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Water Rights, Water Quality & Water Solutions in the West

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WESTERN WATER TRANSFERS & THE CLEAN WATER ACT

LITIGATION OVERVIEW AND THE ARGUMENTS AGAINST REQUIRING NPDES PERMITS

by Peter Nichols, Berg Hill Greenleaf Ruscitti LLP (Denver, CO)

INTRODUCTION

Water transfers — i.e., the moving of water from one water source to another — are an essential element of water management in the American West. Decades of litigation following the 1972 enactment of the federal Clean Water Act (CWA), however, have left unresolved the question of whether water transfers are subject to National Pollutant Discharge Elimination System (NPDES) permitting. 33 USC § 1342.

The CWA regulates the lawful discharge of pollutants, limiting such discharges to levels protective of established water quality standards. The CWA defines "discharge of a pollutant" to mean "any addition of any pollutant to navigable waters from any point source" (CWA Section 502(12); 33 USC §1362(12)). The discharge of pollutants into waters of the US without a permit violates the act.

At issue is whether water transfers are "point sources" discharging pollutants, and thereby requiring an NPDES permit. Water transfer cases in the federal Second, Ninth, and Eleventh Circuit Courts of Appeal (discussed below) will almost inevitably lead to this issue being brought before the US Supreme Court within the next few years.

WESTERN WATER TRANSFERS

Since most precipitation in the West falls as snow, western water providers must capture water when and where the snow melts — often far from the West's urban and agricultural centers. Providers may divert and deliver water from one watershed to another by utilizing natural rivers and lakes, as well as through conveyance facilities such as reservoirs, aqueducts, ditches, canals, and pipelines. Such water transfers supply municipal, agricultural, industrial, commercial, and other beneficial uses across the West. Without the extensive infrastructure for water transfers, many of the West's great cities could not have grown. Water transfer reliant cities now include Albuquerque, Colorado Springs, Denver, Las Vegas, Los Angeles, Phoenix, Reno, Salt Lake City, San Diego, San Francisco, Santa Fe, and Seattle. Similarly, without water transfers many nationally important agricultural regions could not grow crops, including the Central and Imperial Valleys of California, Weld and Larimer Counties in Colorado, the Snake River Valley of Idaho, and the Yakima Valley of Washington.

All told, western transfers serve over 100 million people, including over 90 million urban residents.

Water Transfers

Southern California Aqueducts

Idaho Canal

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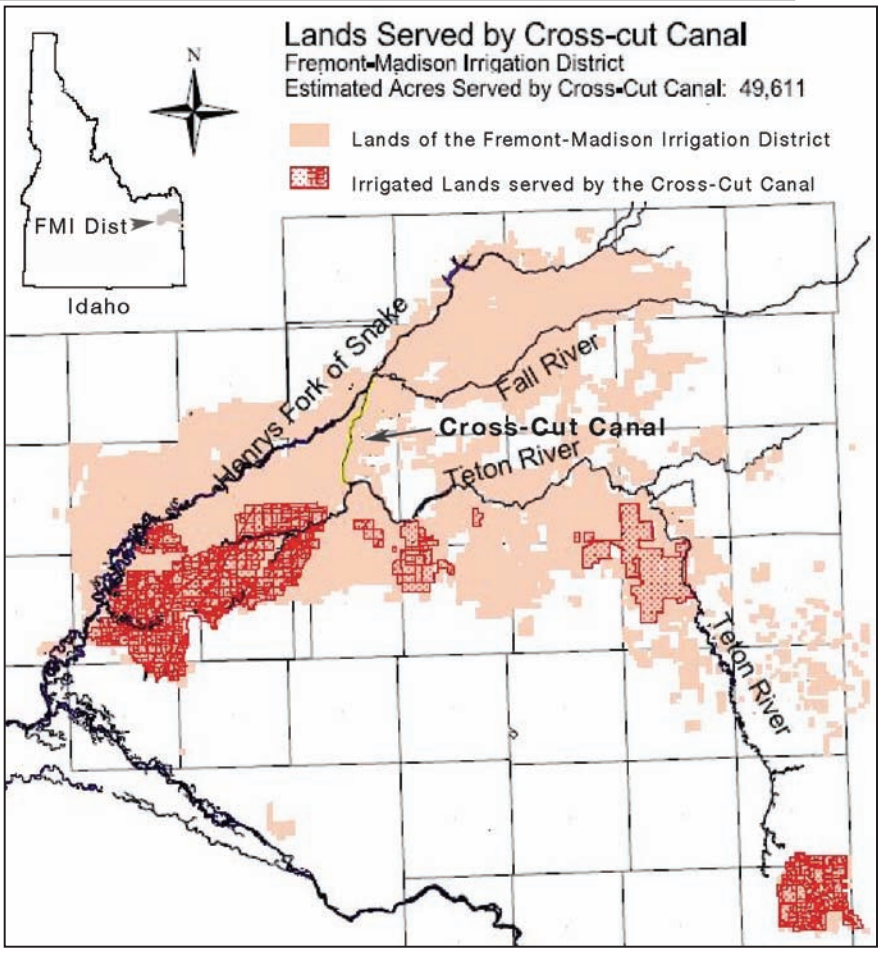
Representative examples of major water transfer projects in the West include:

Metropolitan Water District of Southern California

The Metropolitan Water District of Southern California transfers water from the Colorado River and Northern California to serve nearly 19 million customers of its 26 member public agencies, as shown below. The Colorado River Aqueduct has a capacity of 1.25 million acre-feet per year; up to 2.0 million acre-feet per year is available via the California Aqueduct.

Fremont-Madison Irrigation District

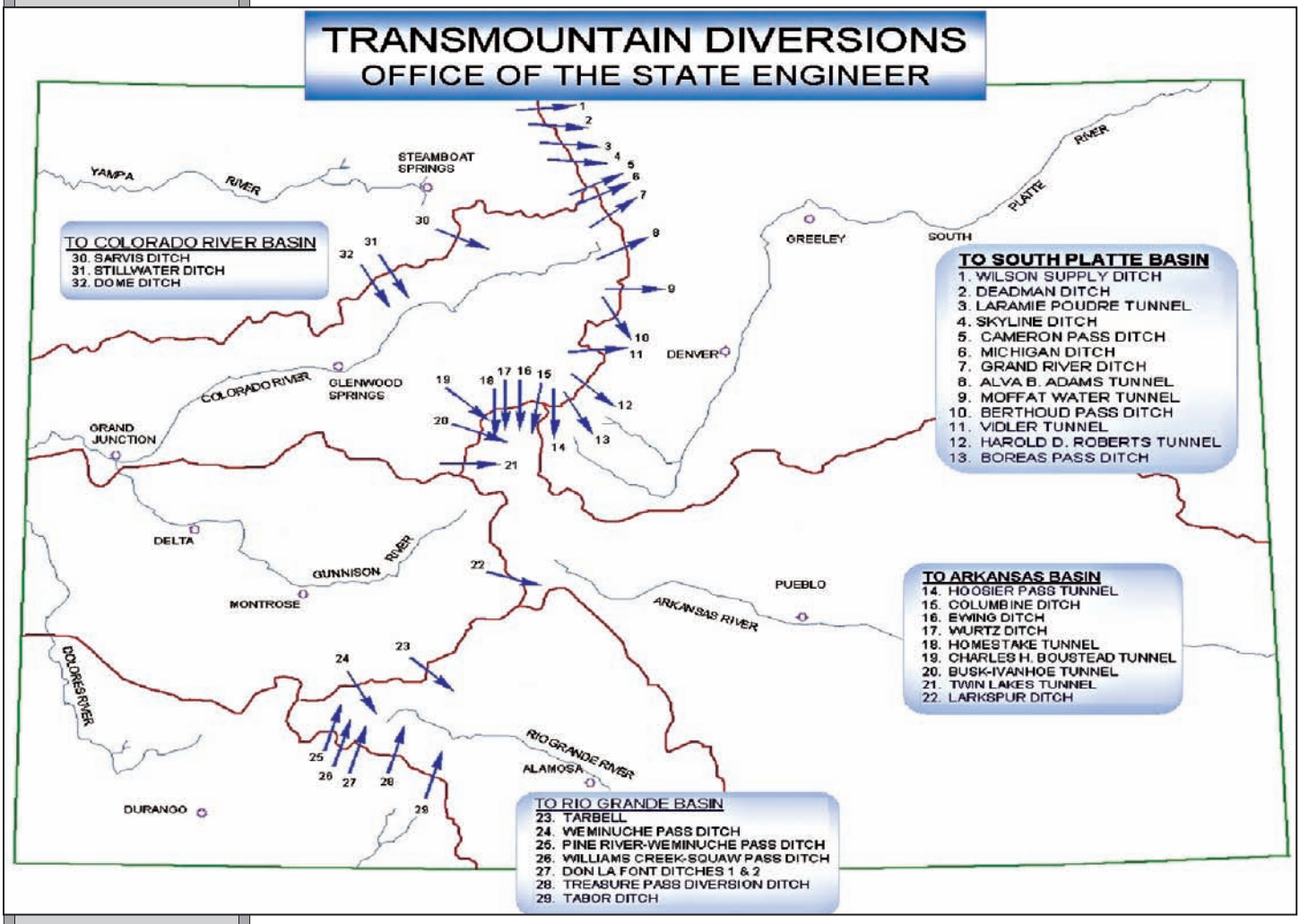
The Fremont-Madison Irrigation District provides water for farm irrigation in the St. Anthony area of eastern Idaho. The Cross-Cut Canal, a critical component of the Fremont-Madison Irrigation District's system, transfers water from the Henry's Fork of the Snake River to the Teton River to irrigate nearly 50,000 acres of farmland.



Water Transfers

Colorado

Fifty major trans-mountain diversions transfer 500,000 acre-feet per year to serve Colorado's eastern slope. More than three million residents of the Colorado's major cities — from Pueblo and Colorado Springs, then north to Denver, Boulder and Fort Collins — and over 750,000 acres on Colorado's eastern plains rely on water transfers for supplemental water supplies.



Natural Impacts

WATER QUALITY ISSUES

Water quality varies between watersheds, and between water transfer source waters and receiving waters. This is often the result of natural processes. The dramatic topography of the West, which extends from over 14,494 feet above sea level to 280 feet below sea level, is largely the result of natural erosive processes. Natural water quality is subject to the same erosive processes and is, therefore, not always pristine. Snow in the western states accounts for 80 percent of the surface water runoff, while thunderstorms account for much of the rest. Runoff from snowmelt and storm events naturally exhibit elevated levels of **t**otal **s**uspended **s**olids (TSS: suspended particles of soil and sediment), **t**otal **d**issolved **s**olids (TDS: dissolved particles of soil and sediment), nutrients, and turbidity. Water transfers typically employ unlined open canals, ditches, and tunnels conveying water, which receives these constituents directly from natural erosion. Source water might be naturally high in TDS and other constituents due to passing through contributing geological formations or from receiving inflows from brackish hot springs.

Water Quality Findings

Water transfers cause relatively few water quality problems. Several western water providers (Providers) recently examined their water transfers. A Declaration summarizing their findings is part of the record for one of the cases we will be discussing further below. Using publicly available data and their own monitoring information, Providers in several states were able to analyze more than 25 representative water transfers, including many multiple transfers. *See Catskill Mountains Chapter of Trout Unlimited, Inc. v. U.S. Environmental Protection Agency,* Nos. 08-CV-5606, 08-CV-8430 (S.D.N.Y.), Doc 177, Decl. of M. Pifher (June 4, 2013).

Water Transfers

Quality Analysis

These Providers' analysis concluded:

- Many small and large volume transfers move water that is always better than the quality of the receiving waters for all sampled parameters
- Parameters of the water transferred would exceed or contribute to the exceedance of one or more of the water quality standards of the receiving waters or downstream waters in many transfers. These situations include:
  - Transfers where the quality of the transferred water is usually better than the quality of the receiving waters for all sampled parameters, with the frequent exception of TSS, a result of erosion during spring runoff. The same situation probably occurs following major precipitation events.
  - Transfers where the quality of the transferred water contains metals at higher concentrations than the receiving waters because of natural geological conditions present at the source.
  - Transfers that deliver nutrients into lakes and reservoirs from nonpoint source pollution introduced prior to and during transfer.

Colorado Example

Not surprisingly in view of the naturally high water quality of the western states, there are few reported water quality problems from water transfers. Colorado, for example, during more than 1,700 transfers has never identified an impaired waterbody pursuant to § 303(d) of the Act. 33 U.S.C. § 1313. There are, in fact, surprisingly few examples of such impairment on record — a tiny fraction of the thousands of water transfers currently ongoing in the United States.

THE CLEAN WATER ACT: NPDES REQUIREMENTS

NPDES Permits

All NPDES permits must include discharge limitations designed to ensure that the water quality standards of the receiving waters are consistently met. Further, all NPDES permits are also subject to requirements concerning antidegradation review under the CWA.

Water Quality Standards

States are primarily responsible for adopting and periodically revising standards to protect water quality and water uses. 33 U.S.C. § 1313(a), (c)(2)(A). Those standards must "be established taking into consideration the use and value of water bodies for public water supplies, propagation of fish and wildlife, recreational purposes, and...also taking into consideration their use and value for navigation." *Id*. at § 1313(c)(2)(A). A discharger must not only ensure the attainment of the numeric and narrative water quality standards, but must protect all underlying beneficial uses as designated by the State.

Potential Contributions

Under the NPDES program, if a discharge merely has the "potential to cause or contribute to...an excursion above any State water quality standard," its NPDES permit must contain conditions to control all such potential contributions. 40 C.F.R. § 122.44(d)(1)(i); see also *Comm. to Save Mokelumne River v. E. Bay Mun. Util. Dist.*, 13 F.3d 305, 309 (9th Cir. 1993). In other words, an NPDES permit must contain conditions that limit the amount of pollutants delivered to the receiving waters, regardless of whether the transfer would cause an exceedance of the water quality standards or be a significant potential cause of an exceedance.

Receiving Waters

Water quality standards are in place for more than three dozen naturally-occurring constituents and physical properties across the United States, including temperature, TDS, nutrients and sediment. *See* 40 C.F.R. pt. 131, subparts A, B & C (State Establishment of Water Quality Standards, e.g., 5 Colo. Code Regs. § 1002-31 (2014); 40 C.F.R. pt. 131, subpart D (Federally Promulgated Water Quality Standards). Under an NPDES permit, each of the water quality standards of the receiving waters would apply to a water transfer, as well as the antidegradation requirements discussed below.

Antidegradation

Degradation Prevention

Antidegradation is a component of the CWA's water quality standards program. 40 C.F.R. § 131.12(a)(2). Where the quality of waters "exceed[s] levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water," antidegradation provisions apply so as to maintain and protect existing quality. *Id*. Antidegradation requirements may apply to prevent *any* change to the quality of the receiving water for every one of a multitude of parameters, even if the overall quality is poor. The antidegradation analysis would apply even in the absence of any threat to the ultimate actual beneficial use.

Water Transfers

LITIGATION OVERVIEW

Point Sources

Early water transfer CWA litigation involved the so-called "dam cases" that held that dams were not "point sources" under the CWA, 42 USC § 1362(14) and, therefore, water transferred through or around the dams was not subject to NPDES permitting. *Nat'l Wildlife Fed'n v. Gorsuch*, 693 F.2d 156 (DC Cir. 1982); *Nat'l Wildlife Fed'n v. Consumers Power Co*., 862 F.2d 580 (6th Cir. 1988).

The discharge of snowmaking water was, however, subsequently subjected to NPDES permitting. *Dubois v. U.S. Dep't of Agric.,* 102 F.3d 1273 (1st Cir. 1996). Later, New York City was required to obtain an NPDES permit to transfer water from one watershed to another for drinking water purposes. *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, 273 F.3d 481 (2d Cir. 2001); *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, No. 1:00-cv-00511-FJS-RFT (N.D.N.Y. 2000) (Catskills I).

Everglades Transfers

It wasn't long after the New York City decision that the Southern District of Florida and Eleventh Circuit Court of Appeals held that transfers of water into the Everglades required an NPDES permit. *Miccosukee Tribe of Indians of Fla. v. S. Fla. Water Mgmt. Dist*., 1999 U.S. Dist. LEXIS 23306 (S.D. Fla. Sept. 30, 1999); *Miccosukee Tribe of Indians v. S. Fla. Water Mgmt. Dist*., 280 F.3d 1364 (11th Cir. 2002). When that case reached the US Supreme Court, the Attorney Generals of Colorado and New Mexico stepped up to lead the fight to support state water law as amicus and intervenor parties, while the National Water Resources Association and Western Urban Water Coalition rallied western **m**unicipal and **i**ndustrial (M&I) providers and users. The US Supreme Court, however, remanded the issue back to the District Court, and invited the US Environmental Protection Agency (EPA) to weigh in. *S. Fla. Water Mgmt. Dist v. Miccosukee Tribe of Indians*, 541 U.S. 95 (2004). For additional details regarding water transfers and the *Miccosukee* case, see Glick, *TWR* #2 (April 15, 2004); Glick, *TWR* #35 (Jan. 15, 2007); Glick, *TWR* #36 (Feb. 15, 2007); and Sensiba & Carbonell, *TWR* #65 (July 15, 2009).

EPA's Water Transfers Rule Litigation

EPA Rule Adoption

In response to the US Supreme Court's invitation, EPA adopted its Water Transfers Rule (Rule), which simply excluded water transfers from discharges that are subject to NPDES permitting requirements. 73 FR 33697 (June 13, 2008); 40 CFR § 122.3. Under the Rule, EPA defined a "water transfer" to mean "an activity that conveys or connects waters of the United States without subjecting the transferred water to intervening industrial, municipal, or commercial use." 40 C.F.R. § 122.3(i).

Rule Challenges

Environmentalists from New England to Florida as well as New York State (joined by eight states and Manitoba) challenged the Rule, with the challenges being consolidated in the Eleventh Circuit. The Eleventh Circuit, however, opted to stay the challenges until it decided an appeal involving Lake Okeechobee in the Everglades. *Friends of the Everglades v. S. Fla. Water Mgmt. Dist*., No. 02-80309-Civ-Altonaga (S.D. Fla. Dec. 11, 2006)(*Lake Okeechobee)*. The Eleventh Circuit reversed the *Lake Okeechobee* trial court, holding that EPA's Rule was a reasonable interpretation of the CWA and, as the CWA was ambiguous concerning transfers, EPA's Rule was entitled to "*Chevron* deference." *Friends of the Everglades, Inc. v. S. Fla. Water Mgmt. Dist*., 570 F.3d 1210 (11th Cir. 2009), cert. denied 131 S. Ct. 643 and 131 S. Ct. 645 (2010). "*Chevron* deference" concerns judicial deference to an agency's interpretation of an ambiguous statute when the agency administers the statute at issue (see below for citation and additional discussion).

"*Chevron* Deference"

Jurisdiction Issues

The Eleventh Circuit, however, proved full of surprises. After repeatedly denying — without explanation — the Western States' and Western Water Providers' unopposed motions to intervene in support of EPA's nationwide Rule, the Circuit dismissed the challenges for lack of jurisdiction. *Friends of the Everglades v. U.S. EPA*, 699 F.3d 1280 (11th Cir. 2012), cert denied *Environmental Protection Agency v. Friends of the Everglades*, 134 S.Ct. 421 (2013).

Forum Shopping

The dismissal of the consolidated challenges by the Eleventh Circuit lifted the stays on "protective" challenges filed by Trout Unlimited, New York State et al., Friends of the Everglades (Friends) and the Miccosukee Tribe inter alia in district courts based on their assertion of jurisdiction. Friends and the Miccosukee Tribe, however, quickly dismissed their suit in the Southern District of Florida, which presumably would have been bound to uphold the Rule due to the Eleventh Circuit's *Lake Okeechobee* precedent. Brazenly forum shopping, Friends and the Miccosukee Tribe then sought intervention in Trout Unlimited and New York State's cases in the Southern District of New York, which most lawyers familiar with the litigation assumed would be bound by the Second Circuit Court of Appeals' decisions in *Catskills I* and *II* and thus overturn the Rule. *See Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, 451 F.3d 77 (2d Cir. 2006)(*Catskills II*). [Editors' Note: "Forum shopping" refers to a decision by a party to file their litigation in a specific court they believe will look more favorably on the position asserted by the party.]

Water Transfers

The Western States, Western Water Providers, New York City, and South Florida Water Management District also sought to intervene. The court granted all intervention requests "by consent." The parties filed cross motions for summary judgment, and the court heard oral arguments December 19, 2013.

Rule Vacated

In his lengthy March 28, 2014 Opinion and Order, Judge Karas vacated the EPA's Water Transfers Rule. In his Conclusion, the Judge stated that the court "vacates the Water Transfers Rule to the extent it is inconsistent with the statute — and in particular the phrase 'navigable waters' as interpreted in *Rapanos* and in this Opinion — and remands the Water Transfers Rule to the extent EPA did not provide a reasoned explanation for its interpretation." *Catskill Mountains Chapter of Trout Unlimited, Inc. v. U.S. Environmental Protection Agency*, Nos. 08-CV-5606, 08-CV-8430 (S.D.N.Y. Mar. 28, 2014); *Opinion and Order* at 116, available at: http://earthjustice.org/sites/default/files/files/FLAwater0221OPINIONandORDER.pdf.

EPA Review

As noted in the Opinion and Order just prior to its Conclusion quoted from above, Judge Karas stated that his decision to remand the Water Transfers Rule was made in order to "give EPA a chance to reexamine and reevaluate some new ideas." *Id*. at 115. Western States, Western Water Providers, EPA, New York City and South Florida Water Management District appealed. Briefing will consume the balance of 2014, so the Second Circuit won't finally decide the case until 2015.

Klamath Water Transfer Litigation

Klamath Transfers

Coincidentally, briefing recently occurred before the Ninth Circuit in an appeal of 1997-vintage litigation involving water transfers through the Klamath Straights in Oregon. *ONRC Action v. U.S. Bureau of Reclamation*, CIV. 97-3090-CL, 2012 WL 3526833 (D.Or. Jan. 17, 2012) report and recommendation adopted sub nom., 1:97-CV-03090-CL, 2012 WL 3526828 (D.Or. Aug. 14, 2012). The issue in *ONRC Action* involved the transfer of water through the Klamath Straights, analogous to transfers in *Miccosukee*, *Lake Okeechobee*, and *Catskills I* and *II*. The Magistrate's report found the transfer excluded by EPA's Water Transfers Rule and thus not subject to CWA requirements. The Magistrate mistakenly confused the *Lake Okeechobee* decision for the consolidated challenges (in the Eleventh Circuit), thinking that the consolidated challenges had upheld the Rule and that was controlling precedent. In fact, it was the *Lake Okeechobee* court that found that the transfer was *not* subject to NPDES permitting because of the Rule, whereas the 11th Circuit dismissed the consolidated challenges to the Rule for lack of jurisdiction. The District Court adopted the Magistrate's conclusion, and found the *Lake Okeechobee* case persuasive though not controlling and rejected ONRC's claim that the transfer was subject to permitting.

Ninth Circuit Reputation

The Ninth Circuit's environmental bent is well known, which would lead one to believe that it is likely to decide that surface water transfers do require NPDES permits (i.e., the environmentalists' argument). The Ninth Circuit's environmental reputation is perhaps heightened by its decision in *Northern Great Plains Res. Council v. Fidelity Exploration and Dev. Co*., 325 F.3d 1115 (9th Cir. 2003)(*Northern Great Plains*). The discharge of groundwater at issue in that case is clearly an activity requiring NPDES permitting, making the case distinguishable from the other water transfer cases — which dealt with surface water to surface water transfers. *Northern Great Plains*, on the other hand, involved a discharge of a groundwater source to surface water. The Ninth Circuit in *Northern Great Plains* followed the 11th Circuit's *Miccosukee* decision and found that the groundwater discharge was an unpermitted "addition" of pollutants to the "waters of the United States." The Ninth Circuit held that groundwater is not "waters of the United States" as defined in the CWA; thus, discharging groundwater produced by oil and gas development is a discharge of waste covered by the CWA that must be permitted under NPDES.

Groundwater Discharges

Ninth Circuit Reversal?

Briefing is now complete, and a decision is likely later this year or early next. Case No. 12-35831. The district court found no NPDES is required, but no one will be surprised if the Ninth Circuit reverses the lower court in *ONRC Action* and finds that an NPDES permit is required for the water transfer — thus creating a split of the Circuits' decisions for the US Supreme Court to resolve.

WATER TRANSFER NPDES COMPLIANCE COSTS

Water Treatment Costs

For water transfers, water treatment to meet NPDES requirements would be cost prohibitive and technically impractical. Transferred water is typically suitable for subsequent agricultural use without treatment, while the Safe Drinking Water Act already requires treatment of water before domestic and municipal use. Regardless, it could cost an estimated $4.2 billion per year to treat just the most significant western interbasin transfers (approximately 14.2 million acre-feet per year) to avoid the potential to cause or contribute to a violation of the water quality standards of the receiving waters. *See* "*Inventory of Interbasin Transfers of Water in the Western Coterminous United States,*" Harold E. Petsch, Jr., USGS Open File Report 85-166 (Lakewood, Colo. 1985), at 30, at $0.90/1000 gallons, *Friends of the Everglades v. S. Fla. Water Mgmt. Dist*., No. 02-80309-Civ-Altonaga (S.D. Fla.), Amicus Curiae Brief of NWRA et al., at 14. Costs of such magnitude are neither feasible nor justified to meet water quality standards and antidegradation provisions, and pose additional unnecessary or redundant costs on water supply Providers.

Water Transfers

Peak Flows

Sequential Transfers

Disposal of Pollutants

Federal Nexus

States' Authority

CWA Recognition

Impractical Impacts

States' Rights Impacts

Constitutional Issue

If the US Supreme Court eventually determines that the NPDES program covers water transfers, a Provider might be compelled to expend hundreds of millions of dollars to construct one or more water treatment facilities, surge reservoirs, and pollutant disposal facilities, or reconfigure its water delivery infrastructure to eliminate water transfers to "waters of the United States." A treatment facility would have to be capable of treating peak flows of source water (which might occur just one or two days a year during spring snowmelt) to avoid the risk of violating the water quality standards of receiving waters. Further, because 50 percent of mountain stream flow occurs in May-June-July, expensive treatment plants might operate only a few weeks or months each year during snowmelt run-off when water users have a legal right to divert water pursuant to the Prior Appropriation Doctrine of the western states. Adding to potential complications is the fact that many water systems include multiple sequential transfers, i.e., into and out of waters of the United States multiple times before the ultimate use.

While municipal and industrial wastewater dischargers employ conventional treatment techniques to affordably meet NPDES program requirements, it would be technically impractical for Providers to treat water transfers because of the variable quality of the source water, enormous volumes of water, and high transfer flow rates. Moreover, pollutants removed by a treatment plant require expensive disposal in accord with applicable federal and state law.

Many water transfers, such as the US Bureau of Reclamation's Colorado-Big Thompson and interstate (Colorado-New Mexico) San Juan-Chama Projects, traverse or abut federal land, including national forests, national parks, national recreation areas, and wilderness areas. To construct a treatment facility, surge reservoir, or pollutant disposal site would likely invoke the dredge-and-fill permit provisions of CWA § 404**,** the National Environmental Policy Act, the Federal Land Policy and Management Act, and potentially the federal Endangered Species Act. Obtaining necessary approvals would be costly, time-consuming, and potentially impossible given site requirements within or near federal lands and environmentally sensitive locations.

In short, infrastructure investments necessary to comply with NPDES requirements for naturally-occurring constituents in such water transferswould be cost prohibitive and technically impractical. Yet such controls would be necessary to avoid regulatory agency enforcement action and citizen suits.

LEGAL ARGUMENTS AGAINST NPDES WATER TRANSFER PERMITS

Clear Statement Rule

Land and water uses are traditionally and primarily state prerogatives, as long understood and applied by the federal and state governments alike. *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 174 (2001). The US Supreme Court thus "ordinarily expect[s] a 'clear and manifest' statement from Congress to authorize an unprecedented intrusion into traditional state authority." *Rapanos v. U.S.*, 547 U.S. 715, 738 (2006).

Rather than expressing a desire to alter the federal-state balance, in enacting the CWA Congress chose to "recognize, preserve, and protect the primary responsibilities and rights of States…to plan the development and use…of land and water resources." 33 U.S.C. § 1251(b). Consistent with this notion, Congress clearly expressed its intent "that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired" by the CWA, and that nothing in the Act "shall be construed to supersede or abrogate rights to quantities of water which have been established by any State." *Id*. § 1251(g). Congress further mandated that nothing in the CWA shall "be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States." *Id*. § 1370(2).

The US Supreme Court in *Miccosukee* stated that if "we read the Clean Water Act to require an NPDES permit for every engineered diversion of one navigable water into another, thousands of new permits might have to be issued, particularly by western States, whose water supply networks often rely on engineered transfers among various natural water bodies. Many of those diversions might also require expensive treatment to meet water quality criteria. It may be that construing the NPDES program to cover such transfers would therefore raise the costs of water distribution prohibitively, and violate Congress' specific instruction that 'the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired'" by the Act. 541 U.S. at 108. Also, as explained above, water rights established by authority of the States would be abrogated or impaired, contrary to 33 U.S.C. § 1251(g). Vacating EPA's Water Transfers Rule would therefore be contrary to the US Supreme Court's "clear statement rule."

Avoidance Canon

The "canon of constitutional avoidance" militates against extending NPDES program jurisdiction over water transfers, thus avoiding a constitutional problem posed by impinging on the States' traditional and primary power over land and water use. *Clark v. Martinez*, 543 U.S. 371, 380-81 (2005).

Water Transfers

Agency Interpretation

Congressional Intent

Interstate Compacts

Colorado River Water Transfers

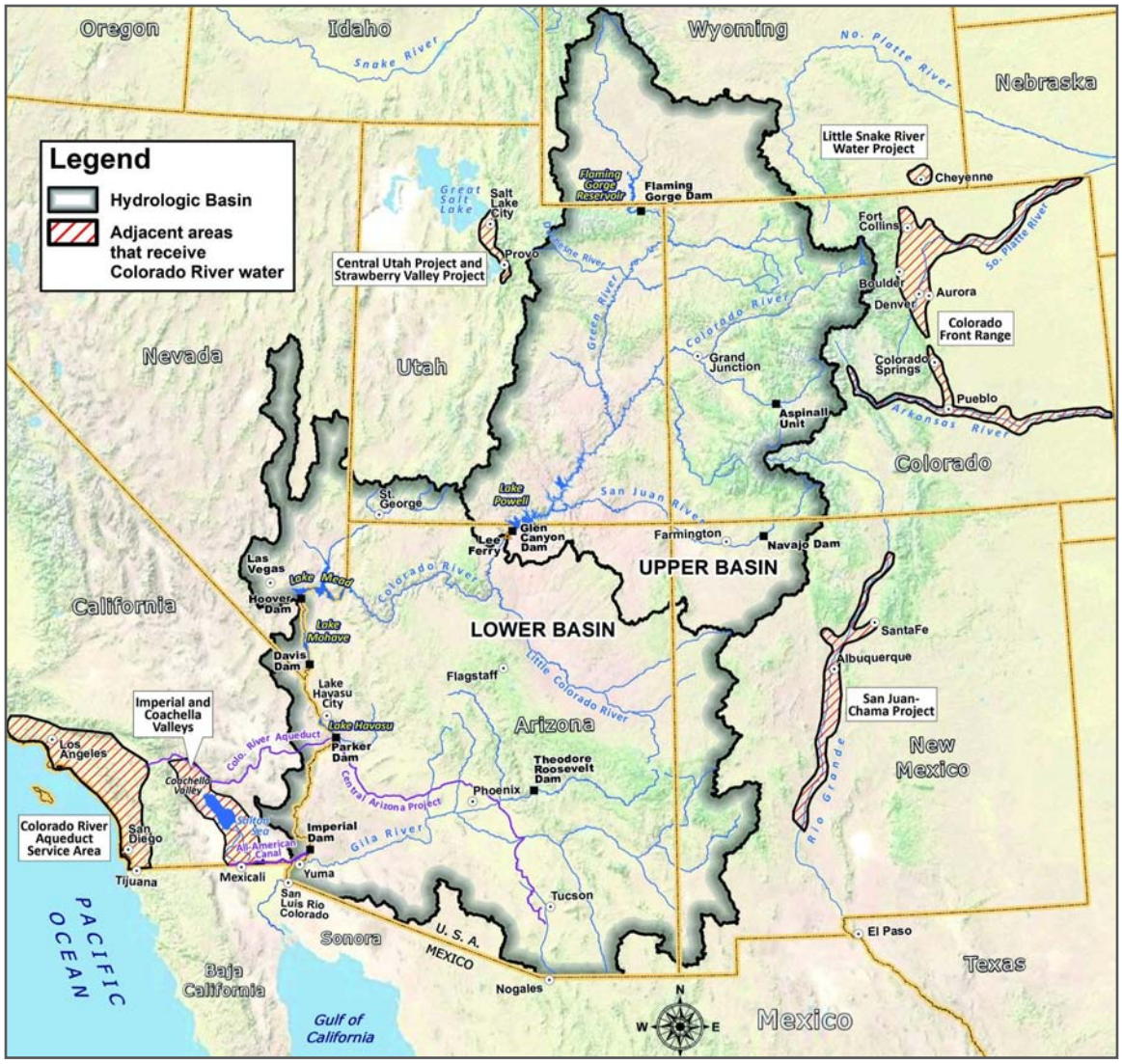
***Chevron* Doctrine**

Chevron concerns judicial deference to an agency's interpretation of an ambiguous statute when the agency administers the statute at issue. *Chevron U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984). The reviewing court must initially determine whether Congress has directly spoken to the precise question at issue. *Id*. at 842–43. If Congress' intent is clear, "that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Id*. If, however, "the statute is silent or ambiguous with respect to the specific issue," the "question for the court is whether the agency's answer is based on a permissible construction of the statute." *Id*. at 843.

Challengers to the Water Transfer Rule argue that Congress unambiguously intended NPDES program requirements to apply to water transfers. More likely, it never occurred to Congress that water transfers might be considered "discharges of pollutants" subject to the NPDES program because it was focused on public outcry over notorious municipal and industrial discharges — like the Cuyahoga River fire — and unaware of any water quality problems caused by water transfers. Congress apparently did not even discuss water transfers, which are noticeably absent from over 3,000 pages of legislative history. *See* Comm. on Envtl. & Pub. Works, 92nd Congr., 1, 2 Legis. *History of the Water Pollution Control Act Amendments of (1973)*; Comm. on Envtl. & Pub. Works, 95th Cong., 3 Legis. *History of the Clean Water Act of 1977 (1978)*. Furthermore, it is inconceivable that Congress would knowingly apply NPDES requirements that could frustrate the "life blood of the west" provided by 170 federal Bureau of Reclamation projects it authorized and funded.

Interstate Issues

NPDES requirements may impermissibly abrogate interstate compacts, US Supreme Court interstate water apportionments, and Congressional acts if States are not able to use their full legal entitlement to scarce water due to technically or economically impossible program requirements that prevent the transfer of legally available water from one basin to another.



Water Transfers

Enforcement Impacts

NPDES Impacts

Differing Rulings

Supreme Court Options

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Enforcement Issues

If water transfers become subject to the NPDES program, any water quality exceedances — even though resulting from natural processes — would expose transferrers to enforcement action and citizen suits. 33 U.S.C. §§ 1319, 1365. The Northern District of New York, for example, imposed civil penalties of $5,749,000 on New York City for a water transfer without an NPDES permit, and calculated the maximum penalties at $63,249,000. *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, 451 F.3d 77 (2d Cir. 2006). Of particular concern would be the possibility of an injunction prohibiting the operation of a water transfer without an NPDES permit, which would deprive westerners of essential water supplies.

CONCLUSION

EPA's Water Transfers Rule excludes water transfers from prohibitively expensive NPDES permitting requirements that would supersede, abrogate or impair state water law and individual water rights essential to the west.

The Eleventh Circuit Court of Appeals has upheld the Rule, the Oregon District Court has similarly upheld the Rule, while the Southern District of New York has vacated the Rule in part and remanded it to EPA. The latter two district court decisions are on appeal to the Ninth and Second Circuits respectively with decisions expected by mid-2015. A split among the circuits is the most likely outcome, teeing up the issue for the US Supreme Court.

The Supreme Court could adopt one or more of several lines of reasoning, or surprise everyone, like when it remanded *Miccosukee* in 2004. First, the Court could conclude that the CWA is ambiguous and defer to EPA pursuant to *Chevron*, 467 U.S. 837, although perhaps remanding the Rule for further consideration. Second, the Court could conclude that NPDES permitting would raise the costs of transfers prohibitively and violate Congress' specific instructions in the CWA consistent with its comment in *Miccosukee*. 541 U.S. 108-09. Third, the Court could take a states' rights approach, building on *SWANCC* and *Rapanos*, 531 U.S. 159, 174 (2001); 547 U.S. 715, respectively. Alternately, the Court could conclude that NPDES permitting does not infringe on state authority, narrowly decide that the CWA is unambiguous through a technical statutory analysis, and subject transfers to NPDES permitting. Or the Court could likewise use a narrow and technical analysis to conclude the CWA unambiguously does *not* apply the NPDES program to transfers.

Although the tide seems to have turned against NPDES permitting of transfers since the Eleventh Circuit's decision in *Lake Okeechobee*, forthcoming opinions from the Ninth Circuit and especially the Second Circuit will test all of the issues and arguments with all of the parties present. That process may provide more tea leaves for Supreme Court watchers and prognosticators to read.

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Pesticides Regulation

FIFRA v. CWA

Past History

Current Controversy

Pesticide Impacts

Aquatic Life Exposures

Mixtures Issue

PESTICIDE USE AND WATER QUALITY

IMPLEMENTING CONCURRENT CWA & FIFRA REGULATIONS

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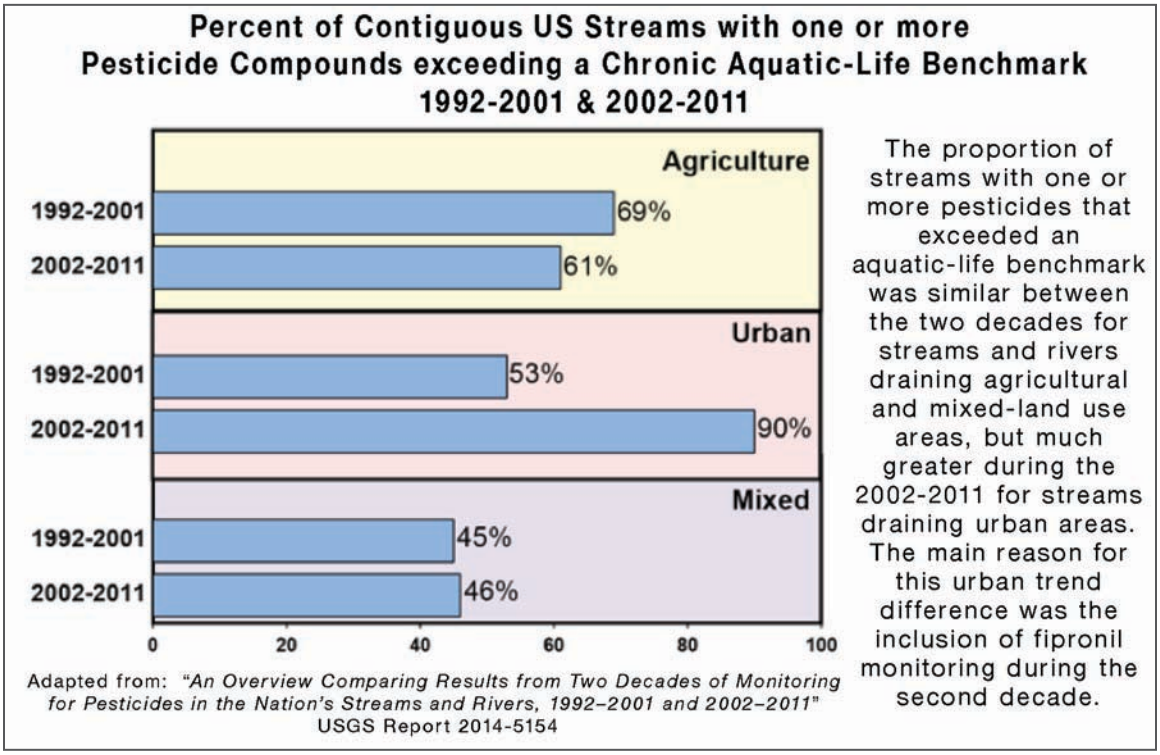
INTRODUCTION

This report provides background on the emerging conflict over interpretation and implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the federal Clean Water Act (CWA). FIFRA governs the labeling, distribution, sale, and use of pesticides, including insecticides and herbicides. The CWA creates a comprehensive regulatory scheme to control the discharge of pollutants into the nation's waters; the discharge of pollutants without a permit violates the act.

For the more than 30 years since they were enacted, there was little apparent conflict between these two acts. The US Environmental Protection Agency's (EPA's) operating principle during that time was that pesticides used according to the requirements of FIFRA did not require regulatory consideration under the CWA. EPA did not require CWA permits for use of FIFRA-approved materials and EPA rules did not specifically address the issue. However, EPA's interpretation and operating practice regarding the relationship between the two laws have recently been challenged in several arenas, including the federal courts, EPA's regulatory proceedings, and the US Congress.

Pesticides used to control weeds, insects, and other pests receive public attention because of potential impacts on humans and the environment. Depending on the chemical, possible health effects from overexposure to pesticides include: cancer; reproductive or nervous-system disorders; and acute toxicity. Similar effects are possible for organisms in the aquatic environment. Recent studies suggest that some pesticides can disrupt endocrine systems and affect reproduction by interfering with natural hormones (*see* Schierow & Buck, CRS Report R40177, *Environmental Exposure to Endocrine Disruptors: What Are the Human Health Risks?*).

Many pesticides and their breakdown products do not have regulatory standards or guidelines. Moreover, what current standards and guidelines there are do not yet account for exposure to mixtures and seasonal pulses of high concentrations. Effects of pesticides on aquatic life are a concern. Surveys done by the US Geological Survey (USGS) found that more than one-half of streams sampled had concentrations of at least one pesticide that exceeded an EPA guideline for the protection of aquatic life. Whereas most toxicity and exposure assessments of pesticides are based on controlled experiments with a single contaminant, sampling by USGS found that most contamination of waterbodies occurs as pesticide mixtures (*see* USGS Circular #1225, 1999).



Pesticides Regulation

Permit Need?

Several federal court cases testing the relationship between FIFRA and the CWA have drawn attention since 2001. [*See* Beale, *TWR* #4; Goldman, *TWR* #12; Ginsberg, *TWR* #35; Morford, *TWR* #59; Lindley & Hamiltion, *TWR* #80; and MacCurdy, *TWR* #94.] At issue is how FIFRA-approved pesticides that are sprayed over or into waters are regulated and, specifically, whether the FIFRA regulatory regime is sufficient alone to ensure protection of water quality or whether such pesticide application requires approval under a CWA permit. This issue arose initially over challenges to some routine practices in the West (weed control in irrigation ditches and spraying for silvicultural pest control on US Forest Service lands). It subsequently drew more attention in connection with efforts by public health officials throughout the country to combat mosquito-borne illnesses such as West Nile virus. The litigation created uncertainty over whether application of pesticides and herbicides to waterbodies requires a water discharge permit. A related interest to many pesticide applicators, not yet addressed by EPA policy or rule, concerns pesticides unintentionally impacting waterbodies through drift or migration from nearby land, such as a field of crops.

Litigation

As discussed in more depth below, in two cases concerning pesticide applications by agriculture and natural resources managers, the US Ninth Circuit Court of Appeals (Ninth Circuit) held that CWA permits are required for at least some discharges of FIFRA-regulated pesticides over, into, or near US waters. It held in a third case that no permit was required for the specific pesticide in question. Most recently, the US Second Circuit Court of Appeals (Second Circuit) ruled in 2010 that a CWA discharge permit for mosquito control activities is not required before April 2011.

EPA Rule (2006)

Several of the rulings alarmed a range of stakeholders who were concerned that requiring CWA permits for pesticide application activities would present significant costs, operational difficulties, and delays. Pressed to clarify its long-standing principle that CWA permits are not required for using FIFRA-approved products, EPA in 2006 issued a rule to formalize that principle in regulations. Environmental activists strongly opposed EPA's actions, arguing that FIFRA does not protect water quality from harmful pollutant discharges, as the CWA is intended to do. Other stakeholders, such as pesticide applicators, endorsed the rule. The rule was challenged, and in 2009 a federal court vacated the regulation. The federal government asked the court to stay the order vacating the exemption for two years, to provide time for working with states to develop a general permit for pesticide applications covered by the decision. The court denied the request for rehearing and granted the requested delay, which was extended until October 31, 2011 — when EPA issued the permit. Under the final permit, pesticide applicators will be covered automatically for discharges before January 12, 2012. Despite EPA's efforts to minimize regulatory burdens and cost, the permit remains controversial.

Vacated (2009)

This report provides background on the conflict over interpretation and implementation of FIFRA and the CWA. A brief discussion of the two laws is followed by a review of the major litigation of interest. EPA's efforts to clarify its policy in this area and the November 2006 rule and the 2009 federal court ruling are discussed, as well as current efforts and possible options at EPA and Congress to further address the FIFRA-CWA issues.

Congressional Resolution?

Some believe that the controversy will only be resolved by congressional action to clarify the intersecting scope of the CWA and FIFRA. As discussed further below, Congress has considered legislation intended to nullify the 2009 federal court ruling but no such legislation has thus far been enacted.

THE LAWS

FIFRA

FIFRA is a regulatory statute governing the licensing, distribution, sale, and use of pesticides, including insecticides, fungicides, rodenticides, and other designated classes of chemicals. Its objective is to protect human health and the environment from unreasonable adverse effects of pesticides. To that end, it establishes a nationally uniform pesticide labeling system requiring the registration of all pesticides and herbicides sold in the United States, and requiring users to comply with conditions of use included on the national label. A FIFRA label encompasses the terms on which a chemical is registered, and its requirements become part of FIFRA's regulatory scheme. In registering the chemical, EPA makes a finding that the chemical "when used in accordance with widespread and commonly recognized practice...will not generally cause unreasonable adverse effects on the environment" (7 U.S.C. §136a(c)(5)(D)).

FIFRA Labeling

EPA Review

EPA reviews scientific data submitted by pesticide manufacturers on toxicity and behavior in the environment to evaluate risks and exposure associated with the pesticide product's use and takes into account the costs and benefits of various pesticide uses. If a registration is granted, EPA specifies the approved uses and conditions of use, which the registrant must explain on the product label. EPA may classify and register a pesticide product for general use or for restricted use. Pesticides judged to be more dangerous to the applicator or to the environment can only be applied by, or under the direct supervision of,

Pesticides Regulation

FIFRA Enforcement

a person who has been trained and certified for such applications. FIFRA preempts state, local, and tribal regulations stricter than or different from EPA rules with respect to labeling requirements, but allows states and localities to adopt more restrictive conditions with regard to sale and use.

Use of a pesticide product in a manner not consistent with its label is prohibited and the law provides civil and criminal penalties for violations. Under FIFRA, EPA generally enforces the law's requirements. However, the law also gives states with adequate enforcement procedures, laws, and regulations primary authority for enforcing FIFRA provisions related to pesticide use.

CWA

"Point Source" Discharge

The objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." To that end, it creates a comprehensive regulatory scheme to control the discharge of waste and pollutants; the discharge of pollutants into waters of the US without a permit violates the act. The permit requirement is at the heart of CWA's compliance and enforcement strategy. Several aspects of these core requirements in the law are important to evaluating whether CWA applies to specific activities, including whether there is a discharge from a point source (a discrete conveyance such as a pipe, ditch, container, vessel, or other floating craft), whether the discharge is made into waters of the United States, and whether the material discharged is a pollutant — all of these terms are defined in the act. Especially key in the current context is whether pesticides are "pollutants" under the CWA. This issue has been central to much of the judicial and regulatory debate over whether the two laws, CWA and FIFRA, are complementary or in conflict.

CWA "Pollutant"

CWA Section 502(6) (33 USC §1362(6)) defines pollutant:

> The term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

NPDES Requirement

CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permitting requirement, which regulates the lawful discharge of pollutants. The act defines "discharge of a pollutant" to mean "any addition of any pollutant to navigable waters from any point source" (CWA Section 502(12); 33 USC §1362(12)). Discharges are permitted if they are authorized under a NPDES permit that meets CWA requirements, including protecting the receiving waters. NPDES permits specify limits on what pollutants may be discharged and in what amounts. They also include monitoring and reporting requirements. They are either individual case-by-case permits or general permits applicable to similar categories of activities and similar waste discharges. Under the CWA, qualified states issue NPDES permits to regulated sources and enforce permits, and the law allows states to adopt water quality requirements more stringent than federal rules. As of 2012, 46 states had been delegated authority to administer the permit program; EPA issues discharge permits in the remaining states.

State Programs

Agency Enforcement

The NPDES permit is the act's principal enforcement tool. EPA may issue a compliance order or bring a civil suit in US district court against persons who violate the terms of a permit, and stiffer penalties are authorized for criminal violations of the act. As a practical matter, the majority of actions taken to enforce the law are undertaken by states, both because states issue the majority of permits to dischargers and because the federal government lacks the resources for day-to-day monitoring and enforcement. In addition, individuals may bring a citizen suit in US district court against persons who violate the terms of a CWA-authorized permit or who discharge without a valid permit. FIFRA does not authorize citizen suits.

Citizen Suits

Throughout the United States, pesticides often are applied in, onto, or near waterbodies to control weeds and insects. Whether those pesticides are adversely affecting water quality has not been a disputed issue until recently.

THE LITIGATION

Ninth Circuit & Second Circuit Rulings

Five federal court cases testing the relationship between FIFRA and the CWA have drawn the most attention, three in the Ninth Circuit in the West, concerning pesticide applications by agricultural and natural resource managers, and two in the Second Circuit in the East, involving the use of pesticides by government and public health authorities for mosquito control. These cases have been brought principally under the citizen suit provisions of the CWA. Two of the Ninth Circuit decisions have held that CWA permits are required for at least some activity involving the point source discharge of FIFRA-regulated pesticides over or into waters of the US, and the third held that a permit was not required because the specific pesticide was not a chemical waste. The Second Circuit ruled in two cases; most recently, it ruled that trucks and helicopters that discharge pesticides are point sources, but it deferred requiring permits until EPA issues a CWA general permit (discussed below).

Pesticides Regulation

Irrigation Canals

CWA & FIFRA Purposes

CWA & Local Conditions

State Responses

Aerial Spraying

Point Source Needing Permit

EPA Disagreement

Instream Application

No Residuals

The Ninth Circuit Cases

The first of the major cases on these issues involved application of herbicides in irrigation ditches. In the case, a major issue was whether the application of pesticides constitutes the discharge of a pollutant. Environmental groups challenged application of an aquatic herbicide called Magnicide H to kill weeds and algae and sought to require that the applicator, a municipal corporation that operates a system of irrigation canals in Oregon, obtain an NPDES permit.

The Ninth Circuit endorsed the lower court's ruling that the pesticide was a pollutant under the CWA, and that the irrigation canals into which the pesticide was being sprayed are "waters of the United States." However, it rejected the lower court's holding that a CWA permit was not required because the pesticide was properly regulated by FIFRA and had an EPA-approved FIFRA label. The appeals court ruled that FIFRA and CWA have different purposes and that, as such, neither could be controlling on the application of the other. The court said that FIFRA creates a comprehensive regulatory scheme for the labeling of pesticides, requiring that all insecticides and herbicides sold in the US be registered with EPA. FIFRA and the CWA have different, although complementary, purposes, the court said, and using a pesticide with a FIFRA-approved label does not obviate the need to obtain a CWA permit. The FIFRA label is the same nationwide. The CWA permit considers local environmental conditions, which the FIFRA label does not. Thus, a nationwide label on a FIFRA-regulated chemical could not be controlling on whether a CWA permit is required, because it does not account for location-specific requirements. The Ninth Circuit reversed the district court's grant of summary judgment in favor of the defendants (*Headwaters, Inc. v. Talent Irrigation District*, 243 F.3d 526 (9th Cir. 2001)). Note that, in view of the Supreme Court's June 2006 decision in *Rapanos v. United States* (547 U.S. 715, 2006), coverage of irrigation canals as "waters of the United States" may depend on case-specific circumstances, because the Court's plurality opinion in that case made specific reference to *Headwaters, Inc. v. Talent Irrigation District* (*see* Copeland & Meltz, CRS Report RL33263, *The Wetlands Coverage of the Clean Water Act (CWA) Is Revisited by the Supreme Court: Rapanos v. United States*).

Several of the states within the Ninth Circuit subsequently took actions to respond to this ruling. California and Washington amended their water quality program rules to require NPDES permits for pesticide applicators. Oregon did not mandate permits, but suggested that pesticide applicators obtain state-issued permits to protect against lawsuits. Other states outside of the Ninth Circuit have continued their long-standing practice of not issuing permits to persons who apply pesticides to waters of the United States.

The second major case in the West involved an annual US Forest Service (USFS) aerial spray program over national forest lands in Oregon and Washington. Environmental groups filed a lawsuit challenging the spraying program, saying that the **e**nvironmental **i**mpact **s**tatement (EIS) prepared by USFS was inadequate and that USFS had failed to obtain a CWA permit, which the environmental groups argued is required for this type of aerial spraying. The appeals court reversed the district court's grant of summary judgment for USFS and instructed the lower court to enter an injunction prohibiting USFS from further spraying until it acquires an NPDES permit and completes a revised EIS (*League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Forsgren*, 309 F.3d 1181 (9th Cir. 2002)). The court disagreed with the USFS argument that the spraying is nonpoint source water pollution, which does not require an NPDES permit. The court held that the insecticides meet the CWA definition of "pollutant" and that the application came from an aircraft equipped with spraying apparatus, thus meeting all of the elements of the CWA's definition of point source pollution.

In September 2003, the EPA General Counsel issued a legal memorandum to officials in states located in the Ninth Circuit responding to the *Forsgren* case. The memorandum said that EPA disagreed with the court's holding in the case and that outside the Ninth Circuit, EPA would continue its long-standing interpretation of FIFRA and the CWA. Within the Ninth Circuit, the memo said, EPA would not acquiesce to the ruling in the case of materials other than pesticides (such as those used for fire control), or in circumstances where pesticides are not applied directly over and into waters of the United States. *See* Robert Fabricant, EPA General Counsel, "*Interpretive Statement and Guidance Addressing Effect of Ninth Circuit Decision in League of Wilderness Defenders v. Forsgren on Application of Pesticides and Fire Retardants*" memorandum, September 3, 2003.

The third Ninth Circuit case involved an effort by the Montana Department of Fish, Wildlife and Parks (Department) to intentionally apply the pesticide antimycin to a river in order to remove non-native trout species and thus to allow re-introducing a threatened fish species into the river. The director of the Department was sued under the citizen suit provision of the CWA by a citizen who sought to require the Department to obtain an NPDES permit before applying the pesticide. The court held in this instance that no NPDES permit was required, because the facts of the case demonstrated that, following application as intended, the antimycin dissipated rapidly, leaving no excess portions or residual chemical that should

Pesticides Regulation

"Chemical Waste" Issue

be characterized as chemical waste, and thus is not a pollutant under the act. Intentionally applied and properly performing pesticides are not pollutants, the court said. The court distinguished this case from its ruling in *Headwaters*, saying that the factual scenarios differ, because "in that case the 'chemical waste' for which a NPDES permit was required was not a pesticide serving a beneficial purpose and intentionally applied to water, but was a chemical that remained in the water after the Magnicide H performed its intended, beneficial function." Further, the court stated that its analysis accords with EPA's construction of the CWA's definition of "chemical waste" in the context of intentionally applied pesticides, and that EPA's 2003 Interim Statement and Guidance addressing the issue (discussed below) is entitled to some deference. The court found that EPA's interpretation as presented in that Interim Statement is reasonable and not in conflict with the expressed intent of Congress. *Fairhurst v. Hagener*, 422 F.3d 1146 (9th Cir. 2005)).

Spray Drift

The Second Circuit Cases

Two cases in the Second Circuit involved the use of pesticides for mosquito control. In the first case, several residents of the Town of Amherst, NY, sought to halt aerial application of pesticides without a CWA permit. The district court initially dismissed the case, stating that spray drift is not chemical waste under the CWA and that the pesticide use was best regulated under FIFRA. But the appeals court remanded the case to the district court for further development of the record (*Altman v. Town of Amherst, N.Y.*, 47 Fed. Appx. 62 (2d Cir. 2002)). Although this ruling may not be cited as precedent, it is notable in that, while EPA had filed an amicus curiae brief providing its views on this particular case, the court invited EPA to offer its views broadly on the policy and legal questions. The court stated:

Court's EPA Invitation

> Until the EPA articulates a clear interpretation of current law — among other things, whether properly used pesticides released into or over waters of the United States can trigger the requirement for NPDES permits...— the question of whether properly used pesticides can become pollutants that violate the CWA will remain open. Participation by the EPA in this litigation in any way that permits articulation of the EPA's interpretation of the law in this situation would be of great assistance to the courts.

47 Fed. Appx. at 67

The second pertinent case in the Second Circuit also involved the use of pesticides for control of mosquitoes. Plaintiffs in the case, a citizens group, sought an injunction to halt aerial and ground spraying, arguing that although the pesticides were properly regulated under FIFRA, the spraying program involved the discharge of a pollutant without a CWA permit, and thus was a violation of the CWA. A federal district court held that FIFRA-compliant spraying activity did not amount to the discharge of a pollutant into navigable waters from a point source, and thus did not violate the CWA. In March 2010, the Second Circuit disagreed with the district court's finding that trucks and helicopters were not "point sources" (which are required to have CWA permits in order to discharge lawfully), but this court held that no permits would be required for the challenged activities until EPA issues a general permit, as it planned to do in 2011 (*Peconic Baykeeper Inc. v. Suffolk County*, 2d Cir., No. 09-97-cv, March 30, 2010).

Point Sources

Other Litigation

Other lawsuits have followed these cases. For example, private citizens who operate an organic fruit farm in Gem County, Idaho, brought suit against the local mosquito abatement district there, seeking to require a CWA permit for pesticide spraying. The mosquito abatement district applied for a permit from EPA, which the agency declined to issue, based on its long-standing policy and legal interpretation. Thereafter, the mosquito abatement district filed a lawsuit against EPA in an attempt to obtain a declaration that a CWA permit is not needed and to avoid the citizen suit litigation, which was pending in federal court in Idaho. The mosquito abatement district asked the federal court either for a judgment saying that no permit is required or, if the court were to determine otherwise, an order directing EPA to process its CWA permit application. In January 2005, the federal district court in the District of Columbia dismissed the case because the mosquito abatement district and EPA were in agreement that no CWA permit is required for pesticide applications that are consistent with FIFRA (*Gem County Mosquito Abatement District v. EPA*, 398 F. Supp. 2d 1 (D.D.C. 2005)).

No Permit Needed

Aerial Spraying Ceased

In other locations, citizen groups have given notice, as required by the CWA, of possible lawsuits to expand the precedent from the Ninth Circuit cases to other types of operations. For example, two actions were threatened in 2004 and 2005 against Maine blueberry farmers for failing to obtain a CWA permit for spraying pesticides that may drift off-target from land into waterbodies. In response to the litigation pressure, however, both farmers subsequently announced plans to cease aerial spraying and instead rely on ground spraying, until such time as government or the courts clarify the law.

Pesticides Regulation

Industry Concerns

EPA Rule (Later Vacated)

EPA Guidance

Activist's Objections

FIFRA Protectiveness Limited

Local Conditions

Synergistic Impacts

Industry Positions

EPA'S REGULATORY RESPONSES: 2003-2006

The rulings by the Ninth Circuit in the *Talent* and *Forsgren* cases and possible endorsement by other courts greatly alarmed a range of stakeholders in the regulated community, including forestry, agriculture, and pesticide applicators, as well as municipal and public health officials concerned with the need to control mosquitoes and other vectors associated with diseases such as West Nile virus and malaria. They feared that CWA permit requirements would be extended to agricultural and other activities that have not traditionally been regulated under the CWA. They argued that if permits tailored to particular circumstances are deemed necessary, such requirements would present significant costs, operational difficulties, and delays to applicators. Such permits also would put pressure on limited federal and state CWA permitting resources. In their view, requiring permits will not be environmentally helpful — on the contrary, the expense and long delays of permitting proceedings will hamper programs that are needed for controlling pests that threaten public health and crops. In response, EPA issued two interpretive guidance documents (in 2003 and 2005) and in 2005 proposed a rulemaking to formalize its long-standing position on CWA/FIFRA issues. A final rule was promulgated in November 2006 but was vacated by a federal court in 2009, as discussed below.

EPA Guidance

After the *Altman v. Town of Amherst* ruling in 2002, industry, states, and others, including some in Congress, pressed EPA to clarify the emerging conflicts over the two laws. EPA responded in July 2003 with an interim guidance memorandum and a final guidance document in 2005 (EPA, "*Application of Pesticides to Waters of the United States in Compliance With FIFRA, proposed rulemaking and notice of interpretive statement*" 70 Federal Register 5093, February 1, 2005). EPA's consistent position, expressed in both guidance documents, was that pesticides applied in a manner consistent with FIFRA do not constitute either chemical wastes or biological materials under the definition of pollutant in Section 502(6) of the CWA. The rationale for this position was that it is consistent with over 30 years of CWA administration. At the same time, EPA said that pesticide applications in violation of FIFRA, that is, when the pesticides were not used or applied according to applicable labeling requirements, would be subject to all relevant statutes, including the CWA.

Environmental activists strongly objected to EPA's position in the guidance, which they viewed as contrary to the judicial rulings. These groups reiterated points made by the Ninth Circuit court in the *Headwaters* and *Forsgren* rulings — namely that chemical and biological pesticides are pollutants within the meaning of the CWA, because the law defines pollutants broadly and includes, among other substances, chemical wastes, biological materials, and agricultural wastes. As the Ninth Circuit has declared, environmentalists said, FIFRA does not override the CWA, and the two statutes must work in tandem to prevent injury to aquatic life. They also argued that EPA was wrongly deciding that materials with beneficial uses should not be construed as pollutants under the CWA.

Environmentalists' objections also went to the policy problems of relying on FIFRA to protect water quality from pesticide applications, as that would be the result of EPA's position. That position, critics said, turns on whether the pesticide application conforms procedurally with FIFRA requirements, not what is the water quality impact of that pesticide. Other concerns raised by critics included the fact that while the FIFRA registration process calls for ecological risk assessment that may be adequate for producing nationally applicable labels, it does not ensure that local water quality standards are maintained and does not account for additive or synergistic effects of multiple pollutants discharged to a particular waterbody. Environmentalists argued that the CWA provides the means to determine whether, and under what conditions, it is safe to discharge a particular pesticide into a particular body of water, and that FIFRA's nationally uniform labeling system cannot do that. FIFRA is not specifically charged with ensuring the chemical, physical, and biological integrity of US waterways, and satisfaction of a pesticide's FIFRA labeling criteria does not automatically satisfy water quality concerns, as the NPDES permit process is intended to do. Environmentalists also maintained that FIFRA fails to consider the lasting effects that pesticide residues have on a local ecosystem and that localized analysis of the environmental impact of pollutant discharges under the CWA is necessary, due to the toxic residues that remain after pesticide application, which FIFRA does not address.

Industry welcomed the thrust of the EPA guidance but also urged that it be broadened. Agricultural groups requested that EPA include other classes of applications under the guidance, such as aquaculture and crop production. Beyond the types of uses described in the guidance, some argued that EPA should additionally clarify that CWA permits are not required in the case of pesticides that are applied over land and then inadvertently impact waterbodies through drift and migration. Many requested that EPA address

Pesticides Regulation

the issues definitively in a rulemaking, rather than in non-binding guidance. In their view, without clear regulatory language supporting EPA's interpretation, pesticide applicators would still face the prospect of citizen lawsuits and NPDES permit requirements.

Many states and local governments, including agriculture agencies, irrigation districts, and mosquito abatement districts, strongly endorsed EPA's proposed clarification of its interpretation of the two laws. However, a few — especially states located in the jurisdiction of the federal Ninth Circuit — expressed a different view. The Oregon Department of Environmental Quality and California State Water Resources Control Board commented that the Interim Statement conflicted with legal precedent in the *Headwaters* case. They urged EPA, if it wishes to create an exemption for pesticide applications conducted in compliance with FIFRA, to ask Congress to amend the CWA and FIFRA accordingly.

EPA Regulatory Proposal

At the same time that it issued the 2005 guidance, EPA proposed a rulemaking to codify the substance of the guidance in CWA regulations, which it promulgated in November 2006 (EPA, "*Application of Pesticides to Waters of the United States in Compliance With FIFRA*" Final Rule, 71 Federal Register 68483, November 27, 2006). The final rule, which became effective January 26, 2007, added two specific circumstances that are excluded from NPDES permit requirements, when the application complies with relevant requirements of FIFRA:

NPDES Exclusions

- the application of pesticides directly to waters of the United States in order to control pests (e.g., to control mosquito larvae or aquatic weeds)
- the application of pesticides to control pests that are present over waters of the United States, including near such waters, where a portion of the pesticides will unavoidably be deposited to waters of the United States in order to target the pests effectively.

Residual Materials

In the final rule, EPA provided a lengthy discussion of its rationale that pesticides, when applied pursuant to FIFRA, are not chemical wastes or biological materials and thus are not "pollutants" as defined under the CWA. However, EPA also acknowledged that application of pesticides may leave residual materials in US waters after the product has served its beneficial purpose and that these residual materials may be "pollutants" under the act at that later time. Nonetheless, even in such cases, EPA said, the initial application of the pesticide does not require an NPDES permit because EPA does not consider it to be a pollutant *at the time of its discharge into water*. *Id*. at 68487. EPA also responded to some public comments that had criticized the adequacy of FIFRA's registration process for consideration of water quality, local conditions, etc. EPA said that the "regulatory and non-regulatory tools under FIFRA provide means of addressing water quality problems arising from the use of pesticides," particularly the registration and re-registration processes, which consider both human health and aquatic resource impacts. *Id.* at 68488-68489.

Judicial Challenge to the EPA Rule

Lawsuits Consolidated

The 2006 rule prompted multiple lawsuits by industry and environmental groups in almost every judicial circuit nationwide. The litigation was consolidated in the Sixth Circuit Court of Appeals (Sixth Circuit). Industry's challenge argued that the rule was arbitrary and capricious because it treats pesticides applied in violations of FIFRA as pollutants, while treating the same pesticides used in compliance with FIFRA as non-pollutants. It also sought to expand the rule to apply to all pesticides and all agricultural applications of pesticides, including applications to land that drift over or into water. Environmentalists' challenge claimed that, by exempting FIFRA-compliant applications of pesticides from CWA requirements, EPA ignores its duties under the CWA.

"Temporal Requirement" Rejected

The court's ruling was issued January 7, 2009 (*National Cotton Council of America v. EPA*, 553 F.3d 927 (6th Cir. 2009)). EPA had argued that at the time of discharge, a pesticide is a non-pollutant. Excess pesticide or pesticide residues do not exist until after the discharge is complete, EPA said, and therefore should be treated as nonpoint source pollutants that do not require CWA permits. The court rejected EPA's attempt to "inject[] a temporal requirement to the 'discharge of a pollutant'" and it said that such an interpretation is unsupported by the CWA, and is also contrary to the purpose of the permitting program. The court said, "If the EPA's interpretation were allowed to stand, discharges that are innocuous at the time they are made but extremely harmful at a later point would not be subject to the permitting program." It concluded that "there is no room for the EPA's argument that residual and excess pesticides do not require an NPDES permit" and the court thus vacated the rule. The vacatur was scheduled to take effect April 9, 2009, but subsequently the Sixth Circuit granted the government's request to delay the effective date of the ruling so that EPA could develop a regulatory response, as discussed below. In February 2010, the Supreme Court declined to review the Sixth Circuit's ruling. On June 27, 2013, EPA promulgated a rule

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to remove the NPDES permit exemption, vacated by the Sixth Circuit in 2009, from CWA regulations (EPA, "*National Pollutant Discharge Elimination System Regulation Revision: Removal of the Pesticide Discharge Permitting Exemption in Response to Sixth Circuit Court of Appeals Decision, Final Rule*" 78 Federal Register 38591-38594, June 27, 2013.

CONGRESSIONAL INTEREST & OPTIONS

Hearings

Congressional interest in these issues became apparent after the first federal appeals court ruling in the 2001 *Headwaters v. Talent* ruling. Two congressional hearings focused on implications of the cases for pesticide use generally and for local governments' efforts to control mosquito-borne illnesses such as West Nile Virus. Also, a hearing also was held on legislation introduced in the 109th Congress to clarify the scope of the CWA regarding the use of FIFRA-approved pesticides, fire retardants, and biological control organisms.

Stormwater Management & Mosquito Control

The first of these hearings was in October 2002, when a House Transportation and Infrastructure subcommittee held a fact-finding hearing on the issues. The subcommittee's particular concern derived in part from the fact that one of the key practices used to manage stormwater runoff, which is regulated under the CWA, is to collect and hold it in retention ponds, basins, drainage ditches, etc. Such practices can be at odds with the public health objective of controlling insect-breeding habitat by eliminating or draining sources of standing water. Stormwater management practices typically allow collected water to drain slowly, while public health efforts would prefer that it be removed quickly. Another way to address the public health concerns is to spray pesticides on stormwater management structures and other areas of standing waters. The question for this subcommittee was the uncertainty raised by the litigation over the CWA/FIFRA issues for communities, industries, and others needing to maintain stormwater control systems. An EPA official, while acknowledging that the issue of CWA jurisdiction over pesticide spraying is "new territory" for the agency, said that EPA believes there is no inherent conflict between protecting water quality and preventing mosquito-borne disease. At the hearing, some Members and public witnesses urged EPA to provide guidance to resolve uncertainties raised by the court rulings.

EPA Rulemaking Questions

The second congressional hearing, held by a House Government Reform subcommittee in October 2004, examined challenges to controlling West Nile Virus. The hearing was an opportunity for some Members and witnesses to express the view that EPA's July 2003 interim guidance, while helpful in clarifying EPA's position, failed to resolve all legal uncertainty, since it would not bind non-federal entities or bar citizen lawsuits. Witnesses said that EPA's guidance is a nonbinding legal document that would not deter filing of citizen lawsuits seeking to impose a permit requirement. Supporters of this view urged EPA to settle the legal questions through a formal rulemaking to revise CWA rules. An EPA official said that even if EPA were to promulgate a rule (as it subsequently did), states will still have the discretion to continue to require non-NPDES permits, and a formal rule would not preclude citizen lawsuits from seeking to force localities to file for permits. EPA acknowledged these same points in the 2005 guidance. Others at this October 2004 hearing agreed on the need for a formal rulemaking, but recommended that in doing so, EPA should reverse the interpretation detailed in the guidance, not codify it.

EPA Clarification Sought

In the 108th Congress, the Senate Appropriations Committee included language in their report on EPA's FY2005 funding bill calling on EPA to finalize the interim guidance by December 2004 and to clarify the long-standing distinction between agriculture and silviculture activities that do and do not require CWA permits (US Senate Committee on Appropriations, "*Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Bill, 2005*" report to accompany S. 2825, 108th Cong., 2nd sess., pp. 110-111).

In 2003, a number of House and Senate Members urged the Bush Administration to support Supreme Court review of the *Forsgren* case, but ultimately the Administration did not endorse industry's request for a review, and the Court did not grant certiorari [to allow review]. Some Members of Congress also submitted comments in support of the July 2003 interim guidance document and the January 2005 regulatory proposal.

OPTIONS FOR EPA

EPA View v. Ruling

As described above, in January 2009, the Sixth Circuit rejected EPA's rationale for its 2006 rule that attempted to specify circumstances in which pesticides applied to waters of the United States do not require NPDES permits [*National Cotton Council of America v. EPA* case]. The court appeared to leave little room for EPA to fashion a new rule consistent with the agency's long-standing view that FIFRA-compliant applications do not require CWA permits. Agriculture industry groups are fearful that the court's ruling

Pesticides Regulation

will lead to permit requirements for each pesticide application, placing significant burdens on industry and EPA. Accordingly, several industry groups (e.g., the American Farm Bureau Federation, American Forest and Paper Association, and CropLife America (trade organization for agriculture and pest management)) petitioned for a rehearing of the case by the full Sixth Circuit court, but the rehearing request was rejected.

The federal government did not seek a rehearing of the case. Instead, the government petitioned the court for a two-year stay of the order vacating the exemption, to give EPA time to work with states and the regulated community to develop a general permit for pesticide applications covered by the decision. State water pollution agencies supported the government's request for the two-year delay, which the Sixth Circuit granted.

EPA's Pesticide General Permit

Permit Types

The two basic types of NPDES permits are individual permits that are specifically tailored for an individual discharger, and general permits that cover categories of point sources having common elements and that discharge the same types of wastes. General permits allow the permitting authority to allocate resources efficiently, especially when there is potentially a large number of permittees, and to provide timely permit coverage. Both individual and general permits are enforceable by the permitting authority and by private citizens (i.e., by citizen suits in federal court). The CWA authorizes EPA to delegate NPDES permitting authority to qualified states, and EPA has done so for the majority of states.

General Permits

EPA frequently uses its authority to issue NPDES general permits, most recently having issued a general permit to cover discharges incidental to the normal operation of vessels (Vessel General Permit) that applies to approximately 69,000 vessels (*see* 73 Federal Register 79473-79481, December 29, 2008). Typically, dischargers seeking coverage under a general permit are required to submit a notice of intent to be covered by the permit, but this procedure can be modified. For example, in the Vessel General Permit, EPA provided automatic coverage for about 20,000 of the covered vessels. Still, even with general permits, development and implementation issues arise, including how EPA specifies applicable discharge limits based on technology available to treat pollutant constituents found in the discharge (i.e., effluent limits) and how EPA determines limits that are protective of the designated uses of the impacted water (i.e., water quality-based effluent limits), as required by the CWA.

Pesticide General Permit

EPA issued the Pesticide General Permit on October 31, 2011, as required by the federal court (*see*, EPA, "*Final National Pollutant Discharge Elimination System (NPDES) Pesticide General Permit for Point Source Discharges From the Application of Pesticides; Notice of final permit*" 76 Federal Register 68750-68756, November 7, 2011). EPA estimates that the universe of activities affected by the court's ruling is approximately 5.6 million applications annually, which are performed by 365,000 applicators, including mosquito and other flying insect pest control, aquatic weed and algae control, aquatic nuisance animal control, and forest canopy pest control. The permit covers about 500 different pesticide active ingredients that are contained in approximately 3,700 product labels.

Covered Entities

The permit applies to a variety of entities, including: agricultural interests involved in crop and timber tract production, forest nurseries, and operating irrigation systems; pesticide and agricultural chemical manufacturing; mosquito or other vector control districts and commercial applicators that service them; utilities (e.g., electric power, natural gas, water supply and wastewater); and government agencies and departments engaged in air and water resource management and conservation. It requires all operators to minimize pesticide discharges to waters by practices such as using the lowest effect amount of pesticide product that is optimal for controlling the target pest. It also requires operators to prepare pesticide discharge management plans to document their pest management practices. Permittees must monitor for observable adverse effects in the treatment area and where the pesticides are discharged to US waters.

Requirements

Statutory Exemptions

The permit does not cover agricultural stormwater runoff or irrigation return flow, as these discharges are statutorily exempt from CWA permitting. It also does not cover terrestrial application to control pests on agricultural crops or forest floors so long as the pesticide applications do not result in a discharge to US waters. The EPA general permit only applies in states and areas where EPA is the NPDES permitting authority, but it is being used as a model for other states to develop their own general permits. For this permit, EPA is the permitting authority for: Massachusetts, New Mexico, New Hampshire, Idaho, and the District of Columbia; Indian lands in all states except Maine; oil, gas, and geothermal activities in Texas; federal activities in Delaware, Vermont, Colorado and Washington; and all US territories except the Virgin Islands. *See* EPA website: http://water.epa.gov/polwaste/npdes/pesticides/.

Areas Covered

Issuance of the final permit was delayed several times and for several reasons: time needed to complete consultations with federal resource agencies under the Endangered Species Act (ESA); time needed for non-federal permitting authorities to review the final permit; and time needed by EPA to develop an electronic system on the Internet to accommodate permit applications.

Pesticides Regulation

Acreage Threshold

In response to a number of commenters, EPA made certain changes in the final permit from the June 2010 proposal. While it covers the same pesticide use patterns as in the draft (i.e., mosquitoes and other flying insects, weed and algae control, animal pest control, and forest canopy pest control), the final permit increases the acreage threshold for requirements to submit a Notice of Intent (NOI) to a permitting authority. For example, the draft stated that pesticides used to control mosquitoes or other flying insect pests would be subject to the NOI requirement if applied to 640 acres or more annually. Under the final permit, that threshold was increased to 6,400 acres per calendar year.

ESA Provisions

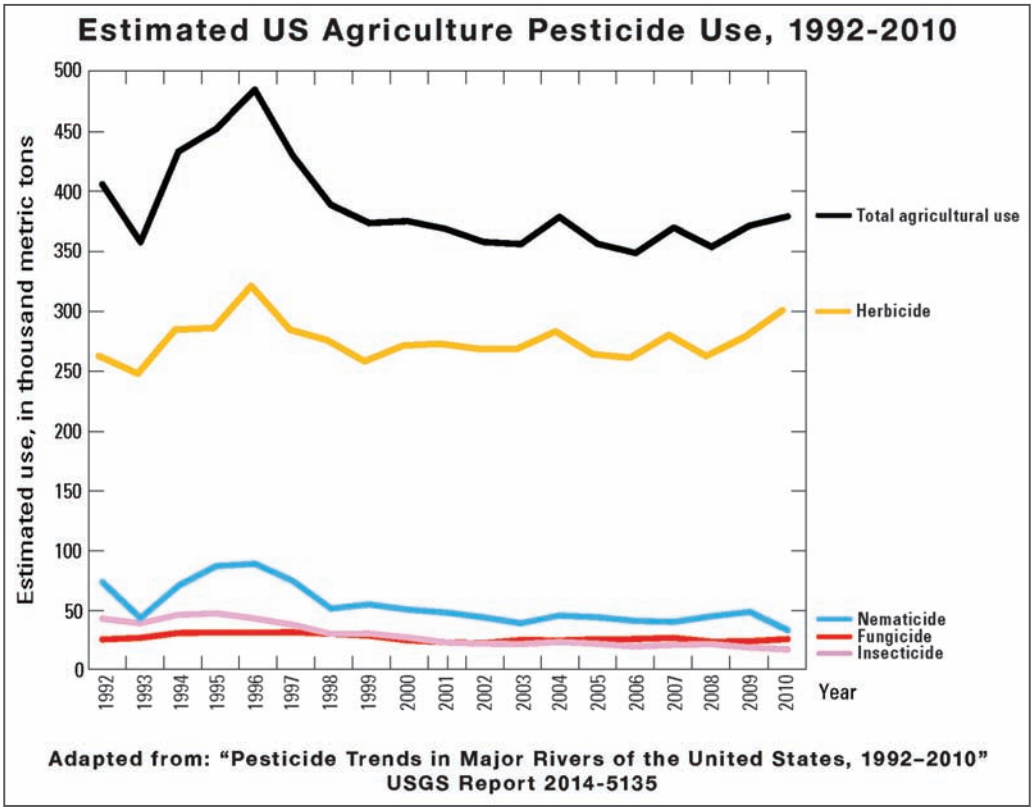
The final permit includes ESA provisions. Following consultation with the National Oceanic and Atmospheric Administration Fisheries Service (consultation with the US Fish and Wildlife Service is on-going) coverage under the permit is available only for discharges not likely to adversely affect species that are listed as endangered or threatened under the ESA and the permit includes additional terms for discharges to certain areas with ESA-listed species and critical habitat. *See* EPA website: http://water.epa.gov/polwaste/npdes/pesticides/NPDES-Pesticides-FAQs.cfm#541.

Pesticide Drift

Other EPA Options

One issue that EPA could address separately, in addition to developing the general NPDES permit, is pesticide drift, which many stakeholders had urged EPA to address in the final rule. The Federal Register Notice accompanying the rule noted that, at the time, EPA was awaiting advice from a workgroup of its Pesticide Program Dialogue Committee, which could recommend further actions. This committee was established in 1995 as a forum to provide feedback to EPA on various pesticide regulatory, policy, and program implementation issues. It is authorized pursuant to the Federal Advisory Committee Act (FACA), which details requirements for the management and oversight of federal advisory committees to ensure impartial and relevant expertise and advice to EPA and other agencies. In March 2006, the committee convened a Spray Drift Workgroup charged with studying the issue of pesticide drift across water and its accompanying impact on water quality and wildlife. The following year, the workgroup finalized a report that focused on issues related to product labeling, applicator training, and practices and equipment to mitigate drift and adverse effects. In November 2009, EPA proposed new pesticide labels to reduce the drifting of spray and dust from pesticide applications. EPA proposed guidance for pesticide labeling that is intended to describe scenarios when additional language would need to be added to a pesticide label to reduce drift from applications such as on golf courses or parks and noncommercial applications such as residential use on lawns and gardens. *See*, EPA, "*Pesticides; Draft Guidance for Pesticide Registrants on Pesticide Drift Labeling*" 74 Federal Register 57166-57168, November 4, 2009.

Labeling Changes



Pesticides Regulation

Risk Review Process

Other options for EPA relate to implementation of FIFRA and procedures used to evaluate the risks of pesticides during the registration process. Environmentalists have argued for some time that EPA's risk review procedures are inadequate because they fail to account for synergistic and additive effects, as well as sub-lethal and indirect effects of pollutants on the environment. In 2003, EPA convened a task force of officials from its pesticide and water quality offices to explore, among other things, whether the agency's pesticide review processes are protective enough to meet water quality standard limits. One outcome of the task force's ongoing review could be changes to implementation of FIFRA in order to address some of these concerns. Thus, in April 2009, EPA officials announced plans to complete a series of white papers on how to harmonize methods used by the agency's Office of Water (CWA-oriented) and the agency's Office of Pesticide Programs (FIFRA-oriented) for ecological assessment of pesticide water quality risks. Three white papers, addressing several areas where officials acknowledged a gap between the way the CWA and FIFRA approach pesticide risk, were initially presented at a National Stakeholder Meeting on December 1, 2010 (*see* http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/cem.cfm#meeting1).

CONGRESSIONAL ACTIVITY

Legislation Needed?

Prior to the 2009 federal court ruling that vacated EPA's rule, some environmental activists favored legislation to clarify that NPDES permits are required, since they contended that the rule was unlawful. However, no such legislation was introduced. Others argued during this time that legislation is not needed because, in their view, the CWA is clear enough that permits are required for discharge of pesticides from point sources. The federal court's vacating of the EPA rule supports that view. But, following the court's ruling, other stakeholders have come to favor legislation to support a narrow view of CWA's jurisdiction on this issue, although many acknowledge that any such legislative effort would be controversial and could be seen as representing not clarification but, rather, an environmental rollback. As is discussed below, although repeated attempts in Congress to enact legislation nullifying the need for an NPDES permit for pesticides application have been made, none have, to date, proven successful.

109th Congress

Exemptions Proposed

Legislation intended to clarify that permits are not required for some or all pesticide spraying activity was introduced in the 109th Congress (HR 1749 and S 1269, the Pest Management and Fire Suppression Flexibility Act), but it was not enacted. These bills would have provided that NPDES permits are not required for the use of FIFRA-approved pesticides; chemicals, fire retardants, or water used for fire suppression; biological organisms used for plant pest or weed control; or silviculture activities such as timber harvesting that are not currently regulated as point source activities.

As discussed above, EPA's 2006 rule, subsequently vacated by a federal court, addressed situations in which pesticides are put directly in waters to control pests (e.g., controlling mosquito larvae or aquatic weeds) or cases of pesticides that are present over water and a portion of the pesticide is deposited in the water (e.g., aerial application to a forest canopy where waters of the United States may be present below the canopy). The proposed legislation in the 109th Congress, in addition to codifying these policies, also would have addressed other, broader circumstances that EPA had declined to include in the rule: applications over land areas that may drift over and into waters of the United States; broad exemption of activities for preventing or controlling plant pests or noxious weeds; and use of fire retardants. Reflecting a different approach, Rep. Goodlatte introduced a bill in the 107th Congress, HR 5329, that was intended to ease industry's ability to register pesticides for use in combating mosquito-borne illnesses. It would have amended FIFRA to expand the definition of what constitutes a "public health" pesticide.

Hearing

In September 2005, a House Transportation and Infrastructure subcommittee held a hearing on HR 1749. Witnesses representing a number of sectors that are pesticide users (state foresters, western irrigation districts, and farmers) testified in support of the legislation, saying that it would resolve existing legal uncertainties about permitting. An EPA witness said that the agency's then-proposed rulemaking was intended to reduce uncertainty about the relationship between FIFRA and the CWA. The EPA official did not expressly endorse the legislation, but he said that EPA appreciated congressional efforts to reduce potential confusion over these issues. There was no further action on either HR 1749 or S 1269 during the 109th Congress, and no similar legislation was introduced in the 110th Congress.

No Further Action

111th Congress

FIFRA Amendment Proposed

Legislation on this issue was introduced in the 111th Congress. One proposal was contained in identical bills, S 3735 and HR 6087. The intention of the these bills was similar to that of the earlier bills — i.e., to clarify permitting requirements under other laws and, effectively, to nullify the 2009 federal court ruling — but the 111th Congress legislation differed in several respects. First, it would have amended FIFRA, while the earlier bills would have amended the CWA. Second, the bills would not expressly have exempted chemicals, fire retardants, water used for fire suppression, or specified silviculture activities from permit requirements. Third, these proposed bills were broader in potential application. The earlier bills were limited to exempting FIFRA-authorized activities from CWA permits, but the proposed 111th Congress legislation would also have exempted FIFRA-authorized activities from: permits required by

Pesticides Regulation

federal environmental laws other than CWA; other federal non-environmental permits or licenses; as well as state or local laws and ordinances (pursuant to FIFRA, many state and local governments control pesticide application within their jurisdictions by employing permitting systems to restrict aerial application of pesticides, or by imposing notice-and-posting requirements). Neither of these bills was voted upon.

Another bill in the 111th Congress was HR 6273. This bill also was intended to nullify the 2009 federal court ruling, but it was narrower in scope than the other two measures discussed above. HR 6273 would have amended both FIFRA and the CWA to provide that a CWA permit could not be required by EPA, nor could EPA require a state to require a permit, for the application of any pesticide that is subject to FIFRA if it is applied in conformance with that act. This bill also failed to be enacted.

No Enactments

112th Congress

EPA's issuance of the Pesticide General Permit has continued to be controversial and attention to these issues resumed in the 112th Congress. Critics continue to argue that requirements of CWA and FIFRA are duplicative. Others disagree, saying that the purposes and approaches of the two laws differ greatly (see discussion of "The Laws" above). Even as they are beginning to implement permit requirements for pesticide discharges, water quality officials in some states have said that they see little water quality benefit from the permit. EPA has stated that many farms are not affected by the *National Cotton Council* ruling and do not need CWA permits for their pesticide applications (EPA, "*Information on the Pesticide General Permit for Agricultural Stakeholders*" December 2011, www.epa.gov/npdes/pubs/pgp_agfactsheet.pdf). Nevertheless, the Pesticide General Permit remains particularly controversial in the agriculture community.

General Permit Controversial

At a joint hearing of subcommittees of the House Agriculture and Transportation and Infrastructure committees in February 2011, draft legislation to overturn the *National Cotton Council* ruling was discussed and HR 872 was subsequently introduced. This bill would amend FIFRA and the CWA to provide that neither EPA nor a state may require a CWA permit for discharge of a pesticide whose use has been authorized pursuant to FIFRA. The bill defines specified circumstances where a permit would be required (e.g., municipal or industrial treatment works effluent that contains pesticide or pesticide residue). At the hearing, some Members indicated that the bill had been drafted with EPA's technical assistance, but the Administration's official position on HR 872 is unknown.

Overturn *National Cotton Council*?

The House passed HR 872 on March 31, 2011, by a vote of 292-130. The Senate Committee on Agriculture, Nutrition, and Forestry approved the bill without amendment in June 2011. The text of HR 872 also was included as a provision of HR 2584, a bill providing FY2012 appropriations for EPA, which the House debated in July 2011, without taking final action. Although legislation to overturn the 2009 federal court ruling was not enacted before EPA issued the final pesticide general permit, some legislators reportedly discussed compromise legislation to provide for a temporary permit moratorium and an EPA study of impacts of pesticide discharges.

Related bills in the 112th Congress included S 3605 (similar to HR 872, with the addition of a report to Congress on effectiveness of regulatory actions related to pesticide registration and protecting water quality) and S 718 (a bill to amend only FIFRA to clarify that, notwithstanding any other law, no permit shall be required for use of a FIFRA-registered pesticide or organisms or practices covered by the Plant Protection Act).

Farm Bill Language

In July 2012, the House Agriculture Committee reported on the 2012 farm bill (HR 6083, the Federal Agriculture Reform and Risk Management Act). A provision identical to House-passed HR 872 was included in the legislation. The Senate had previously passed its version of a 2012 farm bill (S 3240); it did not include a similar provision. The 112th Congress did not take final action on comprehensive farm bill legislation.

No Final Action

113th Congress

Legislation to nullify the 2009 federal court ruling also has been introduced in the 113th Congress:

- HR 935 — similar to HR 872 in the 112th Congress. The House passed HR 935 on July 31, 2014 by a vote of 267-161 and it is now before the Senate Committee on Environment and Public Works.
- S 175 — similar to S 718 in the 112th Congress. Now before the Senate Committee on Agriculture, Nutrition, and Forestry.
- S 802 — similar to S 3605 in the 112th Congress. Now before the Senate Committee on Environment and Public Works.

Similar Legislation

In addition, a provision similar to HR 935 was included in farm bill legislation approved by the House in June 2013 (HR 2642). However, the Senate-passed version of farm bill renewal legislation (S 954) did not include a similar provision. The 2014 farm bill enacted in February 2014 (the Agricultural Act of 2014, PL 113-79) also did not include a provision to overturn the Sixth Circuit ruling.

Final Farm Bill: No Overturn

For Additional Information:
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Congressional Research Service Document RL32884: The full document on which this article was based — "*Pesticide Use and Water Quality: Are the Laws Complementary or in Conflict?*" (August 13, 2014) — is available at: http://nationalaglawcenter.org/wp-content/uploads/assets/crs/RL32884.pdf

Pesticides In US Waters

PESTICIDES IN US STREAMS & RIVERS

USGS REPORT COMPARES DATA FROM 1992–2001 & 2002–2011

Edited/condensed from US Geological Survey documents

USGS Report

In early September, the US Geological Survey (USGS) National Water-Quality Assessment program and National Stream Quality Accounting Network released a report which presents findings for pesticide occurrence in US streams and rivers during 2002–11 and compares them to findings for the previous decade (1992–2001): "*An Overview Comparing Results from Two Decades of Monitoring for Pesticides in the Nation's Streams and Rivers, 1992–2001 and 2002–2011*" USGS Report 2014-5154.

Continued Concerns

Levels of pesticides continue to be a concern for aquatic life in many of the Nation's rivers and streams in agricultural and urban areas, though pesticide levels seldom exceeded human health benchmarks. The proportion of streams with one or more pesticides that exceeded an aquatic-life benchmark was similar between the two decades for streams and rivers draining agricultural and mixed-land use areas, but much greater during the 2002-2011 for streams draining urban areas. Fipronil, an insecticide that disrupts the central nervous system of insects, was the pesticide most frequently found at levels of potential concern for aquatic organisms in urban streams during 2002-2011.

Pesticide Detections

Pesticide stream concentrations were compared to Human Health Benchmarks (HHBs) and chronic Aquatic Life Benchmarks (ALBs). During both decades, one or more pesticides or pesticide degradates were detected more than 90 percent of the time in streams across all types of land uses. For individual pesticides during 2002–11, atrazine (and degradate, deethylatrazine), carbaryl, fipronil (and degradates), metolachlor, prometon, and simazine were detected in streams more than 50 percent of the time. In contrast, alachlor, chlorpyrifos, cyanazine, diazinon, EPTC, Dacthal, and tebuthiuron were detected less frequently in streams during the second decade than during the first decade. During 2002–11, only one stream had an annual mean pesticide concentration that exceeded an HHB. In contrast, 17 percent of agriculture land-use streams and one mixed land-use stream had annual mean pesticide concentrations that exceeded HHBs during 1992–2001. The difference between the first and second decades in terms of percent of streams exceeding HHBs was attributed to regulatory changes.

Aquatic Life Benchmark Exceedances

During 2002–11, nearly two-thirds of agriculture land-use streams and nearly one-half of mixed land-use streams exceeded chronic ALBs. For urban land use, 90 percent of the streams exceeded a chronic ALB. Fipronil, metolachlor, malathion, cis-permethrin, and dichlorvos exceeded chronic ALBs for more than 10 percent of the streams. For agriculture and mixed land-use streams, the overall percent of streams that exceeded a chronic ALB was very similar between the decades. For urban land-use streams, the percent of streams exceeding a chronic ALB during 2002–11 nearly doubled that seen during 1992–2001. The reason for this difference was the inclusion of fipronil monitoring during the second decade.

Concentration Trends

EXAMPLES OF PESTICIDE CONCENTRATION TRENDS INCLUDED:

Metolachlor: Metolachlor is one of the most frequently detected pesticides during both decades in agricultural and mixed-land-use streams. ALB exceedances declined from 1992-2001 to 2002-2011, reflecting a sharp decline in use during 1998-2001 following the introduction of S-metolachlor, which requires about half the use rate for the same weed control. Consistent with its national use trend, concentration trends were predominantly downward or non-significant in major rivers during 1997-2006. Concentration trends then turned mostly upward during 2001-2010, corresponding to a gradual increase in use. Though use and concentrations increased during this recent decade, concentrations remained lower than for most of the previous decade.

Atrazine: Although atrazine has been one of the most frequently detected pesticides, its concentrations have been low compared to current ALBs except in a small proportion of agricultural streams. Concentration trends were predominantly downward or non-significant in major rivers during both 1997-2006 and 2001-2010.

Diazinon: Diazinon was frequently detected in urban streams during 1992-2001. Stream concentration trends were downwards in urban streams during both 1996-2004 and 2000-2008, and in major rivers during both 1997-2006 and 2001-2010. Levels decreased from about 1997 through 2011 due to reduced agricultural use and the US Environmental Protection Agency's regulatory phase-out of urban uses.

Malathion: Few sites could be tested for malathion concentration trends during either assessment period because of the low frequency of detected concentrations, all testable trends were either downward or non-significant for both urban streams and major rivers.

Chlorpyrifos: Chlorpyrifos was frequently detected in urban streams. Urban stream concentration trends were downwards during both 1996-2004 and 2000-2008, although few trends were testable during 2000-2008 because of the increasingly low frequency of detection. Few major river sites could be tested for concentration trends because of infrequent occurrence.

Carbaryl: Concentration trends were increasingly downward and non-significant during 2000-2008 for

Pesticides In US Waters

Report's Limitations

Filling Assessment Gaps

carbaryl in urban streams. Most concentration trends in major rivers were downward or nonsignificant during both decades.

Fipronil: Testable trends during 2002-2011 were mostly upward in urban streams and non-significant for major rivers. Across all land-use streams, the percent of streams exceeding a chronic ALB for fipronil during 2002–11 was greater than all other insecticides during both decades.

The potential for adverse effects is likely greater than the report's results indicate because a wide range of potentially important pesticide compounds were not included in the assessment. The pesticides assessed represent somewhat less than half the amount of synthetic organic herbicides, insecticides, and fungicides used for agriculture in the US. In addition, sampling frequencies in this assessment were not adequate to reliably characterize the highest short-term concentrations. The report focused on pesticides dissolved in water, whereas some hydrophobic pesticides, such as legacy organochlorines and pyrethroid insecticides, are important as contaminants of sediment and tissues and should be considered when evaluating streams.

According to USGS, expanded assessment should:

- Include additional pesticides that are currently used and have the greatest potential for effects (e.g., neonicotinoid, pyrethroid)
- Improve characterization of short-term acute exposures
- Consider multiple environmental media (e.g., sediment and tissues) and coincident assessment of biological conditions
- Track co-occurrence and assess the potential toxicity of mixtures

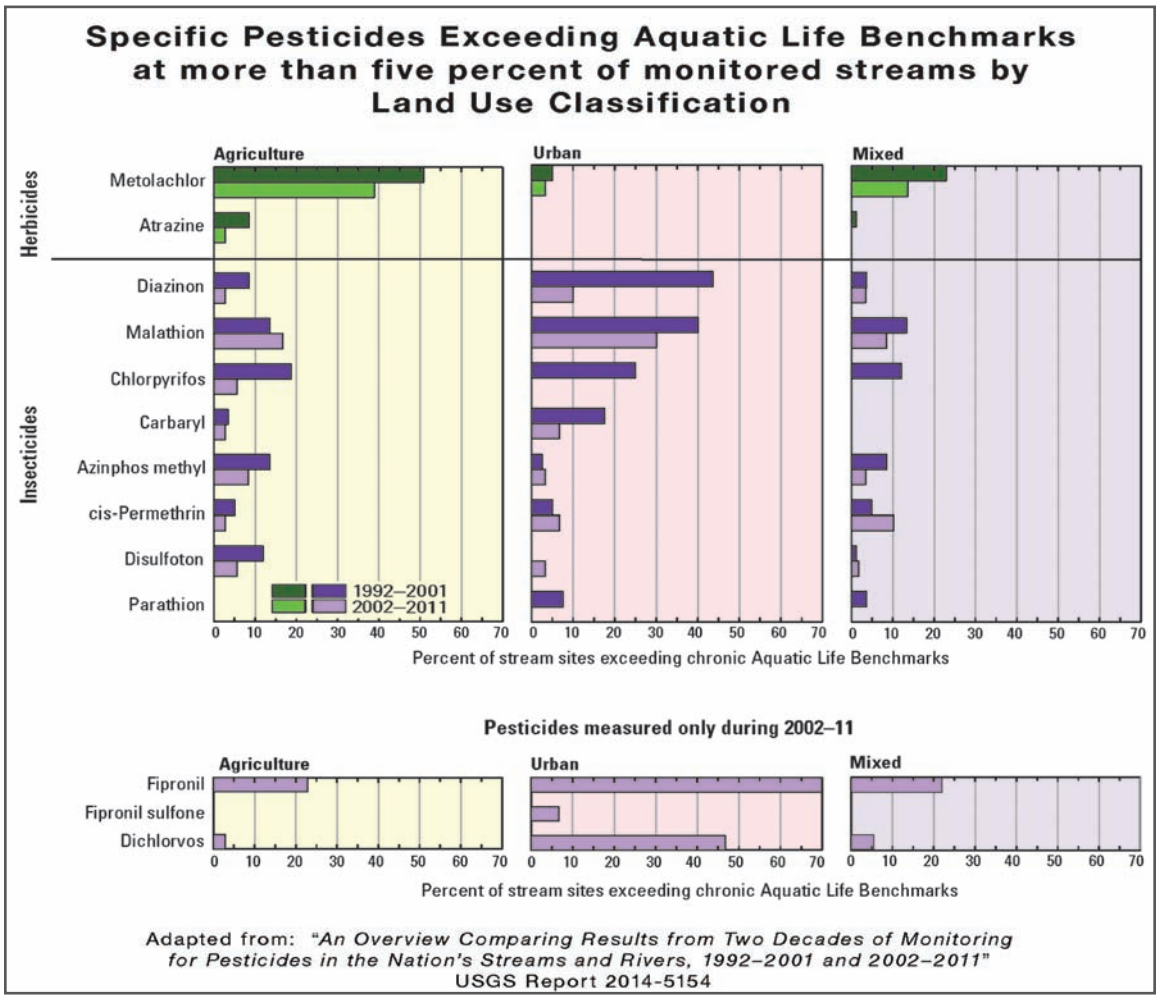
For Additional Information:

"*An Overview Comparing Results from Two Decades of Monitoring for Pesticides in the Nation's Streams and Rivers, 1992–2001 and 2002–2011*" USGS Report 2014-5154 is available online at: http://pubs.usgs.gov/sir/2014/5154/

A second USGS report on national pesticide trends — "*Pesticide Trends in Major Rivers of the United States, 1992–2010*" USGS Report 2014-5135 — was also released in September, 2014. *See* http://pubs.usgs.gov/sir/2014/5135/

EPA fact sheets on selected pesticides: www.epa.gov/pesticides/factsheets/index.htm

Pesticide National Synthesis Project: http://water.usgs.gov/nawqa/pnsp/



California Groundwater

Legislative Package

Extensive Groundwater Use

Need v. Regulations

Managing Groundwater

Local Control

Adjudication

Local Powers

CALIFORNIA GROUNDWATER MANAGEMENT REFORM

SUSTAINABLE GROUNDWATER MANAGEMENT ACT SIGNED

by David Moon, Editor

INTRODUCTION

The daily headlines regarding one of California's worst droughts in history have brought awareness of the fragile nature of the state's water resources. Meanwhile, water users have become increasingly reliant on groundwater to replace the normal surface water sources to supply water for their use. This backdrop has led to a significant reform of water law regulating groundwater use in California. On September 16th, Governor Brown signed a package of groundwater bills (Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319), collectively know as the Sustainable Groundwater Management Act, that establishes a "new structure for managing the State's groundwater" (Governor's Signing Statement, 9/16/14).

As noted in Section 1 of SB 1168, "Groundwater accounts for more than one-third of the water used by Californians in an average year and more than one-half of the water used by Californians in a drought year when other sources are unavailable." The new legislation is intended to provide for more sustainable groundwater management and replaces a system that essentially left groundwater pumping unregulated. *See* Mortimer, *TWR* #127.

The need for the groundwater reform legislation from an environmentalist viewpoint, was summed up in a statement following the signing by Konrad Fisher of the Klamath Riverkeeper: "Unregulated groundwater extraction has been depleting our streams and rivers for too long. This legislation alone will not protect ecosystems from excessive groundwater extraction, but it's a historic step in the right direction. Now it's the responsibility of local groundwater managers to protect ecosystems and surface water right holders from excessive groundwater withdrawals." The opposition, on the other hand, had pushed Governor Brown to veto the bills, with the California Farm Bureau Federation (CFBF) and other farm organizations "describing them as hastily written and overbroad. Opponents said the laws will mandate a costly new regulatory system that will result in greater uncertainty for farmers and ranchers." CFBF News Release, 9/24/14.

The legislation, naturally, was viewed quite differently by its drafters, Senator Fran Pavley and Assembly Member Roger Dickison. "California will no longer be the only Western state that does not manage its groundwater," said Senator Pavley. "The cost of doing nothing is the biggest economic gamble. Thousands of homes and small farms cannot keep pace with the race to drill deeper and deeper wells. The bills take a balanced approach — they protect property rights and incentivize local control." Assembly Member Dickison stated, "Ensuring a sustainable supply of groundwater is a critical element of addressing the water challenges facing California. Over drafting our groundwater leads to subsidence and contamination; consequences we cannot afford. With these new laws in effect, California will take important steps to ensure we are protecting our valuable water supply for years to come."

LOCAL AGENCY CONTROL

Governor Brown stressed in his Signing Statement that a "central feature of these bills is the recognition that groundwater management in California is best accomplished locally. Local agencies will now have the power to assess the conditions of their local groundwater basins and take the necessary steps to bring those basins in a state of chronic long-term overdraft into balance." The Governor attempted to allay concerns of agricultural interests and other water users who opposed the bills, fearing state control of groundwater use. "The State's primary role is to provide guidance and technical support on how to plan for a more sustainable future and step in on an interim basis when, but only when, local agencies fail to exercise their responsibilities as set forth in this legislation." The Governor also pointed out that he would seek additional legislation in the next session to "streamline judicial adjudication of groundwater rights."

Local agencies were given broad powers and authority to develop the sustainability plans in compliance with the legislation. Under the law a local agency — defined as "a local public agency that has water supply, water management, or land use responsibilities within a groundwater basin" — may elect to become a **g**roundwater **s**ustainability **a**gency (GSA). Among other powers, a GSA has the ability to: require registration of a groundwater extraction facility; to require that a groundwater extraction facility be measured with a water-measuring device; and to regulate groundwater extraction. A GSA may also require that the owner or operator of a groundwater extraction facility file an annual statement with the GSA setting forth the total extraction in acre-feet of groundwater during the previous water year. If local agencies are unable or unwilling to adopt sustainable management plans, the State Water Resources Control Board could step in to establish groundwater management plans. *See* AB 1739 and SB 1319.

California Groundwater

Timeline

"Sustainability Goal"

"Sustainable Yield"

"Undesirable Result"

State Control

Implementation

Conjunctive Use

Availability Report

GROUNDWATER SUSTAINABILITY PLANS & "SUSTAINABLE YIELD"

The Sustainable Groundwater Management Act (Act) requires the development of groundwater sustainability plans in overdrafted groundwater basins by January 31, 2020; other high and medium priority basins not currently in overdraft must have sustainability plans by January 31, 2022; and by 2040, all high and medium priority groundwater basins must achieve sustainability. The legislation provides measurable objectives and milestones to reach a "sustainability goal." Plans may be developed for low- or very low-priority basins; such plans, though encouraged, are not required by the law.

Plans must set enforceable goals designed to achieve sustainable groundwater management. The "Sustainability Goal" is defined as:

> the existence and implementation of one or more groundwater sustainability plans that achieve sustainable groundwater management by identifying and causing the implementation of measures targeted to ensure that the applicable basin is operated within its sustainable yield. SB 1168, Ch. 2, 10721(t).

"Sustainable Yield" means:

> the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result. *Id*. at subsection (v).

"Undesirable Result" means one or more of the following effects caused by groundwater conditions occurring throughout the basin:

> (1) Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.
> (2) Significant and unreasonable reduction of groundwater storage.
> (3) Significant and unreasonable seawater intrusion.
> (4) Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
> (5) Significant and unreasonable land subsidence that substantially interferes with surface land uses.
> (6) Surface water depletions that have significant and unreasonable adverse impacts on beneficial uses of the surface water. *Id*. at subsection (w).

By June 1, 2016, the California Department of Water Resources must adopt rules to evaluate the local groundwater management plans. While local "groundwater sustainability agencies" are given the first crack at meeting the sustainability goals, state agencies are on standby to step in if local plans are deemed inadequate (*see* AB 1739 and SB 1319 for details). The intent of the Legislature, as outlined in SB 1168, Section 1 (11)(b)(2), is to "provide that if no local groundwater agency or agencies provide sustainable groundwater management for a groundwater basin or subbasin, the state has the authority to develop and implement an interim plan until the time the local groundwater sustainability agency or agencies can assume management of the basin or subbasin."

The ultimate success of the legislation will undoubtedly depend on local implementation, however. As CFBF Administrator Rich Matteis said, "[I]t will be essential for farmers and ranchers to stay informed and engaged as the groundwater laws are implemented. The groundwater management plans and their impacts will be heavily influenced by those who participate." CFBF News Release, 9/24/14.

OTHER NOTABLE PROVISIONS

Conjunctive Management and Climate Change

Issues surrounding conjunctive management of groundwater and surface water will undoubtedly be of particular importance as the law is implemented. "Sustainable groundwater management in California depends upon creating more opportunities for robust conjunctive management of surface water and groundwater resources. Climate change will intensify the need to recalibrate and reconcile surface water and groundwater management strategies." SB 1168, Section 1 (11).

Water Availability Assessment

As noted in the Legislative Counsel's Digest of AB 1739, that bill requires the California Department of Water Resources to prepare and release a report by December 31, 2016, of the Department's best estimate of water available for replenishment of groundwater in the state.

California Groundwater Legislation, continued:

Fees, Enforcement, and Penalties

The local Groundwater Sustainability Agencies (GSAs) were granted the authority to charge fees to cover the cost of their programs. The GSAs have enforcement powers that include the ability to levee civil penalties of up to $500 per acre-foot of water pumped in excess of the amount the person is authorized to extract. In addition, the violation of "any rule, regulation, ordinance, or resolution adopted pursuant to Section 10725.2" makes a water user "liable for a civil penalty not to exceed one thousand dollars ($1,000) plus one hundred dollars ($100) for each additional day on which the violation continues if the person fails to comply within 30 days after the local agency has notified the person of the violation." *See* AB 1739, Chapter 8 Financial Authority and Chapter 9, Enforcement Powers.

CONCLUSION

SB 1168 sets forth that it is the policy of the state that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. The bill is designed to achieve sustainable groundwater management locally based on the best available science, with a state role of limited intervention when local agencies are unable or unwilling to adopt sustainable management plans.

The devil is in the details, especially where comprehensive reform is involved. The three bills go into extensive detail about the authority and standards involved, and additional rulemaking will further thresh out the specifics for groundwater management in California. *The Water Report* is planning on publishing an extensive article in the future to discuss this groundwater reform and its likely ramifications for water users throughout the state.

For Additional Information:

Full text of the three bills comprising California's "Sustainable Groundwater Management Act" are available online at: http://leginfo.legislature.ca.gov

WATER BRIEFS

FISH CONSUMPTION RATE WA WATER QUALITY STANDARDS

On September 30, the Washington State Department of Ecology (Ecology) made available for early review preliminary draft rules of water quality standards for toxic chemicals. The preliminary draft rules include a new fish consumption rate, which has recently been a controversial issue in Washington and other Northwest states. *See* Campbell, TWR #126 (August 2014). Ecology expects to issue a formal draft rule in January 2015 and will again invite public comments at that time. Ecology's proposal is directly tied to a broader toxics-reduction package that Washington Governor Jay Inlsee plans to propose to the 2015 Legislature.

The new preliminary draft rules propose standards for how clean Washington waters need to be, and would control pollution limits for businesses and municipalities that discharge waste water. The rules contain a unique provision that no standard would allow more pollution than today's standard, except arsenic that occurs naturally. Seventy percent of the standards would actually enhance protection by requiring cleaner water.

The water quality standards are initially calculated using a complex set of equations with many inputs — including fish consumption rate, cancer risk rates, average body mass for people, and bioconcentration factors for each chemical. What ultimately determines how clean waters must be is not the individual input factors, but the output of the equations and the overarching policy decision that no standard will be less protective than today (with the exception of arsenic).

Ecology's preliminary draft rule would increase the fish consumption rate from 6.5 grams a day (about one serving a month) to 175 grams a day (about one serving a day) to better reflect current data and protect Washingtonians who eat a lot of fish. The calculation also includes a 10^{-5} input for the cancer risk rate, up from the previous input of 10^{-6}. This amounts to a change in the cancer risk from 1 in 1 million under current law, to 1 in 100,000 in the new standard.

"We've heard a lot of concerns that we are allowing a higher input risk rate for cancer. We recognize that it's confusing, but the actual risk is not higher," said Ecology Director Maia Bellon. "What matters to people and fish is not the formula but the outcome — it's less about the complex formula going into the standard and more about the level of pollution coming out of the pipe. And the end result is that most standards are more protective and, with the one exception of naturally occurring arsenic, no standard is less protective than today."

The Northwest Indian Fisheries Commission (NWIFC), which represents 20 western Washington tribes, believes the proposed rules don't go far enough to protect tribal members from the cancer risk caused by some chemicals. NWIFC has requested that the US Environmental Protection Agency intervene. Lorraine Loomis, the Acting Chairperson of NWIFC, sent a letter to Governor Inslee on September 5th responding to the proposal (July 9th version), specifically criticizing the change in the cancer risk rate. "It is incomprehensible that the state would consider changing the cancer risk rate in state standards to a rate that is ten times less protective. Essentially, the proposal modifies the fish consumption rate to reflect higher levels of consumption in our state, but trades this improvement for a less protective cancer risk rate." The letter also states that: "Throughout the years of work on this issue, tribes requested that the human health criteria incorporate a fish consumption rate of no less than 175 grams per day, with

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the stated assumption that the state would not weaken other human health criteria — in particular the existing state standard on cancer risk level of 10^{-6}."

Ecology also completed an extensive preliminary economic analysis that shows the new water quality standards would create minimal costs to industries and local governments that discharge wastewater (Analysis at: www.ecy.wa.gov/programs/wq/swqs/DraftPrelimWQS-CBAformatted09282014.pdf). Ecology's proposal includes further clarification about flexible implementation tools that industries and local governments could use to achieve the new water quality standards.

For info: Sandy Howard, Ecology, 360/407-6408 or website: www.ecy.wa.gov/water/standards/index.html; NWIFC letter available from *TWR* upon request.

DROUGHT CURTAILMENTS CA

TEMPORARY CURTAILMENT LIFTING

On October 3, the California State Water Resources Control Board notified post-1914 appropriative water right holders in the Sacramento, San Joaquin, Russian and Eel River watersheds of plans to temporarily release them from curtailment during significant storm events to capture new precipitation. Due to the uncertainty of the drought extending into the new water year and the timing to permanently lift curtailments, this plan provides water right holders that have been unable to divert water since earlier this summer, opportunities to collect water as a result of significant upcoming precipitation events (still subject to the terms and conditions of their water rights). Since storm events are dynamic, notification will only be provided by electronic notification of these short-term diversion opportunities.

For info: Brian Coats, State Water Board, 916/ 341-5389; Notice at: www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/curtail_lift.pdf

WATER CONSERVATION CA

URBAN WATER SUPPLIERS REPORT

On October 7, the California State Water Resources Control Board (Board) updated the report of retail water suppliers concerning urban water conservation efforts. Water conservation efforts in California's urban communities continued their upward trend, climbing to 11.5% statewide for the month of August. The August statewide water saving rate is a significant jump from the 7.5% reported in July and 4% in June, as compared to a year ago.

The report also found that 81% of the water agencies reporting have instituted outdoor water use restrictions. Despite these gains, members of the Board expressed concern about the 19% or 76 water suppliers, that have not yet implemented their water shortage plans to mandate outdoor use restrictions. Outdoor water use restriction is a key action for urban water suppliers under the emergency water conservation regulation because outdoor watering comprises a large percentage of urban water use — as much as 80% in some areas.

Next month, water districts will be required to report "**r**esidential **g**allons **p**er **c**apita per **d**ay" (R-GPCD) in an effort to determine average water consumption per person. R-GPCD more accurately portrays water use and lets communities compare their efforts accurately with others around the state. Data for September was due to the Board on October 15. The R-GPCD estimate also highlights areas where conservation actions over the long term have resulted in significant water savings. Some communities have been conserving for many years and were using far less water per person per day than others before this drought. Others are starting later, but making significant progress.

Water savings increased in all 10 hydrologic (or similar rain zones) regions of the state during August, ranging from 6.9% in the Colorado River region (near the Mexican border) to 22.6% in the Sacramento River region. The biggest month-to-month increase in conservation came from the South Coast region which reported a 7.8% increase in conservation for August — compared to the 1.6% reported for July.

In Southern California, conservation through turf removal continued to increase, with August applications to remove 3.8 million square feet, or 2,533 front yards, from residential customers. In the commercial sector, 7.5 million square feet, or 130 football fields' worth of turf, was slated for removal. Since the beginning of the year, $42.9 million in rebates for turf removal have been requested, demonstrating Southern Californians' interest in permanently reducing their water use.

Approximately 27 billion gallons was saved in August, up from 18 billion gallons saved in July. Approximately 95% of the state's large urban water suppliers submitted their conservation reports, which accounts for 98% of the population that they serve or 33.5 million Californians.

The Board directed that staff check on the adequacy of compliance of those submitting plans to assure that they meet the letter and intent of the regulations. The Emergency Conservation Regulation will be in effect until April 25, 2015, and may be extended if drought conditions persist.

For info: George Kostyrko, gkostyrko@waterboards.ca.gov or www.waterboards.ca.gov/

RAINWATER HARVEST TX

HOW-TO VIDEO

As Texas slowly moves out of its devastating drought, precipitation totals are beginning to increase. Take Care of Texas, a program of the Texas Commission on Environmental Quality (TCEQ), has produced a video on how to build a rain barrel, and is encouraging rainwater collection for outdoor water use. The short video, available on the Take Care of Texas website, shows how to build a simple barrel with a 32-gallon plastic container and lid.

Lawn and garden watering makes up 30 to 50 percent of total household water use during the summer. Collecting rainwater for landscape use can save both water and money. Collecting rainwater from just 10% of the residential roof area in Texas could conserve over 30 billion gallons of water annually. Some cities and counties offer rebates or even reduced costs for rain barrels.

To download or order a free rainwater harvesting manual and step-by-step instructions on how to build a rain barrel, visit the Take Care of Texas website: http://takecareoftexas.org/.

For info: Lisa Wheeler, TCEQ, 512/239-5003

WATER BRIEFS

WATER PROGRAMS WEST
STATES' CAPABILITIES ASSESSED

A report released in the summer of 2014 by the Western States Water Council (WSWC) provides a worthwhile comparison of western states' water planning activities — the "*Western State Water Program Capabilities Assessment Survey Report*" (June 2014). The completion of the survey and report is a major step forward for the Water Data Exchange (WaDE) program as it shows similarities and also variations in member states' water planning activities, such as data gathering, water use reporting, and data management. It discusses challenges ahead for achieving a comprehensive, regional water availability and use picture of the West, and also makes recommendations for how to get there. The Report, maps and related workgroup information are available on WSWC's website.

The goals of the WaDE project involve establishing a governance structure, evaluating current capabilities and methods used by state water agencies, and designing a common format that specifically targets the desired data. The project's State Capabilities Assessment Workgroup was charged with the task of evaluating the current mechanisms and tools used by the state agencies charged with overseeing the allocation and administration of water within their state, regarding their water planning and water rights/permitting programs. This Report is the culmination of the Workgroup's efforts.

For info: WSWC website at: www.westernstateswater.org/state-capabilities-assessment-workgroup/

KLAMATH FLOWS CA/OR
RECLAMATION'S FLOW RELEASES

In response to the discovery of a parasite infection in Chinook salmon in the lower Klamath River, the US Bureau of Reclamation (Reclamation) began to release additional water from Trinity Reservoir into the Trinity River on September 16. Reclamation had previously increased flow releases from the reservoir to reduce the potential for a large-scale die-off of Chinook salmon in the lower Klamath River. *See* Water Briefs, *TWR* #127 (Sept. 15, 2014). The Trinity River is the main tributary to the lower Klamath River. On September 15, scientists from the Fish Health Center of the US Fish and Wildlife Service (USFWS) captured and examined 20 fish from the lower Klamath River mainstem. Of those 20, nine tested positive for Ich parasites, with six of those nine determined to be severe. Ich was the primary pathogen responsible for the fish die-off in 2002. Ich is a common name for the non-native parasite Ichthyophthirius multifiliis and the disease that it causes. The parasite is capable of killing large numbers of fish in a short period of time when fish densities are high as is the case in the lower Klamath River when fall Chinook enter the river in large numbers.

The Fish Health Center's findings are well above the emergency response criteria described in an August 2013 joint memorandum from USFWS and NOAA Fisheries. The recommended response is an immediate doubling of the flow rate in the lower Klamath River for seven days. Releases from Lewiston Dam were increased beginning on September 16; continuing for the next seven days, the flow rate was increased to a maximum of about 3,400 cubic feet per second (cfs), to provide a flow rate of approximately 5,000 cfs in the lower Klamath River. This is double the 2,500 cfs flow sustained since August 23. It will require approximately 35,000-40,000 acre-feet to accomplish the flow doubling. Reclamation announced it will continue to work with NOAA Fisheries and other federal agencies to comply with applicable provisions of the Endangered Species Act and the National Environmental Policy Act. Trinity Reservoir can hold over 2.4 million acre-feet of water. On September 17, the Reservoir was estimated to contain over 660,000 acre-feet.

In a press release from the Karuk Tribe, Klamath Coordinator Craig Tucker addressed the situation in the upper Klamath River (above the confluence with the Trinity River) by noting that "as these fish make their way to the tributaries they want to spawn in, we need all water users to reduce or even stop diverting or pumping groundwater as soon as possible." The press release asserted that legal and illegal diversions throughout the Klamath Basin continue to de-water tributaries, making it difficult or impossible for Chinook to reach spawning grounds.

"This is the only possible means of preventing or reducing the severity of a parasite outbreak," said Mid-Pacific Regional Director David Murillo of Reclamation. "We are greatly concerned about the impact today's decision may have on already depleted storage levels, particularly the cold water pool in Trinity Reservoir. We must, however, take all reasonable measures to prevent a recurrence of the fish losses experienced in 2002."

In a related court case, a federal judge recently ruled in favor of Reclamation's flow releases for fishery purposes (see next Water Brief).

For info: Erin Curtis, Reclamation, 916/ 978-5100; Craig Tucker, Karuk Tribe, 916/ 207-8294

TRINITY RELEASES CA/OR
RECLAMATION AUTHORITY UPHELD

On October 1, federal Judge Lawrence O'Neill ruled that Reclamation did not violate the law by making special "Flow Augmentation Releases" (FARs) in 2013 to protect salmon in northern California's Klamath River. The FARs were made from Lewiston Dam, a feature of the Trinity River Division of the Central Valley Project. The San Luis & Delta-Mendota Water Authority (Authority) and Westlands Water District (Westlands) brought the lawsuit challenging Reclamation's authority, alleging that the water should have been stored in the reservoir for later use by irrigators rather than being released for salmon protection in the lower Klamath River. Reclamation authorized another set of FARs, which began on August 25, 2014. *See* Water Briefs, *TWR* #127 (Sept. 15, 2014) for additional information regarding the lawsuit and the court's recent denial of a temporary restraining order concerning the water releases in 2014.

The FARs were designed to prevent a fish die-off similar to one that occurred in 2002. Judge O'Neill provided background information regarding the 2002 event. "In the fall of 2002, a fish die-off occurred in the lower Klamath River and within the Yurok Reservation. AR 00016. Federal,

tribal, and state biologists concluded that pathogens were the primary cause and that warm water and low flow conditions, combined with high fish density, contributed to the outbreak. *Id*. FWS estimated that over 34,000 fish, mainly fall run Chinook, died from the disease outbreak, but noted that its estimate was a conservative one. AR 02895, 02896. Actual losses may have been more than double that number. AR 02535." *Slip Op*. at 11.

The Authority and Westlands argued in the case that Reclamation's actions violated provisions of the Central Valley Project Improvement Act (Pub. L. No. 102-575, 106 Stat. 4700 (1992), and the Reclamation Act of 1902. Those plaintiffs also argued that Reclamation acted unlawfully by releasing the water without first preparing an Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA) or engaging in consultation under the Endangered Species Act. *San Luis & Delta-Mendota Water Authority, et al. v. Sally Jewell, et al*., Case No. 1:13-CV-01232-LJO-GSA (Oct. 1, 2014); *Slip Op*. at 2. The Hoopa Valley Tribe (Hoopa), the Yurok Tribe (Yurok), and the Pacific Coast Federation of Fishermen's Associations and Institute for Fisheries Resources intervened as defendants; an amicus brief was submitted by the California Department of Fish & Game.

Judge O'Neill, based in Fresno, California, largely upheld Reclamation's ability to provide additional flow in the Trinity River to prevent harm to salmon downstream. The order, however, did indicate that different legal authorities need to be invoked by Reclamation the next time it seeks to release Trinity Reservoir water. The federal defendants had cited the 1955 Trinity River Division Central Valley Project Act (1955 Act) as the only independent legal authority for the Flow Augmentation Releases (FARs). "The Court finds that the 1955 Act is likewise limited in scope to the Trinity River basin, so does not provide authorization for Federal Defendants to implement the 2013 FARs to benefit fish in the lower Klamath." *Id*. at 63.

This complicated decision goes into great detail regarding the powers and authorization Reclamation relied on for the Flow Augmentation Releases and deserves careful reading by interested water professionals. Importantly, Judge O'Neill rejected the plaintiffs' claim that the 2013 FARs violated the Central Valley Project Improvement Act: "…the Court finds (and no party disputes) that the flow prescriptions set forth in the TRROD [Trinity River Record of Decision] operate as upper limits on actions within the scope of the TRROD. But, because the scope of CVPIA § 3406(b)(23), which incorporates the goals of the 1984 Act, is limited to the Trinity River basin, and the associated TRROD is lawfully limited in scope to the Trinity River mainstem, neither CVPIA § 3406(b)(23) nor the TRROD *preclude* Reclamation from implementing the 2013 FARs, which were designed to improve fisheries conditions on the lower Klamath River." *Slip Op*. at 62-63 (emphasis added).
For info: Full Decision at: http://earthjustice.org/sites/default/files/files/TrinitySJdecision.pdf.

STORMWATER PENALTY HI
HDOT VIOLATIONS

The US Department of Justice, the US Environmental Protection Agency and the Hawaii Department of Health have reached an agreement with the Hawaii Department of Transportation (HDOT) that requires the department to pay a $1.2 million penalty and correct federal Clean Water Act (CWA) stormwater violations at the Honolulu and Kalaeloa Harbors on Oahu.

Inspections by EPA and DOH in December 2008 first identified the CWA stormwater violations at the harbor facilities. Stormwater runoff from unpaved land areas, paved streets, and maintenance yards contains contaminants such as sediments, trash, chemicals, and oils that can flow into waterways and coastal zones, resulting in environmental damage. By creating a system of project review and oversight inspections, installing treatment systems, and exercising better control over tenant activities, HDOT can significantly reduce the amount of pollutants discharged in stormwater runoff.

The $1.2 million in penalties will be divided equally between the State of Hawaii and the US, and the settlement requires HDOT to undertake a variety of actions to improve the management of stormwater runoff at the two harbors, including: 1) create a new Office of Environmental Compliance to ensure all HDOT facilities comply with federal, state and local environmental regulations. Develop a stormwater prevention outreach and training program to communicate with the public using harbor facilities, to inform the public about how their activities impact the quality of stormwater runoff; 2) rank all harbor tenants annually based on their activities and risk of pollutant discharges. Inspect all high risk tenants twice per year, medium risk tenants once per year, and low risk tenants every five years; 3) inspect stormwater outfalls during wet and dry weather for the presence of non-stormwater discharges, and assess the physical condition of each outfall to determine if maintenance is needed; 4) establish a comprehensive Construction Runoff Control Program to control discharges from sites subject to new development or redevelopment. HDOT will study the feasibility of retrofitting construction projects, and complete at least three retrofits.

The consent decree for this settlement has been lodged with the federal district court by the US Department of Justice and is subject to a 30-day public comment period and final court approval.
For info: Dean Higuchi, EPA, 808/ 541-2711 or higuchi.dean@epa.gov; Janice Okubo, HDOH, 808/ 586-4442; Consent Decree available at: www.usdoj.gov/enrd/open.html

TRIBAL SETTLEMENT NE
DRINKING & WASTEWATER SYSTEMS

The Omaha Tribe of Nebraska (Tribe), a federally recognized Native American tribe located in northeastern Nebraska, and the Tribe's Utilities Commission have reached a settlement with the United States to improve the Tribe's drinking and wastewater systems and its trash collection program. The settlement, in the form of a Consent Decree filed with the US District Court of Nebraska, resolves EPA's claims that the Tribe failed to comply with a 2011 EPA Administrative Order on Consent (AOC) alleging longstanding violations of the Resource Conservation

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and Recovery Act, the Safe Drinking Water Act, and the Clean Water Act. The settlement requires the Tribe to implement utilities improvements valued at approximately $1 million and pay a civil penalty of $2,000.

"This settlement is designed to build the Tribe's financial, managerial and technical capacity, which will allow it to operate and maintain compliant and sustainable utilities," said EPA Region 7 Administrator Karl Brooks. "I commend the Tribe for working with EPA to protect the health of its residents and to ensure compliance with environmental laws." The Consent Decree addresses utilities serving the towns of Macy and Walthill, Nebraska, on the Omaha Reservation; the Macy Public Water System, the Macy Public Wastewater Treatment Facility, and the solid waste collection system. Collectively, the utilities serve approximately 310 residential households and 32 commercial customers. The utilities are operated by the Omaha Tribal Utility Commission on behalf of the Omaha Tribe.

Violations of the AOC included failure to provide timely notice to the public and to EPA of numerous significant pressure losses and water outages associated with the drinking water system; failure to submit utilities budgets and operating plans; failure to perform necessary repairs and conduct required monitoring and reporting for the drinking and waste water systems; and failure to clean up the extensive open dump located at the Tribe's Mother Earth Recycling Center. Among the requirements of the Consent Decree, the Tribe must: Create and maintain a reserve account to fund utilities emergencies and infrastructure; Hire and retain certified drinking and wastewater operators; Provide drinking and wastewater training to utilities staff and management; Inspect and repair components of the drinking water system; Complete cleanup of the recycling center dump and evaluate associated residual contamination; Outsource operations of the drinking water system if the Tribe cannot meet certain requirements ensuring the continuous provision of safe drinking water.

For info: Ben Washburn, EPA, 913/551-7364 or washburn.ben@epa.gov

MARIJUANA & WATER CA/OR

ILLEGAL FARMS IMPACT COHO

NOAA Fisheries recently released its Final Recovery Plan for the Southern Oregon/Northern California Coast (SONCC) Evolutionarily Significant Unit of Coho Salmon (Sept. 2014). New threats to the coho salmon in what is sometimes called the "Emerald Triangle" of northern California and southern Oregon have emerged due to the impact of illegal pot farms on water quantity and water quality. NOAA Fisheries discusses the threats posed by illegal water diversions, fertilizers and pesticide use, clear-cutting to create pot plantations on public land, and sediment problems from illegal road building.

"An additional stress to low-flow conditions is the emergence of marijuana cultivation in many areas of the SONCC coho salmon recovery domain. Although the number of plants grown each year is unknown, the water diversion required to support these plants is placing a high demand on a limited supply of water (Bauer, S., pers. comm. 2013a). Most diversions for marijuana cultivation occur at headwater springs and streams, thereby removing the coldest, cleanest water at the most stressful time of the year for coho salmon (Bauer, S., pers. comm. 2013b). Based on an estimate from the medical marijuana industry, each marijuana plant may consume 900 gallons of water per growing season (Humboldt Growers Association [HGA] 2010)." *Id*. at 3-27.

For info: Final Recovery Plan at: www.nmfs.noaa.gov/pr/recovery/plans/cohosalmon_soncc.pdf

NUCLEAR WATER RIGHTS UT

SPECULATION IN WATER ALLEGED

On September 17, more than a dozen Utah environmental organizations, small business owners, and concerned citizens led by HEAL Utah, Uranium Watch and Living Rivers filed an appeal in Utah's Court of Appeals challenging a decision which upheld the State Engineer's approval of a transfer of water rights for a nuclear reactor project. One of the grounds of the appeal is that Blue Castle Holdings is engaging in speculation with the water it has leased, which Utah water law doesn't allow.

During last fall's District Court trial it was revealed that Blue Castle Holdings has raised less than $20 million of the $20 billion minimum needed to build two reactors. "They've raised less than 0.1 percent of the total cost of these projects," says Park City attorney John Flitton of Flitton Babalis, who represents the plaintiffs. "What they're trying to do is get a permit to sell to someone else, and while they wait, they're tying up water which is increasingly important. That's the very definition of speculation."

In addition, the plaintiffs are asserting that the Colorado River system, which encompasses the Green River, doesn't have the water available that is needed to support the reactors (53,000 acre-feet). "The Colorado River basin is already over-allocated," according to John Weisheit, conservation director of Living Rivers.

Finally, the appeal argues that withdrawing such a massive amount of water — 53,000 acre feet is roughly the amount a city of 200,000 uses in a year — will harm the "natural stream environment," which Utah law forbids. The plaintiffs say that District Court Judge Harmond ignored expert testimony that the withdrawal would decrease key fisheries areas by 50%. The stretch of the Green River impacted is home to four native endangered species — the razorback sucker, humpback chub, Colorado pikeminnow, and bonytail — which depend upon key eddies, backwater channels and other features threatened by low flows.

Plaintiffs expect a hearing in front of the three-judge Court of Appeals sometime next year. The Green River nuclear project was first announced in 2007.

For info: Plaintiffs' Brief available at Heal Utah website: http://healutah.org/AppealBrief; Matt Pacenza, HEAL Utah, 801-864-0264

CALENDAR

October 16 CA
Clean & Drinking Water State Revolving Funds Workshop: Paying for Water Infrastructure, Sacramento. Cal/EPA HQ, 1001 I Street. Presented by EPA Region 9 & State Water Board. For info: State Water Board, 916/ 327-9978 or CleanWaterSRF@waterboards.ca.gov

October 16-17 NV
Tribal Water Law Conference: Perspectives from DC & Around the West, Las Vegas. Planet Hollywood. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

October 17 CA
Ass'n of California Water Agencies Regions 6 & 7 Water Forum, Visalia. Holiday Inn Visalia. For info: Katie Dahl, ACWA, 916-441-4545 or katied@acwa.com

October 19-22 WA
Water for Food 2014 Global Conference: Harnessing the Data Revolution: Ensuring Water & Food Secuirty from Field to Global Scales, Bellevue. Hyatt Regency Bellevue. Hosted by the Robert B. Daugherty Water for Food Institute at the University of Nebraska and the Bill & Melinda Gates Foundation. For info: http://waterforfood.nebraska.edu/wff2014/

October 19-22 CA
Ass'n of Metropolitan Water Agencies Annual Meeting, Newport Beach. Balboa Bay Resort. For info: www.amwa.net/cs/conferences/future

October 20 AZ
Colorado River Conference, Phoenix. The Arizona Biltmore. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

October 20 WA
Wetlands in Washington Seminar, Seattle. WA State Convention Ctr or WEB. For info: Law Seminars Int'l, 800/ 854-8009, registrar@lawseminars.com or www.lawseminars.com

October 21-23 WA
Columbia River Basin: Learning from our Past to Shape our Future Conference, Spokane. Fourth International Transboundary Columbia River Conference. Presented by Northwest Power & Conservation Council & Columbia Basin Trust. For info: http://columbiabasin-2014conference.org/

October 22-24 CA
Northern California Tour, Sacramento. Presented by Water Education Foundation. For info: www.watereducation.org/toursdoc.asp?id=2979

October 23 CA
SCWC's Annual Meeting & Dinner, Universal City. Sheraton Universal Hotel. Presented by Southern California Water Committee. For info: www.socalwater.org/images/Updated_Save_the_Date_With_Location.pdf

October 23-24 MT
14th Annual Montana Water Law Seminar, Helena. Great Northern Hotel. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

October 24 OR
Changing Climate: Adapting to New Regulations Conference, Portland. U of O's White Stag Block. Presented by the Citizen's Utility Board Policy Center. For info: http://cubpolicycenter.org/conference

October 24 OR
Environmental Law Year in Review (Annual) CLE, Troutdale. McMenamin's Edgefield Manor. Presented by Oregon State Bar Environmental & Natural Resources Section. For info: www.osbar.org

October 27-29 Austria
European River Restoration Conference 6th Edition, Vienna. TechGate. For info: http://errc2014.eu/

October 29 CA
Groundwater Land Use Symposium: The Correlation Between Land Use & Groundwater - Can We Plan Our Way to a Sustainable Groundwater Supply, Clovis. Clovis Veterans Memorial District, 808 4th Street, 8:30am-1:30pm. Presented by California Water Foundation, Kings River Conservation Dist. & Kings Basin Water Authority. For info: www.kingsbasinauthority.org/groundwater-symposium

October 29-31 France
International Water & Energy Conference: Preserving the Flow of Life, Lyon. Cite Internationale. For info: www.preserving-the-flow.com

October 30 CO
7th Annual Energy Innovation Schultz Lecturship Series: James Burke on Water-Energy Nexus, Boulder. Wolf Law Bldg., University of Colorado. Presented by Getches-Wilkinson Center. For info: www.colorado.edu/law/research/gwc

October 30 CA
Dealing in Drought: Development, Legislation & Litigation Seminar, Los Angeles. DoubleTree by Hilton Downtown. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

November 2 VA
Rainwater Harvesting Systems: Design, Implementation and Potential (Workshop), Tyson Corner. Presented by AWRA National Capital Region Section. For info: www.awra.org/meetings/Annual2014/workshop.html?utm_source=2014+September+Connections&utm_campaign=September+2014+Connections&utm_medium=email

November 3-4 CA
California Water Law Conference, San Francisco. Hotel Nikko. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

November 3-6 VA
2014 AWRA Annual Conference: 50 Years of Water Resources Management, Tysons Corner. Sheraton Premier Hotel. Presented by American Water Resources Ass'n. For info: www.awra.org

November 4 TX
Texas Stormwater Innovation Conference, Dallas. Marriott Quorum by the Galleria. For info: www.constructionecoservices.com/texas-stormwater-innovation-conference/

November 5 WA
Industrial Stormwater Workshop: Stormwater Management Fundamentals, Puyallup. Presented by Environmental Coalition of South Seattle. For info: www.ecoss.org/stormwater_workshops.html

November 5 TX
Texas Stormwater Innovation Conference, Austin. Wyndham Garden Hotel. For info: www.constructionecoservices.com/texas-stormwater-innovation-conference/

November 5-6 WA
Washington State Municipal Stormwater Conference, Puyallup. The Pavillion. Presented by the Washington Stormwater Center, Dept. of Ecology & City of Puyallup. For info: www.wastormwatercenter.org

November 6 WA
Industrial Stormwater Workshop: Advanced Stormwater Case Studies, Puyallup. Presented by Environmental Coalition of South Seattle. For info: www.ecoss.org/stormwater_workshops.html

November 6 TX
Texas Stormwater Innovation Conference, San Antonio. Wyndham Garden Hotel. For info: www.constructionecoservices.com/texas-stormwater-innovation-conference/

November 6-7 CA
San Joaquin River Restoration Tour, Fresno. Presented by Water Education Foundation. For info: www.watereducation.org/toursdoc.asp?id=2979

November 6-7 OR
23rd Annual Oregon Water Law Conference, Portland. The Benson Hotel. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net or www.theseminargroup.net

November 6-7 AZ
Energy & Mineral Development in Indian Country Institute, Tucson. Marriott Tucson University Park Hotel. Presented by Rocky Mt. Mineral Law Foundation. For info: www.rmmlf.org

November 6-7 CA
Climate Action Planning & Implementation Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

November 6-7 ID
31st Annual Water Law & Resource Issues Seminar, Boise. The Riverside Hotel. Presented by Idaho Water Users Ass'n. For info: www.iwua.org

November 6-8 CA
International Conference on Sustainable Infrastructure, Long Beach. For info: http://content.asce.org/conferences/icsi2014/index.html

November 7 TX
Texas Stormwater Innovation Conference, Houston. Norris Meetings & Events Ctr. For info: www.constructionecoservices.com/texas-stormwater-innovation-conference/

November 7 CA
Groundwater Law & Hydrology Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

November 8 OR
12th Annual Celebration of Oregon Rivers, Portland. Tiffany Center, 1410 SW Morrison Street. For info: WaterWatch of Oregon, www.waterwatch.org

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

CALENDAR

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November 12 TX
Financing Sustainable Water: Building Better Water Rates in an Uncertain World, Houston. United Way Resources Ctr., 50 Waugh Drive. Presented by Texas Water Foundation. For info: www.texaswater.org

November 12 WA
Preparing for Climate Change - New Regulations & New Litigation Seminar, Seattle. Hilton Seattle. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net/seminar.lasso?seminar=14.cliWA

November 12-14 Mexico
International Conference on Hydrometeorological Risks & Climate Change, Cholula. Univeridad de las Americas Puebla. For info: http://web.udlap.mx/ingenieria/ichrcc/

November 13 TX
Financing Sustainable Water: Building Better Water Rates in an Uncertain World, Dallas. Dallas City Hall, 1500 Marilla Street. Presented by Texas Water Foundation. For info: www.texaswater.org

November 13-14 WA
7th Annual Water Rights Transfers Seminar, Seattle. Hilton Seattle. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net or www.theseminargroup.net

November 13-14 PA
Groundwater Quality & Unconventional Gas Development: Is There a Connection? Workshop, Pittsburgh. Presented by Nat'l Groundwater Ass'n. For info: www.ngwa.org/Events-Education/shortcourses/Pages/224nov14.aspx

November 13-14 CA
Drought Impacts & Solutions in the Agricultural Sector: Western Governors' Drought Forum Meeting, Sacramento. For info: http://westgov.org/drought-forum

November 14 WA
CELP Continuing Legal Education Workshop, Seattle. Seattle University. Presented by Center for Environmental Law & Policy. For info: www.celp.org/

November 17 WA
Source Control Conference: Stormwater Management, Water Quality Stds. & Sediment Remediation, Seattle. For info: www.elecenter.com/conferences.htm

November 17-21 TX
Water Management Aspects of Shale Plays Course, College Station. Presented by Next (Schlumberger Co.).

November 18 OR
Financial Planning for Water Utilities Workshop, Salem. Chemeketa Center for Business & Industry, 626 High St. NE. Presented by Oregon Section - Ass'n of Clean Water Agencies. For info: ACWA, gillaspie@oracwa.org or www.oracwa.org/

November 19-21 LA
Clean Water Act Compliance Workshop, New Orleans. Hilton Garden Inn French Quarter. For info: www.epaalliance.com/cleanwaterworkshop-nov14.html

November 20-21 OR
Management & Remediation of Contaminated Sediments Course, Portland. University Place Hotel & Conf. Ctr. Presented by Northwest Environmental Training Ctr. For info: https://nwetc.org/course-catalog/rem-550-nov-20-21-2014

November 21 MT
Natural Resources and the Law Seminar, Missoula. Holiday Inn Downtown. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or www.theseminargroup.net

December 1 CO
A West That Works: Grass, Soil, Hope - Lecture by Courtney White, Quivira Coalition, Colorado Springs. Palmer Hall, Colorado College. Presented by State of the Rockies. For info: www.coloradocollege.edu/other/stateoftherockies/speakerseries/

December 2-5 CA
ACWA 2014 Fall Conference & Exhibition, San Diego. Manchester Grand Hyatt. Ass'n of California Water Agencies. For info: www.acwa.com/events/acwa-2014-fall-conference-exhibition

December 4-5 CA
California Environmental Quality Act Conference, San Francisco. Hotel Nikko. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

December 5 CA
Habitat Conservation Plan Implementation Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

December 8 WA
Industrial Stormwater Workshop: Advanced Stormwater Case Studies, Vancouver. Presented by Environmental Coalition of South Seattle. For info: www.ecoss.org/stormwater_workshops.html

December 8-9 NV
Drought Impacts & Solutions for Water Supply: Western Governors' Drought Forum Meeting, Las Vegas. For info: http://westgov.org/drought-forum

December 8-12 VA
ACES 2014 Conference: Linking Science, Practice & Decision Making, Arlington. Crystal Gateway Marriott Hotel. Presented by A Community on Ecosystem Services. For info: http://conference.ifas.ufl.edu/aces/

December 9-10 OR
Northwest Environmental Conference & Trade Show, Portland. Red Lion on the River, Jantzen Beach. For info: www.amwa.net/event/2014-annual-executive-management-conference