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Water Rights, Water Quality & Water Solutions in the West

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STORMWATER MANAGEMENT EVOLVES

LA'S MEASURE W & THE EVOLUTION OF STORMWATER MANAGEMENT IN SOUTHERN CALIFORNIA

by Gregor Patsch, Torrent Resources (Bloomington, CA)
&
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INTRODUCTION

It has been said that water is often considered a resource as it falls from the sky, then quickly becomes waste the moment it hits the ground. A critical natural resource for life, water is also one of the most powerful and destructive. This dichotomy is the basis for the need for thoughtful stormwater management.

Few regions on Earth are faced more with the challenges created from stormwater's diverse impacts than Southern California. This article examines the evolution of stormwater management in this region, with particular attention being given to recent innovations in stormwater management and the securing of sustainable, long-term, programatic funding.

BACKGROUND

AN EXPANDING FOCUS

Conveyance

Until recently, stormwater management was a term that represented how to safely and efficiently convey accumulated rainfall from developed areas to prevent flooding and its associated damages. Stormwater engineering consisted of designing erosion-resistant conveyance systems consisting of large pipes, concrete channels, impoundments, and levees to ensure a greater level of flood protection for people and infrastructure.

In 1938, Los Angeles experienced a catastrophic flood (estimated to be a once-in-50-years flood) which inundated much of the coastal plain, killed over 100 people, and resulted in mass destruction of property and infrastructure (https://en.wikipedia.org/wiki/Los_Angeles_flood_of_1938). The response to the 1938 flood consisted of major flood control modifications to the Los Angeles River. After 20 years of construction, the Los Angeles River was armored into a massive trapezoidal channel, successfully protecting Los Angeles from future floods. The need for stormwater conveyance and flood control systems grew with the ever-increasing addition of impervious surfaces and associated runoff from urban and suburban areas.

Quantity and Quality

As stormwater conveyance systems continued to improve, a new problem arose. We were becoming very efficient at moving huge amounts of runoff, but also becoming very efficient at polluting our natural waterbodies. Riverbanks collapsed from erosive flows; estuaries were choked with sediment and pollutants, and beaches were littered with trash. Aquatic, riparian, and coastal ecosystems bared the brunt of our efforts to mitigate stormwater flooding. A revised stormwater management strategy began to take root that not only ensured conveyance, but also aimed to reduce the *quantity* and improve the *quality* of stormwater runoff. Stormwater Best Management Practices (BMPs) became requirements for all new development and redevelopment projects.

Stormwater Management

Solutions

Reuse

Multiple Benefits

Recharge

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In Los Angeles, all projects that add 5,000 square feet or more of impervious area are now required to implement stormwater BMPs that either eliminate runoff from the property site or treat the water before it is discharged into the storm sewer system. The technology and land-based solutions used to meet these requirements, and address both water quality and quantity, include: detention ponds; constructed wetlands; bioretention; and sand filters. These solutions have become common BMPs to slow and filter runoff, before sending it to our conveyance systems.

Capture and Reuse

Southern California is home to 23 million people with the Greater Los Angeles Area consisting of over 18 million (https://en.wikipedia.org/wiki/Southern_California). Population growth coupled with prolonged and intensifying droughts has led to water supply being one of California's — if not the most — critical resource management need. To provide some perspective, on average, 310 million gallons of water travel through the Los Angeles River daily (http://riverlareports.riverla.org/water-recharge/quantity-of-water/). While stormwater managers were working to find new ways to responsibly and effectively send water out to sea, water supply managers were working to create new ways to meet the ever-growing demand for fresh water. Hence, a holistic strategy of utilizing stormwater as a resource has evolved. Regulations throughout the State now require municipalities to develop Watershed Management Plans (WMPs) and Integrated Regional Water Management (IRWM) programs to implement multi-benefit stormwater projects. Such projects not only ensure public safety and environmental health, but also seek ways to capture stormwater for reuse. State-of-the-art BMPs designed for stormwater infiltration (e.g. underground infiltration galleries, drywells, etc.) have become a preferred solution to not only to reduce runoff, but also to restore natural hydrology by promoting shallow and deep infiltration to recharge groundwater resources.

A MaxWell® Infiltration Drywell system being installed for the City of Baldwin Park, CA. The drywell will capture street runoff and allow it to infiltrate into permeable sandy soils 50 feet below the surface.

GETTING AHEAD OF THE CURVE

THE PASSAGE OF MEASURE W

All cities in Los Angeles County are subject to a Municipal Separate Storm Sewer Systems (MS4) permit. These permits are issued under the federal Clean Water Act's (CWA'S) National Pollutant Discharge Elimination System (NDPES) permit program. The 2012 version of the MS4 permit adopted by the Los Angeles Regional Water Quality Board added 33 Total Maximum Daily Load (TMDL) requirements. Meeting these requirements requires funding for large municipal projects that target treatment of these pollutants and work toward meeting pollutant load reductions set by the TMDLs. There have been numerous one-time or revolving funding sources in the past that has been tangentially related to meeting the TMDL requirements of the 2012 MS4 permit. In 2004, the City of Los Angeles passed Proposition O to provide a one-time funding source of $500 million to support the implementation of projects that prioritized the health of local waterways throughout the City. This money has all been spent or allocated to date (www.lapropo.org/).

Stormwater Management

Reliable Funding

Measure W Passage

Capture as Resource

Parcel Tax

Exemptions

Regional Reach

Municipal Funds

Administration Funding

Scoring Metrics

Multiple Improvements

The ensuing proposal for Measure W was the *first of its kind* in that it:

- aimed to capture stormwater to "increase water supply, improve water quality, and protect public health"
- was based on an annual parcel tax to create a long-term and reliable funding source to meet permit requirements and regional stormwater objectives

This annual funding model provides a sustainable source of funding and resources for not only project design and construction, but also to maintain longevity and sustainability of projects through the availability of operation and maintenance funding.

In order to pass a ballot measure such as Measure W in California, State law required there be at least a 2/3 vote in favor of the measure. The first attempt to pass Measure W in 2013 failed to meet the 2/3 threshold. After subsequent years of drought, the Los Angeles County Flood Control District tried again to propose Measure W and its associated parcel task. In July of 2018, the Los Angeles County Board of Supervisors voted four to one to include Measure W on the 2018 ballot. Voters in favor of Measure W tallied 67.5% and in November 2018, the measure was passed and the "Safe Clean Water Program" was created.

SAFE CLEAN WATER PROGRAM

HOW IT WORKS

The Safe Clean Water (SCW) Program highlights the evolution of stormwater management in Southern California with the ultimate goal of utilizing stormwater as a resource to support multi-benefit solutions for the Los Angeles region. A key pillar of the SCW Program is to "[I]ncrease our yearly collection of rainwater to supply water for millions of people in L.A. County annually."

Program Funding

The SCW Program is funded by a parcel tax that charges land owners within the LA County Flood Control District $0.025 per impervious square foot on their property. This generates approximately $285 million dollars annually to support the program. Land owners may challenge their impervious square footage estimate, apply for an exemption, or obtain a credit if a stormwater BMP is currently treating/mitigating their impervious areas. Exemptions are made for parcels owned by low-income seniors (over 62), and other parcels whose use is exempt from property taxes.

This money generated by the Safe Clean Water Program is allocated every year to three separate sub-programs as follows:

- Regional Program (50%): Half of all program funds are dedicated to support the planning, design, construction, operation, and maintenance of regional watershed-level projects. The aim of these projects is to provide stormwater solutions that benefit multiple communities within the nine watersheds that make up the County of Los Angeles Flood District and the SCW Program. The various types of projects are described in more detail below.
- Municipal Program (40%): This allocation, also known as the Local Return, is proportionally divided (by tax generation) and distributed to the municipalities throughout the Flood Control District. Local Return money can be used to supplement a municipality's stormwater and/or MS4 compliance programs. Cities can use this money to implement stormwater improvement projects that may be similar to the Regional Program projects, but result in more local benefits. The Local Return can also be used to support on-going operation and maintenance programs essential for ensuring proper stormwater management and NPDES permit compliance.
- Program Administration (10%): Ten percent of collected revenue is allocated to support SCW Program administration. County of Los Angeles administers the Program and supports education and outreach efforts, meeting facilitation, technical support, billing/collection of parcel tax, and all other elements needed to run a program of this scale.

Regional Program Projects

The SCW Regional Program, which allocates 50% of the total annual funds, supports the implementation of watershed-level stormwater projects. Projects are submitted annually to the SCW Infrastructure Program where numerous stakeholders review, score, rank, and ultimately select the top projects for funding. Scoring is based on five primary metrics of: 1) Water Quality; 2) Water Supply; 3) Community Investment Benefits; 4) Nature-Based Solutions; and 5) Leveraging Funds and Community Support. This scoring criteria ensures that projects entail multiple benefits to not only natural resources, but also to benefit the communities where these investments are being made. As such, multi-benefit projects typically include improvements such as: increased green space and landscaping; reduced nuisance flooding; improved pedestrian safety; and expanded recreational opportunities.

Stormwater Management

Infrastructure

Recharge Benefits

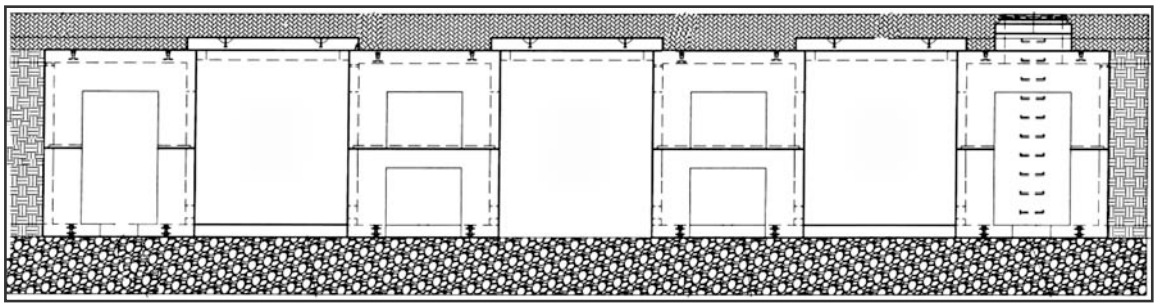
Infiltration Examples

Funded projects fall into in three categories: 1) Infrastructure Projects (both new projects and **o**peration and **m**aintenance (O&M) funds for existing facilities); 2) Technical Resources; and 3) Scientific Studies.

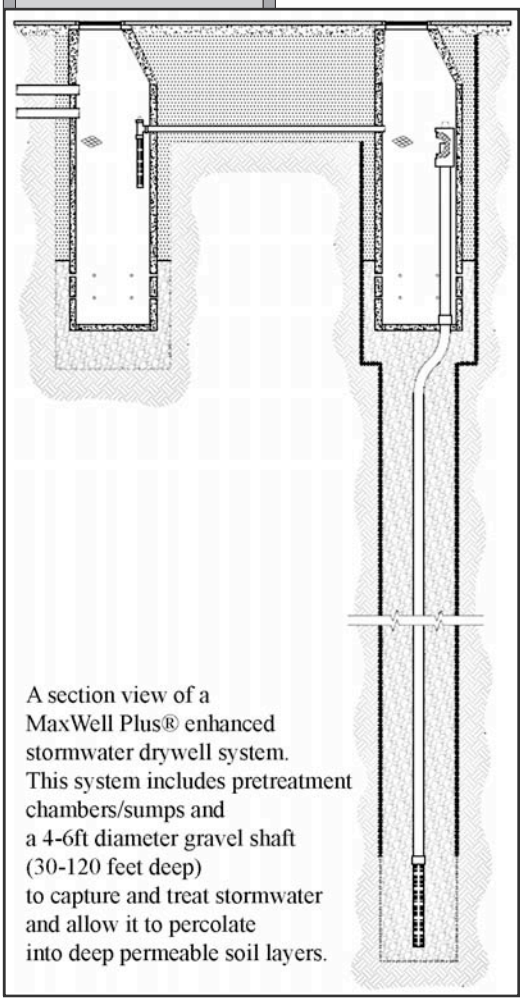
1) Infrastructure Projects: These are projects that typically have completed a feasibility study and are seeking funding to complete design and/or construction, or to help support post-construction **o**perations and **m**aintenance (O&M). Infrastructure projects are categorized as one of the following types of stormwater BMP:

Infiltration Facility

Typically, infiltration facilities are large underground storage cisterns that have openings on the bottom. The water is detained in the storage system before it is infiltrated into the ground, allowing groundwater recharge. The multi-benefits of this solution are that our groundwater supply increases and our runoff pollutants decrease. Underground storage facilities are ideal solutions in urban areas where real estate has a high value and there is a need to preserve above grade space for parks, buildings, and other facilities that benefit communities.



Elevation view of an example of technology that can be used for large volume infiltration applications. Typical elevation for a StormCapture—a precast modular storage system--that is manufactured by Oldcastle Infrastructure being used for infiltration.



A section view of a MaxWell Plus® enhanced stormwater drywell system. This system includes pretreatment chambers/sumps and a 4-6ft diameter gravel shaft (30-120 feet deep) to capture and treat stormwater and allow it to percolate into deep permeable soil layers.

Project Example: Basset High School

This project consists of infiltration galleries located underneath a high school campus. Currently, the project is still in the feasibility and planning phase. The infiltration system solution will reduce the volume of runoff from leaving the campus and prevent pollutants from entering the nearby San Gabriel River. The infiltration system provides a storage volume of 50.4 ac-ft of water. The infiltration galleries will have a footprint size of 4.2 acres. On the surface above the infiltration galleries, there will be new trees and landscaping, as well as active and open play areas for the students.

Infiltration Wells

Infiltration Wells, also referred to as Drywells, are a type of vertical underground BMP that promotes deep infiltration of stormwater by accessing highly permeable soil layers at depths ranging from 30–120 feet below the surface. Drywells are an ideal solution for green street projects or other urban applications where site constraints require a very small footprint. Drywells can also be used in conjunction with Infiltration Facilities or underground detention vaults on projects with larger drainage areas.

Project Example: Lankershim Boulevard Infiltration Well Project

The City of Los Angeles was awarded $25.7M to support the design and construction of a distributed drywell system with a dense urban right-of-way to improve neighborhood drainage, reduce nuisance flooding, and increase groundwater recharge through deep infiltration.

Treatment Facility

Treatment facility projects will typically consist of stormwater treatment systems that include pretreatment, pumps, storage, and filtration. These projects can be multi-stage and the effluent water can be sometimes be reused on-site or conveyed further downstream to a wastewater treatment plant.

Stormwater Management

Treatment Facilities

Wastewater Treatment

Low Impact BMP

Biofiltration

Bike Paths

Rain Capture

Project Example: Mayfair Park
This project is currently under construction. Their recent approval for funds under Measure W was for continued operations and maintenance. The City of Lakewood has historically paid for recycled water. The Mayfair park project includes a pre-treatment system, underground storage tank, and filter that will help the City capture and utilize the stormwater for on-site irrigation, thereby reducing reliance on paid recycled water.

Diversion to Sanitary Sewer
These types of projects are proposed in areas where stormwater can safely and effectively be diverted to the sanitary sewer system or directly conveyed downstream to an existing wastewater treatment plant. Diversions are primarily used for low flow or dry weather flows where pollutants can be very concentrated in the stormwater.

Biofiltration/Bioretention
Biofiltration and Bioretention projects utilize green infrastructure to filter and detain/retain stormwater to treat runoff. This Low Impact Development BMP incorporates vegetation, engineered soil media, and landscaping to easily integrate with a site's drainage and architectural design.

Example technologies that can potentially be utilized for biofiltration/bioretention. Left: BioMod planter system. Precast modular planter box system. Right: BioPod by Oldcastle Infrastructure - High flow-rate engineered media biofiltration system.

Project Example: Active Transportation Rail to River Corridor Project – Segment A
This project is a transportation improvement project that will connect two separate rail lines. The project is currently in the design phase. This project will include bike paths and pedestrian walkways. Alongside these walkways and bike paths, landscaped areas will include bioretention/biofiltration stormwater BMPs. Even though the overall impervious square-footage will increase after the project is finished, the amount of runoff discharging from the site after a storm will be greatly reduced due to the new biofiltation systems.

Cistern/Rain Barrel
Cisterns and rain barrels are a type of stormwater capture and reuse BMP where rainwater is filtered, collected, and stored on site in above ground or underground containers/tanks. The stored water is then typically reused for irrigation or other grey-water applications.

Stormwater Management

O & M

Infiltration & Storage

Prefiltering

Planning Stages

Management Studies

Tracking Funds

Stormwater Investment Plan (SIP)

Operations& Maintenance Funding

The following are a two examples of projects that were approved for O&M funds during the most recent, and first, round of funding (Summer 2020).

Project Example: Caruthers Park Storage & Infiltration

The City of Bellflower was awarded $855,000 to support operations and maintenance of a 10.7 AC-FT storage & infiltration facility. Part of the storage system was used as an infiltration gallery 9.7 acre-feet, and a smaller portion (1 acre-foot) was used to store water that was then to be used onsite for non-potable uses.

Partially constructed stormwater system. Modular Precast Units Provided by Oldcastle Infrastructure.

Project Example: Mayfair Park Treatment System

The City of Lakewood was awarded $1.3M to support operations and maintenance of the Stormwater treatment system. Oldcastle Infrastructure provided the Nutrient Separating Baffle Box that served as pretreatment. The project has decreased the City of Lakewood's reliance on buying recycled water. Instead they are able to use the water that they capture from this project. High capacity pretreatment solutions like the Nutrient Separating Baffle Box by Oldcastle Infrastructure are used to provide prefiltering on these projects to increase the time in between maintenance cycles on these underground systems.

2) Technical Resources: Projects that are in still in the planning stages can apply for funding support under the Technical Resources Program. These are projects or strategies that have not completed a feasibility study and/or require additional analysis. County of Los Angeles provides Technical Assistance Teams consisting of planning and design experts to assist project applicants with developing and completing feasibility studies such that projects can be ready for Infrastructure Project funding in the future. Projects selected for Technical Resources assistance are typically awarded $300,000.

3) Scientific Studies: Studies that benefit the SCW Program's collective knowledge of stormwater management can also be supported with up to 5% of the Regional Program funds. These studies are typically conducted in collaboration with academic or independent research institutions and may benefit multiple watersheds.

Study Example: An example of this type of study is the San Gabriel Valley Regional Confirmation of Infiltration Rates which was awarded $385,000 to improve the region's understanding of where to best locate stormwater infiltration BMPs to promote groundwater recharge.

Stakeholder Engagement

A key element of the SCW Program is the engagement of numerous municipal, environmental, and community stakeholders that work together through various committees to ensure Program funds are properly and fairly distributed throughout the region.

Watershed Area Steering Committees

A Watershed Area Steering Committee (WASC) is assigned to each of the nine watersheds with the SCW Program. WASC members consist of representatives from various cities, environmental, and community groups with the watershed. The WASC's primary responsibility is to review, score, and rank all submitted regional projects. This process consists of many months of public meetings, including applicant presentations and scoring discussion to ultimately approve the watershed area's Stormwater Investment Plan (SIP). The SIP is a five-year funding allocation plan that is reviewed and revised annually as new projects (Infrastructure, Technical Resources, Scientific Studies) are submitted.

Stormwater Management

Scoring Expertise

Scoring Committee

The Scoring Committee consists of experts in: 1) Water Quality; 2) Water Supply; 3) Community Investment Benefits; 4) Nature-Based Solutions; and 5) Leveraging Funds and Community Support. — i.e., the five metrics for scoring regional projects. This committee holds regular public meetings to review and refine the project scoring criteria and selection process.

Regional Oversight Committee

Similar to the WASCs, this nine-person committee consists of a diverse group of stakeholders from various organizations throughout the Los Angeles region. The Committee's primary goal is to ensure that the WASC's, the Scoring Committee, and input from all public stakeholders is coordinated such that projects that best meet the goals and intent of the SCW Program are funded.

2020 Approvals

The first round of SIPs was historically approved this summer (2020). Despite the unprecedented global, national, and local challenges presented by Covid-19 this year, the SCW Program — through virtual meetings and expanded conversations on issues facing LA's communities — was able to approve more than $370 million to support five-year SIPs. These SIPs address infrastructure, technical resources, and scientific study projects across the nine watersheds. More information on the SCW Program and projects can be found at https://safecleanwaterla.org/.

LOOKING FORWARD

Capture & Store

Citizens of Southern California do not need to be a water resources professionals to understand the importance of water and the natural hydrologic cycle. After months and months of endless sunshine, it becomes easy to see that capturing and storing winter rains and snow are critical to our sustainable near- and long-term future.

Holistic Approach

The shift in thinking to recognize stormwater as a resource has resulted in significant changes when approaching project planning and design in order to create multi-benefit solutions. Today's planners and engineers need to consider: conveyance; flood control; water quality; water supply; habitat aspects; cultural aspects; recreational benefits; and economic benefits of stormwater projects. Whether it is creating new park features, recharging groundwater, reducing nuisance flooding, or ensuring beaches are safe and clean — stormwater management has become a holistic endeavor centered around humans' intimate connection to water.

Integrating Disciplines

As we continue to move forward, our industry will see further integration within the disciplines of water supply, wastewater, and stormwater management. The City of Los Angeles has set an aggressive goal of recycling 100% of the City's wastewater by 2035. In addition, Mayor Garcetti's Sustainable City pLAn goal is to cut purchases of imported water by 50% by 2025 and source 50% of water locally by 2035, thus reducing dependence on imported water (*see* https://www.lamayor.org/mayor-garcetti-los-angeles-will-recycle-100-city%E2%80%99s-wastewater-2035). Meeting this goal would mean that wastewater would be treated to drinking water standards and reused. One solution includes utilizing infiltration or injection wells to recharge groundwater basins with treated water. Similarly, multi-benefit stormwater projects would work in concert to ensure that rainwater is captured and infiltrated into the ground or sent to a treatment facility such that it can be reused.

Reuse Options

Resource Resilience

The Safe Clean Water Program sets an example for municipalities around the country who are facing similar problems and seeking creative funding solutions. The passage of Measure W by a 2/3 popular vote proves that residents are ready and willing to support the efforts needed to improve stormwater management and establish more resilient water resources. With current economic conditions increasing the unemployment rate, it is important to note that these annually funded projects will not only benefit our natural resources, but also create countless local jobs in planning, design, construction, operation, and maintenance. Infrastructure improvements will improve the safety, aesthetics, and environmental health throughout Los Angeles, thereby directly benefiting the livelihood of local communities throughout the region.

Runoff = Reuse

The SCW Program represents a historic milestone in the evolution of stormwater management. It is safe to say that even the dirtiest of urban runoff is no longer considered a waste product suitable only for disposal. Rather, runoff presents an opportunity for water to be reused time and time again — as nature intended.

It's All Water

The future will likely see an abandonment of the terms Drinking Water, Wastewater, and Stormwater, as they are replaced with simply Water — the most critical and interconnected resource on the planet.

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Stormwater Management

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https://safecleanwaterla.org/about/
https://www.losangelesforward.org/updates/2018/10/18/were-wild-for-measure-w-safe-clean-water-for-all

Additional Resources

http://www.scag.ca.gov/committees/committeedoclibrary/eec060514_stormwaterreport.pdf
https://ourwaterla.org/la-county-passed-measure-w-in-2018-lets-make-it-fuel-our-recovery/
https://safecleanwaterla.org/wp-content/uploads/2020/05/SIP-Cover-letter-LSGR_FINAL-1.pdf
Duarte Lawsuit: *See* https://www.accessduarte.com/news/displaynews.htm?NewsID=635&TargetID=1

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Forestry Conservation

FORESTRY CONSERVATION & PRIVATE LANDS

COLLABORATIVE FRAMEWORKS: VALUABLE TOOLS IN CONSERVING AT-RISK AND DECLINING SPECIES

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INTRODUCTION

Ecosystem Benefits

Forests are vitally important for numerous ecosystem benefits such as clean water, carbon sequestration and storage, and biological diversity. Within the US, 58% of forest land is owned or managed by private entities; this proportion is nearly 90% in the Southeast and ~39% in the Pacific Northwest (www.stateforesters.org/timber-assurance/legality/forest-ownership-statistics/, Oswalt et al. 2019).

"At-Risk" Species

As such, privately owned and managed forests are a critical component of conserving fish and wildlife, including those species that are of conservation concern. Two-thirds of the watersheds in the continental US that contain "at-risk" species are in private forests, and the greatest densities occur in the Southeast, Midwest, and West Coast (Robles et al. 2008). "At-risk" species are those that have not yet been afforded federal protection as threatened or endangered under the federal Endangered Species Act (ESA), but could be in the future. However, listing under the ESA, which signifies the possibility of extinction for listed species, creates a regulatory burden for landowners and requires additional resource investment from state and federal agencies.

Proactive Approach

The best approach for all stakeholders, and for species' conservation, is to take proactive measures to ensure conservation of at-risk species and preclude the need for ESA protection. Conservation of at-risk species and active forest management are not mutually exclusive. Private, working forests can contribute to conservation of biological diversity (*e.g.*, Demarais et al. 2017, Miller et al. 2009). For example, forestry activities can develop and maintain forest conditions needed by terrestrial species. For aquatic species, standard forestry practices, such as limiting management activities and chemical application near waterbodies and limiting alterations to physical and chemical characteristics of surface waters, are protective. For at-risk species that may need specific management actions, voluntary conservation mechanisms, such as Candidate Conservation Agreements with Assurances (CCAAs) with the US Fish and Wildlife Service (USFWS), conservation easements, and other processes, can provide benefits.

Voluntary Conservation Mechanisms

Collaborative Efforts

Private, working forests also contribute to conservation for many species already listed under the ESA. Implementing voluntary or regulatory practices for protecting streams, developing Habitat Conservation Plans, conducting research, or otherwise considering the needs of listed species during forest planning, can all be part of effective solutions for persistence and recovery of listed species. Many of these measures are addressed in the third-party certification programs to which most of the largest forest owners adhere. To be most effective for conservation of at-risk and listed species, conservation efforts should be collaborative among regulatory agencies, forest landowners, researchers, species experts, and other forest stakeholders. Such collaborations are essential to conserving vulnerable species.

Forestry Conservation

Nationwide Scope

In this article, we review several key examples of collaborative efforts involving private forest owners. These efforts differ from east to west due to differences in regulatory pressures and the relative proportion of private forest ownership. The three case studies presented here highlight these differences, notably that the collaborative efforts in the West evolved in response to regulation of species listed under the ESA while those in the East seek to avoid regulatory mandates by proactively conserving at-risk species. We conclude by highlighting a large-scale conservation effort initiated by forest landowners to achieve some common understanding of modern forest management. This effort has evolved into a nationwide collaborative conservation effort that may provide a pro-active framework to expand species conservation across ownerships.

COLLABORATIVE EFFORTS WITHIN A REGULATORY FRAMEWORK: Forest Conservation Practices in the Pacific Northwest

Pacific Northwest

Due to the regulatory nature of forest practice rules in the Pacific Northwest, collaborative efforts among private landowners and state and federal agencies operate within existing regulatory frameworks that differ with public versus private ownership in the western US. However, collaboration remains at the forefront of conservation efforts and the case studies highlight efforts for native species inhabiting aquatic ecosystems that span ownerships and land uses.

Native Salmonids Require Protection of Cold-Water from Headwaters to the Ocean

Case Study:

River Network

Native salmonid fish species inhabit forested headwaters and downstream rivers (and, if anadromous, marine ecosystems) within different stages of their life cycles. Conserving native salmonids must therefore incorporate the entire river network spanning various government jurisdictions, ownerships, and land uses (Boisjolie et al. 2017). Conservation efforts seek to limit stream temperature increases because native salmonids require cold water. In the western US, state regulations define maximum temperature changes based on native salmonid temperature requirements, developed in accordance with federal water quality guidance (US Environmental Protection Agency 2003).

Temperature Issue

Numeric Criteria

Often, these regulations define specific numeric criteria (*i.e.*, <0.3°C (Oregon Department of Environmental Quality 2004, Washington Department of Ecology 2003, and Idaho Department of Environmental Quality 2006)), or less than specific thresholds with ranges dependent on species and aquatic life stage (typically <16°C or <18°C). For example, in Washington State, maximum numeric temperature criteria vary by aquatic life stage and species, with maximums ranging from 16 to 17.5°C for salmonids, or within 0.3°C of those criteria (WAC 173-201A-200). Differing thermal sensitivities of salmonid species lead to different regulatory limits. These regulations ensure all human activities limit temperature increases throughout the river network.

Private Lands

For forestry on private lands, the ability of forest practice rules to meet strict temperature requirements is regularly evaluated, and rules are updated if temperature exceedances are observed (Cupp and Lofgren 2014; Teply et al. 2014; Groom et al. 2018). Evaluations of existing rules are typically led by regulatory state agencies, but these efforts can benefit greatly from multi-stakeholder collaborations. For example, in western Oregon the Private Forests Riparian Function and Stream Temperature Study led by the Oregon Department of Forestry (ODF) provides an excellent example of such collaboration. This Study involved: multiple private forest landowners; Oregon State University; Oregon Department of Fish and Wildlife; Oregon Department of Environmental Quality; Oregon Headwaters Research Cooperative; US Forest Service (USFS); and the US Environmental Protection Agency (EPA). Following extensive study of effectiveness of forestry regulations across 33 streams dispersed across private land (18) and state land (15), the Oregon Board of Forestry developed new rules, which became effective in July 2017 (Groom et al. 2018). Riparian buffers in streams with cold-water fishes (including salmon, steelhead, and bull trout) have now been extended by 10 feet and have greater basal area requirements relative to other fish-bearing streams in coastal Oregon (Oregon Department of Forestry).

Regulation Effectiveness Study

Riparian Protections

Riparian Buffers

Riparian buffers refer to streamside terrain and vegetation where forest management activities are restricted or modified to protect habitat and/or water quality. Widths of riparian buffers vary from state to state, with ownership, and by stream categorization. Stream classification often determines widths of riparian buffers and are often categorized by water flow (perennial, intermittent, ephemeral), stream size, type of biota present (fish presence or absence), and contribution to community drinking waters. In the Pacific Northwest a primary objective of riparian buffers is to provide shade to protect cold-water salmonids, while also controlling non-point source pollution (sediment, nutrients, herbicide), large woody debris recruitment, and preventing slash from entering streams.

Forestry Conservation

Watersheds Research Cooperative

Non-regulatory collaborative efforts have also been highly effective in documenting the effects of forest management activities on aquatic ecosystems in the Pacific Northwest. The Watersheds Research Cooperative (WRC) was established to evaluate current and anticipated future forest practices on intensively managed forestland on water quality, quantity, and biota. Although primarily focused on private land, this effort also included state and federal lands as references. Although the WRC was initiated with a single paired watershed study site, it eventually expanded to include three paired watersheds on private forests in Oregon (Hinkle Creek Watershed, Alsea Watershed Revisit, and Trask Watershed). Although not part of the WRC, another paired watershed study located on private land in Idaho (Mica Creek Watershed) also represents an excellent example of collaboration. Collectively, collaborators on these projects included: multiple private landowners; universities (Colorado State University, Oregon State University, University of Idaho); federal agencies (Bureau of Land Management, US Forest Service, US Geological Survey); state natural resource agencies (Oregon and Idaho); National Council for Air and Stream Improvement, Inc. (NCASI); Oregon Forest Resources Institute (OFRI); and Oregon Forest Industries Council (OFIC) (*see* Oregon Watershed Research Cooperative: http://watershedsresearch.org/; Mica Creek Watershed: https://www.webpages.uidaho.edu/micacreek_redesign/mica_creek_project.htm).

Stream Ecosystems

The collective knowledge gained from these efforts has re-defined our knowledge of the effects of contemporary forest practices on stream ecosystems in the Pacific Northwest and will continue to be invaluable in informing future conservation efforts. For example, these studies suggest no negative effects of forest harvest on fish populations of coastal cutthroat trout (Oncorhynchus clarkia clarkia), coastal coho salmon (Oncorhynchus kisutch), or steelhead (Oncorhynchus mykiss irideus; Bateman et al. 2016), with significant increases observed only for late summer biomass of age 1+ cutthroat trout (Bateman et al. 2016; 2018). Results from these studies also suggest current forest practices in the Pacific Northwest have been effective in reducing stream sediment (Arismendi et al. 2017; Hatten et al. 2017) and in minimizing changes in stream temperature (Bladon et al. 2016; Bladon et al. 2018; Reiter et al. 2019; Sugden et al. 2019).

Sediment & Temperature

Habitat Conservation Plans Provide Additional Collaborative Opportunities to Required Conservation and Mitigation Measures

Case Study:

Salmonid Populations

Several salmonid populations in the West are listed under the ESA. Some anadromous populations are termed a "distinct population segment" (DPS) while others are termed an "evolutionarily significant unit" (ESU). Section 10 of the ESA requires that parties wishing to obtain an Incidental Take Permit must submit a Habitat Conservation Plan (HCP), approved by the USFWS, or the National Oceanic and Atmospheric Agency (NOAA) for anadromous species. An HCP establishes a formal conservation agreement between USFWS and/or NOAA and non-federal parties to allow continuation of activities that may "take" a listed species subject to conservation measures designed to mitigate anticipated take. ESA Section 9 defines "take" to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" as regards an ESA-listed species. An Incidental Take Permit allows permit holders to proceed with an activity that is legal in all other respects, but that may result in the "incidental" taking of a listed species.

"Take" Permit

Incidental Take

Habitat Conservation Plans

An HCP includes planning documents that describe: (1) anticipated effects of activities that may result in incidental take; (2) how those affects will be minimized or mitigated; (3) effectiveness monitoring; (4) adaptive management tools; and (5) how the HCP will be funded. Therefore, in addition to state-level forest practice acts and forest practice rules, federally approved HCPs of private, working forests are specifically designed to protect salmonid habitat.

In the most recent five-year status assessment for the Northern California (NC) steelhead DPS, NOAA acknowledged these efforts and stated: "Within the NC steelhead DPS and CC [Coastal California] Chinook salmon ESU there are two important habitat conservation plans Humboldt Redwoods Company (HRC) HCP, and the Green Diamond Resource (GDRC) HCP) that likely have contributed to the conservation of the species."

Specifically, the five-year review noted that:

Five-Year Review

> Monitoring reports from HRC suggest that many of the objectives in the HCP are being achieved. In most of their watersheds, freshwater habitat conditions appear to either be stable or improving since 2003 (HRC 2014). In particular, a trend in declining summer water temperatures in coho bearing streams has been observed between 2001 and 2012 (HRC 2014). All of these factors suggest that the HRC HCP is reducing the threat of timber harvest for the NC steelhead DPS (NOAA 2016, at page 22).

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Mitigation Activities

One of the major mitigation activities of the GDRC HCP includes removing 50% of high and moderate priority road sites within the first 15-years of plan implementation. From 2007 to 2014 GDRC has treated 2,009 sites saving 746,473 cubic yards of sediment and has spent $24,589,690 (GDRC 2015). These measures coupled with provisions for riparian protection, mass wasting prevention, and adaptive management ensure that adverse impacts to steelhead and Chinook salmon rearing, migration, and spawning habitats are minimized or avoided (NOAA 2016, at page 22).

These statements suggest that HCPs have been effective in meeting their goals to minimize effects of forest management on habitat for NC steelhead.

State-Wide HCP

A state-wide Forest Practices HCP for the State of Washington is the largest multi-species HCP in the nation, covering 60,000 miles of stream on non-federal forestland. In 2006, the USFWS and NOAA approved a state-wide HCP for Washington with a 50-year time period to protect all native fish species. Three state agencies oversee implementation of the Forest Practices HCP: Washington State Department of Natural Resources, Washington Department of Fish and Wildlife, and the Washington Department of Ecology. The HCP uses adaptive management to ensure its objectives are being met and releases publicly-available annual reports and comprehensive five-year status reports that detail HCP progress including habitat protection measures, rule changes, and adaptive management (https://www.dnr.wa.gov/programs-and-services/forest-practices/forest-practices-habitat-conservation-plan). The most recent annual report noted 924 kilometers of forest road improvements were completed in 2018, resulting in 46,109 kilometers of forest roads improved since 2001 along with the removal of 7,424 fish passage barriers, resulting in re-opening 8,085 kilometers of stream for fish passage (FPHCP Annual Report 2019).

Adaptive Management

Fish Passage Barriers

Shade Impact

Similar HCPs throughout the Pacific Northwest allocate wider "no management" riparian buffers, which help limit alteration of shade on stream channels and thereby limit changes in temperature. For example, in 2000, Plum Creek Timber Company in Montana and the USFWS entered into a native fish HCP to conserve bull trout and other native salmonids in the region (USFWS 2000; Watson and Hillman 1997). Recent evaluation of effectiveness of these stream protections found that forest harvest conducted in accordance with the HCP had no effect on stream temperature (for any of six metrics evaluated) or on fish population or fish biomass (total number of fish multiplied by mean weight of each fish sampled; Sugden et al. 2019).

Collaborative Conservation - Wildlife Conservation Initiative (WCI)
Case Study:

Collaborative Effort

Over the past ten years, USFWS has seen an increasing number of species petitioned for listing under the ESA in the southeastern US. Recognizing an opportunity to demonstrate the conservation values of private working forests, five National Alliance of Forest Owners (NAFO) members in the southeast, who owned or managed over five million acres of forests, worked together to establish a collaborative relationship with USFWS to facilitate the conservation of species in private, working forests, particularly with respect to at-risk species in the listing petitions. The effort by these five forest owners led to the creation of a collaborative effort known as the NAFO Wildlife Conservation Initiative (WCI). The WCI has been formalized as a conservation partnership engaging NAFO, large, private forest landowners that are members of NAFO, and the USFWS (Miller et al. 2019). Other key partners include NCASI, the Sustainable Forestry Initiative, the Wildlife Management Institute, and other interested groups, such as state natural resource agencies and other conservation organizations (*e.g.*, American Bird Conservancy). Although the WCI originated in the southeastern US, it has expanded to include the six USFWS regions throughout the conterminous US where NAFO members hold acreage.

Private Forests

The underlying premises of the WCI is that private forest owners are important for conservation success, that active forest management is a conservation tool, and that science will guide us (*see* www.nafoalliance.org/issues/wildlife/). Most the acreage managed by NAFO members is in coniferous forests. There are three primary forest cover types that can be provided on these forests and contribute to conservation: young forests; open canopy forests; and riparian forests/aquatic systems.

Young Forest Importance

There is growing recognition of the importance of young forests for a diversity of species. For example, the most rapidly declining bird community in the eastern US are those that depend on young forests (King and Schlossberg 2013). Multiple species in the southeastern US, including at-risk species such as gopher tortoises, depend on open canopy pine forests. Historically, these forests were maintained by frequent fire. Open pine conditions can be maintained on private, working forests, providing conservation benefits for species adapted to those conditions (*e.g.*, Greene et al. 2019a, Greene et al. 2019b, Iglay et al. 2019). In the southeastern US, similar to much of the country, water quality is

Forestry Conservation

Water Quality BMPs

protected with a comprehensive set of state-approved forestry Best Management Practices (BMPs). These voluntary measures, which are required by landowners enrolled in forest certification, have high (>90%) implementation rates among all forest owners (Cristan et al. 2018) and have been shown to protect water quality and aquatic systems (*e.g.*, Aust and Blinn 2004, EPA 2005, Brown and Binkley 1994, Cristan et al. 2016, Warrington et al. 2017), thus contributing to conservation on private forestlands, as recognized by the USFWS (e.g., 84 Fed. Reg. 23660, 84 Fed. Reg. 65330, 83 Fed. Reg. 67133). Protection of water quality is particularly relevant as the southeastern US is a global hotspot for freshwater biodiversity (e.g., Elkins et al. 2019, Collen et al. 2014).

"Pilot Projects"

Gopher tortoises and aquatic species were chosen to serve as "pilot projects" to develop relationships and focus on species of particular conservation concerns that are known to occur in private, working forests in the region. One key outcome of the gopher tortoise pilot project was a document entitled "*Best Conservation Practices for Gopher Tortoise Habitat on Working Forest Landscapes*" (December 2018), co-developed by the USFWS and the participating forest landowners. This document outlines recommendations for creating and maintaining gopher tortoise habitat on working forests. Further, this collaboration spawned research publications (Greene et al. 2019a, Greene et al. 2019b) and an ongoing research project at the University of Georgia to better understand gopher tortoise ecology on private, working forests (A. Larsen-Gray, NCASI, personal communication). This effort also initiated collaboration among forest landowners, the USFWS, and the Alabama Department of Conservation to promote conservation of rare aquatic species.

Research Objectives

Both the USFWS and NCASI have committed funding to the WCI. Current projects include collecting data on: aquatic species (fish, mussels, aquatic turtles); gopher tortoises; red hills salamanders (federally listed under the ESA); other upland reptiles; and bird communities within managed forest landscapes in southern Alabama and the Upper Peninsula in Michigan. Four other regions (two in the Pacific Northwest, the Northeast, and Texas/Oklahoma) are in the beginning stages of developing research objectives. The overall objective of these collaborative efforts is to collect data to better understand distribution of at-risk species on private, working forests. This will provide the USFWS with the best available scientific data to make future ESA listing decisions and will promote conservation of these species on private forest ownerships.

CONCLUSIONS

A collaborative approach to conservation has proven to be effective in the conservation of at-risk species, even within largely regulatory frameworks. From experience in the examples provided, we can draw the following key conclusions:

Critical Benefits

- Active participation of private forest owners in conservation brings access to land, experience and knowledge, and appropriately large scales for conservation to the table.
- Collaborative frameworks can aid in conservation of aquatic and terrestrial species.
- Continued development of these types of collaborative arrangements is critical for:
  - Assurances of long-term conservation benefits
  - Maintaining a known regulatory environment for forest landowners
  - Developing precedence for effective conservation measures
  - Developing and maintaining trust between landowners and regulatory agencies
  - Ensuring the best available science is used to guide conservation
  - Recognizing importance of private landowners for conservation success and working pro-actively to conserve at-risk species

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FORESTRY CONSERVATION & PRIVATE LANDS

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NEPA Rule

NATIONAL ENVIRONMENTAL POLICY ACT UPDATE

CEQ ISSUES FINAL RULE TO MODERNIZE NEPA REGULATIONS

by Tyson Kade, Joe Nelson, & Jonathan Simon (Van Ness Feldman, Washington DC)
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Editors' Note: The article below is a reprint of a Van Ness Feldman "Alert" which first appeared on their website on July 20, 2020, and was updated prior to our deadline on August 7, 2020. It is reprinted with their kind permission and has been slightly edited to fit our format.

Introduction

Final NEPA Rule

On July 16, 2020, the Council on Environmental Quality (CEQ) published its final rule modernizing and clarifying its procedural regulations implementing the National Environmental Policy Act (NEPA). The final rule, titled "*Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act,*" is the first major revision to CEQ's NEPA regulations in over 40 years, and is the latest in a series of efforts by the Trump Administration to streamline federal agency processes for permitting infrastructure projects.

Intent

CEQ describes its efforts on this rule as intended to:

> "…facilitate more efficient, effective, and timely NEPA reviews by Federal agencies by simplifying regulatory requirements, codifying certain guidance and case law relevant to these regulations, revising the regulations to reflect current technologies and agency practices, eliminating obsolete provisions, and improving the format and readability of the regulations."

Fundamental Changes

To this end, the rule modifies almost all aspects of the regulations governing how federal agencies meet their environmental review obligations under NEPA. Although the ultimate practical impact of these changes is uncertain, the rule fundamentally alters the timing of, procedures for, and content of NEPA reviews, and will have important implications for parties seeking federal permits and other program approvals or authorizations.

The final rule will be effective September 14, 2020; however, the timing may be impacted by Congressional review and/or pending litigation (*see* below).

Background on NEPA Regulations

NEPA Process

NEPA applies to a broad range of actions with a federal nexus, including federal permit applications, federal land management decisions, highway construction, and other infrastructure development. Through the NEPA process, federal agencies must evaluate the environmental and related social and economic effects of their proposed actions.

Criticisms

NEPA reviews have long been the subject of significant criticism and litigation — including over the length of time they take to complete, inconsistent implementation within and across agencies, adequacy of public participation processes, and disputes over the scope and detail of the environmental documents produced by the agencies.

Expediting Decisions

CEQ's efforts here focus on reducing the time required to complete NEPA reviews and placing clearer boundaries on the scope of the effects analysis, with the goal of expediting permitting decisions and narrowing litigation risk. An overview of the precursors and additional context for the development of this rule is provided in our previous alert on the proposed rule.

Overview of Changes

Under the final rule, the NEPA review process is altered in both subtle and direct ways. Among the notable changes are:

Time & Page Limits

Presumptive Timelines and Page Limits: NEPA reviews will have presumptive time limits of one year for **e**nvironmental **a**ssessments (EAs) and two years for **e**nvironmental **i**mpact **s**tatements (EISs), and page limits of 75 pages (not including appendices) for EAs, 150 pages for routine EISs, and 300 pages for EISs covering matters of "unusual scope or complexity." Exceptions can be granted on a case-by-case basis.

One Federal Decision Policy

One Federal Decision and Adherence to Joint Schedules for Reviews and Agency Action: The final rule reinforces and codifies elements of the One Federal Decision policy under Executive Order No. 13807, titled "*Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects*." Where multiple federal agencies have discretionary decision-making authority for a proposed project, the agencies must coordinate on scheduling and, where practicable, issue a single environmental document that can be relied on for each agency's permitting or authorization decision as well as, to the extent practicable, a joint **r**ecord **o**f **d**ecision (ROD) or **f**inding **o**f **n**o **s**ignificant **i**mpact (FONSI). The joint schedules must reflect applicant input and extend to any authorizations required for a proposed action, as well as provide a means for resolution of inter-agency disputes and other issues that may cause delays in the schedule.

NEPA Rule	
Pre-Filing Data	**Front-Loading of Analyses:** The final rule makes important changes to the scoping process for an EIS, which, together with the adoption of shorter time limits and enforceable schedules, will place a premium on earlier data collection and analysis by permit applicants. Under the rule, scoping may begin "as soon as practicable after the proposal for action is sufficiently developed for agency consideration," and agencies may require "appropriate pre-application procedures or work" prior to publishing a notice of intent. Further, the **n**otice **o**f **i**ntent (NOI) now must include, among other information, a preliminary description of the proposed action and alternatives and a brief summary of expected impacts. This approach not only places a priority on early data collection, but also affects the timing of the review because the issuance of the NOI starts the clock on the two-year presumptive time limit for completion of an EIS. Although CEQ advises that "agencies should not unduly delay publication of the NOI," the approach to scoping and pre-application procedures under this rule gives agencies the ability to effectively extend the timeframe for EISs through pre-filing data requirements for permit applicants and other activities.
Notice of Intent (NOI)	
"Major Federal Decision" Redefined	**Scope of Effects Analysis:** The final rule incorporates a number of significant changes to the overall scope of effects and alternatives to be analyzed, including: • Changing the definition of "major federal action," which triggers NEPA review, to exclude non-federal projects with "minimal Federal funding or minimal Federal involvement where the agency does not exercise sufficient control and responsibility over the outcome of the project." Included under this exclusion are certain federal loans, loan guarantees, and other forms of financial assistance.
Causal Relationship	• Doing away with the concepts of direct, indirect, and cumulative effects, and instead focusing the analysis on those effects that are reasonably foreseeable and that have a reasonably close causal relationship to the proposed action. Further, CEQ clarifies that a "but for" causal relationship is not sufficient, and that the standard is analogous to proximate cause in tort law.
"Reasonable Alternatives" Clarified	• Clarifying that "reasonable alternatives" must be "technically and economically feasible" and meet the purpose and need for the proposed action. Specifically, when the agency's action involves a non-federal applicant, the development of reasonable alternatives must consider the goals of the applicant.
Cumulative Effects	**Uncertainty for Cumulative Effects and Climate Change Analysis:** The final rule repeals the specific requirement to consider cumulative effects, but allows for incorporation of such analysis if such effects are reasonably foreseeable and have a reasonably close causal relationship. Similarly, the final rule allows for incorporation of climate trends into the discussion of environmental baseline conditions (i.e., the "affected environment") but would exclude the discussion of speculative conditions.
Climate Change	
"EAs"	**Additional Structure for Environmental Assessments:** Historically, action agencies have followed varied practices regarding the scope and content of their EAs. While still maintaining a level of flexibility for agency implementation, the final rule encourages more standardized approaches. Specifically, agencies are directed to follow the same rules as applied to an EIS in relation to the level of data available, methodologies and scientific accuracy, and accommodation of other surveys and analysis that may be required for lead or cooperating agency permitting or authorization determinations.
Categorical Exclusions	**More Detailed Direction on Categorical Exclusions:** The final rule includes additional direction on agencies' use of **c**ategorical **e**xclusions (CEs) as a means to avoid detailed environmental review of actions that normally do not have significant effects. In addition to clarifying that the presence of extraordinary circumstances does not necessarily preclude the application of a CE, the final rule also includes provisions that would allow federal agencies to adopt other agencies' CEs.
Applicant's Preparation	**Greater Role for Applicants:** The final rule allows applicants to assume a greater role in the preparation of environmental documents. Specifically, it allows both EAs and EISs to be prepared by project applicants or contractors under the supervision of the agency, provided that agencies retain ultimate responsibility for the accuracy, scope, and content of the document.
Tribal Role	**Greater Roles for Tribes:** CEQ makes a series of changes to its rules to further integrate Tribes into NEPA reviews by: (i) recognizing that Tribes may assume NEPA implementing responsibility under certain statutory authorities; (ii) requiring federal agencies to coordinate with affected Tribes in the development of NEPA review timelines; (iii) allowing for Tribes, with the lead agency's agreement, to be cooperating agencies; and (iv) ensuring that federal agencies further coordinate with Tribes on the analysis of a proposed action's potential effects on Tribal lands, resources, or areas of historic significance. In conjunction with coordinating on the potential effects of an action on Tribal resources and historic significance, the rule eliminates existing provisions that limit Tribal interests to reservations.

NEPA Rule

Public Comments

Rebuttable Presumption

Public Involvement and Implications for Litigation: Throughout the rule, CEQ emphasizes the need for disclosure or public involvement — in contrast to prior focus on public participation. The final rule includes several provisions designed to encourage commenters to provide the agency with "all available information prior to the agency's decision, rather than disclosing information after the decision is made or in subsequent litigation." It requires that public comments be as specific as possible and submitted during the prescribed comment periods, providing that agencies need only respond to "substantive" comments and that comments or objections not submitted will be deemed "forfeited as unexhausted." The final rule also establishes a rebuttable presumption that an agency has considered submitted alternatives, information, and analyses in the final EIS. Further, agencies are given more discretion in determining the need for public meetings or hearings, which, traditionally, have been a key step in the development of an EIS. The final rule also scraps the mandatory 30-day comment period on final EISs included in the proposed rule, although it retains the current 30-day waiting period between publication of notice of a final EIS and issuance of a ROD. The extent to which any of these provisions ultimately may limit judicial review will be within the purview of reviewing courts.

Implementation Dates

Implementation of the New Rule

The revised regulations apply to all NEPA processes begun after the September 14, 2020 effective date. CEQ states that agencies also have the discretion to apply the revised regulations to ongoing activities and environmental reviews. Going forward, federal agencies must revise their agency-specific NEPA implementing regulations by September 14, 2021. In the interim, the final rule explicitly states that, where existing agency NEPA procedures are inconsistent with the new CEQ regulations as adopted, the new regulations shall apply, upon their effective date, "unless there is a clear and fundamental conflict with an applicable statute." Additionally, the rule supersedes existing CEQ guidance materials, but clarifies that CEQ will publish a separate notice to withdraw such guidance.

Legal Challenges

Litigation Challenging Final Rule Implementation

Within a month of CEQ issuing the final rule, plaintiffs' groups have filed lawsuits in federal district courts in Virginia, California, and New York, challenging the final rule under the Administrative Procedure Act. All three suits allege that CEQ was arbitrary and capricious in failing to respond to public comments, reversing agency position without adequate explanation, and creating a rule inconsistent with NEPA, and seek orders declaring that the final rule is unlawful and request vacatur. In addition, the complaints raise other claims that are specific to each particular lawsuit:

Specific Claims

- The Western District of Virginia suit alleges that CEQ relied on factors not provided in the statute, but instead focused on the "burden" caused by the current NEPA process;
- The Northern District of California suit alleges that CEQ failed to complete a review of the rule under NEPA (the very statute the rule is seeking to implement); and
- The Southern District of New York suit focuses on environmental justice issues, alleging the elimination of cumulative impacts in the final rule will make it "extremely difficult, if not impossible" for federal agencies to consider the effects of a project on environmental justice communities.

While the final rule is set to become effective September 14, 2020, whether these lawsuits may impact that timing remains to be seen.

Controversy

Conclusion

As we observed in our Alert on the proposed rule, this Administration is not unique in recognizing that NEPA can delay and/or add significant costs to important infrastructure projects and that the environmental review process can and should be improved. Since NEPA's enactment in 1970, administrations of both parties and Congress have sought to improve the process and make it more efficient. Applicants, stakeholders, courts, and others all at times have found certain elements of implementation of the statute and regulations to lack clarity. In that context, some of the changes made in the final rule have the potential to reduce costs and delays historically associated with NEPA compliance. The extent to which that might be the case, however, depends on how the final rule is implemented by the federal agencies whose responsibility it is to conduct the environmental reviews mandated by the statute. Given the controversial nature of some of the changes in the final rule, the inevitable legal challenges to the new regulations have already commenced. Furthermore, the Congressional Review Act and the potential for a change in administrations and congressional leadership raise additional questions regarding the future of the final rule. Particularly in the transition period — until agencies have updated their own NEPA implementation procedures and key legal questions are addressed — project proponents and others whose activities are subject to NEPA review will need to work closely with their permitting agencies to address the NEPA procedures that the agency will follow.

Transition

NEPA Rule

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Final NEPA Rule at: www.govinfo.gov/content/pkg/FR-2020-07-16/pdf/2020-15179.pdf

Tyson Kade, Van Ness Feldman – Washington DC, represents clients before federal agencies and state and federal courts on a broad range of matters involving natural resources, pipeline safety, and energy law. Tyson provides strategic guidance on Endangered Species Act, National Environmental Policy Act, Marine Mammal Protection Act, and Clean Water Act compliance and liability issues, assists with permitting for energy development and hydropower projects, and advises on Magnuson-Stevens Fishery Conservation and Management Act matters related to West Coast and Alaska fisheries. Tyson also counsels pipeline and electric clients on regulatory compliance and administrative appeals involving the Federal Energy Regulatory Commission and the Pipeline and Hazardous Materials Safety Administration.

Molly Lawrence, Van Ness Feldman - Seattle WA, counsels public and private clients in all facets of law related to land use and development. She is highly-skilled at helping clients navigate overlapping and divergent federal, state and local statutes and regulations. Her practice focuses on assisting clients in developing comprehensive permitting strategies, and counseling them through the regulatory process from project conception to construction. When necessary to facilitate project development, Molly assists clients in drafting and advancing changes in the laws and regulations through the legislative and rule making processes. In addition to permitting and legislative work, Molly regularly litigates land use and environmental matters before local governments, and in state and federal court.

Rachael Lipinski, Van Ness Feldman - Seattle WA, practices in the areas of natural resources, environmental, and maritime law. She has experience providing counsel on complex regulatory, enforcement, and litigation matters under a range of environmental statutes, including the Clean Water Act (CWA), Endangered Species Act (ESA), Outer Continental Shelf Lands Act (OCSLA), and the National Environmental Policy Act (NEPA).

Joe Nelson, Van Ness Feldman - Washington DC, has over twenty years of experience providing counsel to clients involved with linear and site-specific energy, natural resource, and water resource projects as they navigate the myriad regulatory and environmental laws governing project development and operations. His practice includes representation of clients before federal agencies and commissions including the Federal Energy Regulatory Commission, U.S. Fish and Wildlife Service, National Marine Fisheries Service, National Park Service, U.S. Bureau of Reclamation, Department of Energy, and Department of the Interior.

Jonathan Simon, Van Ness Feldman – Washington DC, provides strategic counsel and legal representation to project developers, state governmental entities, Alaska Native corporations, concessioners, and others on a broad range of matters involving natural resources, public lands, environmental, and energy law. With a particular focus on the management and use of federal lands and the permitting of energy infrastructure projects, Jon has significant experience representing clients before the courts, Congress, and federal agencies in matters involving the National Environmental Policy Act (NEPA), Endangered Species Act, Clean Water Act, Federal Land Policy and Management Act (FLPMA), Outer Continental Shelf Lands Act, Coastal Zone Management Act, Wilderness Act, and other environmental and natural resource-related statutes.

Irrigation Conservation

Integrated Plan

Aging Infrastructure

Modernization

Technology Advances

YAKIMA BASIN WATER CONSERVATION

INTEGRATED PLAN ON TRACK TO CONSERVE 85,000 ACRE-FEET OF WATER BY 2029

by Janine Empel, Washington State Department of Ecology Office of Columbia River

Editors' Note: The article below is an edited version of a Washington State Department of Ecology (Ecology) blog which appeared online in July 2020 (*see* https://ecology.wa.gov/Blog/CountingEveryDrop). It has been slightly edited to match our format.

Introduction

Water Conservation is an important component to the success of the Yakima River Basin Integrated Plan (*see TWRs* #106, #108, #135 & #186). The Basin — encompassing 6,155 square miles of land spread across Washington State's Kittitas, Yakima, and Benton counties — has experienced decades of water conflict and concern over shifting environmental conditions.

The Integrated Plan offers a vision for protecting and enhancing the land, water, and communities in the face of drought and climate change. This semi-arid area supports a thriving agricultural economy reliant on irrigation water. Unfortunately, a fair portion of the infrastructure that distributes water is aging, outdated, or in need of repairs or upgrades. Additionally, as farms, businesses, and technology have evolved, the irrigation infrastructure has needed to evolve with it.

Modernizing Water Delivery Systems

A main goal of the water conservation element of the Integrated Plan is to improve and modernize agricultural water systems, as well as municipal water systems, to reduce waste in the form of leaks, seepage, and inefficient or imprecise delivery methods. Water, a precious resource in high demand, cannot afford to be wasted.

Growing crops is by far the greatest use of the water in the Yakima Valley, one of the country's most diverse agricultural producers. From asparagus in the spring to pears and wine grapes in the fall, the valley shares its bounty locally, regionally, and throughout the world.

Across the Basin, farmers have implemented conservation measures as new technologies have become available. Some projects have occurred organically as technology advances in irrigation methods have adapted in response.

Water from the Yakima River feeds farmland through winding canals and other irrigation systems.

Irrigation Conservation

Drip Irrigation

Canal Lining

Pressurized Pipelines

Shared Funding

"Farmers know upgrades are inherently necessary as they carefully manage water during water short years," said Tom Tebb, director of Ecology's Office of Columbia River. "These investments are helping to stretch water supplies, and, at the same time, have proven beneficial for crops as well."

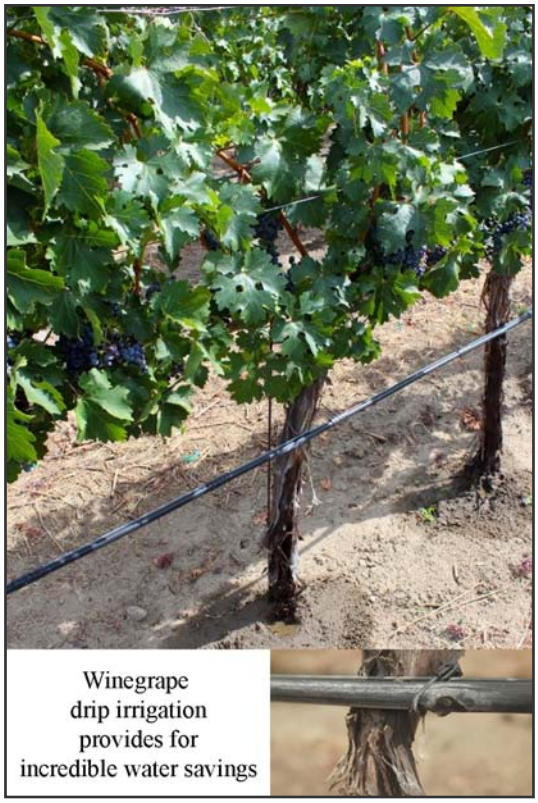
For instance, flooding water along narrow furrows between hop rows and grape trellises was once a common practice. Now farmers have upgraded their systems to more precise drip irrigation that produces consistent growth and larger yields, all using less water.

Other conservation projects are much larger in scale. Kittitas Reclamation District has lined more than three miles of their North Branch Canal with concrete and a technologically advanced geo-membrane to transform a leaky earthen berm into a safer, more efficient delivery system. The district is in the process of lining 6.7 miles of the South Branch Canal as well. Projects like these are underway across the basin — all in an effort to use wisely every drop of water available.

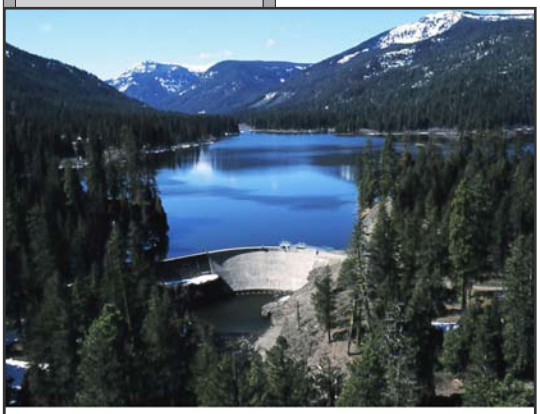
Many are turning to completely enclosed systems. Selah-Moxee Irrigation District, for instance, has converted miles of open ditch laterals to pressurized pipelines. This reduces the volume of water diverted from river, to canal, to ditch, and field. Pressurized pipes let farmers turn water on and off with a spigot, allowing them to apply water only when needed.

All of these projects are expensive and benefit from shared on-farm, district, local, state, and federal funding. The projects' participants take the long view, supporting a $4 billion agricultural industry in anticipation of hydrologic changes in climate and snowpack.

Kittitas Reclamation District's South Branch canal, lined with new concrete, is shown partially complete here. Lining prevents loss of water through leakage.



Winegrape drip irrigation provides for incredible water savings



The initial development phase aims to conserve nearly 16 times the quantity of water held in Clear Creek Dam's reservoir.

State & Federal Cooperation

Though the roots of the Integrated Plan date back some 40 years, the current iteration of state and federal cooperation began with the passage and funding of state legislation in 2013, followed by federal legislation in 2019. The federal legislation, known as the John D. Dingell Jr. Conservation, Management, and Recreation Act, set a goal of conserving 85,000 acre-feet of water through agricultural and municipal infrastructure improvements, education, and outreach by 2029. That is the equivalent of storing water in 16 reservoirs the size of Clear Lake on Highway 12 in Yakima County.

Now, one year since the federal legislation passed and seven years since the state legislation, we are tabulating the multitude of water conservation projects funded under the Integrated Plan, and determining how far we have come to meeting the 2029 goal.

Irrigation Conservation

Project Yield

Priority Strategy

Counting-Up Water Savings

To make an accounting of what projects have occurred, we've had conversations with our partners in the Yakama Nation, the US Bureau of Reclamation, irrigation districts, conservation districts, cities, counties, and other involved organizations. So far, the partners have implemented 70 conservation and water efficiency projects in the last seven years. With approximately $67 million of state, federal, and farmer money invested, these projects have yielded over 36,000 acre-feet of conserved water. That breaks down to approximately $1,900 per acre-foot of water. The water savings support streamflows to aid fish and riparian habitat, and provide drought resiliency for irrigators. Some conserved water will allow the Wapato Irrigation Project to provide additional irrigation on tribal land.

With these projects, we've been able to accomplish approximately 42% of the plan's first phase conservation goal. We are optimistically looking forward, as virtually all the parties involved are moving ahead with plans for future conservation projects. A strategy is underway to prioritize projects to achieve the 2029 goal and make the basin irrigation systems as efficient as possible.

We anticipate technological advances will continue to evolve and increase conservation effectiveness in the future. It's a challenge, but one that is being taken on with eagerness and enthusiasm.

For Additional Information:
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Yakima Integrated Plan: https://ecology.wa.gov/YakimaPlan
Eastern Washington Water Projects: https://ecology.wa.gov/WaterSupplyProjects

Extensive piping has reduced impacts to Manastash Creek, allowing streamflows to support returning fish. Previously, the creek ran dry due to irrigation diversions.

Klamath Dams

Partial Transfer

Co-Licensee Remains

PacifiCorp Position

Dam Removal Entity

Other Stakeholders

California Governor Urging

Economic Argument

KLAMATH DAMS REMOVAL UPDATE

by David Moon, Editor

Introduction

On July 16, the Federal Energy Regulatory Commission (FERC) issued an order granting a partial transfer of the license for the four lower Klamath River dams from PacifiCorp to the entity organized for dam removal, the Klamath River Renewal Corporation (KRRC). The approval marked a key step in a decade-long effort to remove the four, now-obsolete hydroelectric dams and restore a free-flowing Klamath River.

The Order, however, threw a monkey wrench in the process that KRRC and PacifiCorp had hoped would be a clean transfer of the FERC license to KRRC, by requiring PacifiCorp to remain as a co-licensee. While both KRRC and PacifiCorp had requested a full transfer of ownership, as outlined in the Klamath Hydroelectric Settlement Agreement, FERC determined that it wanted PacifiCorp to remain as co-licensee due to its experience with the project and dam removal.

Stakeholder Views

PacifiCorp issued a statement July 16th which explained its position: "Throughout this process, PacifiCorp has been clear about the bedrock principles of ensuring customer protections in charting a path forward for the Klamath River dams. Today's order rejects the transfer of the license from PacifiCorp to the Klamath River Renewal Corporation under the agreement by requiring PacifiCorp to remain co-licensee for the dams through the removal process. The Klamath River Renewal Corporation's inability to become the sole licensee for removal of the Klamath River dams denies the customer protections PacifiCorp negotiated on their behalf." PacifiCorp's statement also noted that, "PacifiCorp is continuing to fully examine the order and will consult with our settlement partners to assess its impact on continued implementation of the Klamath Hydroelectric Settlement Agreement. … We expect to reconvene with our settlement parties to determine next steps for continued agreement implementation. PacifiCorp continues to believe that a multi-party settlement provides the best way forward to resolve the future for the Klamath dams, while helping resolve difficult natural resource conflicts in the Klamath Basin."

KRRC issued a short press release on July 17th: "We are pleased that FERC has identified a pathway for the project to move forward. There is more work to be done, and we are working with our settlement partners on how to ensure a successful project. Our partners have indicated they remain committed to identifying a path to move forward." KRRC is an independent nonprofit organization founded in 2016 as part of the amended Klamath Hydroelectric Settlement Agreement (KHSA). Signatories of the amended KHSA include the states of California and Oregon, local governments, tribal nations, dam owner PacifiCorp, irrigators, and several conservation and fishing groups. KRRC was formed for the sole purpose of taking ownership of four PacifiCorps dams — J.C. Boyle, Copco No. 1 & 2, and Iron Gate — and then removing the dams, restoring formerly inundated lands, and implementing required mitigation measures. KRRC's work is funded by PacifiCorp customer surcharges and California Proposition 1 water bond funds.

The joint press release of stakeholders the Karuk Tribe, Yurok Tribe, Pacific Coast Federation of Fishermen's Associations, Trout Unlimited, California Trout, Sustainable Northwest, American Rivers, Save California Salmon, and Klamath Riverkeeper relates their view of the impact of FERC's order (*see* Order at www.klamathrenewal.org/wp-content/uploads/2020/07/FERC-Order-20_0716.pdf). "A 2016 negotiated agreement proposes to transfer the dams from PacifiCorp to the KRRC for purposes of removal. The agreement allows PacifiCorp to transfer the dams and $200 million to the KRRC and then make a clean break from the project. While FERC's conditional approval today [July 16] requires PacifiCorp to remain involved, it also outlines a clear path towards dam removal. FERC's order took pains to acknowledge that KRRC has successfully responded to requests for additional information and that there is a significant likelihood KRRC will complete the dam removal process without relying on PacifiCorp for additional funding or expertise, as envisioned the Klamath Hydroelectric Settlement Agreement."

California's Position

Governor Gavin Newsom of California also has weighed in on the situation by sending a letter on July 29th to PacifiCorp representatives, Warren Buffett, Gregory Abel and Stefan Bird, urging Berkshire Hathaway (the parent company of PacifiCorp), to "take this opportunity to respond by expediting the process to remove these dams…" and "promptly accept FERC's invitation to move this project to completion and continue to partner with us to make this a reality." Governor Newsom presented his position that, "[W]e stand at an unprecedented moment of reckoning about our past and, more importantly, our future. In this moment, we have the opportunity and obligation to see ourselves clearly and decide whether we are living up to the values that I firmly believe all Californians stand for: equity, inclusion and accountability. The Klamath dam removal project is a shining example of what we can accomplish when we act according to our values." The Governor also made the economic argument that "PacifiCorp and its ratepayers will benefit from this publicly-funded dam removal when compared to a lengthy and costly process to relicense these outmoded dams under complex federal regulations."

Klamath Dams

Avoid Liability

Risk Management

Dam Removal Opposition

Opponents to removal of the dams, meanwhile, viewed the FERC Order quite differently. Congressman Doug LaMalfa (CA) issued the following statement: "…KRRC is nothing more than a shell corporation created for California, Oregon, and other supporters of dam removal to avoid liability and leave local communities to clean up the mess they would create. I am happy to see that FERC agreed with the many issues I, and other stakeholders, brought to their attention. It would have set a dangerous precedent to give a shell cooperation sole liability for the immense damage to the environment and local economy that this project would create. Smaller dam removal projects have faced significantly higher costs than originally estimated and this project has made the same failed assumptions. This Order clears the way to stop this terrible project without wasting more of California taxpayer funds or Oregon ratepayer dollars. PacifiCorp should instead pursue relicensing of all four Klamath dams, ensuring the Basin continues to receive ample carbon free, clean power for years to come."

For additional information concerning KRRC and the KHSA, as well as details regarding KRRC's comprehensive approach for risk management addressing the removal of the dams, *see* "*Klamath Hydroelectric Agreement*," Roos-Collins, *TWR* #187 (Sept. 15, 2019). Governor Newsom's letter is available upon request to *TWR* (TheWaterReport@yahoo.com).

For Additional Information:
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PacifiCorp website at: www.pacificorp.com/energy/hydro/klamath-river.html

WATER BRIEFS

KLAMATH PROJECT CA/OR
SCIENCE UPDATES

On July 29, the Bureau of Reclamation (Reclamation) announced that in response to Secretary of the Interior David Bernhardt and Reclamation Commissioner Brenda Burman's recent visit with Klamath Basin ranchers, farmers, tribes and community officials, Reclamation is launching a new science initiative to inform Klamath Project operations. Updated science will improve water supply forecasting, operations planning and modeling, according to Reclamation. The project supplies water to more than 230,000 acres of irrigated farmland along the border between Oregon and California.

Commissioner Burman said that, "[R]eclamation is launching a fresh approach with an initial $1.2 million investment in applied science projects. These projects will improve our understanding of natural stream flows and the relationship between project operations and aquatic ecosystems in the Klamath Basin."

Reclamation will begin several important science initiatives:

- New Naturalized Flow Study: Update a 20-year-old assessment of stream flows to address shortcomings identified in the National Academy of Science's 2004 and 2007 reviews, as well as incorporating more recent data.
- Lake Level Science Update: Conduct focused evaluations of emerging science in partnership with USGS and US Fish and Wildlife Service (USFWS) that will improve the understanding of how Upper Klamath Lake elevations affect endangered sucker fish.
- Flow/Habitat Relationships in the Klamath River: Evaluate contemporary methods of data collection and habitat modeling techniques to tailor a plan to better support habitat and water flow needs of juvenile Chinook and endangered coho salmon in the Klamath River.
- Salmon Model Refinement: Refine a salmon survival model in partnership with the USGS and USFWS that will update the Stream Salmonid Simulator model, which is used to estimate juvenile salmon survival during their migration to the sea.
- Salmon Disease and Hydrology Data Portal: Develop a process that will improve biologic data management on salmon disease in the Klamath Basin.

"The activities announced will be helpful to all the stakeholders in the Klamath Basin, and we are committed to maintaining an ongoing dialogue," said Deputy Regional Director Jeff Payne. "My hope is that the science process and the involvement by experts across Reclamation and additional input from stakeholders will result in some crucial, agreed-upon facts that are needed for decisions and will also focus future investments on the highest priority scientific needs."

For info: Mary Lee Knecht, Reclamation, 916/ 978-5100 or mknecht@usbr.gov
Reclamation website: www.usbr.gov/mp/kbao/programs/ops-planning.html

WATER BRIEFS

RESILIENCE PORTFOLIO CA

BLUEPRINT FOR WATER

On July 28, Governor Gavin Newsom released a final version of the *Water Resilience Portfolio*, his Administration's blueprint for equipping California to cope with more extreme droughts and floods, rising temperatures, declining fish populations, over-reliance on groundwater, and other challenges. The portfolio outlines 142 state actions to help build a climate-resilient water system in the face of climate change.

There are several priorities the state will focus on, including:

- Implementing the Safe and Affordable Drinking Water Act of 2019
- Supporting local communities to successfully implement the Sustainable Groundwater Management Act of 2014
- Achieving voluntary agreements to increase flows and improve conditions for native fish in the Sacramento-San Joaquin Delta and its watersheds
- Modernizing the Delta water conveyance system to protect long-term functionality of the State Water Project
- Updating regulations to expand water recycling
- Accelerating permitting of new smart water storage
- Expanding seasonal floodplains for fish and flood benefits
- Improving conditions at the Salton Sea
- Removing dams from the Klamath River
- Better leveraging of information and data to improve water management

For info: Resilience website: www.waterresilience.ca.gov

ABANDONMENT LIST CO

LIST FOR TERMINATION

The Colorado Division of Water Resources (CDWR) released the Decennial Abandonment List of water rights on July 1st. Every ten years the CDWR is required by Colorado law to present a list of water rights that each Division Engineer has determined to meet the criteria of "abandonment" to the water court. "Abandonment" is defined as the termination of an absolute water right in whole or in part as a result of the intent of the owner to permanently discontinue the use of the water under that water right.

Failure to apply a water right to beneficial use — when water was available for a period of ten or more years — results in a rebuttable presumption of abandonment. Once the rebuttable presumption is established through non-use, the burden shifts to the owner of the water right to prove that they did not intend to abandon the water right.

After the abandonment list is published, notices are placed in local news outlets and a certified letter is sent to the last-known owner of the water right. Any person wishing to object to the inclusion of a water right on the initial list may file a statement of objection in writing with the division engineer by July 1, 2021. An objection form is available on CDWR's website shown below.

By December 31, 2021, the Division Engineer will file a revised abandonment list with the water court. Written protests may be submitted to the water court by June 30, 2022. The list of water rights to be abandoned will be finalized by the water court.

Water rights that cannot be included on the abandonment list are:

- Conditional water rights
- Federal Reserved water rights
- CWCB instream flow water rights
- Water rights which historically served land that is enrolled in a federal land conservation program
- Water rights that, were enrolled in:
  - * A water conservation program approved by a state agency, a water conservation district, or a water conservancy district
  - * A water conservation program established through formal written action or ordinance by a municipality or its municipal water supplier
  - * An approved land fallowing program as provided by law in order to conserve water
  - * A water banking program as provided by law
  - * A loan of water to the Colorado Water Conservation Board for instream flow use under section 37-83-105(2), C.R.S.
  - * Any contract or agreement with the Colorado Water Conservation Board that allows the board to use all or a part of a water right to preserve or improve the natural environment to a reasonable degree under section 37-92-102(3), C.R.S.

For info: DWR website: http://water.state.co.us/DWRDocs/Reports/Pages/Abandonment.aspx

INSTREAM PARTNERSHIP CO

POWER & IRRIGATION

Colorado Water Trust (Water Trust), on August 1st, in partnership with Grand Valley Water Users Association and Orchard Mesa Irrigation District, began delivering water to the 15-Mile Reach on the Colorado River through delivery to the Grand Valley Power Plant (GVPP). The 15-Mile reach starts east of Grand Junction and stretches to the confluence with the Gunnison River just west of town. Reservoir releases are expected to last through August 17 at a rate of 25 cubic feet per second.

The Water Trust, the Grand Valley Water Users Association and the Orchard Mesa Irrigation District signed an agreement effective February 1, 2019 whereby water secured by the Water Trust from upstream sources may be delivered to and used in the GVPP. Once run through the plant's turbines, the water will be released back into the 15-Mile Reach. Made possible by a grant from the Walton Family Foundation, the Water Trust will contribute $425,000 of the total costs of over $5.4 million dollars expected for GVPP rehabilitation, in exchange for the five-year agreement. For more details, *see* Water Briefs, *TWR* #188.

Thanks to funding from Bonneville Environmental Foundation, Coca-Cola, and Daniel K. Thorne Foundation, water released from Ruedi Reservoir will first flow through the Fryingpan River and Roaring Fork River, and then downstream to supplement flows in the 15-Mile Reach to support four species of endangered fish: the Colorado Pikeminnow, Humpback Chub, Bonytail, and the Razorback Sucker.

"Flowing rivers are an economic engine in Colorado, providing immense value to irrigators, drinking water providers, and recreation across the state," says Todd Reeve, CEO of Bonneville Environmental Foundation and Director of Business for Water Stewardship. "It is for this reason that we are seeing more and more corporate funders step forward to invest in innovative projects like this one that help keep the rivers in Colorado flowing."

For info: Water Trust webpage at: http://coloradowatertrust.org/project/15-mile-reach

WATER BRIEFS

INVEST IN RIVERS — US

ECONOMIC ENGINES

On July 1, American Rivers released a new report, "*Rivers as Economic Engines: Investing in Clean Water, Communities and Our Future*." The report is a call for the investment of $500 billion in federal spending for water infrastructure and river restoration to support healthy rivers, create jobs, and strengthen communities. The report includes infographics, a poster series, and testimonial quotes that make the case for transformational change as the answer to our nation's current economic downturn. The report makes the case for boosting federal water infrastructure and river restoration spending and suggests a framework for equitable investment that will strengthen communities nationwide. American Rivers called on Congress to invest the $500 billion over ten years in water infrastructure and river restoration.

According to the report, communities have proven that safeguarding clean water and river health creates jobs and boosts the economy. The report highlights findings, including: Investing $82 billion per year in water, wastewater, and stormwater infrastructure for ten years would generate $220 billion per year in economic activity and would produce and sustain 1.3 million jobs over the ten-year period (Value of Water Campaign, 2017); Healthy rivers plow money back into the economy through recreation activities, with watersports and fishing directly generating over $175 billion in retail spending annually and over 1.5 million jobs nationwide (Outdoor Industry Association); and the ecological restoration sector directly employs approximately 126,000 workers nationally, and supports nearly another 100,000 jobs indirectly, contributing a combined $25 billion to the economy annually (University of North Carolina).

The report states that the $500 billion should be focused on three areas:

• Improve Water Infrastructure ($200 billion)

• Modernize Flood Management ($200 billion)

• Revitalize Watersheds ($100 billion)

For info: Amy Kober, American Rivers, 503/ 708-1145; Report available at: AmericanRivers.org/InvestInRivers

INSTREAM FLOWS — WA

IMPAIRMENT PROTECTION

The Washington Department of Ecology (Ecology) has released a new publication dealing with protection from impairment for instream flows in Washington state, "Focus On: How the *Foster* Decision Affects Our Work" (July 2020). The *Foster v. Ecology, City of Yelm, and Washington Pollution Control Hearings Board,* 362 P.3d 959 (2015*)* (*Foster*) decision reaffirms and reinforces that instream flows adopted in a rule by Ecology must be protected from impairment. Ecology noted that the *Foster* decision "affects our work on water right change applications, mitigation packages, and water banking." The new publication provides a summary of the *Foster* Washington Supreme Court decision and its effects upon Ecology's work. *See* https://fortress.wa.gov/ecy/publications/SummaryPages/2011083.html.

For info: Kasey Cykler, Ecology, 360/ 255-4386 or kasey.cykler@ecy.wa.gov; *Foster* Decision webpage at: https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-rights/Case-law/Foster-decision

INSTREAM FLOW RULE — WA

ECOLOGY RULE UPHELD

The Washington Supreme Court (Court) on August 6th unanimously upheld the Washington Department of Ecology's (Ecology's) instream flow rule for the Spokane River. The Court decided on rule WAC 173-557-050, which sets a minimum instream flow for the Spokane River during the summer. "This case concerns the authority of the Department of Ecology to set minimum instream flows for the rivers and streams in this state and the parameters of that authority… ." *Center for Environmental Law & Policy, et al. v. State of Washington, Department of Ecology*, Case No. 97684-8 (August 6, 2020); *Slip Op*. at 1.

On February 27, 2015, the Water Resources Management Program for the Spokane River and Spokane Valley Rathdrum Prairie (SVRP) Aquifer (Chapter 173-557 WAC) took effect for the benefit of the community and the river. The rule protects river flows and balances the needs of all water users by setting a regulatory threshold to determine when there is water available for new uses. The Water Resources Management Program for the SVRP Aquifer applies to the mainstem of the Spokane River and those portions of Spokane and Stevens counties within the boundary of the SVRP Aquifer. After February 27, 2015, all new uses of water from the Spokane River and SVRP Aquifer — including new water right permits and permit-exempt groundwater withdrawals — are required to comply with the rule.

If one is not able to connect to an existing water supplier for water needs, they may need to use groundwater from a permit-exempt well. Mitigation is required for all new groundwater uses in the SVRP Aquifer. Ecology acquired and placed into trust a senior water right for the purpose of offsetting river impacts from the few new domestic wells expected in the rule area. Ecology used this water right to establish the SVRP Aquifer Bank, which provides mitigation water to allow uninterruptible water for new permit-exempt uses.

On August 6, 2020 the Supreme Court, in a unanimous en banc (full court) decision, upheld Ecology's approach. *Center for Environmental Law & Policy, et al. v. State of Washington, Department of Ecology*, Case No. 97684-8 (August 6, 2020). The Court opinion and background information are available on Ecology's website shown below. "Ecology has authority under RCW 90.22.010 to set minimum instream flows for the rivers and streams in this state and properly promulgated WAC 173-557-050, a rule setting a summertime minimum instream flow rate for the Spokane River at 850 cfs from June 16 to September 30. Challengers of that rule fail to carry their burden to show the rule's invalidity." *Slip Op*. at 19-20.

For info: Ecology website: https://ecology.wa.gov/Water-Shorelines/Water-supply/Protecting-stream-flows/Instream-flow-implementation/Spokane-River-basin-rule

NEW PFAS STANDARDS — MI

MUNICIPAL WATER

On August 3, Michigan adopted new regulations limiting seven PFAS chemicals in municipal drinking water. The new drinking water standards also update Michigan's existing groundwater clean-up criteria of 70 ppt for PFOS and PFOA. The new groundwater standard is 8 ppt for PFOA and 16 ppt for PFOS. Known to scientists as per- and polyfluoroalkyl substances, PFAS are a group of potentially harmful contaminants used in thousands

WATER BRIEFS

of applications globally including firefighting foam, food packaging, and many other consumer products. These compounds also are used by industries such as tanneries, metal platers and clothing manufacturers.

The new groundwater standards result in 38 new sites being added into the Michigan PFAS Action Response Team's (MPART's) portfolio of ongoing PFAS investigations. The majority of these sites are landfills or former manufacturing facilities that are already the subject of ongoing state investigations into other forms of contamination. An interactive map of the sites is available at www.michigan.gov/pfasresponse/0,9038,7-365-86511_95645---,00.html.

The new standards, announced by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) on July 22, noted that Michigan will adopt a ruleset creating some of the nation's most comprehensive regulations limiting PFAS contamination in drinking water. Michigan acted due to the slow response by the federal government to PFAS contamination issues.

The ruleset became official on August 3rd. The new rules will provide drinking water standards for public water systems to achieve. Michigan's first-ever regulations limiting seven PFAS chemicals in drinking water will cover roughly 2,700 public water supplies around the state and exceed the current US Environmental Protection Agency (EPA) guidance on the chemicals.

Additional investigations may also be pursued based on monitoring data required of public water systems under the new rules. Roughly 30 public water systems were found to have total PFAS results of 10 ppt or higher during MPART's 2018 statewide sampling program and ongoing surveys. Compliance with the new standards at those systems and others will be determined based on a running annual average of sample results. Investigations near the public water systems with PFAS detections will be prioritized for further assessment and sampling by EGLE to determine potential PFAS sources and any potential risk to both public and private drinking water.

For info: MPART website at: Michigan.gov/PFASResponse

REUSE ACTION PLAN — US

EPA IMPLEMENTATION UPDATE

On July 23, the EPA issued the first update on the collaborative implementation of the National Water Reuse Action Plan (WRAP) that was launched on February 27, 2020. The *National Water Reuse Action Plan: Collaborative Implementation* included 37 actions with more than 200 distinct implementation milestones. In the months since the Action Plan's release, more than 80 milestones have been completed as action teams have: held virtual kickoff convenings; explored cross-action collaborative opportunities; and thought critically about how to integrate water reuse into new and existing programs. This progress is highlighted through the WRAP Online Platform, which promotes transparency and accountability by reflecting the current implementation status for all 37 actions. Nearly 300 activities have already been integrated into the online platform.

Noteworthy activities include:

- Collaboration between federal entities, states, and state associations to design and develop a compilation of existing fit-for-purpose specifications for various sources of water and uses.
- An interactive global water reuse live webchat, co-hosted by the U.S. Department of State's Bureau of Oceans and International Environmental and Scientific Affairs, and the Bureau of Global Public Affairs on World Water Day (March 19, 2020).
- $15 million in Conservation Innovation Grant funding, announced on April 28 by USDA to support the adoption of innovative conservation approaches on agricultural lands. This is the first time that water reuse has been included as a priority area within the program.
- The Water Security Grand Challenge's recent selection of ten Phase 1 winners for their Water Resource Recovery Prize and announcement of a $20 million funding opportunity to improve water and wastewater treatment system infrastructure.

For info: Update at: www.epa.gov/waterreuse/water-reuse-action-plan

WATER BLUEPRINT — AZ

WATER DATA TOOL

Arizona's Water Augmentation, Innovation and Conservation Council is examining potential means of augmenting water supplies by a variety of methods. The "Arizona Water Blueprint" — a data-rich, interactive map of Arizona's water resources and infrastructure created by the Kyl Center for Water Policy at Arizona State University — was recently added to these efforts. The Blueprint puts within the framework of a single tool a vast array of maps and data sets that depict a wide-ranging view of water in Arizona.

For info: Blueprint available at: https://azwaterblueprint.asu.edu/

ENVIRONMENTAL TRUST — NE

2020 GRANTS AWARDED

The Board of the Nebraska Environmental Trust recently announced that 118 projects will receive $20,000,000 in lottery proceeds for natural resource work in Nebraska. Out of these, 73 are newly funded grants and 45 are carryover projects. This is the 27th year of grants from the Trust, which has provided over $328 million dollars in lottery revenue to preserve and protect the air, water and land of Nebraska.

Funded projects included:

- Middle Niobrara NRD – Long Pine Creek Watershed Restoration – Phase 3
- Sandhills Task Force – Sandhills Conservation Partnership – Grassland and Wetland
- UNL, Board of Regents – Improving Statewide Performance of Conservation Investments On Eastern Red Cedar Invasions
- Spring Creek Prairie Audubon – Launching Spring Creek Prairie as a Demonstration Site for Tallgrass Prairie Conservation

A complete listing of all approved 2020 grants and summaries can be found on the Nebraska Environmental Trust website shown below.

Using the revenue from the Nebraska Lottery, the Trust has provided grants to over 2,300 projects across the state since 1992. Anyone can apply — citizens, conservation organizations, communities, businesses and individuals that want to protect Nebraska's natural habitat, improve water quality and quantity or find ways to manage waste.

For info: NET website at: https://environmentaltrust.nebraska.gov/

CALENDAR

August 11-12 OR & WEB
Shoreline Development & Permitting Seminar, Seaside. Seaside Civic & Convention Center, 415 First Avenue. Available Via Live Webcast. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

August 13-14 WEB
29th Annual Superconference: Arizona Water Law - Moving Forward: Development, Drought & Climate Webinar, Virtual Interactive Broadcast. For info: CLE International, 800/ 873-7130 or www.cle.com

August 17-18 Alberta
5th Annual Canadian Frac-Sand Exhibition & Conference - RESCHEDULED: 10/8 & 9/20, Calgary. For info: www.canada.frac-sand-conference.com

August 17-19 WEB
StormCon Direct - Virtual Event (RESCHEDULED to Sept. 9-10), Advancing Stormwater Management. For info: www.stormcon.com/stormcon/375627

August 17-20 OR
Oregon Association of Water Utilities - Annual Summer Classic Conference, Seaside. Seaside Convention Center. Pre-Conference Classes on August 17th; Full Conference Classes August 18-20. For info: OAWU at 503/ 837-1212 or https://oawu.net/training-events/annual-summer-classic-conference-seaside/

August 18 WEB
Effective Utility Management (EUM) Roadmap Webinar: Taking the Next Step Toward Sustainability, Webinar. 1:00 - 3:00 pm EDT. Presented by EPA Office of Wastewater Management. For info: https://rossstrategic.zoom.us/webinar/register/WN_FN_KDfIGTWCJDDjHrZvN4Q or www.epa.gov/npdes

August 18-20 CA
4th California Adaptation Forum 2020 - POSTPONED: DATE TBA, Riverside. TBA. Presented by the Local Government Commision & the California Governor's Office of Planning and Research. For info: Kelsey Wolf-Cloud at kwolfcloud@lgc.org or www.californiaadaptationforum.org

August 19 WEB
Hydrology in Water Law Proceedings Webinar. Virtual Via Interactive ZOOM Webcast. For info: Law Seminars International, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com

August 19 WEB
Sediment Remediation Webinar. 10:30 am - 12:00 pm PDT. Presented by Environmental Law Education Center. For info: Holly Duncan, ELEC, 503/ 282-5220 or https://elecenter.com/

August 20-21 WEB
Natural Resources Damages 13th Annual Conference on Litigating NRD Cases, Santa Fe. Virtual Via Interactive ZOOM Webcast. For info: Law Seminars International, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com

August 25-26 Australia
Australian Smart Water Utilities 2020: Reducing Water Leakage Across the Network Conference, Melbourne. For info: www.australia.smart-water-utilities.com/?join=VR

August 27-28 WA & WEB
3rd Annual Water Law in Central Washington Conference, Ellensburg. Central Washington University, 400 E. University Way. Available Via Live Webcast; PROMO Code SPP50 for $50 off for *TWR* Readers. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

August 27-28 WEB
Clean Water & Wetlands in California Conference Webcast, Virtual Via Interactive ZOOM Webcast. For info: Law Seminars International, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com

August 31-Sept. 1 ID & WEB
Water Law & Resource Issues Seminar - Idaho Water Users Association, Sun Valley. Sun Valley Resort. Also Available Virtually. For info: IWUA, 208/ 344-6690 or www.iwua.org

September 1-3 WEB
2020 Virtual Texas Groundwater Summit - MOVED to a Virtual Event, Virtual Event Questions to: groundwater@iemshows.com. For info: https://texasgroundwater.org/texas-groundwater-summit/

Sept 9-10 MT & WEB
20th Annual Montana Water Law Seminar, Helena. Great Northern Hotel. Available Via Live Webcast; PROMO Code SPP50 for $50 off for *TWR* Readers. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

September 9-10 WEB
StormCom Conference Direct - Virtual Event (Rescheduled from August 17-19). Advancing Stormwater Management. For info: www.stormcon.com/stormcon/375627

September 10-11 WEB
The Clean Water Act & Wetlands in Oregon. Virtual Via Interactive ZOOM Broadcast. For info: Law Seminars International, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com

September 13-16 WEB
35th Annual WateReuse Symposium: "Reaching New Heights in Water Reuse", Moves Online. RE: Water Reuse Laws, Policy, Funding, Research, Technology, & Public Acceptance. For info: https://watereuse.org/news-events/conferences/35th-annual-watereuse-symposium/

September 14-15 WEB
PFAS Litigation in the Pacific Northwest Webinar. Virtual Via Interactive ZOOM Webcast. For info: Law Seminars International, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com

September 14-15 WEB
Tribal Water Law 9th Annual Conference - Expanding Access in a Shrinking Environment. Virtual Interactive Broadcast. For info: CLE International, 800/ 873-7130 or www.cle.com

September 14-16 WEB
CASQA Annual Conference, Virtual Conference. General Attendee & Speaker Registration Deadline: Sept. 8th at 5:00 pm PT. Presented by the California Stormwater Quality Association. For info: www.casqa.org

September 14-16 WEB
WateReuse Symposium - 35th Annual, Virtual Conference. For info: https://watereuse.org/event/35th-annual-watereuse-symposium/

September 15-16 MT & WEB
Buying and Selling Ranches in Montana Seminar - 5th Annual, Billings. Northern Hotel. Available Via Live Webcast. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

September 16 WEB
NACWA Hot Topics in Clean Water Law Webinar, National Association of Clean Water Agencies Event. For info: www.nacwa.org/conferences-events/events-at-a-glance

September 16-22 WEB
Riverbank 2020. VIRTUAL EVENT. Fundraiser for Colorado Water Trust. For info: http://coloradowatertrust.org/riverbank-2020

September 17 WEB
Celebrate Water - Center for Environmental Law & Policy Annual Meeting & CLE Workshop, Seattle. Virtual - View Live on CELP's Facebook Page: CLE 4:00 - 5:00 pm PDT; Celebrate Water Reception 5:30 pm - 8 pm. Honoring Prof. Bob Anderson with the Ralph W. Johnson Award. For info: https://celp.org/celebrate-water-2020/

September 21-22 Alberta
Montney & Duvernay Shale Water Management 2020: Water Strategies for Northern Alberta Exhibition & Conference, Grande Prairie. Stonebridge Hotel. For info: https://alberta.shale-water-management.com/?join=VR

September 30-Oct. 1 NV
13th Annual WaterSmart Innovations Conference and Exposition - CANCELED. 2021 Conference: October 6-7 in Las Vegas. Location TBA. For info: https://watersmartinnovations.com

October 5-9 WEB
WEFTEC 2020: The Water Quality Event & Exhibition - VIRTUAL Event. Presented by Water Education Foundation. For info: www.weftec.org/future-weftec-schedule/

October 6 WEB
2020 AWRA-Washington Annual State Conference - Virtual Webinar, Presented by American Water Resources Association - Washigton Chapter. For info: www.waawra.org

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CALENDAR

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October 8 WEB
Environmental Law: Year in Review CLE, Via Webcast. Cosponsored by the Environmental & Natural Resources Section of the Oregon State BAR; 8:30 am - 4:30 pm; Environmental & Natural Resources Topics, Endangered Species Act, CERCLA, Oregon Forest Law & Policy Updates, Clean Water Act, Ocean & Coastal law, Et. For info: www.osbar.org/cle

October 6 WEB
Interstate Council on Water Policy 2020 Virtual Annual Meeting, Start at 9:00 am MDT. Water Planning Focus. For info: Sue Lowry, ICWP, www.icwp.org

October 8 WEB
Interstate Council on Water Policy 2020 Virtual Annual Meeting, Start at 9:00 am MDT. Water Data & Science Focus. For info: Sue Lowry, ICWP, www.icwp.org

October 8-9 Alberta
5th Annual Canadian Frac-Sand Exhibition & Conference, Calgary, The Westin Calgary. For info: www.canada.frac-sand-conference.com/?join=VR

October 8-9 WEB
PFAS Litigation in the Midwest Conference VIRTUAL Event. Virtual Via Interactive Zoom Broadcast. For info: Law Seminars International, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com

October 13 WEB
Interstate Council on Water Policy 2020 Virtual Annual Meeting, Start at 9:00 am MDT. Legislation & Policy Focus. For info: Sue Lowry, ICWP, www.icwp.org

October 15 WEB
Interstate Council on Water Policy 2020 Virtual Annual Meeting, Start at 9:00 am MDT. Interstate Water Management Focus; Annual Members' Meeting. For info: Sue Lowry, ICWP, www.icwp.org

October 19-20 WEB
Tribal Water in California Seminar - 7th Annual, Virtual Via Interactive Zoom Broadcast. For info: Law Seminars International, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com

October 24 WEB
WaterWatch of Oregon's 18th Annual Celebration of Rivers, Virtual Event: Details TBA. For info: WaterWatch, 503/ 295-4039 or www.waterwatch.org

October 25-27 FL
2020 Smart Water Summit, Ponte Vedra. Sawgrass Marriot Resort & Spa. Water Utilities Conference & Exhibition. For info: www.smartwatersummit.com