



The Water Report™

Water Rights, Water Quality & Water Solutions in the West

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WOTUS UPDATE

DETERMINING WATERS OF THE UNITED STATES
ARE WE ANY CLOSER TO CLARITY?

by Olivier Jamin, Davis Wright Tremaine and Rick Glick (Portland, OR)

Introduction

In 1948, Congress enacted the Federal Water Pollution Control Act, amended in 1972 to become the Clean Water Act (CWA).¹ With the passage of the CWA, the United States embarked on an ambitious mission to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”² The primary tool for implementing this lofty goal is to prohibit the “discharge” of a “pollutant” from a “point source” into “navigable waters,”³ except as allowed under a permit. All of these terms are defined in the CWA, some more clearly than others, but all have been further elucidated by the agencies by rule and guidance, and a long line of judicial interpretations.

At least in the case of discharges, pollutants, and point sources, Congress gave some direction, however imperfect. But in the case of “navigable waters,” Congress simply punted. “Navigable waters” are defined simply as “waters of the United States [WOTUS], including the territorial seas.” The agencies and courts have struggled ever since to give meaning to this vaguest of definitions and to clarify just how far the scope of CWA regulatory jurisdiction extends. This effort has mostly resulted in failure. Successive administrations have proposed rules, which have led to massive litigation continuing to this day.

The CWA was a reaction to damning reports of highly contaminated waterways throughout the US, and perhaps most spectacularly to the 1969 Cuyahoga River fire. One of the most polluted rivers in the US, the Cuyahoga experienced a minimum of 13 fires from pollution-related causes between 1868 and 1969.

While CWA implementation over the last 50 years has achieved significant improvement of rivers and lakes polluted by industrial and municipal waste discharges, the extension of CWA regulation over wetlands has been more problematic. It is in the wetlands context that the inadequacies of the WOTUS definition have been made apparent.

In the wake of the US Supreme Court’s inability to formulate a binding test for CWA jurisdiction in *Rapanos v. United States*,⁴ the agencies tried through guidance to provide a window into their thinking. The Obama administration enacted its version of the WOTUS rule in 2015,⁵ rescinded by the US Environmental Protection Agency (EPA) under the Trump administration in 2019 and replaced by its own rule in 2020.⁶ In due course, the Biden administration promptly rescinded the Trump era rule and is now working on its own WOTUS rule. In a back and forth familiar to those practicing environmental law, conservatives often describe broader definitions of WOTUS as a regulatory overreach, while environmentalists have criticized a narrower definition as insufficiently protective. This back and forth has led to conflicting decisions in lower courts, further muddying the WOTUS waters.

WOTUS**Moot Case?****Rulemaking****“Navigable Waters”****1973 EPA Regs****Broadened Definition****The Water Report**

(ISSN 1946-116X)
is published monthly by
Sky Island Insights LLC
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Tucson, AZ 85745

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email
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website:
www.TheWaterReport.com

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\$299 per year
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Upping the ante, the Supreme Court has granted a petition for a writ of certiorari in *Sackett v. EPA*,⁷ which could reshape the definition of WOTUS. It is likely that the Biden administration is now racing to publish a new rule that would make the Supreme Court case moot in an effort to prevent the conservative supermajority of the Court from narrowing WOTUS — especially in the wake of the Court’s decision last June in *West Virginia v. EPA*⁸ limiting EPA’s ability to regulate air emissions.

This article briefly reviews CWA history and WOTUS evolution and summarizes the most recent attempt at clarity by the Biden administration.

Background**HOW DID WE GET HERE?**

For the past 50 years, environmentalists, permit applicants, legislators, agencies, and courts have struggled with the meaning of “waters of the United States” in the absence of a clear definition in the CWA itself. Throughout the years, the US Army Corps of Engineers (Army Corps) and EPA have tried to bring clarity to the term through multiple rulemaking efforts but continuous judicial challenges and reversals between presidential administrations have left the regulations promulgated in 1986 and 1988 mostly intact.

The Early Days

Historically, CWA jurisdiction applied to “navigable waters” of the United States, intended to mean only waters navigable in fact. The CWA’s legislative history, however, made clear that Congress “fully intend[ed] that the term ‘navigable waters’ be given the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes.”⁹ In turn, the 1973 EPA regulations defined “waters of the U.S.” as:

- (1) All navigable waters of the United States;
- (2) Tributaries of navigable waters of the United States;
- (3) Interstate Waters;
- (4) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes;
- (5) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce; and
- (6) Intrastate lakes, rivers, and streams which are utilized for industrial purposes by industries in interstate commerce.¹⁰

The 1973 regulations were the first step in broadening the WOTUS definition to what we know today, and it immediately generated opposition and was struck down in 1975.¹¹ The Army Corps adopted regulations in 1977 that mostly mirrored the 1973 rules. Congress’ 1977 amendment of the CWA codified the 1977 regulations and temporarily settled the disagreement over the reach of the CWA. The US Attorney General subsequently published a legal opinion in 1979 providing that EPA had final administrative authority to determine the reach of the term “navigable waters.”¹²

The Supreme Court Gets Involved

Beginning in 1985 with the *Riverside Bayview* and *SWANCC* decisions, the United States Supreme Court several times confronted the jurisdictional limits of the CWA. Many disputes around the meaning of WOTUS have been and still are focused on wetlands because they are often targeted as potential development areas, and development would become significantly more difficult if the CWA applied to them. As such, they have offered an ideal battleground for the definition of WOTUS.

In *United States v. Riverside Bayview Homes, Inc.*,¹³ the Supreme Court first reviewed a legal challenge to the Army Corps’ interpretation of “waters of the United States.” A property owner challenged a jurisdictional determination resulting in the CWA applying to wetlands abutting Black Creek, a navigable waterway.¹⁴ In agreeing that the wetlands at issue were within the jurisdictional scope of the CWA, the Supreme Court (Court) found that the Army Corps’ position was reasonable because of the interconnectedness of navigable waters and adjacent wetlands. Specifically, the Court found that water “moves in hydrological cycles,” and not in “artificial lines.”¹⁵ *Riverside Bayview* established the principle that wetlands adjacent to a navigable waterway are within the definition of WOTUS, regardless of whether flooding by the navigable waterway creates the wet conditions supporting CWA jurisdiction. If the adjacent wetlands are wet enough often enough to support plants requiring wet conditions, they will be subject to regulation, even if the wet conditions are not caused by the abutting waterway.

While the late 1980s extended the scope of the CWA, the late 1990s then limited the jurisdictional reach of the statute. In *United States v. Wilson*, the Fourth Circuit US Court of Appeals overturned the conviction of three defendants found to have violated the CWA for knowingly discharging fill material into

<p>WOTUS</p>	<p>wetlands ten miles from the Chesapeake Bay and six miles from the Potomac River in Maryland.¹⁶ The Army Corps’ regulatory definition of “waters of the United States” included waters “the use, degradation or destruction of which could affect interstate or foreign commerce.”¹⁷ The court ruled this was a violation of the Commerce Clause because the regulated conduct had to “substantially affect” interstate commerce.¹⁸ The court held that the Corps’ interpretation “intolerably stretches the ordinary meaning of the word ‘adjacent’ [...] to include wetlands remote from any interstate or navigable waters.”¹⁹</p>
<p>“Adjacent”</p>	<p>In reaction, the Army Corps published guidance in 2000 to clarify that:</p>
<p>Intermittent & Ephemeral Streams</p>	<ul style="list-style-type: none"> • First, in the Fourth Circuit, isolated waters must have an actual connection to interstate or foreign commerce to be regulated under the CWA.²⁰ • Second, the Corps explained that “intermittent streams,” with flowing water supplied by groundwater during some times of the year only, and “ephemeral streams” that result from precipitation events could be jurisdictional.²¹
<p>Migratory Bird Rule</p>	<p>The next court battle involved what became known as the Migratory Bird Rule. The Army Corps and EPA had interpreted the CWA to apply to waters and wetlands that were used or may have been used by migratory birds crossing state lines, asserting that migratory birds were articles of interstate commerce.²² That rule was challenged in <i>Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers</i>, (<i>SWANCC</i>).²³ The SWANCC had selected an abandoned sand and gravel pit as a solid waste disposal site — former excavation trenches at the site had previously become ponds and had been used by migratory birds.²⁴ The Army Corps determined that a permit was needed and subsequently denied the permit.²⁵ In a 5-4 ruling, the Supreme Court rejected the Corps’ arguments and held that assertion of jurisdiction over isolated waters based purely on migratory birds use exceeded its statutory authority.²⁶ <i>SWANCC</i> introduced the notion that isolated ponds and waters needed a “significant nexus” to traditionally navigable waters to be subject to CWA jurisdiction.²⁷ In response, the agencies concluded that they could continue to exercise jurisdiction over isolated waters if their degradation or destruction could affect other jurisdictional waters, which would constitute a “significant nexus.”²⁸</p>
<p>“Significant Nexus”</p>	<p>And Then Came Rapanos</p>
<p>Plurality Test</p>	<p>The most recent attempt by the Supreme Court to clarify the scope of WOTUS was <i>Rapanos v. United States</i>.²⁹ <i>Rapanos</i> consolidated two cases from the Sixth Circuit US Court of Appeals questioning jurisdiction over wetlands physically separated from navigable waters.³⁰ The <i>Carabell</i> case involved “wetlands that are hydrologically isolated from any of the ‘waters of the United States,’”³¹ while <i>Rapanos</i> asked whether CWA jurisdiction applied to nonnavigable wetlands “that do not even abut a navigable water.”³² A badly divided Court set aside the Army Corps’ determination of jurisdiction but failed to provide clear guidance to WOTUS jurisdictional questions. Instead, a plurality of the Court joined an opinion authored by Justice Scalia, while Justice Kennedy, authored a separate concurring opinion in which he proposed an alternative test.</p>
<p>Scalia Position</p>	<p>Justice Scalia warned against the Army Corps’ increasingly broad interpretation of the term “waters of the United States,” and its routine application to tributaries.³³ The Army Corps’ interpretation of jurisdiction in <i>Rapanos</i> “stretche[d] the outer limits of Congress’s commerce power and raises difficult questions about the ultimate scope of that power.”³⁴ In response, Justice Scalia and the plurality found that “waters of the United States” includes “only those relatively permanent, standing or continuously flowing bodies of water ‘forming geographic features’ that are described in ordinary parlance as ‘streams[,]...oceans, rivers, [and] lakes.’ The phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.”³⁵ The plurality would also limit jurisdiction to wetlands with a “continuous surface connection to bodies of water that are ‘waters of the United States’ in their own right, so that there is no clear demarcation between ‘waters’ and wetlands.”³⁶</p>
<p>“Significant Nexus” Case-by-Case</p>	<p>Justice Kennedy provided a different test for jurisdictional determinations under the CWA and took issue with the Army Corps’ ability to regulate wetlands. He argued that the Army Corps should determine, on a case-by-case basis, whether the water at issue possessed a “significant nexus” to waters that are navigable in fact.³⁷ Justice Kennedy explained that a significant nexus exists when the wetland, alone or in connection with similarly situated properties, significantly impacts the chemical, physical, and biological integrity of a traditional navigable water.³⁸</p>
<p>Differing Courts</p>	<p>Since <i>Rapanos</i>, lower courts have struggled to decide which test to apply to jurisdictional determination. Generally, when a majority of the Supreme Court agrees only on the outcome of a case but not on the reason for the outcome, lower courts will follow the Justice’s opinion that rests on the narrowest grounds.³⁹ But the “narrowest ruling” is not always evident, and some lower courts have applied Scalia’s test, while others followed Kennedy, and still other circuit courts held that waters that satisfy either Justice Scalia’s test or the “significant nexus” test are regulated under the CWA.⁴⁰</p>

WOTUS
2008 Guidelines
Continuing Litigation
2015 Clean Water Rule
Categorical Determinations
“Adjacent” Definition
Agencies’ Interpretation
Trump Order
States Split
1986 Rule via <i>Rapanos</i> Governs

Responding to *Rapanos*⁴¹, the Army Corps and EPA published guidance in 2008 in which waters meeting either test would qualify as “waters of the United States,” establishing three categories of waters:

- First, the agencies would assert jurisdiction over traditional navigable waters, wetlands adjacent to these waters, “relatively permanent” tributaries, and wetlands that directly abut such tributaries.⁴²
- Second, nonnavigable tributaries that are not relatively permanent, wetlands adjacent to those tributaries, and wetlands adjacent to relatively permanent tributaries would be analyzed on a case-by-case basis under the significant nexus test.⁴³
- Third, the agencies found no jurisdiction over swales or erosional features, and ditches.⁴⁴

While providing some clarity, this guidance left many unanswered questions regarding WOTUS jurisdiction. In 2011, the agencies yet again engaged in rulemaking that would have increased the jurisdictional scope of the CWA, but quickly abandoned the effort because of congressional opposition.⁴⁵ Post-*Rapanos*, the 2008 guidance is mostly still in place, commingled with rulemakings in 2015 and 2019. All this has become buried deep in litigation sadly reminiscent of the infamously interminable *Jarndyce v. Jarndyce* case chronicled in Charles Dickens’ Bleak House.

Obama, Trump, and Biden Continue the WOTUS Fight

The Clean Water Rule

After the agencies failed to adopt a new WOTUS rule in 2011, a new rulemaking effort eventually led to the adoption of the 2015 Clean Water Rule during President Obama’s second term in office. The new rule generally kept the structure of the post-*Rapanos* 2008 interpretation in place, but aimed at reducing the number of waterbodies subject to the case-by-case significant nexus test, and increase the number of categorical jurisdictional determinations.⁴⁶ Among the new rule’s categorical jurisdictional waters were traditionally navigable waters, all interstate waters and wetlands, the territorial seas, tributaries, impoundments, and all waters adjacent to those listed waters. Perhaps most significantly, the Clean Water Rule added that a water was “adjacent” if it met the definition of “neighboring”: if it is located in whole or in part within 100 feet of the ordinary high-water mark of a jurisdictional water, or within the 100-year floodplain and not more than 1,500 feet from such waters.⁴⁷

Over one million comments were submitted to the rule, which drew criticism from environmental groups (for not being protective enough of waterbodies) and industry groups (for being too protective). In January 2016, the US Senate and House of Representatives passed a resolution of disapproval to nullify the rule.⁴⁸ President Obama vetoed the resolution and a procedural vote failed to override the veto,⁴⁹ but court challenges came quickly.

The first significant blow came from a federal court in North Dakota, where Judge Ralph R. Erickson preliminarily enjoined the “exceptionally expansive view” of the agencies’ interpretation.⁵⁰ Judge Erickson relied on internal documents showing disagreement between EPA and the Army Corps over the technical support and policy choices that led to the adoption of the rule and concluded that the agencies’ interpretation went beyond the discretion granted by Congress in the CWA.⁵¹ Elsewhere, the Sixth Circuit somewhat surprisingly issued a stay of the rule after acknowledging that it may not have jurisdiction, and after the petitioners moved to dismiss their own petition for lack of jurisdiction.⁵²

Shortly after taking office, former President Trump signed Executive Order No. 13,778,⁵³ aimed at abandoning the Clean Water Rule and encouraging EPA and the Army Corps to interpret the term “waters of the United States” consistently with Justice Scalia’s opinion in *Rapanos*.⁵⁴

Trump’s Take on WOTUS

Under the Trump presidency, EPA and the Army Corps first sought comment on a proposed rule to rescind the 2015 rule and replace it with the text that existed before its promulgation.⁵⁵ Second, the agencies released a new proposed rule in December 2018 redefining the term “waters of the United States.”⁵⁶ But even dismantling the Clean Water Rule wasn’t easy. The rescission of the rule was invalidated by a federal judge in *South Carolina Coastal Conservation League v. Pruitt*,⁵⁷ because the notice-and-comment opportunity was too narrow and violated the Administrative Procedures Act (APA).⁵⁸ At the time of the ruling, the 2015 WOTUS rule had been stayed in 24 states, and striking down the Trump administration rescission of the rule meant that the other 26 states would still be subject to the 2015 rule, splitting the country in half regarding how to interpret “waters of the United States.”⁵⁹

In September 2019, the Trump administration finalized the repeal of the 2015 rule, ending “the previous administration’s overreach in the federal regulation of U.S. waters and recodifying the longstanding and familiar regulatory text that previously existed.”⁶⁰ The repeal meant that, until a new rule defining WOTUS is adopted, the old 1986 rule, as interpreted in *Rapanos* and the 2008 guidance, would continue governing the field.

WOTUS	<p>In the meantime, the Trump administration started working on a new interpretation of “waters of the United States.” Unsurprisingly, this new effort generated a lot of controversy.⁶¹ The approach chosen by the Administration sought an easy solution to a complex problem.⁶² But as evidenced by the long and complicated history of WOTUS, the interconnection of natural systems is by nature complex.</p> <p>The Trump administration’s proposed rule adopted Justice Scalia’s position in <i>Rapanos</i>, where he explained:</p>
Trump Rule Proposal	<p>In sum, on its only plausible interpretation, the phrase “the waters of the United States” includes only those relatively permanent, standing or continuously flowing bodies of water “forming geographic features” that are described in ordinary parlance as “streams[,]... oceans, rivers, [and] lakes.” <i>See Webster’s Second 2882.</i> The phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.⁶³</p>
Significant Nexus Nixed	<p>This simplistic interpretation stands in sharp contrast to Justice Kennedy’s approach, adopted in the 2015 rule, which requires a complex analysis and grants agencies a certain amount of discretion. Trump’s Navigable Waters Protection Rule (NWPR) went into effect on June 22, 2020,⁶⁴ in effect eliminating case-by-case significant nexus determinations and removing interstate waters and wetlands as a separate category of WOTUS.⁶⁵</p>
More Litigation	<p>Some industrial groups supported the NWPR as providing greater certainty and clarity, while many environmental groups and blue states voiced strong opposition due to concerns that the rule would roll back protections on many waters and would adversely affect water quality around the United States.⁶⁶ In February 2020, EPA’s Science Advisory Board (SAB) found that the proposed NWPR would “decrease[] protection for our Nation’s waters” and concluded it did not incorporate best available science. In a familiar pattern, the NWPR quickly drew court challenges, and the US District Court for the District of Colorado issued a preliminary injunction, which barred its implementation in Colorado on June 19, 2020,⁶⁷ a decision reversed by the US Court of Appeals for the Tenth Circuit.⁶⁸</p>
Biden Order	<p>Biden Embarks On His Own WOTUS Journey</p> <p>President Biden, much like his predecessor, lost no time in diving into WOTUS. On January 20, 2021, he signed Executive Order (EO) 13990, which revoked the Trump administration’s EO, directing the agencies to review and rescind the Clean Water Rule.⁶⁹ EPA also sent a letter to the US Department of Justice (DOJ) on January 21, 2021, requesting the DOJ to seek stays for pending litigation involving judicial review of EPA regulations issued during the Trump administration, which included a number of challenges to the NWPR.⁷⁰ After reviewing the NWPR, agencies found that the rule had already had a disproportionate impact in arid states like Arizona and New Mexico, and noted that at least 333 projects formerly requiring CWA Section 404 permits were now non-jurisdictional under the NWPR.⁷¹</p>
Arid States Impact	

Authors

Olivier Jamin & Rick Glick

will be speaking at the

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WOTUS

Foundational Rule

Despite those concerns, no court has ruled on the merits of the NWPR, partly because the Army Corps and EPA have asked courts to remand the rule while they worked on a new rule.⁷² In July 2021, the Army Corps and EPA began engaging with stakeholders and solicited preproposal feedback from those stakeholders. The ensuing proposed rule on December 7, 2021, would restore pre-2015 protections before working on a second rule that would build upon the regulatory foundation of the first one. The so-called Foundational Rule adopts seven WOTUS categories from the pre-2015 regulations but excludes impoundments of waters determined to be jurisdictional under the “other waters” category, tributaries of “other waters,” and wetlands adjacent to “other waters.”⁷³ The Foundational Rule would also clarify that tributaries, adjacent wetlands, and other waters would be jurisdictional if meeting either the relatively permanent standard or the significant nexus standard, in an effort to incorporate the findings of *SWANCC* and *Rapanos*.⁷⁴ The agencies had set August 2022 as a target date for publishing the final rule, but as of this writing we are still waiting to see it published.

Current Supreme Court Case

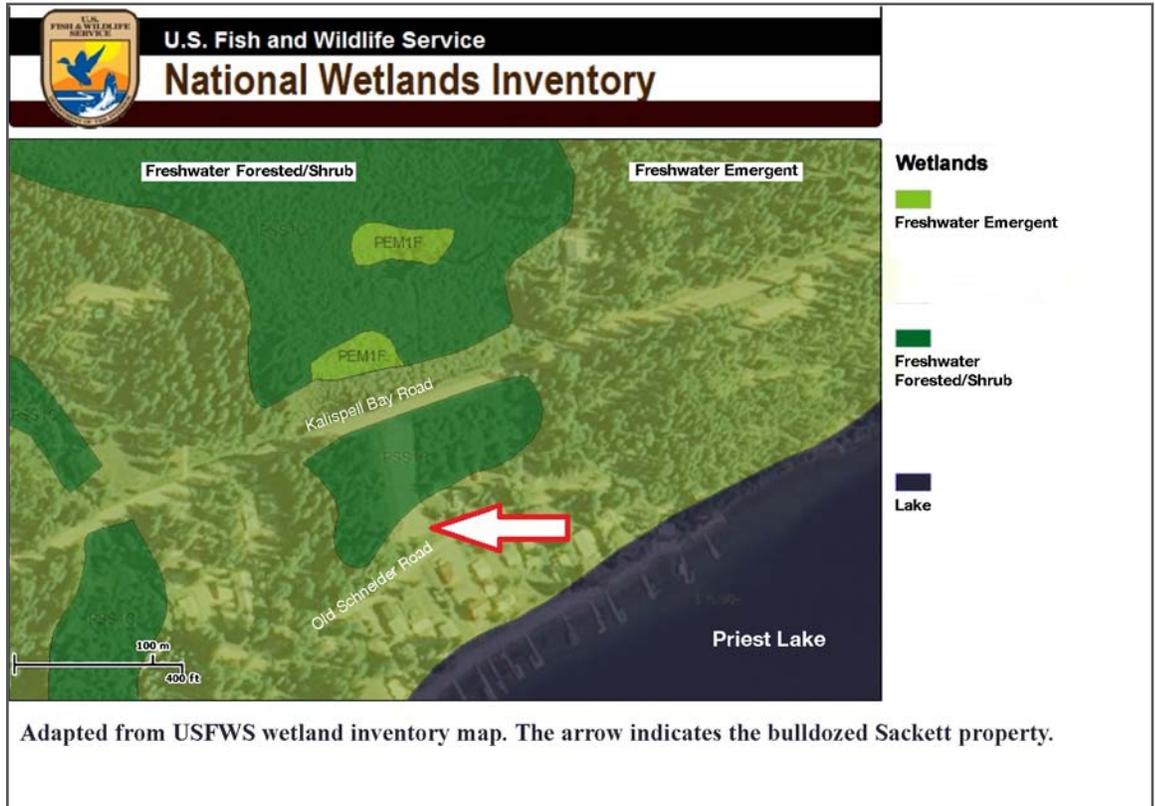
***Sackett v. EPA* — Once More into the Breach**

Sackett Wetlands

In the midst of the back and forth between various administrations, the Supreme Court could once again overhaul the definition of WOTUS. On January 24, 2022, the Court agreed to review *Sackett v. EPA* in a matter questioning whether certain wetlands are “waters of the United States.” The petitioners own land in Idaho near Priest Lake and across a road from wetlands draining into a tributary and eventually feeding into Priest Lake. The Sacketts have been trying to build on the parcel in a long-running dispute with the agencies. Recently, the US Court of Appeals for the Ninth Circuit had upheld EPA’s conclusion that the property was jurisdictional based on Justice Kennedy’s significant nexus test; all of the Circuits ruling post-*Rapanos* have either assessed jurisdiction based on the Kennedy text alone, or considered whether jurisdiction lies under either the Scalia or Kennedy test.⁷⁵ The Sacketts appealed to the Supreme Court, urging the emboldened conservative supermajority to revisit *Rapanos* and definitively adopt Justice Scalia’s plurality test.⁷⁶ Importantly, the Supreme Court specified that review would be limited to “whether the Ninth Circuit set forth the proper test for determining whether wetlands are ‘waters of the United States’ under the Clean Water Act.”⁷⁷ Oral argument for this case was held on October 3, 2022.

Oral Argument

Some lawmakers have called on the EPA to pause the rulemaking process and wait for a decision in *Sackett*, but the Biden administration has indicated it still intends to move forward with a new rule, perhaps to argue that the Court’s review would become moot and mitigate the possibility of a new decision narrowing the scope of WOTUS. If the Court issues a decision prior to the EPA finalizing its new rule, the agency would almost certainly need to make adjustments to the rule. At the time this article was written,



WOTUS

“Continuous Surface Connection”

Jurisdictional Impacts

Jurisdictional Changes

Pending Supreme Court Decision

Congressional Action?

This article is an update of “*Waters of the United States*”: *Nearly 50 Years of Jurisdictional Uncertainty, and More to Come*, authored by the same authors and published in *The Journal of Water Law*, Volume 26.

the Court had just heard oral argument in the *Sackett* case, with plaintiff arguing that only wetlands with a direct “continuous surface connection” to jurisdictional waters should be jurisdictional. Justices Gorsuch and Alito seemed most sympathetic to that claim, but other conservative justices, including Chief Justice Roberts and Justice Kavanaugh, seemed unwilling to go that far, with Justice Kavanaugh asking why seven straight administrations had disagreed with the Sacketts’ argument. The liberal block of the court also seemed to embrace Justice Kennedy’s significant nexus theory. Based on the oral argument alone, it would appear the Court would side with EPA, but it remains unclear whether enough justices would come together to provide a more definitive test for WOTUS jurisdiction.

Discussing changes to the definition of WOTUS can seem a bit abstract, but recent studies focused on the NWPR help shed light on the environmental and jurisdictional impact of the different rules. Estimates prepared by EPA and the Army Corps in 2017 indicated that the NWPR was likely to exclude at least 18% of streams and 51% of wetlands nationwide from protection under the CWA.⁷⁸ Reports also noted disparate impacts on different regions of the US, with the arid West much more likely to be affected by recent efforts to narrow the WOTUS definition due to the higher number of ephemeral and intermittent waters in states like Arizona, New Mexico, Colorado, or California.⁷⁹ The exclusion of certain waters from the WOTUS definition in turn impacts the application of important CWA water quality and permitting programs, which would seem to undermine the lofty goal of restoring and maintaining “the chemical, physical, and biological integrity of the Nation’s waters.”

Conclusion

Fifty years ago, Congress enacted the Clean Water Act to restore the quality of the nations’ waters. The CWA applies to “navigable waters,” itself defined as “waters of the United States.” This perhaps simple sentence would become the subject of intense and constant debate, and perhaps one of the most controversial topics of US environmental law. Jurisdiction was initially limited to waters that were “navigable in fact,” meaning capable of carrying interstate commerce. Over time, regulations adopted by the US Army Corps of Engineers and EPA extended jurisdiction to tributaries and adjacent wetlands, because degradation of these waters would result in degradation of the navigable waters, and to some intermittent streams.

After thirty years of court decisions and failed attempts to clarify the reach of the CWA, the operational definition of WOTUS remains mostly identical to the definition adopted in the second half of the 1980s. The debate has intensified in the last few years, with the Obama, Trump, and Biden administrations each making an attempt to clarify WOTUS, so far unsuccessfully. The next few months are sure to remain a bit unpredictable and many will be anxiously waiting to see which of a Supreme Court decision or new EPA regulations come first, and the effects that one may have on the other.

Perhaps the best solution to the WOTUS mess would come from Congress through an amendment of the CWA, though lawmakers may not have the appetite to embark on yet another contentious debate. The stakes are even higher today than when the CWA was enacted. In 1972, the priority policy concern was end-of-pipe industrial and municipal discharge of pollutants directly to rivers and lakes. While this imperative still exists, the framework of the CWA gives the agencies potent tools for addressing these point source discharges. Jurisdiction is often clear⁸⁰ and the discharges are subject to regulation. Much progress has been made. In contrast, a major water pollution concern today derives from nonpoint sources — e.g., farms, fields, and dams — that are not directly subject to the CWA’s permit requirements. Nonpoint source pollutants — like temperature, suspended solids, and nutrients (nitrogen and phosphorus) — are direct threats to wetlands viability.

In the meantime, flexibility remains the best ally for regulated entities, understanding that their status under the CWA could change based on judicial decisions or a change in administration, which most would agree is neither good for business nor the environment. For its 50th anniversary, will the Supreme Court or EPA give WOTUS much needed clarity? Or will we continue to witness more twists and turns in the WOTUS saga?

FOR ADDITIONAL INFORMATION:

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WOTUS

Endnotes

- 1 Act to Amend the Federal Water Pollution Control Act, PL 92-500 § 502, 86 Stat. 816, 886 (1972)
- 2 33 U.S.C. § 1251
- 3 33 U.S.C. § 1362
- 4 547 U.S.C. 715 (2006)
- 5 Clean Water Rule, 80 Fed. Reg. 37,054 (2015)
- 6 Navigable Waters Protection Rule, 85 Fed. Reg. 22,250 (2020)
- 7 *Sackett v. EPA, cert. granted*, 142 S.Ct. 896 (No. 21-454) (U.S. Jan. 24, 2022). The court scheduled oral arguments for October 3, 2022
- 8 597 U.S. ____ (2022)
- 9 See S. REPT. NO. 92-1236, at 144 (1972) (Conf Rep)
- 10 See National Pollutant Discharge Elimination System, 38 Fed. Reg. 13528, 13,529 (1973) (codified at 40 C.F.R. § 125.1(p) (1974))
- 11 See *Nat. Res. Def. Council, Inc v. Callaway*, 392 F.Supp. 685 (D.D.C. 1975)
- 12 See Dep't of the Army & EPA, *Memo of Agreement: Exemptions Under Section 404(F) of the Clean Water Act* (1989), available at: www.usace.army.mil/Portals/2/docs/civilworks/mous/enfmoa.pdf
- 13 474 U.S. 121 (1985)
- 14 *Id.* at 124-25
- 15 *Id.* at 133
- 16 *United States v. Wilson*, 133 F.3d 251, 254, 257 (4th Cir. 1997)
- 17 *Supra* note 18
- 18 *Wilson*, 133 F.3d at 256. For a more detailed discussion of how the Commerce Clause jurisprudence influenced the *Wilson* decision, see Congressional Research Service, *supra* note 16, at 17¹⁹ *Id.* at 258
- 20 See *Final Notice of Issuance and Modification of Nationwide Permits*, 65 Fed. Reg. 12,818, 12,824 (March 9, 2000)
- 21 *Id.* at 12,823, 12,897
- 22 See *Final Rule for Regulatory Programs of the Corps of Engineers*, 51 Fed. Reg. 41,206, 41,217 (Nov. 13, 1986)²³ 531 U.S. 159 (2001)
- 24 *Id.* at 163
- 25 *Id.* at 164. The Corps had initially concluded that it had no jurisdiction over the site, but an environmental organization informed the Corps about the use of the ponds by migratory bird species, which led the Corps to eventually exercise jurisdiction. *Id.*
- 26 *Id.* at 173-74
- 27 *Id.* at 167
- 28 Joint Memorandum from Gary S. Guzy, General Counsel, EPA, and Robert M Andersen, Chief Counsel, Army Corps on Supreme Court Rule Concerning CWA Jurisdiction Over Isolated Waters (January 19, 2001) available at: www.environment.fhwa.dot.gov/ecosystems/laws_swepacoe.asp [hereinafter 2001 Joint Memorandum]
- 29 547 U.S. 715 (2006)
- 30 *Rapanos v. United States*, 376 F.3d 629 (6th Cir. 2004), *cert. granted*, 546 U.S. 932-33 (2005); *Carabell v. U.S. Army Corps of Eng'rs*, 391 F.3d 704 (6th Cir 2004), *cert. granted* 546 U.S. 932-33 (2005)
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- 44 *Id.*
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WOTUS

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- 49 See U.S. President (Obama) Veto Message from the President—S. J. 22 (Jan. 19, 2016) available at: obamawhitehouse.archives.gov/the-press-office/2016/01/19/president-obama-vetoes-sj-22.
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- 64 Army Corps & EPA, “*The Navigable Waters Protection Rule: Definition of ‘Waters of the United States,’*” 85 Fed. Reg. 22250, April 21, 2020 (hereinafter “Navigable Waters Protection Rule”)
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**Adding
Hydro**

**Unused
Resources**

**Generating
Capacity**

**Storage
Flexibility**

Benefits

**Promoting
Development**

**Two-Year
Process**

**Qualification
Factors**

FERC Update

**Expedited
Schedule**

ADDED HYDROPOWER

ADDING HYDROPOWER TO EXISTING WATER INFRASTRUCTURE

by Elizabeth McCormick
Troutman Pepper Hamilton Sanders, LLP (Washington, DC)

Introduction

Of the approximately 90,000 dams in the United States, only about 3% generate electricity. As the country moves increasingly away from fossil fuels and towards a clean energy economy, it will be increasingly vital to tap these unused resources by adding hydroelectric generation to existing non-powered dams. Many dams were built in the United States during the twentieth century for a variety of purposes including flood control, irrigation, navigation, water supply, and recreation. While we are currently seeing drought in the West, the last several years have also seen an increase in precipitation in the Midwest, South, and East, which may provide opportunities for hydroelectric generating resources in those areas.

A 2016 US Department of Energy (DOE) study forecasted that the United States could increase its current hydroelectric generating capacity of approximately 101 gigawatts to 150 gigawatts by 2050, simply by upgrading existing hydroelectric resources, adding additional pumped storage capacity, and retrofitting nonpowered dams for hydroelectric generation. *Hydropower Vision Report*, DOE (2016) at 1. By installing electric generating equipment at these currently non-powered dams, America’s hydropower industry can tap the waters already flowing through this existing infrastructure, with minimal environmental impact. Importantly, adding more hydropower to the nation’s energy mix could play a crucial and potentially unique role in energy production. While other renewable resources — namely solar and wind — produce energy intermittently, hydropower facilities can operate at any time of the day and can shut down or ramp up energy production quickly, providing energy grids with stopgap flexibility during peak demand or in the case of blackouts.

The addition of hydropower to non-powered dams can also be financially attractive to developers. Typically, the dam’s operation is not changed, so adding hydroelectric generation to existing dams involves less construction, fewer environmental impacts, and less opposition from local communities than there would be for a project involving new electric generating infrastructure.

Legislative Initiatives

In recent years, Congress has taken several steps to spur the development of hydroelectric generation at non-powered dams. First, the America’s Water Infrastructure Act (AWIA) of 2018 included a provision entitled *Promoting Development at Nonpowered Dams*. 16 U.S.C. § 823e. This section, which amends the Federal Power Act (FPA), requires that the Federal Energy Regulatory Commission (FERC), the federal agency responsible for licensing non-federal hydroelectric facilities, “seek[s] to ensure” that decisions on qualifying hydropower projects at nonpowered dams are issued within two years of receipt of a completed license application. That is far faster than the typical five to seven years usually required to license new hydroelectric projects.

Under this new section, “qualifying facilities” are those that:

- are not already licensed or exempted by FERC;
- are located at a non-powered dam in existence prior to enactment of AWIA (i.e., before October 23, 2018); and
- for which the addition of hydroelectric generation will not “result in any material change to the storage, release, or flow operations” of the dam. *Id.*

In 2019, FERC updated its regulations to implement AWIA. With respect to an entity requesting to use the new expedited process, FERC now provides that an applicant must first demonstrate compliance with certain federal statutes including the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), and the Clean Water Act (CWA), as well as non-opposition from the dam owner and the state or local manager of any public park, recreation facility, or wildlife refuge in which the project would be located. 18 C.F.R. Pt. 7. If FERC grants the request, it will issue a notice that the application is ready for environmental analysis and establish an “expedited licensing process schedule” for all remaining regulatory obligations for licensing. However, to date, no applicants have successfully completed the expedited licensing process. As FERC recently reported to Congress, “hydropower developers have not availed themselves of the program either due to the complexity of the proposed project or a preference to use FERC’s established [licensing processes].” See Letter from FERC Chairman Glick to US Rep. Cathy McMorris Rodgers at 2 (Aug. 19, 2022).

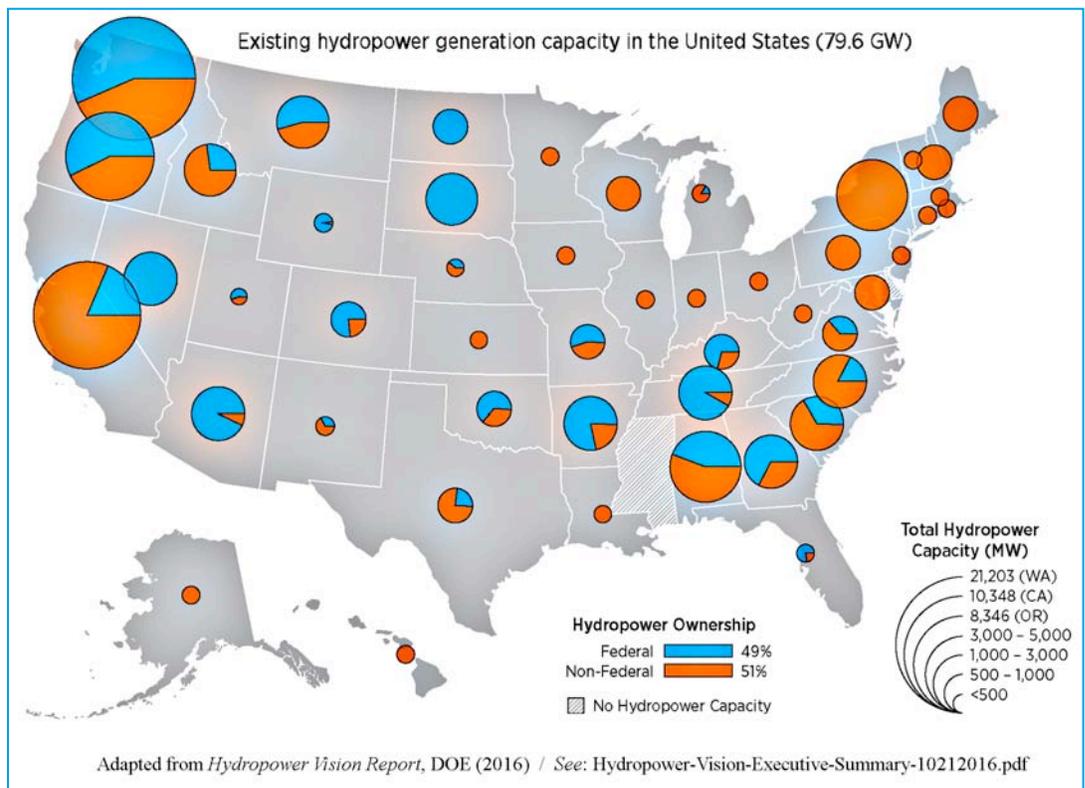
- Adding Hydro**
- Additional Funding**
- FERC Regulation**
- License Prohibitions**
- Declaratory Order**
- “Exemptions”**
- Perpetual Exemptions**

Separately, DOE’s Hydroelectric Production Incentive Program, which provides funding for developers to add or expand hydroelectric generating capacity to existing dams, recently received additional funding as part of the 2021 Infrastructure Investment and Jobs Act (also known as the Bipartisan Infrastructure Framework). This program was originally established in Section 242 of the Energy Policy Act of 2005, but was not funded by Congress until 2014. The 2021 legislation provided \$125 million in direct funding for this program and expanded the eligibility criteria to include facilities in communities with inadequate electric service. As of September 2022, DOE has distributed \$13.5 million in incentive payments to 55 hydroelectric facilities, including 18 new applicants to the program — a promising start.

How to Add Generation to Existing Dams

As discussed above, FERC regulates the nation’s non-federal hydropower resources in accordance with its jurisdictional obligations of the FPA. In determining whether to add hydroelectric generation to an existing dam, location is critical. Under the statute, certain categories of projects *must* be licensed, including those that are located on a navigable waterway of the United States, occupy federal lands, or use surplus water from a government dam. However, other statutes prevent FERC from issuing licenses in certain areas, including on or in Congressionally designated Wild and Scenic Rivers or Wilderness Areas or within the boundaries of National Parks. Additionally, FERC is prohibited from issuing licenses that would interfere with an existing licensed project. However, it may permit “such small encroachments on a license, comparable in their adverse impact to variations in conditions that investors might expect from other causes, such as, for example, annual fluctuations in water supply” that do not interfere with the existing licensee’s expectations under the license. *PG&E v. FERC*, 720 F.2d 78 (D.C. Cir. 1983). Finally, FERC lacks jurisdiction to license projects at federal dams (i.e., one owned by the Bureau of Reclamation or Army Corps of Engineers) where Congress has reserved the site for federal development of hydropower or has otherwise indicated that FERC’s jurisdiction has been withdrawn. *Chapman v. F.P.C.*, 345 U.S. 153 (1953). Developers that are unsure whether a FERC license is required for a proposed project may file a Declaration of Intention or request a Declaratory Order from FERC for its opinion.

In addition to FERC licenses, FERC also offers other authorizations, known as “exemptions” from licensing, for projects that meet certain qualifying criteria. Conduit exemptions must be constructed primarily for purposes other than power production (i.e., irrigation, municipal water supply, industrial use, etc.), be limited to 40 megawatts (MW), and generally not occupy federal lands. Small hydropower exemptions are appropriate for projects at existing non-powered federal dams (for example, Army Corps or Bureau of Reclamation dams), but must be limited to 10 MW. While FERC licenses are issued for terms of 30-50 years, exemptions are perpetual, which is a significant benefit to developers.



Adding Hydro

Preliminary Permits Extensions

Permittees' Activities

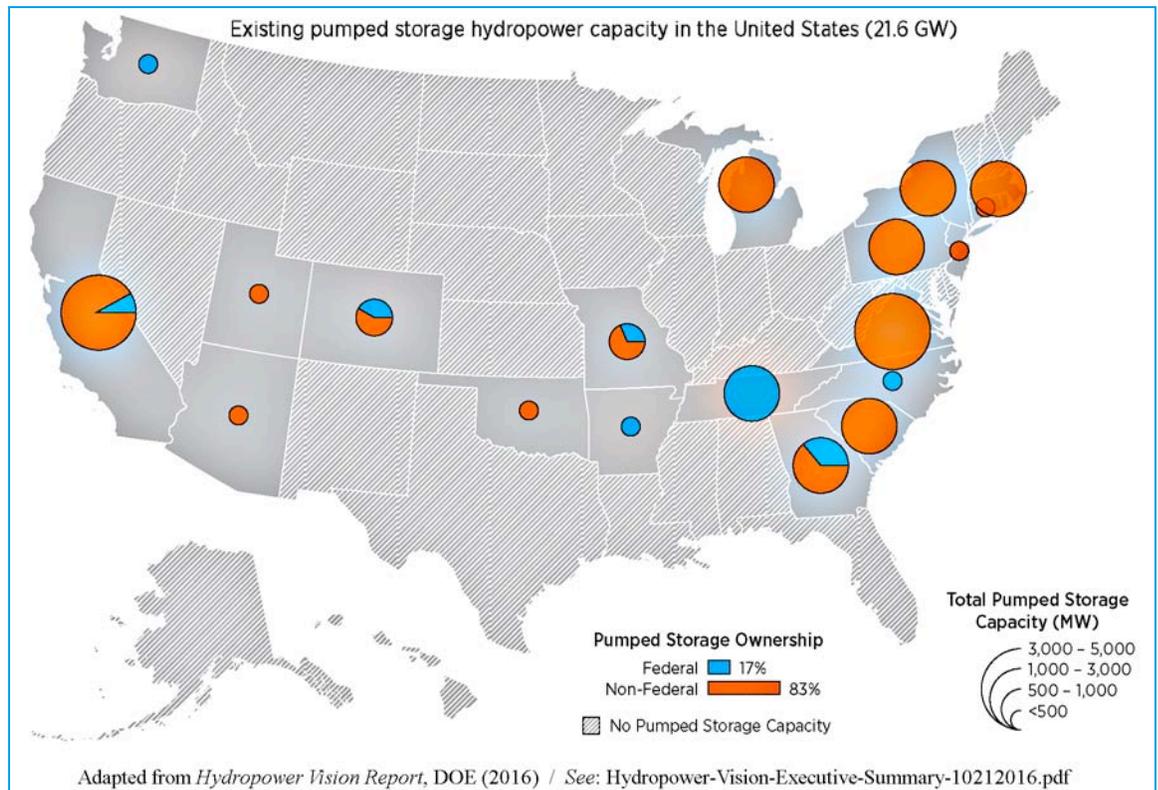
FERC Licensing Options

For developers who wish to study a site to determine if licensing might be feasible, FERC grants preliminary permits, which preserve the right of the permit-holder to have first priority in applying for license. Importantly, preliminary permits do not grant land-disturbing or other property rights and are not a pre-requisite to filing a license application. Rather, they enable a developer to study a site without the risk of another entity filing a competing license application for the same site. Preliminary permits are issued for four-year terms, and may be extended for an additional four years, provided the permittee has demonstrated — through periodic progress reports — that it has carried out activities under the permit “in good faith and with reasonable diligence.” 18 CFR § 4.82. Beyond the first permit term and extension, permittees can only obtain an additional extension if they demonstrate that “extraordinary circumstances” were present. This FERC policy helps to prevent “site-banking” by developers with no ability or intention to develop a licensed project.

Examples of activities undertaken by permittees during preliminary permit terms include:

- developing internal and external project teams, including engineering, environmental, and legal professionals;
- completing early engineering and project design work;
- studying the environmental suitability of the site;
- engaging with the site owner and ensuring sufficient access;
- identifying and analyzing potential legal issues; and
- engaging with local, state, and federal resource agencies, stakeholders, and members of the public.

Once a developer has selected a site and determined that FERC licensing is necessary, the next step is to determine the appropriate licensing process. FERC’s default licensing process is the Integrated Licensing Process (ILP), which includes early issue identification and resolution of studies needed to fill information gaps. The ILP is helpful in that it is a schedule-driven process led by FERC, who makes certain decisions about project development, including what environmental studies are required as part of licensing. FERC’s Traditional Licensing Process (TLP) requires FERC approval to use, and is an applicant-driven process with less FERC involvement. The TLP is generally appropriate for projects with few or no environmental issues, and no significant opposition from environmental agencies or other stakeholders. Finally, the Alternative Licensing Process (ALP) is designed as a collaborative process to promote settlement, and also requires FERC approval to use.



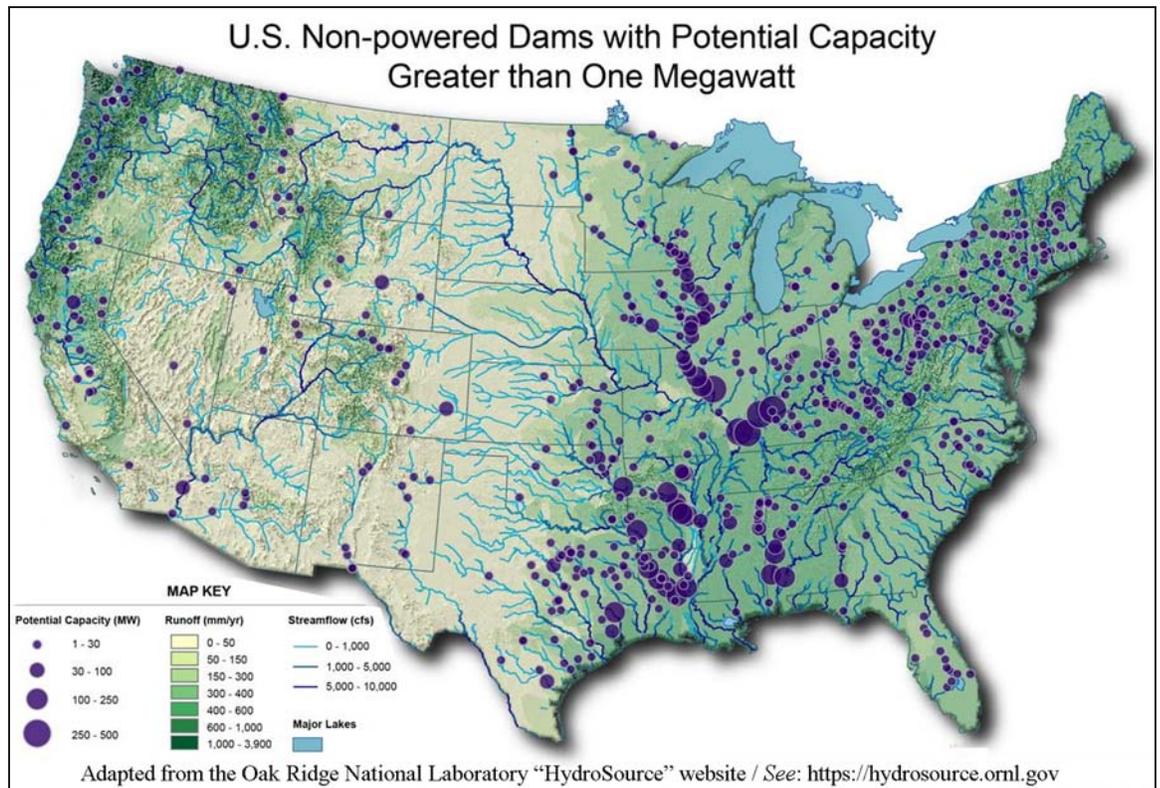
- Adding Hydro**
- Applicant Activities (FPA Guided)**
- FERC Limitations & Mandatory Conditions**
- Public Participation**
- Requirements**
- CWA Certification (State)**

Once an applicant selects and, where applicable, receives FERC approval to use a particular licensing process, it may begin to undertake activities including consultation with local, state, and federal resource agencies, outreach to the local community, study development and implementation, engineering design, and environmental protection, mitigation, and enhancement measures. Depending upon the licensing process, the applicant will prepare proposed and revised study plans, initial and updated study reports, and draft and finalize license applications. This process is guided by the FPA, which requires FERC to include certain discretionary conditions to address a wide range of public uses, including power generation, navigation, water supply, recreation, and environmental protections under section 10(a). It also permits FERC to include discretionary conditions based on recommendations from federal and state fish and wildlife agencies. For projects that occupy a federal “reservation,” section 4(e) of the FPA provides that the federal land management agencies (i.e., U.S. Forest Service or Bureau of Land Management) may impose certain mandatory conditions relating to protection of the federal reservation. Similarly, section 18 of the FPA allows the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to impose mandatory conditions for fish passage. With respect to the mandatory conditions under sections 4(e) and 18, FERC has no authority to modify or reject these conditions. In the case of exemptions, section 30(c) of the FPA provides similar opportunities for agencies to submit mandatory conditions.

While public participation requirements vary depending on the licensing process, each process provides significant opportunities for public review and comment of the applicant’s proposal, so early outreach to the local community and environmental/advocacy groups is important to ensure a smooth licensing process. An effective communication strategy is also critical — particularly in the case of adding hydropower generation to an existing dam — and can help demonstrate to the public the significant benefits of retrofitting existing infrastructure.

Environmental Considerations

While adding hydropower generation to an existing dam involves considerably fewer environmental considerations than developing a new greenfield project, there are still certain environmental requirements that developers must satisfy, and other important considerations in site selection. First, license applicants must ensure that their proposal will meet the requirements of the Clean Water Act, the Endangered Species Act, and the National Historic Preservation Act. The Clean Water Act provides that a federal agency may not issue a permit or license for an activity that “may result in any discharge into waters of the United States” without a certification from the state where the discharge will occur. Importantly, this requirement still applies to applicants for hydropower licenses at existing dams.



Adding Hydro Fish & Wildlife

Historic Preservation

Tribal Resources

NEPA Review

Significant Potential

Hydropower Benefits

Site Selection

Collaboration

Similarly, the Endangered Species Act requires that FERC consult with state and federal fish and wildlife agencies to ensure that proposed projects will not affect federally listed species or adversely modify critical habitat. FERC is required to undertake a similar process pursuant to the National Historic Preservation Act to ensure that proposed projects will not adversely affect historic or cultural resources, including tribal resources or properties that are or may be eligible for listing on the National Register of Historic Places. In undertaking site selection, developers should strive to gather existing information about whether either federally listed species or their designated critical habitat exist in the project area, and whether the project might affect historic, tribal, or cultural resources. While project development may still be possible in areas known to contain these resources, licensing is likely to move faster when these resources are not present.

Once a developer files an application for a FERC license, FERC will conduct its own environmental review pursuant to the National Environmental Protection Act (NEPA). Depending on the scope of a project, FERC meets its NEPA obligations through preparing either an environmental assessment or, for more complex projects, an environmental impact statement. NEPA obligations also drive environmental study requirements during FERC licensing.

While FERC licensing at existing dams generally involves fewer environmental issues than developing a new project, environmental groups still stress caution. Even existing nonpowered dams can produce negative environmental impacts such as blocking fish passage and sediment transportation, and can contribute to methane emissions.

Conclusion

With over 90,000 dams in the United States, the majority of which do not include hydroelectric generation, there is significant potential for adding generating capacity without significant construction or environmental effects. Developing these generating resources, which can be ramped on or off easily, will be critical as the nation moves away from fossil fuels and increasingly towards more renewable generation. Hydropower is unique in that it can fill gaps left by other renewable resources and can generate at any time of day.

In considering whether to add hydroelectric generation to an existing non-powered dam, environmental considerations are still applicable, so site selection is critical. Namely, obtaining a FERC license or exemption is far easier when there are few or no issues related to threatened or endangered species, fish passage, and cultural or historic resources. Selecting a site that is not on federal land will also reduce the likelihood of mandatory conditions, as discussed above, though some will apply regardless of location.

Finally, early information gathering, agency consultation, and public outreach can go a long way towards a transparent and collaborative process that moves through the licensing process quickly and avoids the need for additional negotiations or legal filings following license issuance.

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Elizabeth McCormick is an Associate with Troutman Pepper Hamilton Sanders, LLP in Washington, DC. McCormick helps clients navigate complex energy infrastructure proceedings before FERC. Her practice focuses on hydropower and natural gas proceedings, where she advises clients on a wide range of federal energy and environmental statutes, including the Federal Power Act, the Natural Gas Act, the Clean Water Act, the Endangered Species Act, and the National Historic Preservation Act. Elizabeth draws on her nearly six years of experience in FERC's Office of the General Counsel, where she worked on a number of hydropower license and natural gas certificate proceedings. While at the commission, she gained experience working with a variety of federal and state environmental and natural resources agencies, Native American tribes, community and landowner groups, and NGOs. This experience enables Elizabeth to help her clients smoothly navigate the complex federal permitting landscape.

ICWP



INTERSTATE COUNCIL ON WATER POLICY



AN INTERVIEW WITH THE ICWP'S NEW EXECUTIVE DIRECTOR BETH CALLAWAY

Conducted by Sue Lowry, Retired ICWP Executive Director

Interviewer's Note: The Interstate Council on Water Policy (ICWP) is pleased to welcome Beth Callaway as its new Executive Director. The ICWP, formed in 1959, is a national policy organization whose membership is open to: states; interstate water organizations; tribes; academics; research and policy water affiliates; as well as private sector water planning and water equipment firms. Sue Lowry served as the Executive Director of ICWP until her retirement July 1, 2022. This interview of Beth by Sue will give readers of *The Water Report* insight into the organization and Beth's leadership plans for the next three-to-five years.

Sue: Please tell the readers a bit about your background and your interest in serving as the Executive Director for the ICWP.

Beth: I was named Executive Director of ICWP in June 2022 following Sue Lowry's retirement. Prior to that, I served as the lead water and natural resources policy advisor for Wyoming Governor Mark Gordon. My water background stems from a tenure with the Wyoming State Engineer's Office Interstate Streams Division. I received a BS in Business Administration and Environment/Natural Resources from the University of Wyoming and a Master of Environmental Science and Management with an emphasis in water resources from the Bren School at University of California, Santa Barbara.

I have always believed that natural resource management — and particularly water resource management — is more effective when people are connected, informed, and have opportunities to collaborate with one another. ICWP is the type of organization that does just that: we bring together water resource managers from all around the country to share ideas and learn from each other through our four standing committees (Legislation & Policy, Water Data & Science, Water Planning, and Interstate Water Management) and at our Annual Meeting and Washington DC Roundtable. With my background I understand the key water policy issues facing water resource managers today, and I also know who the key players are to get things done.

What are your top priorities for the next three-to-five years for ICWP?

First off, I plan to build upon Sue's accomplishments that modernized ICWP into what it is today. Technology now enables us to find creative ways to engage with each other and nourish key relationships across a broad geographic scope. We get to interact more frequently with our federal agency partners, such as: the US Geological Survey (USGS); US Army Corps of Engineers; Environmental Protection Agency; Bureau of Reclamation; National Oceanic and Atmospheric Administration (NOAA); Natural Resources Conservation Service; and others. It also allows us — by way of ICWP's standing virtual committee meetings and webinars — to have regular contact with our peers at fellow state and regional water resource management agencies. This certainly doesn't diminish the value of in-person interactions; they complement ICWP's Annual Meetings and Spring Washington DC Roundtables to round things out throughout the rest of the year. Combined, all of these are important venues where members can share ideas, learn from one another, and foster relationships with professionals in a similar field.

In terms of ICWP's strategic initiatives, I see an opportunity to build upon ICWP's policy positions to ensure that they are nimble and adapt to a rapidly changing world. There have been many advancements in the last couple of years in the fields of water resources science, technology, and data. These advancements should inform our policy frameworks, both at the state and federal levels. I think we have a lot of opportunity for cross-pollination within our own membership and I plan to continuously find ways to make that happen.

Lastly, I think ICWP is in a unique position to work at the federal level, both with Congress and the Executive Branch, to provide feedback on how federal water resources regulatory and policy tools interact with — and hopefully sync up with — state, interstate and regional approaches. One area that I think is ripe for opportunity is implementation of the Infrastructure Investment and Jobs Act of 2021 (IIJA). ICWP's members can provide valuable insights on how to optimize the rollout of these federal resources at the state level. They can also identify ways to improve the everyday administration of existing federal water programs, especially those receiving significant IIJA investments. Our members can take a deeper look at capacity at the implementation level and assess what is or isn't working. They are ready to engage with the federal agencies as these funds are rolled out and will have an important perspective on how to optimize these programs.

Wyoming Background



Beth Callaway

Technological Engagement

Federal Partners

Policy Positions

Infrastructure Investment

Implementation Capacity

ICWP

Broad Membership

Water Professionals

Data Upgrade

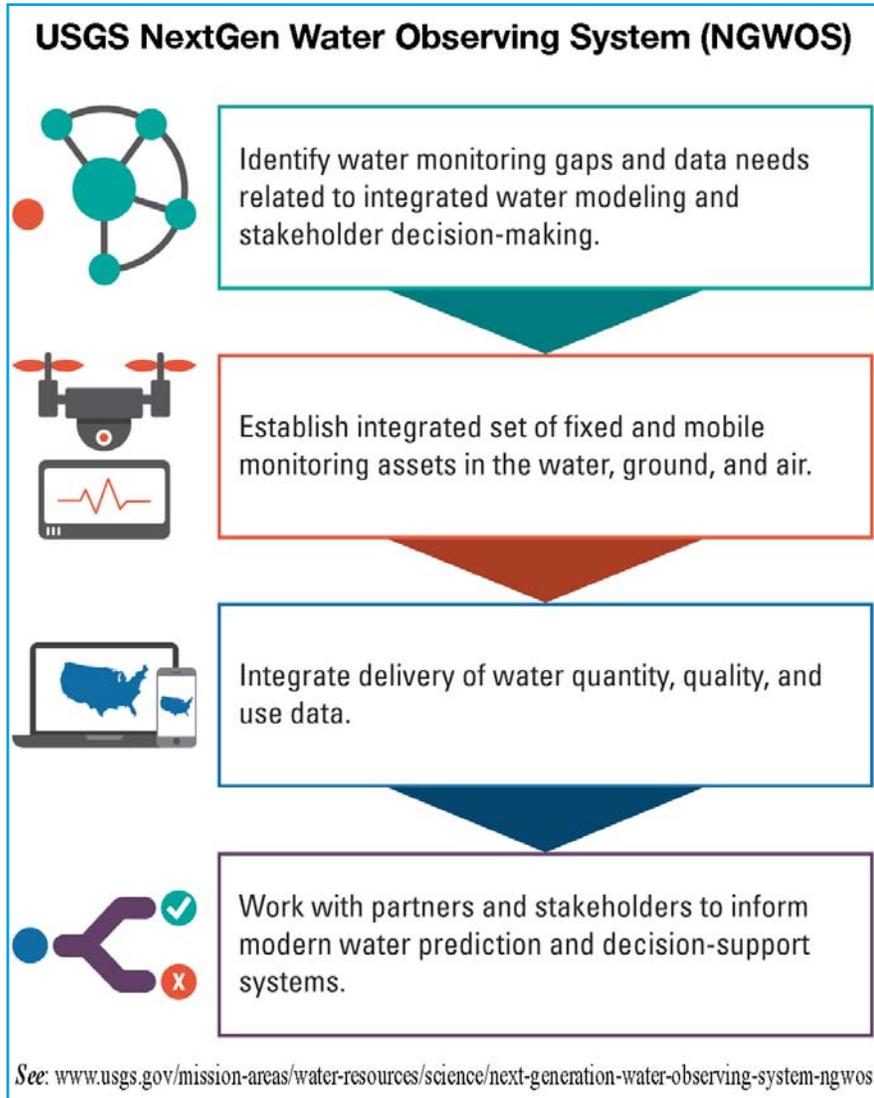
NGWOS

Is there a particular membership category that you feel is ripe for expansion or areas where you plan to focus membership development and outreach?

As you've noted, traditionally ICWP's membership is made up of states, interstate water organizations, tribes, academic and research institutions, as well as the private sector. Our membership has broad reach across the US, with many members hailing from the Midwest, South/Southeast and East Coast as well as the Intermountain West. Geographically, the more we can represent the various perspectives of the country to include the Northeast and West Coast, the better. Additionally, one area that I think we could tap into more is the tremendous expertise offered by professionals at university water policy and research institutes as well as natural resource/water law firms. There is a wealth of scientific, research, and policy expertise that many of our members would greatly appreciate learning from, so these are groups that I plan to engage more with in the coming months. In turn, ICWP provides current, relevant water policy information to these entities.

Support for federal Water Data Programs has been central to ICWP's mission for the past several years. How do you see that advocacy work continuing or evolving?

ICWP will continue to advocate for the consistent funding of USGS, NOAA, Corps of Engineers and other federal agency water science and data programs that are so crucial to the management of our nation's water resources. We support the USGS NextGen Water Observing System (NGWOS) and its core goals to modernize data delivery, improve national water prediction and assessments, and advance water observing methods and instrumentation. Congress is sending signals that it, too, supports NGWOS by increasing appropriations for NGWOS in USGS' budget, so we hope to capitalize on that momentum and parlay that into complementary efforts both within the agency (i.e., the Water Resources Availability portfolio) as well as externally.



ICWP**Networking****Coalitions****Annual Meeting
October 25-27****DC Roundtable
April 2023**

In your first few months on the job, you have reached out to members about their priorities. What do members value most about ICWP?

The running theme from all my discussions is that our members place great value on networking and building relationships with one another. They also indicated that they strive for opportunities to gain more frequent and more effective access to the federal agencies. These are two areas that I will emphasize as a priority during my tenure with ICWP.

What else would you like *The Water Report* readers to know about the work/priorities of the ICWP?

We are a national organization, which means we cover a wide array of policy issues of national significance, and these priorities are shaped by our membership. We represent a broad geographic scope of water resources policy interests, and the issues we take on are by their nature nonpartisan. ICWP also places value in coalitions — we are stronger together and this is made possible by the partnerships we enjoy with other water and natural resources organizations such as the USGS Coalition, 3DEP Coalition, and Disaster Relief & Resiliency Coalition.

What events are coming up?

As mentioned, ICWP is hosting our 2022 Annual Meeting in Davenport, Iowa from October 25th-27th. Meeting attendees are from across the board: water resources managers, federal partners, and consultants. [They] all participate in interactive discussions on planning, data, and national policy and in networking events and weigh in on decisions regarding ICWP's future direction and policy positions during our annual members business meeting. Six sessions will be held, each focusing upon topics related to our active ICWP committees. On the afternoon of October 25th, we will conduct a field tour of the Beaver Island Habitat Restoration project. The visit entails interconnected backwaters, secondary channels, wetlands and floodplain habitat along the Mississippi River as part of the Iowa Department of Natural Resources, US Fish and Wildlife Service, and US Army Corps of Engineers habitat restoration project.

Additionally, each spring we host a Washington DC Roundtable where we welcome water resources agencies across the US to interface with the federal agencies. We cover a range of topics related to federal water programs, including water supply studies, forecasting, planning, climate resilience, data, infrastructure, and financing. The 2023 Roundtable is scheduled for April 2023.

Information about both conferences, as well as our standing committee meeting schedule, are posted on ICWP's website: www.icwp.org.

Sue: Thanks so much for your time, Beth, and best of luck with the ICWP — I know the organization is in great hands!!

FOR ADDITIONAL INFORMATION:

BETH CALLAWAY, ICWP, 307/ 772-1999 or beth@icwp.org

ICWP website: www.icwp.org

The Water Report — New Owner Sky Island Insights

Dear Reader, thank you for being a loyal patron of *The Water Report*!

As you may have heard, *The Water Report* is undergoing a transition in ownership. Current editors and owners David Light and David Moon are retiring and passing the publication to Sky Island Insights.

Worry not, as Mr. Light and Mr. Moon will continue to be involved with the publication to ensure a smooth transition.

Sky Island Insights is honored and excited to continue the highly respected legacy of *The Water Report*. We firmly believe that sharing useful knowledge across the water management and policy spectrum is critical to finding solutions to the challenges we all face as water professionals.

Contact Information

If you have an article topic that you would like to see featured, an article that you would like to submit, or have any questions for the new owners please reach out. Send an email to info@thewaterreport.com or give us a call at **602/ 456-2127**.

WATER BRIEFS

WATER IMPACTS

CA

CLIMATE CHANGE STUDY

The American River Basin in central California expects to see increasing temperatures and a declining snowpack through the end of the 21st century. The Bureau of Reclamation (Reclamation) released the American River Basin Study on August 31, which also found an increased variability of fall and winter precipitation that will amplify the severity of droughts and flooding in the basin. The report is available on Reclamation's Basin Study website (see below).

The American River Basin Study found that maximum temperatures are projected to increase throughout the year, with the most significant increase of 7.3°F during the summer months by the end of the 21st century. While projections of average annual precipitation are uncertain, climate projections indicate a change in precipitation timing and variability. Precipitation is projected to be increasingly variable into the future with the timing of the moisture shifting

with fall and spring precipitation declining and winter and summer precipitation increasing. In addition, the snowpack will decrease due to warming, moving the peak runoff by more than a month by the mid to late century.

One adaptation portfolio highlights the importance of long-term Central Valley Project contracts for regional reliability.

Other adaptation evaluations:

- Use of high elevation, off-stream storage to replace lost storage from reduced snowpack and earlier snowmelt
- Use of existing diversion facilities on the Sacramento River and exchange water supply to reduce reliance on Folsom Reservoir and the American River
- The raise of Folsom Dam offers upstream flood control space through facility modifications to increase flood control space
- Releasing flood water earlier to recharge groundwater creates additional regional water supply and ecosystem benefits

- The effectiveness of the flow management standard for the Lower American River in the 2015 update of the Sacramento Water Forum Agreement to reduce the effects on the river's ecosystem and fisheries from climate change.

The basin study was selected in 2017 and built upon the Sacramento and San Joaquin Rivers Basin Study completed in 2016. The American River Basin and the area covered by this study consists of 3,600 square miles in central California from the valley through the foothills to the top of the Sierra Nevada.

Study funding is part of the Department of the Interior's WaterSMART Program, which focuses on collaborative efforts to plan and implement actions to increase water supply sustainability, including investments to modernize infrastructure. **For info:** Basin Study website at: www.usbr.gov/watersmart/bsp/index.html; Reclamation's WaterSMART program webpage: www.usbr.gov/watersmart/; Mary Lee Knecht, Reclamation, 916/978-5100 or mknecht@usbr.gov

WATER BRIEFS

NONPOINT SOURCE MANAGEMENT PROGRAM TX

The 2022 Texas Nonpoint Source Management Program was adopted by Texas Commission on Environmental Quality (TCEQ) Commissioners on December 15, 2021, was submitted to the US Environmental Protection Agency (EPA) by the Texas Governor’s office, and was approved by EPA on August 29, 2022. The 2022 Texas Nonpoint Source Management Program was developed jointly by TCEQ and the Texas State Soil and Water Conservation Board and accomplishes the following:

- Incorporates EPA’s eight components of an effective program
- Establishes long- and short-term goals for the program
- Provides coordination of nonpoint source-related programs and activities conducted by federal, state, regional, and local entities
- Prioritizes assessment, planning, and implementation activities in priority watersheds and aquifers

For info: 2022 Texas Nonpoint Source Management Program available from the TCEQ Program website at: www.tceq.texas.gov/waterquality/nonpoint-source/mgmt-plan

SUPERFUND CLEANUP ANACONDA SMELTER SITE MT

The Atlantic Richfield Company (AR) has agreed to complete its cleanup of the Anaconda Smelter Superfund Site (Site) in Deer Lodge County, Montana, the Environmental Protection Agency and the Department of Justice announced September 30. The state of Montana, on behalf of the Montana Department of Environmental Quality (MDEQ), is also a signatory to the Consent Decree that was lodged in the US District Court in Butte, Montana.

Decades of copper smelting activity at the town of Anaconda polluted the soils in yards, commercial and industrial areas, pastures and open spaces throughout the 300-square-mile Anaconda Site. This pollution has in turn contributed to the contamination of creeks and other surface waters at the Site, as well as of alluvial and bedrock groundwater. The closure of smelting operations in 1980 left large volumes of smelter slag, flue dust, and hazardous rock tailings that have had to be secured through a variety of remediation methods. For additional information, see also *TWR*, Water Briefs #45 and #48.

Under the settlement, AR — a subsidiary of British Petroleum — will complete numerous remedial activities that it has undertaken at the Anaconda Site pursuant to EPA administrative orders since the 1990s. Among other actions, AR will finish remediating residential yards in the towns of Anaconda and Opportunity, clean up soils in upland areas above Anaconda and eventually effect the closure of remaining slag piles at the Site. The estimated cost of the remaining Site work, including operation and maintenance activities intended to protect remediated lands over the long term, is \$83.1 million. AR will pay \$48 million to reimburse the EPA Superfund Program for EPA and Department of Justice response costs and will pay approximately \$185,000 to the US Forest Service for oversight of future remedial activities on Forest Service-administered lands at the Site.

The consent decree filed September 30 in US District Court in Butte, Montana, is subject to a 30-day public comment period and approval by the federal court. A copy of the consent decree is available on the Department of Justice website at: www.justice.gov/enrd/consent-decrees. Under Montana state law, MDEQ is separately required to put the consent decree out for public comment. The state’s public comment period will run concurrently with the federal public comment period.

For info: Consent Decree and other information related to the Anaconda Site are available on EPA’s Superfund Site at: <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0800403>

WATER REUSE GRANTS EPA RESEARCH SUPPORT US

EPA announced on October 5 that it awarded grants totaling \$6.4 million to Iowa State University and the Water Research Foundation for research to support national efforts to reduce technological and institutional barriers for expanded water reuse. This research will help improve the national understanding of the water available for reuse and the critical impediments to advancing water reuse across the US, including public acceptance.

Water reuse (also commonly known as water recycling or water reclamation) represents a major opportunity to enhance the sustainability and efficient use of water resources to ensure the quality and quantity of existing water

supplies. It is a well-established practice in some areas of the US and internationally, yet substantial barriers exist to expand its consideration and application for different purposes and benefits.

Water reuse reclaims water from a variety of sources then treats and reuses it for beneficial purposes such as agriculture and irrigation, potable water supplies, groundwater replenishment, industrial processes and environmental restoration. There are additional opportunities to reuse water from other sources, such as stormwater, agricultural flows and industrial waters and for other use applications. Communities, agriculture and businesses are looking to diversify their water supply portfolios to meet current and future needs.

Institutions receiving awards:

- Iowa State University (Ames, Iowa) to integrate technological, institutional, and regulatory decision-making processes to accelerate water reuse adoption by addressing issues in water quality and availability in small, underserved communities.
- The Water Research Foundation (Denver, Colorado) to quantify water reuse potential across the nation while aiming to reduce biological and chemical health risk and provide stakeholders with user-friendly tools and materials to advance water reuse in communities both technologically and organizationally.

For info: <https://www.epa.gov/research-grants>

RIVERS & STREAMFLOWS WA \$35M GRANTS AWARDED

Communities around Washington State will soon receive grant funds to support projects that protect rivers and improve streamflows. The Washington Department of Ecology (Ecology) announced October 5 that it is slated to distribute about \$35 million for 26 high-priority projects in 22 watersheds. The funding supports projects to increase water storage capacity, improve fish habitat, acquire water rights, and improve water management and infrastructure.

Ecology received 57 competitive applications from across the state. This is the third round of grants as part of a 15-year program created by the Washington Legislature to invest in improving streamflows and protecting habitat. In 2020, Ecology awarded \$22 million for 21 projects in 16 watersheds;

WATER BRIEFS

in 2019, Ecology awarded \$20 million in 16 projects in 11 watersheds.

Projects selected f include:

- Confederated Tribes of the Umatilla Indian Reservation - \$2,858,231 to conserve 175 acres of floodplain, restore floodplain function, improve fish habitat, and purchase water rights to improve streamflow.
- Kittitas Conservation Trust - \$1,926,025 to improve streamflow and habitat conditions on the upper Kachess River.
- Adopt A Stream Foundation – \$1,588,955 for a water storage project to restore wetland, stream channel, and riparian habitat in Jones Creek.
- Great Peninsula Conservancy - \$1,349,200 to protect and restore summer flows and critical habitat for endangered Hood Canal summer chum and reconnect 40 acres of floodplain.

The Washington Legislature created this grant program as part of the 2018 Streamflow Restoration law that seeks to protect rivers and streams while providing water for rural homes. The grant program helps state and local agencies, Tribal governments, and nonprofit organizations implement local plans and projects.

For info: Jimmy Norris, Ecology, 360/480-5722 or jimmy.norris@ecy.wa.gov; ecology.wa.gov

EDWARDS AQUIFER TX PROTECTION PROGRAM

The Texas Commission on Environmental Quality (TCEQ) conducts annual public hearings to receive comments from the public on actions TCEQ should take to protect the Edwards Aquifer from pollution (required under Texas Water Code, §26.046). These annual public hearings are held by the Edwards Aquifer Protection Program and cover the TCEQ rules, found at Title 30, Texas Administrative Code, Chapter 213, which regulate development over the delineated contributing, recharge, and transition zones of the Edwards Aquifer. These annual public hearings assist the commission in its shared responsibility with local governments to protect the water quality of the aquifer. Agency staff will provide an update on application process improvements and electronic records management.

The Edwards Aquifer is a home to diverse fauna and is a drinking water source for the city of San Antonio and surrounding central Texas communities. Because it is a karst aquifer, fractures, caves, sinking streams, and sinkholes act as conduits to the aquifer from the surface. While this means that the aquifer recharges quickly after a rain event, it also means that any surface pollution from stormwater runoff or spills will directly impact the water quality of the aquifer, possibly impairing drinking water and affecting the sensitive ecosystem.

This year the hearing will be conducted in person in two locations, the TCEQ Headquarters in Austin and the TCEQ San Antonio Regional Office. The hearing in Austin will be at the TCEQ Headquarters located at 12100 Park 35 Circle, on October 18, 2022 and begin at 10:00 a.m. in Building A, Room 172. The San Antonio hearing will be at the TCEQ San Antonio Regional Office located at 14250 Judson Road, on October 20, 2022 and begin at 10:00 a.m. The hearings will be structured for the receipt of oral or written comments by interested persons. There will be no open question and answer discussion during the hearing; however, agency staff members will be available to answer questions 30 minutes prior to and 30 minutes after the conclusion of the hearing. All other comments must be received by 5:00 p.m., October 21, 2022.

Additional written comments submitted before or after the hearing should reference the Edwards Aquifer Protection Program and may be sent to Ms. Lillian Butler, Texas Commission on Environmental Quality, Austin Region, MC R11, P.O. Box 13087, Austin, Texas 78711-3087 or emailed to eapp@tceq.texas.gov.

For info: TCEQ Edwards Aquifer webpage: www.tceq.texas.gov/permitting/eapp/history.html

WATER TRUST PLAN CO SEVENTH STRATEGIC PLAN

On September 21, the Colorado Water Trust (CWT) unveiled its newest strategic plan. With numerous legal and administrative tools to keep more water in Colorado’s rivers and streams without causing harm to consumptive users, CWT says it “has the ability to impact

the future of our natural world at a much greater scale than we have in the past.”

The new strategic plan builds upon 21 years of flow restoration work.

CWT’s plan includes:

Community-Based Projects: CWT will identify, develop, and implement at least one significant multi-purpose project each in an urban and rural community. These projects will consider the needs of people that are often forgotten in the design of environmental projects.

Reservoir Release Program: By 2024, implement a new program centered around existing reservoirs and their potential to provide benefits to downstream rivers and multiple beneficial uses through coordinated efforts. CWT aims to find matches between available water or capacity, stream need, and downstream use. CWT will use various legal mechanisms to make releases, with a pool of resources available for compensation as it moves forward.

Increased Flows: CWT aims to double the average annual flow volumes that are returned to Colorado’s streams and rivers compared with its first twenty-one years. CWT will also evaluate the transformative effect of its existing and new projects; develop metrics to measure how present and future projects might strengthen and make more resilient the diverse human communities that depend and live in close proximity to Colorado’s streams and rivers. This data will inform how to assess and deploy resources equitably for maximum community impact.

Public Involvement: CWT will engage in public policy discussions and advocacy to expand its leverage and influence in pursuing the goal of streamflow restoration. CWT will support the enactment of legislation or adoption of policies that will further its work, and will advocate against undesirable legislation or policies. Consistent with its non-partisan and non-controversial history, CWT’s advocacy efforts will include ensuring that the interests of multiple water-related sectors are considered and balanced.

For info: CWT website: coloradowatertrust.org > Strategic Plan

WATER BRIEFS

WATER INFRASTRUCTURE US
FEDERAL FUNDS TO 18 STATES

On September 16, EPA awarded Bipartisan Infrastructure Law funding to the first 18 states across the country for water infrastructure improvements.

The Bipartisan Infrastructure Law allocates more than \$50 billion to EPA toward repairing the nation’s essential water infrastructure, which helps communities access clean, safe and reliable drinking water, increase resilience, collect and treat wastewater to protect public health, clean up pollution, and safeguard vital waterways. More than \$1.1 billion in capitalization grants from the Bipartisan Infrastructure Law have been issued to 18 states through the State Revolving Funds (SRFs), with additional capitalization grants forthcoming. The grants mark the first significant distribution of water infrastructure funds from the Bipartisan Infrastructure Law.

EPA’s SRFs are part of President Biden’s “Justice40” initiative, which aims to deliver at least 40% of the benefits from certain federal programs to underserved communities. Furthermore, nearly half the funding available through the SRFs thanks to the Bipartisan Infrastructure Law must be grants or principal forgiveness loans that remove barriers to investing in essential water infrastructure in underserved communities across rural America and in urban centers.

EPA awarded SRF capitalization grants to 18 states, including: Arizona, Colorado, Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Montana, New Hampshire, New Mexico, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, Washington, and West Virginia. Once grants are awarded, state programs will begin to deliver the funds as grants and loans to communities across their state.

The Bipartisan Infrastructure Law presents the largest-ever funding for investing in water infrastructure.

For info: EPA’s Bipartisan Infrastructure Law webpage: www.epa.gov/infrastructure

CLEANUP US
EPA RCRA BENEFITS STUDY

EPA has announced the results of a study that estimates the economic benefits of cleaning up facilities under the federal Resource Conservation

and Recovery Act (RCRA) Corrective Action program.

EPA’s analyses of 79 cleanups revealed that these facilities support 1,028 on-site businesses, which provide economic benefits including: \$39 billion in annual sales revenue; over 82,000 jobs; and \$7.9 billion in estimated annual employment income. EPA also developed brief profiles for more than 40 facilities to showcase the economic benefits that can be fostered through RCRA Corrective Action cleanups.

EPA and states work with owners and operators of hazardous waste treatment, storage, and disposal facilities to ensure cleanups effectively protect human health and the environment and support reuse as well as continued use. Facilities that are cleaned up under RCRA are often redeveloped for a wide array of commercial, recreational, and energy production purposes. These cleanups also enable on-site industrial and commercial businesses to continue operating while protecting human health and the environment.

EPA collected economic data for 79 facilities, a subset of all the Corrective Action facilities, for this study to assess the number of jobs and magnitude of economic benefits from these facilities post cleanup. Since the analysis is from a small subset of the nearly 4,000 facilities being cleaned up, the benefits associated with all RCRA Corrective Action cleanups are likely much greater. EPA plans to continue to evaluate economic benefits and develop more profiles in the future.

Additionally, Corrective Action cleanups are an important part of EPA’s focus on environmental justice to help correct disparities in access to a clean and safe environment. EPA found that approximately 25% of the facilities in this study are located within communities with potential environmental justice concerns. More than 170 businesses are operating at these facilities, helping to generate 7,900 jobs and more than \$522 million in annual income for these communities.

Finally, the economic benefits from RCRA Corrective Action cleanups go beyond those associated with on-site businesses. According to recent research, EPA’s Corrective Action program contributed to a \$323 million increase in the value of homes near the completed cleanups studied. By

identifying and completing the cleanup of contamination, homeowners near the cleanups experience an average of a six to seven percent increase in the value of their homes. Another recent study notes that housing price increases are largest for lower-cost homes.

Signed into law in 1976 with Corrective Action provisions added in 1984, RCRA set standards for responsible solid waste management and established safeguards for hazardous wastes, from generation to transportation, treatment, storage, and disposal. Corrective Action is a requirement under the law that facilities that treat, store, or dispose of hazardous wastes investigate and clean up hazardous releases into soil, ground water, surface water, and air. EPA and states currently oversee cleanups at almost 4,000 facilities across the country under the RCRA Corrective Action program. Approximately 111 million people live within three miles of a RCRA Corrective Action cleanup. **For info:** EPA website: www.epa.gov/hw/learn-about-corrective-action

WATER REUSE US
UPDATED EPA ANALYSIS TOOL

EPA’s “Regulations and End-Use Specifications Explorer” (REUSExplorer) is an online tool to examine water reuse regulations across the United States.

The REUSExplorer is a web-based tool that examines state water reuse regulations and guidelines and highlights the underlying technical basis of water quality metrics and treatment requirements. It is intended to be a resource for stakeholders interested in: developing laws or policies for reuse; understanding the technical aspects of a regulation or guideline; and/or identifying whether reuse applications are regulated within a particular state.

The REUSExplorer is searchable by state, source of water, and end-use application. The following set of end-uses were recently added to the REUSExplorer: Agricultural-related applications; Livestock watering; and Landscape-related applications. The tool already included information on: potable water reuse; onsite non-potable reuse; and other centralized non-potable reuse applications.

For info: EPA Reuse website: www.epa.gov/waterreuse

WATER BRIEFS

WATER INNOVATIONS US

RECLAMATION INVESTS \$6.6 MILLION

Reclamation is investing \$6.6 million in internal research for the development of innovative solutions for water and power challenges in the West. This includes funding for 21 new research projects and 120 continuing, multi-year projects.

“The projects selected will directly benefit water and power facility managers, customers, stakeholders and industry,” according to Reclamation’s Senior Advisor for Research and Development Levi Brekke. “The Science and Technology Program contributed to many of the tools and capabilities that western water managers use today.”

The research projects were selected through an internal competitive process. Many of these projects partner with internal and external organizations. Partners include: technical professionals from federal and state governments; tribes; universities; and private and local organizations. The partners will provide \$13.43 million in cost-share.

The Science and Technology Program addresses needs in five research areas including: water infrastructure; power and energy; environmental issues in water delivery management; water operations and planning; and developing water supplies. Research needs are identified using input from the administration, Department of the Interior, and Reclamation priorities. These priorities include climate change and drought. Identified needs of the Reclamation regional directors and input from technical experts within Reclamation are also used.

Projects receiving funding this year include:

- Improving snow water equivalence measurements in the San Juan Chama Project
- Analyzing climate change impacts on groundwater availability in California
- Improving river restoration guidance
- Identifying new corrosive-resistant coatings for hydraulic infrastructure
- Automated repairs of in-place equipment in older facilities

A diverse group of partners for these newly funded projects include the US Army Corps; Tennessee Valley

Authority; US Geological Survey; California Department of Water Resources; Arizona State University; University of Illinois; University of Wyoming; Sherwin-Williams Company and GE Renewable Energy. Several Tribal Nations will partner on a project exploring the reintroduction of anadromous fish in the Upper Columbia River, including: the Coeur d’Alene Tribe; the Confederated Tribes of the Colville Reservation; and the Spokane Tribe.

The Science and Technology Program seeks to develop cost-effective solutions for the technical and scientific challenges that affect Reclamation’s mission. It also seeks to build and strengthen scientific and engineering capacity for Reclamation, communicate solutions to Reclamation offices, other water and power management officials, and the public to build partnerships with other water and power management agencies and stakeholders.

For info: To view descriptions of all the projects receiving funding please visit the Research Program’s Science and Technology website: www.usbr.gov/research/st/index.html

NAVAJO-GALLUP WATER NM DRINKING WATER PROJECT

Reclamation has announced the award of a \$73,056,845 contract to Archer Western Construction of Phoenix, Arizona, to convey reliable drinking water to Navajo communities and the City of Gallup in northwest New Mexico. This award marks significant progress toward the completion of the Navajo-Gallup Water Supply Project (NGWSP).

The effected areas currently rely on a rapidly depleting groundwater supply of poor quality to meet the demands of more than 43 Navajo chapters, the southwest area of the Jicarilla Apache Reservation, and the City of Gallup. The NGWSP consists of two main pipeline systems: the San Juan Lateral and the Cutter Lateral. This contract award is for the Tsé Da’azkání Pumping Plant and Tó Ałts’íísí Pumping Plant on the San Juan Lateral. These drinking water pumping plants are two of 13 water transmission pumping plants on the San Juan Lateral.

Both plants will be located in the Navajo Sanostee Chapter in New Mexico’s San Juan County and will operate in concert with the other pumping plants on the San Juan Lateral, pumping San Juan River water that has been treated to Safe Drinking Water Act requirements at the San Juan Lateral Water Treatment Plant to the north and delivering to downstream communities to the south. Each plant will have four equally sized pump and motor units with a combined capacity of approximately 51.5 cubic feet per second (23,100 gallons per minute). Work under this contract will begin this fall with groundbreaking in early 2023 and completion expected by the fall of 2025.

With the Cutter Lateral delivering water to Navajo homes and construction of the San Juan Lateral now more than 50% finished, this construction contract continues progress toward meeting the United States’ obligation to the Navajo Nation under the nation’s water rights settlement agreement on the San Juan River Basin in New Mexico. Over a third of Basin households still haul drinking water to their homes. The importance of supplying drinking water has been underscored by the pandemic experience. A good water supply is essential to public health and safety.

The Tsé Da’azkání and Tó Ałts’íísí pumping plants will further the progress of the NGWSP. When the full project is completed, it will include: approximately 300 miles of pipeline; two water treatment plants; 19 pumping plants; and multiple water storage tanks. Construction on the Cutter Lateral is complete and water deliveries are currently being made to eight Navajo communities and soon to the southwestern portion of the Jicarilla Apache Reservation, serving 6,000 people or 1,500 households.

This contract continues many years of work by Reclamation, the Navajo Nation, and other project partners constructing the NGWSP to improve the lives of residents and provide opportunities for economic development and job creation.

For Info: Reclamation’s Navajo-Gallup Water Supply Project website: www.usbr.gov/uc/progact/navajo-gallup/index.html

- October 18 TX**
Hearing on the Edwards Aquifer Protection Program, Austin. TCEQ Headquarters, 12100 Park 35 Circle; Begins at 10:00am CDT. Annual Hearing to Assist the Commission to Protect the Water Quality of the Aquifer; All Other Comments Must be Received by Oct. 21 at 5:00pm CDT. For info: www.tceq.texas.gov/permitting/eapp
- October 18-19 WEB**
Digital Twins for Water & Wastewater - Online Course, Presented by EUCI: 303-770-8800 or events@euci.com. For info: www.euci.com or 303/770-8800
- October 19 WEB**
Explore Your Options: Stormwater Treatment Solutions Used on Publicly Funded Projects - Stormwater Webinar, 2:00pm EST Start. Presented by Contech. For info: <https://solutions.conteches.com/>
- October 19-21 OK**
2022 Western States Water Council Fall (200th) Meetings, Sulphur. Artesian Hotel, Casino & Spa. Field Trip on Oct. 19th. For info: <https://westernstateswater.org/events/2022-wswc-fall-200th-meetings/>
- October 20 TX**
Hearing on the Edwards Aquifer Protection Program, San Antonio. TCEQ San Antonio Regional Office, 14250 Judson Road; Begin at 10:00am CDT. Annual Hearing to Assist the Commission to Protect the Water Quality of the Aquifer; All Other Comments Must be Received by Oct. 21 at 5:00pm CDT. For info: www.tceq.texas.gov/permitting/eapp
- October 20-21 WEB**
Tribal Consultations Conference: Current Requirements, New Resources, and Strategies for Effective Participation, Interactive Online Broadcast. For info: Law Seminars Int'l, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com
- October 23-25 OR**
Oregon Brownfields & Infrastructure Summit, Bend. Riverhouse on the Deschutes. Presented by Business Oregon, Northwest Environmental Business Council, in Partnership with Oregon Dept. of Environmental Quality. For info: theoregonsummit.com
- October 23-26 CA**
Connecting the Drops - From Supply to Delivery: Annual Fall Conference of the California-Nevada Section, American Water Works Association, Sacramento. SAFE Credit Union Convention Center. For info: <https://www.ca-nv-awwa.org/> >> Fall Conference
- October 24-26 CA**
CASQA 2022 Annual Conference: "Celebrating Milestones: Taking the Next Steps for Stormwater", Palm Springs. Palm Springs Convention Center. For info: California Stormwater Quality Association, www.casqa.org
- October 24-27 NE**
Platte River Basin Conference & 3rd Playa Research Symposium - Braided Paths: Science, Policy, and Culture, Kearney. Younes Conference Center. Hosted by the Nebraska Water Center. For info: <https://watercenter.unl.edu/2022-nebraska-water-conference>
- October 25 DC**
Recognizing the Clean Water Act's 50th Anniversary: Evaluating the Past 50 Years of Progress and Looking Ahead to Future Challenges - ELI 2022 Policy Forum, Washington. Omni Shoreham Hotel - 4:00pm-5:30p EST. Presented by Environmental Law Institute: In-Person Only; Free - Registration Required by Oct. 21st. For info: www.eli.org
- October 25 WEB**
Enforcement and Compliance History Online (ECHO) Webinar, 1:30pm-2:30pm EDT. Presented by US EPA to Demonstrate the Capabilities of the ECHO Facility Search; Register at: <https://echo.epa.gov/help/training#upcoming>. For info: <https://echo.epa.gov>
- October 25 NE**
Nebraska Floodplain Management Workshop, Syracuse. Syracuse Public Library. Presented by Nebraska Dept. of Natural Resources. For info: <https://dnr.nebraska.gov/floodplain/training-and-workshops>
- October 25 TX**
Water, Texas: 8th Annual Film Festival, Austin. Austin Film Society Cinema. Revealing the Winners of the 8th Annual Water, Texas Film Festival; 6:00pm Start. For info: www.watertexasfilms.org
- October 25-26 WEB**
Leadership Conference for Women in Water/Wastewater, Online. Sponsored by the California Water Association. For info: www.euci.com or 303/770-8800
- October 25-27 IA**
Interstate Council on Water Policy 2022 Annual Meeting, Davenport. Hotel Blackhawk. RE: Planning & National Policy; Ecosystem Restoration; Data Research Updates; Water Use Data; Tribal & Interstate Water Management; Federal Agency Updates; Networking, & More. For info: Beth Callaway, ICWP, 307/772-1999 or www.icwp.org
- October 27 UT & WEB**
Water Markets: the Good, the Bad, and the Ugly - 18th Annual Stegner Center Young Scholar Lecture with Vanessa Casado Pérez, Salt Lake City. College of Law & Virtual Event. 12:15pm-1:15pm MST. For info: <https://sjquinney.utah.edu/event/water-markets-the-good-the-bad-and-the-ugly/>
- October 27 CA**
Water Summit 2022: Rethinking Water in the West, Sacramento. The Westin Sacramento. Water Education Foundation's Premier Event of the Year; 9:00am-6:00pm Pacific Time. For info: <https://www.watereducation.org>
- October 28 WEB**
CEQA Conference: 18th Annual Advanced Seminar - Critical Updates on Major Developments, Interactive Online Broadcast. For info: Law Seminars Int'l, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com
- November 2-3 WEB**
Data Collection Techniques and Analytics for Water Resource Systems and Natural Water Systems - Course, Presented by EUCI: 303-770-8800 or events@euci.com. For info: www.euci.com or 303/770-8800
- November 3 UT**
America's Public Lands - Looking Back, Looking Ahead Lecture, Salt Lake City. College of Law; 12:15pm-1:15pm MDT. For info: <https://sjquinney.utah.edu/event/americas-public-lands-looking-back-looking-ahead/>
- November 4-5 CA**
Water Law Institute, San Diego. Manchester Grand Hyatt. Presented by The Foundation for Natural Resources and Energy Law (formerly Rocky Mountain Mineral Law Foundation). For info: <https://www.firrel.org/programs>
- November 7-9 WA**
AWRA Annual Water Resources Conference, Renton. Hyatt Regency Lake Washington. Presented by the American Water Resources Association. For info: Felix Kristanovich, felixk@windwardenv.com or <https://www.waawra.org/2022AnnualConference>
- November 9-10 OR**
Oregon Water Law Conference - 31st Annual, Portland. DoubleTree by Hilton. For info: The Seminar Group: 206/ 463-4400, info@theseminargroup.net or theseminargroup.net
- November 10 WEB**
Accelerating Livestock Methane Solutions in California - Webinar, 1:00pm-2:00pm PDT. Presented by the Emmett Institute on Climate Change & the Environment and the Center for Law, Energy, & the Environment. For info: https://berkeley.zoom.us/webinar/register/WN_GfDG_is_QL63kJVYWpjLfw
- November 15-17 CA**
American Water Summit 2022, Los Angeles. Marriott Los Angeles Airport. 12th Annual Meeting for Senior Executives Within the North American Water Sector. For info: <https://americanwatersummit.com/>
- November 16-17 KS**
Governor's Conference on the Future of Water in Kansas, Manhattan. Hilton Garden Inn and Conference Center. 11th Year of the Conference. For info: www.kwo.ks.gov
- November 17 WEB**
Wetlands in Washington Conference: Waters of the US & Recent Judicial and Administrative Developments Impacting Wetlands, Interactive Online Broadcast. For info: Law Seminars Int'l, 206/ 567-4490, registrar@lawseminars.com or www.lawseminars.com



CALENDAR

(continued from previous page)

November 29-Dec. 1 CA

ACWA 2022 Fall Conference & Exhibition, Indian Wells. Renaissance Esmeralda & Hyatt Regency. Presented by Association of California Water Agencies. For info: www.acwa.com/events/2022-fall-conference-exhibition/

December 5 CO

Colorado Water Law 16th Annual Conference - Adaptation in a Changing Environment, Denver. Embassy Suites Downtown. For info: CLE International: 800/ 873-7130 or www.cle.com

December 6-7 AZ

Western Governors Association Winter Meeting, Phoenix. Arizona Biltmore. For info: www.westgov.org

December 6-8 France

UN-Water Summit on Groundwater 2022, Paris. Hybrid Presentation: In-Person at UNESCO HQ & Remotely: "Groundwater: Making the Invisible Visible" - 7-8 December 2022; Pre-Summit Side Events 6 December 2022. Implemented by the Dedicated UN-Water Task Force and Co-Coordinated by UNESCO and the International Groundwater Resources Assessment Centre (IGRAC), on behalf of UN-Water; Registration is Free. For info: groundwater-summit.org

December 8-9 WA

Washington Water Code Conference - 15th Annual, Seattle. Courtyard Marriott Seattle Downtown/Pioneer Square. For info: The Seminar Group: 206/ 463-4400, info@theseminargroup.net or theseminargroup.net

December 12-13 WEB

Fundamentals of SCADA in Water Treatment Facilities - Online Course, For info: www.euci.com or 303/770-8800

December 14-16 NY

Colorado River Water Users Association 2022 Conference, Las Vegas. Caesars Palace. For info: www.crwua.org/future-conferences.html

December 15-16 CA

CEQA 18th Annual Conference: New Developments & Practice Challenges for 2022, San Francisco. Grand Hyatt Hotel. For info: CLE International: 800/ 873-7130 or www.cle.com

January 10-12 TX

Ten Across Summit: The Future is Here, Houston. Hotel Zaza Museum District & Asia Society Texas Center. RE: Critical Issues & Solutions Impacting the Region. For info: <https://na.eventscloud.com/website/21653/>



#AWRA2022 ANNUAL WATER RESOURCES CONFERENCE
November 7-9 | Renton, WA
awra.org/2022AnnualConference



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- Field trips to explore Seattle.
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