are projects that have been installed or are in progress. (Image from May 2018.)

Source: Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

San Diego County

The County of San Diego is developing a Storm Water Capture and Use Feasibility Study that will assess the opportunities and constraints of stormwater capture within the County (*see* References). The purpose of the Study is to provide a county-wide analysis to determine the feasibility of planning, constructing, operating, and managing facilities that capture and use stormwater beneficially. The Study may inform future stormwater management decisions. The Study has already identified approximately 92,000 acre-feet per year that could potentially be captured. For reference, the San Diego region's annual potable water demand is on the order of 450,000 acre-feet per year, so this estimate represents about 20% of total regional demand.

Stormwater**Feasibility
Study****Industrial
Compliance
Challenges****TMDL
Compliance
Options****Cost
Constraints****Water
at a
Premium**

Although the Study is still under development, key steps in this process have included: identifying potential capture and storage sites; estimating the total potential stormwater storage; identifying the end uses; developing costs for projects/connect the projects to the end uses; and prioritizing each project.

The completed Study will be incorporated into the updated San Diego Integrated Regional Water Management Plan. It is anticipated that the completion of this Study will improve the opportunities for future grant funding for stormwater capture and use programs.

Industrial Facilities

The California State Water Board has reopened the Statewide General Permit for Industrial Discharges (Order 2014-0057-DWQ) to include TMDLs (*see* References). Administered by authority granted to the state under the federal Clean Water Act, a TMDL determines the maximum amount of a pollutant that the waterbody can receive and still attain water quality standards.

The Draft Order addresses a total of 36 TMDLs within San Francisco Bay, Los Angeles, Santa Ana, and San Diego. These TMDLs have been approved by EPA and the Regional Water Boards and are applicable to industrial stormwater dischargers. The TMDLs address the discharge of metals, nutrients, and toxics/pesticides. If adopted as currently drafted, compliance with the discharge limits in these TMDLs will be very difficult for industrial dischargers because the runoff standards will be much lower. For example, industrial facilities that discharge into Ballona Creek in Los Angeles would be held to a copper concentration limit reduction from 0.0332mg/l to 0.0137mg/l and lead would be reduced from 0.262mg/l to 0.0767mg/l. This leaves very few options for industrial facilities discharging to a metals TMDL waterbody in California. Although the Statewide General Permit is still in draft form, the State Water Board has two proposed compliance options, both of which could help augment local groundwater supplies by promoting infiltration:

On-Site Compliance: Where the industrial facility would capture and use captured stormwater to include the daily volume of the 85th percentile 24-hour storm event. This includes infiltration BMPs and the influent will need to meet Maximum Contaminant Levels (MCLs) for groundwater.

Off-Site Compliance: Participation in agreements with municipalities resulting in offsite retention BMPs for industrial facilities eligible to participate in watershed-based compliance. Agreement with the local jurisdiction is through a Regional Water Board approved “watershed management program or stormwater program.” Watershed-based BMP(s) are required to be in the same watershed as the facility and TMDL (if applicable).

In order to comply with the lower discharge limits, capturing the industrial runoff and treating it with media filtration and possibly reverse osmosis is an expensive option. For cost-constrained companies these water treatment systems are not an option. Both of the industrial stormwater compliance options presented by the Water Board are designed to prevent industrial runoff into surface waters, to direct stormwater back into the ground, and eventually contribute to water supply.

**Infiltration Pond**

Source: California State Water Board

www.waterboards.ca.gov/water_issues/programs/stormwater/docs/tmdl_igp/20170311_igp_amendment_workshop_2017.pdf

Conclusion

In California, water of any quality is at a premium. There are unique challenges with stormwater capture, but it's clear that stormwater capture and reuse is a growing subset of stormwater compliance. Municipalities, regulators, and industrial dischargers are all required to meet water quality objectives in stormwater runoff. Reducing the runoff volume through LID features and directly capturing runoff for graywater systems both go a long way towards reducing surface water pollution through volume reduction.

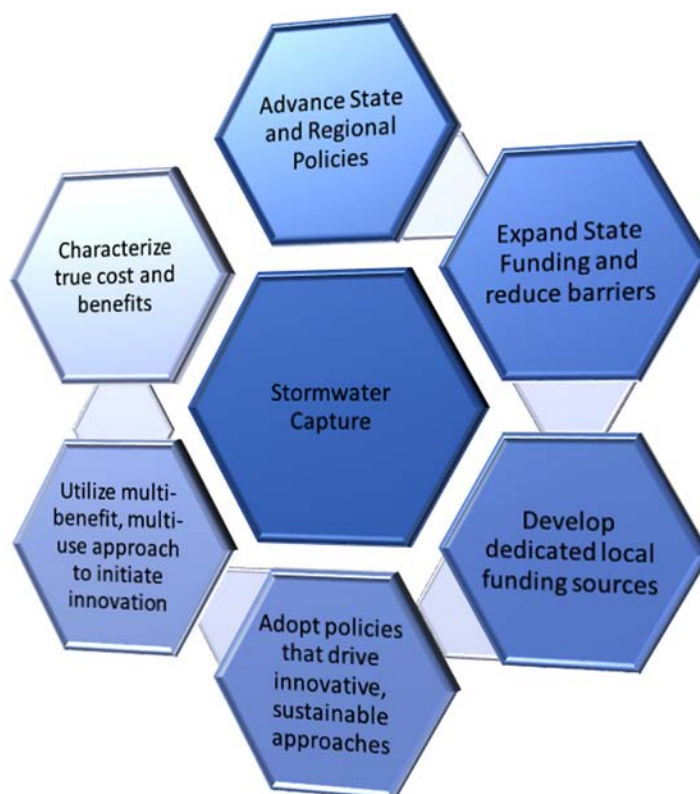
Whether using stormwater infiltration to recharge groundwater or by capturing runoff for direct non-potable consumption, California is making clear strides towards improving the resilience and sustainability of water supply throughout the State.

We are excited to see our State treating stormwater like the asset it truly is.

Stormwater

FOR ADDITIONAL INFORMATION:

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Graphic representation of the Pacific Institute 2018 recommendations for expanding stormwater capture in California.

Sean Porter is a Project Manager at APEX Companies, LLC. Sean specializes in water resource services with a background in stormwater, wastewater, urban and natural landscape, creek watershed studies, and groundwater. He is an expert in receiving water, stormwater, and wastewater monitoring, NPDES permit program requirements, ASBS discharge requirements, evaluation of facility stormwater pollution prevention plans (SWPPPs), total maximum daily loads (TMDLs) allocations and monitoring, and public funded research-driven watershed studies. His 18 years of experience includes designing and implementing large-scale water quality and sediment monitoring programs for regional stormwater monitoring programs for state, municipal, transportation, federal, and low-impact development. Sean is an Industrial General Permit (IGP) Trainer of Record (ToR) and Qualified Industrial Stormwater Practitioner (QISP), and qualified Compliance Group Leader (CGL). He develops innovative solutions that maximize efficiency, enhance safety, increase responsiveness, and provide quality results.

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WOTUS

WATERS OF THE UNITED STATES UPDATE

WOTUS LIVES! . . . AT LEAST IN HALF THE STATES (FOR NOW)

by Richard Glick, Davis Wright Tremaine (Portland, OR)

Introduction

On August 16th, a federal judge in South Carolina invalidated the Trump Administration's suspension of the rule defining "waters of the United States" (WOTUS), under the federal Clean Water Act. The court found that the notice-and-comment opportunity supporting the Suspension Rule was too narrow and thus violated the federal Administrative Procedures Act (APA). *South Carolina Coastal Conservation League v. Pruitt*, Case No. 2-18-CV-330-DCN, U.S. District Court, D. South Carolina (August 16, 2018).

The WOTUS suspension is the latest in a series of attempts by the administration to stall implementation of Obama era regulations, none of which have met favor with the courts.

As widely reported about one year ago, the Trump administration announced a two-step process to undo WOTUS (see Water Brief, *TWR* #161). The first step was to suspend WOTUS for two years, during which a revised WOTUS rule would be developed. In the meantime, guidance on jurisdictional waters that had been issued in the 1980s by the Army Corps of Engineers would be reinstated. The public notice of the Suspension Rule requested comments only on the suspension, but not the substance of either the Obama WOTUS rule or the 1980s guidance.

US District Court Judge David C. Norton, a George H.W. Bush appointee, reasoned that the practical effect of the Suspension Rule is that the WOTUS rule would not apply and instead the 1980s guidance would control. The judge then noted that the definitions in the WOTUS rule and the 1980s guidance are "drastically different" and it is hard to comment on the Suspension Rule without talking about that difference. That refusal to allow comment on the substantive differences violates the notice-and-comment provisions of the APA: "An illusory opportunity to comment is no opportunity at all." The judge therefore rejected the Trump Suspension Rule, and imposed a nationwide injunction.

What Ruling Does

PENDING DISTRICT COURT CASES TO CONTINUE

Explaining the jurisdictional reach of the Clean Water Act has flummoxed the federal agencies and courts for decades. Far from bringing clarity, the Obama WOTUS Rule drew over one million comments and multiple judicial challenges on the merits of the rule. Initially the question was whether such challenges should be made in the US district courts or the Circuit Courts of Appeal. The 6th Circuit held that the appellate courts had original jurisdiction and stayed all of the pending district court actions, but that decision was reversed earlier this year in a unanimous decision of the US Supreme Court (see Water Brief, *TWR* #168). Thus, those district court cases can now continue.

Judge Norton, in *South Carolina Coastal Conservation League*, was clear that he was not ruling on the merits of the WOTUS Rule, but just the procedural correctness of the Suspension Rule. In challenges on the merits, other federal courts have stayed the WOTUS Rule in 24 states. Striking down the Suspension Rule means that WOTUS remains in effect in the other 26 states.

At the moment, then, about half the country is subject to the WOTUS Rule, while the other half is not. What could go wrong?

FOR ADDITIONAL INFORMATION:

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South Carolina Coastal Conservation League v. Pruitt decision is available at: www.leagle.com/decision/infdco20180816g04

Author Rick Glick
will be co-chairing
the

**27th Annual
Oregon
Water Law
Conference**
November 8th & 9th
in
Portland

For info:
www.theseminargroup.net

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Water Supply

WATER SUPPLY DETERMINATION

ARIZONA SUPREME COURT RULING RE: UNQUANTIFIED RESERVED RIGHTS

by David Moon, Editor

The Arizona Supreme Court (Court) in a split decision held that the Arizona Department of Water Resources (ADWR) is not required to consider unquantified federal reserved water rights when it determines whether developers have an “adequate water supply.” *Silver v. Pueblo Del Sol Water Company*, Case No. CV-16-0294-PR (August 9, 2018) (*Silver*). The decision has significant implications for future water rights applications in Arizona and creates a legal limbo for unquantified federal reserved rights until such rights are finally adjudicated. The decision ended up being decided on the basis of statutory interpretation and the intent of the legislature concerning what ADWR must consider when determining the “legal availability” of water to provide an “adequate water supply.”

The US Bureau of Land Management (BLM) manages the San Pedro Riparian National Conservation Area (SPRNCA), which was established in 1988. Congress created a federal reserved water right to fulfill SPRNCA’s conservation purpose and a water right claim was filed for SPRNCA as part of the Gila River General Stream Adjudication (Gila Adjudication) more than 20 years ago. The SPRNCA water right has a priority date of November 18, 1988, but remains unquantified in the Gila Adjudication after nearly thirty years of litigation. See *Silver* at 3. Pueblo Del Sol Water Company (Pueblo) was formed in 1972 and that same year received a Certificate of Convenience and Necessity from the Arizona Corporation Commission. Castle & Cooke, Inc., the owners of Pueblo, proposes a development with 7,000 residential and commercial lots, on Pueblo’s 4800 acres of land. The proposed development is approximately five miles from the San Pedro River, outside of any of Arizona’s statutory active management areas (AMAs: see A.R.S. § 45-411(A)).

Arizona’s “adequate water supply” program under A.R.S. § 45-108(I) required a showing that water would be “continuously, legally and physically available” to satisfy the developments water needs “for at least one hundred years” and that the entity possesses “financial capability” to construct the necessary water facilities. *Silver* at 3. Pueblo applied to ADWR for the adequate water supply designation based on its calculation that it would need from 1430 acre-feet to 4870 acre-feet to meet Tribute’s water needs. BLM, Robin Silver and Patricia Gerrodette (Plaintiffs) objected.

The “adequate water supply” program requires certain residential and commercial developments to demonstrate they have an adequate quantity of water “continuously, legally and physically available” for a period of 100 years. ADWR’s regulation, as analyzed by the Arizona Supreme Court however, limited ADWR’s consideration of “legal” availability to a determination of whether Pueblo had secured a “Certificate of Convenience and Necessity” from the Arizona Corporation Commission. That Commission regulates business activities of private water companies but does not have jurisdiction over water resources.

When ADWR issued its draft decision and order finding that Pueblo satisfied the requirements for the designation, the Plaintiffs appealed and asserted, among other things, that the increase in Pueblo’s groundwater pumping would impact the flow of the San Pedro River and thereby conflict with BLM’s federal reserved water right. *Id.* at 3-4.

The Court agreed with ADWR’s interpretation of the governing statutes and found that ADWR’s regulation properly implemented the statutory requirement to evaluate the legal availability of the proposed water supply — even though ADWR decided it need not consider BLM’s unquantified federal reserved water right. “We hold that ADWR is not required to consider unquantified federal reserved water rights under its physical availability or legal availability analysis.” *Id.* at 20. Among the rationale cited by the Court was the fact that “ADWR does not have the authority to quantify BLM’s rights; that is the exclusive domain of the Gila Adjudication.” *Id.* at 14.

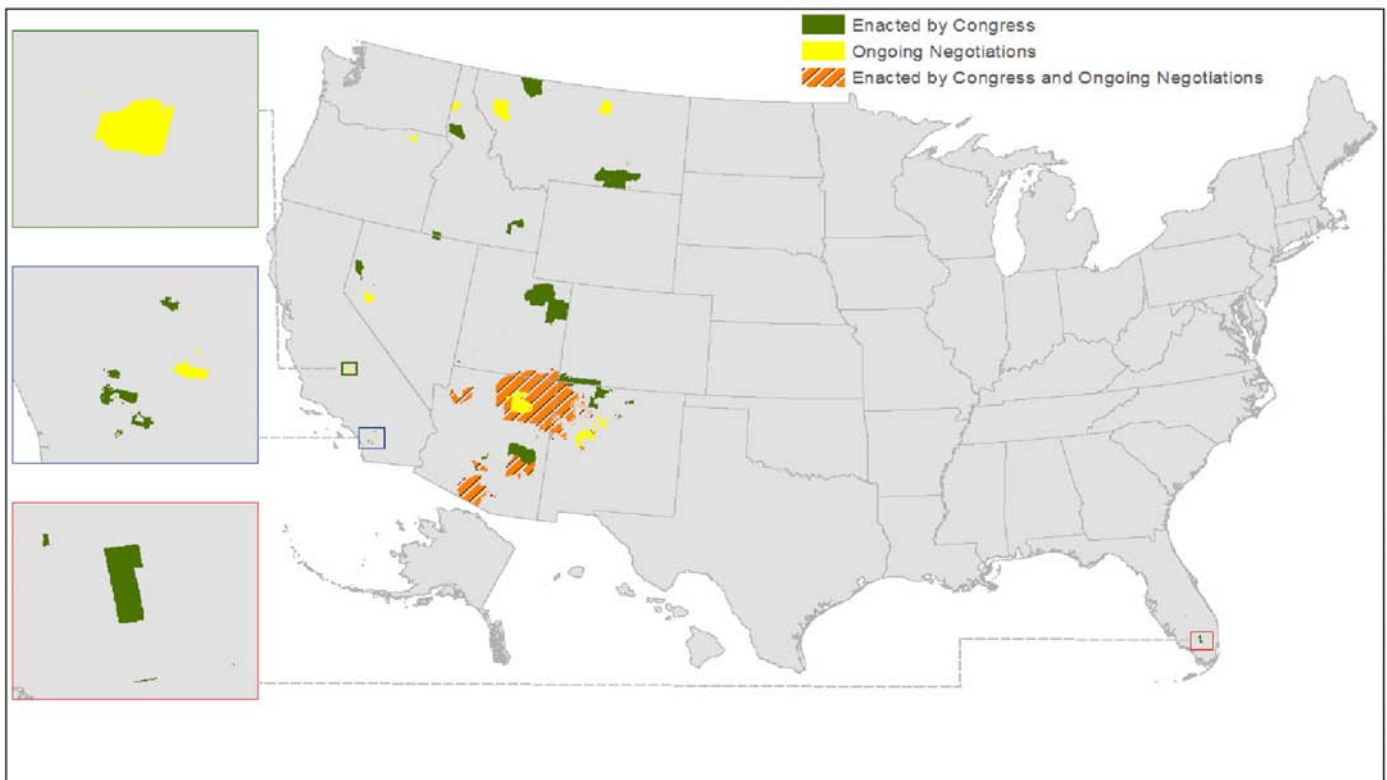
The Court’s reliance on an obscure canon of statutory interpretation is clear, yet the decision also lays out the dilemma of such reliance especially where water policy and scarce resources are at stake. “But this case is not about the wisdom of the policy underlying the adequate water supply statute. Our task is to discern the statute’s meaning... We decline to recast the statute’s meaning under the guise of interpreting it. Ultimately, the degree of acceptable risk to consumers’ water supplies is a policy judgment best suited for the legislature... If the legislature intended to require ADWR to consider unquantified federal reserved water rights under its legal availability analysis, it failed to do so in § 45-108.” *Id.* at 19-20.

Bill Staudenmaier, a leading water law attorney with Snell & Wilmer LLP (Phoenix), noted some of the of the decision’s ramifications. “Most immediately, the decision clears the way for the Tribute development to proceed. More generally, the decision authorizes ADWR to review other proposed developments under its current, narrow definition of ‘legal’ availability. This may make the adequate water supply process easier and more predictable for other developments similar to Tribute that face conflicting claims based on unquantified federal reserved water rights. Even more broadly, the Court’s reasoning also may limit the ability of federal reserved water right claimants to use their unquantified claims as a basis for objecting to other types of state-issued water permits and approvals.”

FOR ADDITIONAL INFORMATION:

Case available at: www.documentcloud.org/documents/4704846-16-0294-Opinion.html

Indian Reservations with Water Rights Settlements or Negotiations



Source: CRS, with DOI data as of February 14, 2017.

Notes: Reservations with enacted settlements and ongoing negotiations may be situations in which the conditions of existing settlements are being renegotiated; situations in which new areas, projects, and/or tribes are undergoing negotiations; or a combination.

TRIBAL WATER RIGHTS SETTLEMENTS US

UPDATED CRS REPORT

Indian water rights are vested property rights and resources for which the United States has a trust responsibility. The federal trust responsibility is a legal obligation of the United States dictating that the federal government must protect Indian resources and assets and manage them in the Indians' best interest. Historically, the United States has addressed its trust responsibility by acting as trustee in managing reserved lands, waters, resources, and assets for Indian tribes and by providing legal counsel and representation to Indians in the courts to protect such rights, resources, and assets. Specifically in regard to Indian water rights settlements, the United States has fulfilled its trust responsibility to Indian tribes by assisting tribes with their claims to reserved water rights through litigation, negotiations, and/or implementation of settlements.

Since 1978, the federal government has entered into 36 water rights settlements with 40 individual Indian tribes. These Indian water rights settlements are a means of resolving ongoing disputes related to Indian water rights between tribes, federal and state governments, and other parties (e.g., water rights holders). The federal government is involved in these settlements pursuant to its tribal trust responsibilities. Many of these settlements have been authorized by Congress to provide funding for projects that allow tribes to access and develop their water resources. At issue for Congress is not only the new settlements completing negotiations but also how well the current process for negotiating and recommending settlements for authorization is working. Some of the challenges raised by these settlements pertain to satisfying the federal trust responsibility related to tribal water rights, the provision of federal funding associated with the universe of these settlements, and the principles and expectations guiding ongoing and future negotiation of new settlements and renegotiation of past settlements.

An updated Congressional Research Service report — "*Indian Water Rights Settlements*" — was recently released. The report provides background on Indian water rights settlements and an overview of the settlement process. It provides background on Indian water rights, describes the settlement process, and summarizes enacted and potential settlements to date. It also analyzes issues related to Indian water rights, with a focus on the role of the federal government and challenges faced in negotiating and implementing Indian water rights settlements. Finally, it focuses on settlements in a legislative context, including enacted and proposed legislation.

For info: CRS Report is available at: www.everycrsreport.com/reports/R44148.html

WATER BRIEFS

RIVER PROJECTIONS

WEST

FORECAST FOR COLORADO

On August 24, the Bureau of Reclamation (Reclamation) released updated five-year probability-based planning model projections for future Colorado River system conditions, which underscore the ongoing impact of record dry conditions across the basin. With spring and summer inflow to Lake Powell at only 36% of average, this year is one of the driest years in the past 19 years — which is the driest 19-year period in recorded history and one of the driest in the past 1,200 years. These projections show increased risk of declining reservoir elevations over the next five years.

The projections include a 57% likelihood for Lower Basin shortage in 2020 — an increase from 52 percent from the April results. Furthermore, recently published results from the August 2018 24-Month Study operational model showed that another dry year like 2018 could drop the elevation of Lake Mead by 20 feet or more by mid-2020.

These probability projections include uncertainty as the long-term hydrologic assumptions used may not fully represent possible future inflows. The Colorado River Simulation System planning model used for these projections is an important long-term planning tool for water managers across the basin. Conversely, the 24-Month Study operational model — which was most recently released on August 15 — produces a single projection of reservoir conditions based on current inflow forecasts and reservoir conditions. Projections from the August 24-Month Study were used to determine annual operations for Lake Powell and Lake Mead for 2019. While Lake Mead is near the level that would — for the first time — trigger mandatory cuts to Lower Basin water deliveries, it will continue to operate in normal conditions through calendar year 2019. Annual operations for 2020 will be determined in August of 2019.

For info: Patti Aaron, 702/ 293-8189 or paaron@usbr.gov; Lower Colorado River Region (Reclamation) website at: www.usbr.gov/lc/index.html

RIO GRANDE FLOW

NM

LEASING & STORAGE

On August 22, the Upper Colorado Region of the Bureau of Reclamation (Reclamation) issued a press release detailing efforts to keep the Middle Rio Grande wet through the Albuquerque reach for the remainder of this year in the face of ongoing severe drought. Reclamation is partnering with water management agencies to preserve Middle Rio Grande flows.

In 2018, Reclamation set aside \$2 million to lease water from the Albuquerque Bernalillo County Water Utility Authority's San Juan-Chama Project supply to preserve flows through the Middle Rio Grande. Both entities will work closely to ensure continued Rio Grande flows through Albuquerque this summer and fall. San Juan-Chama Project water is diverted across the continental divide from the Colorado River basin. The City of Santa Fe is also partnering on this operation to help mitigate water loss impacts to the Rio Grande near Santa Fe.

Jennifer Faler, Reclamation's Albuquerque Area Office Manager, noted that 2018 has been an "extremely dry year with one of the lowest snowpacks on record." Although a historically low spring runoff resulted in some parts of the San Acacia reach drying in the beginning of April, actions taken by the agencies should keep much of the Middle Rio Grande flowing later this summer and fall. The leased water will help maintain flows from Cochiti Dam to downstream of Isleta Diversion Dam when the Middle Rio Grande Conservancy District's (MRGCD's) irrigation storage is exhausted. Reclamation will seek additional funding in 2019 for continued leasing.

The Six Middle Rio Grande Pueblos, which have the most senior water rights in the Middle Valley, are also participating in extending available water supplies. The Pueblos, Bureau of Indian Affairs, MRGCD and Reclamation agreed to use water stored in El Vado Reservoir that would normally be reserved for ensuring a supply for Pueblos to meet district-wide irrigation demands in exchange for a reserved amount of MRGCD's

San Juan-Chama Project water for late season needs. "Because of the unusually dry conditions, the Pueblos wanted to cooperate with other agencies this year, and agreed to use our senior water rights to stretch available water supplies for everyone, to the greatest extent possible," said Governor James Richard Bernal, Pueblo of Sandia. "Long-term solutions to water supply shortage issues and protection of senior rights to water need to be identified."

Releases of San Juan-Chama Project water will supplement the very low natural Rio Grande flow and will include water released to ensure that the Pueblos can continue to irrigate. Without adequate rains, MRGCD will divert required flow to first meet the most senior water users on the lands at Cochiti, Santa Domingo, San Felipe, Santa Ana, Sandia, and Isleta Pueblos and then for non-Pueblo irrigators as conditions allow.

Audubon New Mexico is also participating in water operations this summer. Audubon has leased 990 acre-feet of San Juan-Chama Project water that is being released from Abiquiu Dam in support of the proposed operations in cooperation with all water management agencies.

For info: Mary Carlson, Reclamation, 505/ 462-3576 or mcarlson@usbr.gov; Upper Colorado Region (Albuquerque): www.usbr.gov/uc/albuq/index.html

WATER & CRAFT BEER

AZ

RESOURCE PROTECTION

Craft beer depends on reliable water, and so do birds like the federally threatened Western Yellow-billed Cuckoo. That's why craft brewers and the National Audubon Society are advocating across the Colorado River Basin for water policies that keep great beer (and rivers) flowing. In collaboration with Borderlands, Wren House, and Crooked Tooth breweries, as well as the Western Rivers Brewers' Council, Audubon Arizona announced the release of its first co-branded beer: The Rain Crow IPA. The initial release occurred at Phoenix's Real Wild & Woody Indoor Beer Festival on Saturday, July 28.

WATER BRIEFS

Arizona relies on the Colorado River for about 40% of its water supply. With serious drought across the basin, and Colorado River reservoirs falling, the National Audubon Society — through its Western Water program, state offices, and partnerships — is urging Arizona to adopt water conservation measures that reduce risks to our economic and environmental livelihoods. Stabilizing water levels in Lake Mead is critical for our rivers, birds, wildlife, communities, and economies. Audubon partners with breweries year round to collaborate over common interests. Without a flowing Colorado River, Arizona could not support habitat for birds, nor resources for beer.

“Rain Crow” is the colloquial term for the Western Yellow-billed Cuckoo. Once common across the Colorado River Basin and western North America during their breeding season, loss of their favored riverside habitat across their range has restricted them to small populations primarily in Arizona, California, and New Mexico. A perfect beer for Arizona’s sweltering summers, Rain Crow will be a 50% wheat Hazy IPA.

For info: Western Water Initiative at: www.audubon.org/westernwater

GROUNDWATER STORAGE CA RECYCLED WASTEWATER

On July 24, the California Water Commission approved a \$280 million initiative to use recycled wastewater instead of groundwater on agricultural fields in Northern California. Regional San, Sacramento’s regional wastewater utility, received this funding from Proposition 1, a voter-approved, \$7.5 billion bond passed in 2014 to fund watershed protection and restoration, water supply infrastructure projects, and drinking water protection. Regional San has partnered with The Freshwater Trust (TFT) throughout the process of competing for this funding to plan, implement, and track the environmental benefits of this innovative conservation solution. “Groundwater depletion has cut the river off from the groundwater

that sustains its flows,” said Erik Ringelberg, California Director with TFT. “Climate change, increased pressures from urbanization and more require that we think differently about how to replenish the groundwater that serves as critical reservoirs.” In south Sacramento County, a drop in the groundwater table of 30 feet has jeopardized a connected ecosystem — from irrigation wells to wetlands and forests to migrating fish.

“The thesis behind this project is that the recycled water will help reverse some of the impacts of the over-pumping on the Cosumnes River,” said Ringelberg. “It’s critical to track the improvements and impacts of this conservation investment over time.” TFT supported Regional San in a year-long competition for water storage funds under Proposition 1, working with the Regional San team to identify the many environmental benefits of using recycled water to replace groundwater used in irrigated agriculture. Impacts from over-pumping the aquifer are rapidly reversed by substituting the region’s recycled water, protecting the nearby Cosumnes River and Stone Lakes National Wildlife Refuge. The 15 state and federally listed species living in this area are protected not just from these current impacts, but from modeled climate change scenarios showing that without the project, these critical wetlands would be completely disconnected from the groundwater resource.

The substitution of recycled wastewater will reduce the need to pump groundwater for irrigation. The retained groundwater will interact with surface water, thereby restoring the region’s overall groundwater elevations and stream flows that support streamside and wetland vegetation. Active streamside revegetation and invasive weed control are also part of the program. This combined approach will improve both the quality and quantity of riparian and wetland habitats that support a host of listed native species, including Chinook salmon and the giant garter snake.

For info: Haley Walker, The Freshwater Trust, 503/ 222-9091 x30

WATER RELIABILITY CA TRIBE & MWD AGREEMENT

An agreement that will help boost water reliability for the Sycuan Band of the Kumeyaay Nation (Sycuan) in San Diego County was approved August 21st by the board of directors of the Metropolitan Water District of Southern California (Metropolitan). Through the water service agreement between Metropolitan, the Sycuan Band, San Diego County Water Authority and Padre Dam Municipal Water District, water will be delivered to 227 acres of developed land on the Sycuan Indian Reservation, located in an unincorporated area of San Diego County, just east of El Cajon. The federally recognized tribe has historically relied on independent groundwater supplies to serve this portion of its reservation and sought a more reliable supply.

“Metropolitan delivers about 85% of the water used in San Diego County. It is important for the Sycuan tribe to have access to the same high-quality, reliable water supply enjoyed by the rest of the region,” said Metropolitan General Manager Jeffrey Kightlinger. Although more recently acquired land on the reservation is serviced by the Padre Dam Municipal Water District and the Otay Water District, the tribe’s original 640-acre reservation, including the 227 acres served under this agreement, were never annexed by any water district, leaving the tribe to rely on groundwater for that portion of the reservation.

A state law passed in 2016 (AB 2470, Gonzalez) facilitated the agreement, allowing for the delivery of and payment for water without requiring that the land be fully annexed. Under the agreement, the Sycuan will follow all the same terms and conditions and receive the same service as other Metropolitan customers. The agreement is similar to a water supply agreement approved in 2016 with the Pechanga Band of Luiseno Mission Indians.

For info: Metropolitan website at: <http://mwdh2o.com/> >> Newsroom

WATER BRIEFS

GROUNDWATER RISK WA/OR
HANFORD SITE CONTAMINATION

On August 15, the US Dept. of Energy, Office of Environmental Management (EM) announced that workers at the Hanford Site met a yearly groundwater-treatment goal nearly two months early, reducing risk to the Columbia River and shrinking the size of contaminated areas, or plumes, of groundwater. EM's goal was to treat 2.2 billion gallons of groundwater by the end of the fiscal year, which ends September 30. Contractor CH2M Hill Plateau Remediation Company (CHPRC) met this key performance goal seven weeks ahead of schedule, and has removed more than 90 tons of contaminants so far this fiscal year.

Hanford officials say the keys to this year's success in treating groundwater have been putting worker innovations into practice and improving treatment systems while keeping them running well. One employee innovation was reusing containers of activated carbon that filter volatile organic compounds out of the air in treatment tanks. Recycling the tanks decreased potential waste and is a cost avoidance.

Five pump-and-treat systems along the Columbia River remove a toxic chemical, hexavalent chromium, from groundwater, while a large pump-and-treat facility on the center of the Hanford Site removes more than a half-dozen contaminants, including carbon tetrachloride and radioactive constituents like uranium. The facilities pump contaminated groundwater up through wells and transfer it to treatment systems where contaminants are removed, before the treated water is returned to the aquifer through injection wells.

The groundwater contamination resulted from operations to produce plutonium from the 1940s through the end of the 1980s. The discharge of liquids resulted in large plumes of contaminated groundwater. Since groundwater treatment facilities began operating in the mid-1990s, approximately 19 billion gallons have been treated and more than 435 tons of contaminants have been removed from groundwater on the Hanford Site.

For info: www.energy.gov/em/articles/hanford-workers-meet-groundwater-treatment-goals-early

INFRASTRUCTURE LOANS US
WATER AND WASTEWATER

EPA received 62 letters of interest (LOIs) collectively requesting \$9.1 billion in loans from a wide range of prospective borrowers in response to the Water Infrastructure Finance and Innovation Act (WIFIA) program's 2018 Notice of Funding Availability, according to an Office of Water press release of August 16. Established by the Water Infrastructure Finance and Innovation Act of 2014, the WIFIA program is a new federal loan and guarantee program at EPA that aims to accelerate investment in the nation's water infrastructure by providing long-term, low-cost supplemental credit assistance for regionally and nationally significant projects.

EPA received LOIs from prospective borrowers located in 24 states, the District of Columbia, and Guam for a wide variety of projects, including wastewater, drinking water, water recycling, desalination, stormwater management, and combined approaches. More than half of the LOIs addressed one or both of EPA's 2018 WIFIA Notice of Funding Availability (NOFA) priorities: reducing exposure to lead and other contaminants in drinking water systems and updating aging infrastructure. While the majority of prospective borrowers are municipal government agencies, other prospective borrowers include small communities, public-private partnerships, corporations, and a tribe.

In April 2018, EPA announced the availability of additional WIFIA funding that could provide as much as \$5.5 billion in loans. Leveraging private capital and other funding sources, these projects could support \$11 billion in water infrastructure investment and create up to 170,000 jobs. Prospective borrowers responding to the 2018 NOFA were required to submit a letter of interest by July 31, 2018. EPA is currently evaluating the submitted

letters of interest for project eligibility, credit worthiness, engineering feasibility, and alignment with WIFIA's statutory and regulatory criteria. Through this competitive process, EPA selects projects it intends to finance and invites them to submit a formal application this fall.

According to EPA's estimate of national drinking water and wastewater needs, over \$743 billion is needed for water infrastructure improvements. EPA's WIFIA program plays an important part in fulfilling this need and in the President's Infrastructure Plan, which calls for expanding project eligibility.

For info: WIFIA website at: www.epa.gov/wifia

FISH ACCORDS NW
TEN-YEAR RESTORATION REPORT

On August 14, the Columbia River Inter-Tribal Fish Commission (CRITFC) released the "Columbia Basin Fish Accords Ten-Year Report 2008-2017." Back in 2008, CRITFC, the Umatilla, Warm Springs, and Yakama tribes, the Bonneville Power Administration, US Army Corps of Engineers, and the Bureau of Reclamation signed the Columbia Basin Fish Accords — a decade-long agreement that secured funding for salmon restoration projects throughout the Columbia River Basin. Now, ten years later, we have an opportunity to look back and see what was accomplished.

CRITFC noted on its website that it was pleased to release the Columbia Basin Fish Accords Ten-year Report — an overview of the tribal efforts and achievements that the Accords facilitated. The report includes background information about the tribes and their connection to the natural resources of the Columbia Basin and the importance of salmon to their history and culture. It then proceeds on to sections on fish status and trends and hydropower operations to give context to the state of the fish and the river over the course of the last decade. The report highlights tribal projects and successes for topic areas including

WATER BRIEFS

Habitat Projects, Propagation, Lamprey and Sturgeon, RM&E, Predators and Invasive Species, Climate Change, and Partnerships and Coordination. Most of these topic areas include detailed maps, graphs and metrics, or charts to highlight various aspects of the work completed.

Forty percent of the Yakama, Umatilla, Warm Springs, and CRITFC Accords funding went to watershed restoration efforts. Over the course of the last decade, they completed 14,586 in-stream actions and 404 out-of-stream actions. The certainty of funding also allowed the tribes to leverage millions of dollars from additional sources including the Pacific Coastal Salmon Recovery Fund and other federal, state, tribal, public utility district, and private foundations. The goal of these projects is watershed-scale habitat restoration to increase naturally-spawning salmon and steelhead survival and to help restore these populations to levels where Endangered Species Act viability criteria or *Wy-Kan-Ush-Mi Wa-Kish-Wit* (the tribes' salmon recovery plan) goals and objectives are met.

The funding provided by the Columbia Basin Fish Accords allowed the tribes to achieve some major accomplishments throughout the Columbia Basin in protecting the ecosystems that support healthy salmon populations including:

- 968,621 acres of habitat protected, treated, or maintained (an area the size of Rhode Island)
- 7,236 miles stream protected or improved
- 397 barriers improved or removed
- 37.3 billion gallons of water protected and conserved each year

For info: CRITFC website at: www.critfc.org/blog/2018/08/14/fish-accords-10-year-summary/

BASIN RESTORATION**NW****GAO COLUMBIA BASIN REPORT**

The US Government Accountability Office (GAO) has released a review of restoration efforts in the Columbia River Basin.

The report examines:

- 1) efforts to improve water quality in the Basin from fiscal years 2010 through 2016
- 2) approaches to collaboration that entities have used for selected efforts
- 3) sources of funding and federal funding expenditures
- 4) the extent to which EPA and OMB have implemented Clean Water Act Section 123

GAO reviewed documentation, including laws, policies, and budget information; surveyed federal, state, tribal, and nongovernmental entities that GAO determined had participated in restoration efforts; and conducted interviews with officials from most of these entities.

According to EPA officials, the agency has not yet taken steps to establish the Columbia River Basin Restoration Program, as required by the Clean Water Act Section 123. EPA officials told GAO they have not received dedicated funding appropriated for this purpose; however, EPA has not yet requested funding to implement the program or identified needed resources. By developing a program management plan that identifies actions and resources needed, EPA would have more reasonable assurance that it can establish the program in a timely manner. Also, an interagency crosscut budget has not been submitted. According to US Office of Management and Budget (OMB) officials, they have had internal conversations on the approach to develop the budget but have not requested information from agencies. A crosscut budget would help ensure Congress is better informed as it considers funding for Basin restoration efforts.

GAO Recommended:

- that EPA develop a program management plan for implementing the Columbia River Basin Restoration Program
 - that OMB compile and submit an interagency crosscut budget
- EPA agreed with its recommendation. OMB has not yet commented.

For info: GAO Report available at www.gao.gov/products/GAO-18-561

RIVERS PROTECTION**CA****“WILD AND SCENIC” SETTLEMENT**

On August 17th, the Trump administration agreed to a settlement with the Center for Biological Diversity (Center) that requires two federal agencies to prepare long-overdue management plans to protect eight “wild and scenic” rivers in Southern California. Under the agreement the US Forest Service and US Bureau of Land Management must complete plans by 2024 for 100 miles of waters in the Amargosa River, Owens Headwaters, Cottonwood Creek, Piru Creek, North Fork San Jacinto River, Fuller Mill Creek, Palm Canyon Creek, and Bautista Creek.

Designated by Congress in 2009 under the Wild and Scenic Rivers Act, the waters wind through three national forests and other public lands and provide essential habitat for imperiled fish, birds, and other wildlife. In March the Center filed suit in US District Court in Los Angeles to ensure protections for these California rivers.

The Wild and Scenic Rivers Act ensures that rivers with outstanding natural, cultural, and recreational values remain in free-flowing, wild condition. It requires the federal agencies to prepare comprehensive management plans to protect the river segments within three years of their designation. The plans for these eight rivers were scheduled to have been finished years ago.

Wild and scenic river management plans provide important protections by ensuring that the qualities for which the river was designated — wild, scenic or recreational — remain for future generations. River management plans ensure that water flow and water quality are protected from threats such as poorly managed grazing, off-road vehicles and other harmful activities.

For info: Ileene Anderson, Center for Biological Diversity, 323/ 490-0223 or ianderson@biologicaldiversity.org

September 17-19 TX

WaterPro Conference, Fort Worth. Fort Worth Convention Center. Annual Conference of the National Rural Water Assoc. on Water & Wastewater Utility Systems. For info: www.waterproconference.org

September 20 WA

Northwest Remediation Conference: Integrated Approaches to Financing LUST Cleanup, Tacoma. Greater Tacoma Convention Center. Presented by Northwest Environmental Business Council; Remediating Brownfields, Sediments & More. For info: Diane Thornton, NEBC, 503/ 227-6361 x4, diane@nebc.org or www.nwremediation.com

September 20-21 NM

New Mexico Water Law 26th Annual Conference: The Latest Updates from All Points of View, Santa Fe. Eldorado Hotel & Spa. For info: CLE Int'l, 800/ 873-7130, live@cle.com or www.cle.com

September 24 WA

CERCLA + MTCA: Advanced Sediments Conference, Seattle. Washington State Convention Center. For info: Holly Duncan, Environmental Law Education Center, 503/ 282-5220, info@elecenter.com or www.elecenter.com

September 24-25 FL

Managing Florida's Aquifers: Annual Conference, Orlando. Florida Hotel & Conference Center, 1500 Sand Lake Road. Presented by American Ground Water Trust. For info: <https://agwt.org/events>

September 25-27 CA

First Annual Western Groundwater Congress - Technical Conference on Western Groundwater Quality & Groundwater Resources, Sacramento. DoubleTree by Hilton. Presented by Groundwater Resources Assoc. of California. For info: www.grac.org/events/151/

September 26-29 FL

Association of Water Technologies (AWT) Annual Convention & Exposition, Orlando. Omni Orlando Resort. For info: www.awt.org/annualconvention18/

September 27-28 CA

San Diego Industrial Environmental Association: Environmental Training Symposium & Conference - "Strategies for Success on California's Environmental Frontier", San Diego. San Diego Convention Center. For info: <http://ieaca.org/conference/>

September 29-Oct. 3 LA

WEFTEC 2018: The Water Quality Event & Exhibition, New Orleans. Morial Convention Ctr. Presented by Water Education Foundation. For info: www.weftec.org/future-weftec-schedule/

October 2 WA

Streamflow Restoration Funding & Guidance for Net Ecological Benefit - Public Workshops, Union Gap. Ecology's Central Regional Office, 1250 W. Alder Street. Presented by WA Dept. of Ecology; 1-3 pm. For info: Rebecca Inman, Ecology, 360/ 407-6450, Rebecca.Inman@ecy.wa.gov or <https://ecology.wa.gov/>

October 3 WA

Streamflow Restoration Funding & Guidance for Net Ecological Benefit - Public Workshops, Omak. Omak Public Library. Presented by WA Dept. of Ecology; 1-3 pm. For info: Rebecca Inman, Ecology, 360/ 407-6450, Rebecca.Inman@ecy.wa.gov or <https://ecology.wa.gov/>

October 3-5 NV

11th Annual Water Smart Innovations Conference & Expo, Las Vegas. South Point Hotel and Conference Center. For info: WaterSmartInnovations.com

October 4 WA

Streamflow Restoration Funding & Guidance for Net Ecological Benefit - Public Workshops, Lacey. Ecology Headquarters. Presented by WA Dept. of Ecology; 1-3 pm. For info: Rebecca Inman, Ecology, 360/ 407-6450, Rebecca.Inman@ecy.wa.gov or <https://ecology.wa.gov/>

October 9 WY

Wyoming Water Forum: The Colorado River Compact-Perspectives on Politics & Policy, Cheyenne. WYDO Conference Room, 6920 Yellowtail Road. Presentation by Don Ostler. For info: <http://seo.wyo.gov/interstate-streams/water-forum>

October 9-11 OK

Interstate Council on Water Policy Annual Meeting, Oklahoma City. Sheraton Downtown. Field Trip to Simpson/Arbuckle Aquifer on Oct. 9; Panel Sessions Oct. 10-11. For info: Sue Lowry, ICWP, 307/ 630-5804, Sue.ICWP@gmail.com or www.icwp.org

October 9-11 TX

Autumn Environmental Conference & Expo, Austin. Palmer Events Center. Presented by TCEQ. For info: www.tceq.texas.gov

October 9-11 CO

Sustaining Colorado Watershed Conference: The Color of Water - Exploring the Spectrum, Avon. The Westin Riverfront Resort & Spa. For info: www.coloradowater.org/scw-conference-2018/

October 10-12 MT

2018 Watershed Symposium: Advancing Conservation Through Effective Communication, Whitefish. The Lodge at Whitefish Lake. Presented by the Montana Watershed Coordination Council. For info: Kierra Davis: kierra@mtwatershed.org or www.mtwatersheds.org

October 11 OR

Environmental Law: Year in Review CLE, Troutdale. McMenamin's Edgefield Manor. Presented by Environmental & Natural Resources Section - Oregon BAR. For info: <https://ebiz.osbar.org/ebusiness/Meetings/Meeting.aspx?ID=1548>

October 11-12 MT & WY

Montana Water Law Conference - 18th Annual, Helena. Great Northern Hotel. For info: The Seminar Group, 800/ 574-4852, info@theseminalgrou.net or www.theseminalgrou.net

October 11-12 AZ

Tribal Water Law Conference - 7th Annual: Nationwide Perspectives on the Critical Demand for Water, Scottsdale. We-Ko-Pa Resort & Conference Center. For info: CLE Int'l, 800/ 873-7130, live@cle.com or www.cle.com

October 14-17 CA

Association of Metropolitan Water Agencies Executive Management Conference, San Francisco. The Hotel InterContinental Mark Hopkins. Sharing Ideas and Building Relationships Among Top Drinking Water Utility Executives. For info: www.amwa.net/event/2018-executive-management-conference

October 15 WA

Streamflow Restoration Funding & Guidance for Net Ecological Benefit - Public Workshops, Bremerton. Kitsap Regional Library. Presented by WA Dept. of Ecology; 2-4 pm. For info: Rebecca Inman, Ecology, 360/ 407-6450, Rebecca.Inman@ecy.wa.gov or <https://ecology.wa.gov/>

October 15-17 CA

Connecting the Drops From Summit to Sea: CASQA 2018 14th Annual Conference, Riverside. Riverside Convention Center. Presented by California Stormwater Quality Ass'n. For info: www.casqa.org/events/annual-conference

October 16 WA

"Hirst, Foster, Boldt, and Beyond: A New Era of Water Management?" - 2018 AWRA Washington State Conference, Seattle. Mountaineers Seattle Program Center, 7700 Sand Point Way NE. Presented by American Water Resources Association - Washington Chapter. For info: www.waawra.org/event-2837056

October 16 CA

2018 Association of California Water Agencies (ACWA) Regulatory Summit, Sacramento. Hilton Sacramento Arden West. For info: www.acwa.com/events

October 16-19 AZ

11th Annual International Conference on Irrigation and Drainage, Phoenix. Sheraton Mesa Hotel at Wrigleyville West. For info: <http://uscid.org/18azconf.html>

October 22 WA

CERCLA + MTCA: Sediments & Dredging, Toxic Cleanup Conference, Seattle. Washington State Convention Center. For info: Holly Duncan, Environmental Law Education Center, 503/ 282-5220, info@elecenter.com or www.elecenter.com

October 22-23 TX

9th Annual Texas Water Law Conference: Innovations in Water Conservation & Management, San Antonio. La Cantera. For info: CLE Int'l, 800/ 873-7130, live@cle.com or www.cle.com

October 23 WA

Streamflow Restoration Funding & Guidance for Net Ecological Benefit - Public Workshops, Everett. Everett Public Library. Presented by WA Dept. of Ecology; 1-3 pm. For info: Rebecca Inman, Ecology, 360/ 407-6450, Rebecca.Inman@ecy.wa.gov or <https://ecology.wa.gov/>

October 23 DC

ELI 2018 Environmental Achievement Award Dinner, Washington. Omni Shoreham Hotel. Award to Lisa Jackson Presented by the Environmental Law Institute. For info: www.eli.org/award-dinner

October 23-26 ID

2018 Western States Water Council Fall (188th) Council Meeting, Coeur d'Alene. The Coeur d'Alene Resort. For info: www.westernstateswater.org/upcoming-meetings

October 24 OR

Oregon Floodplain Development Conference, Portland. The Mark Spencer Hotel. For info: The Seminar Group, 800/ 574-4852, info@theseminalgrou.net or www.theseminalgrou.net

October 24-25 CO

2018 South Platte Forum, Loveland. Embassy Suites Loveland. For info: <http://www.southplatteforum.org/>

October 24-26 NM

23rd Annual New Mexico Infrastructure Finance Conference, Albuquerque. Isleta Resort & Casino. Presented by New Mexico Environment Department. For info: www.nmifc.com

October 24-26 PA

The American Water Summit 2018, Philadelphia. Loews Philadelphia. For info: www.americanwatersummit.com

October 25-26 AZ

Tribal Water Summit, Phoenix. Wild Horse Pass Casino & Events Center. Presented by WestWater Research; Hosted by Gila River Indian Community; The Gila River Indian Community is hosting a two-day summit on Tribal water management issues, focused on developing water management programs and federal policy concerning Tribal water. For info: Julie Mai, WestWater Research, 208/ 433-0255 or mai@waterexchange.com or 208/ 433-0255 or www.tribalwatersummit.com

October 28-31 GA

Water Infrastructure Conference & Exposition, Atlanta. Hotel Regency Atlanta. Presented by American Water Works Assoc.. For info: www.awwa.org/conferences-education/conferences.aspx

October 30 OR

Columbia River Toxics Reduction Working Group Meeting: Columbia River Restoration Act Implementation Plan, The Dalles. Columbia Gorge Discovery Center. For info: RSVP to Catherine Corbett, ccorbett@estuarypartnership.org

November 1-2 WA

11th Annual Water Rights Transfers Seminar, Seattle. Washington Athletic Club. For info: The Seminar Group, 800/ 574-4852, info@theseminalgrou.net or www.theseminalgrou.net

November 4-8 MD

Annual Water Resources Conference, Baltimore. Baltimore Marriott Inner Harbor at Camden Yards Hotel. Presented by American Water Resources Association. For info: www.awra.org/meetings/Baltimore2018/index.html



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CALENDAR

(continued from previous page)

November 7-9 **CA**
NWRA Annual Conference, Coronado. Hotel Del Coronado. Presented by National Water Resources Assoc. For info: www.nwra.org/upcoming-conferences-workshops.html

November 8-9 **OR**
Oregon Water Law Conference - 27th Annual, Portland. Crowne Plaza Portland - Downtown Convention Center, 1141 NE 2nd Avenue, Belmont Ballroom. For info: The Seminar Group, 800/ 574-4852, info@theseminalgroup.net or www.theseminalgroup.net

November 9 **CO**
Cost-Nothing Analysis: Environmental Economics in the Age of Trump: Lecture by Prof. Lisa Heinzerling, Boulder. Wolf Law Bldg.-Witteymer Courtroom, Univ. of Colorado. Presented by the Getches Wilkinson Center for Natural Resources, Energy, and the Environment. For info: www.getches-wilkinsoncenter.cu.law/events/

November 11-15 **ON, Canada**
Water Quality Technology Conference & Exposition, Toronto. Sheraton Centre Toronto Hotel. Presented by the American Water Works Assoc.. For info: www.awwa.org/conferences-education/conferences/water-quality-technology.aspx

November 13 **WY**
Wyoming Water Forum: Updates on Wyoming StreamStats, Cheyenne. WWDO Conference Room, 6920 Yellowtail Road. Presentation by Kathy Chase / Paul Caffrey, USGS. For info: <http://seo.wyo.gov/interstate-streams/water-forum>

November 13-15 **IL**
Storm Water Solutions Conference & Exhibition, Chicago. Tinley Park Convention Center. Training, Exhibits & Seminars. For info: www.estormwater.com or www.swsconferenceexpo.com

November 15-16 **ID**
Idaho Water Users Assoc. 35th Water Law Seminar, Boise. The Riverside Hotel. For info: IWUA, 208/ 344-6690 or www.iwua.org/

November 27-28 **DC**
Public-Private Partnership Federal Conference: Using P3s to Meet Our Infrastructure Challenges, Washington. Marriott Marquis. For info: www.p3federalconference.com

December 5-6 **OK**
39th Annual Oklahoma Governor's Water Conference & Research Symposium, Midwest City. Reed Conference Center. For info: www.owrb.ok.gov/GWC/

December 6-7 **CO**
Today's Environmental Agencies: Regulatory Enforcement, Citizen Suits, and the Energy Industries Course, Denver. Le Meridien Denver Downtown. Presented by Rocky Mountain Mineral Law Foundation. For info: www.rmmlf.org

2018 AWRA Washington Annual State Conference

October 16, 2018
Seattle, WA



Hirst, Foster, Boldt, and Beyond:
A New Era of Water Management?



Details and Registration at: www.waawra.org