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Robert M. Schuster, Editor and Publisher, P.O. Box 1425, Foresthill, CA 95631; 530-367-3844; schuster@argentco.com

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FEATURE ARTICLE

PLEASE SHOW US THE WAY: STORMWATER REGULATION—
THE CALIFORNIA EXPERIENCE

By Matthew E. Cohen

The California State Water Resources Control Boards' failure to adopt a uniform policy for Municipal Separate Storm Sewer System NPDES Permits has led to conflicting and incongruous results in the area of storm water pollution control.

Background

Water pollution is a big problem. Environmental degradation and illnesses resulting from water pollution cost California millions of dollars a year. Yet the most curious thing about this problem is its source. The vast majority of the pollution in our waterways is not caused by some large industrial complex spewing out toxic waste, it is caused by us—everyday, individual users and families. Whenever you wash your car, spray pesticides on your lawn, or even use your breaks, you are contributing to the contamination of our waters.

In 1972, Congress enacted one of the most significant pieces of legislation in modern times. The Clean Water Act (CWA) and its accompanying regulations have had a profound impact on the way both private and governmental entities carry out their stewardship of one of this states' most precious resources. Although the CWA is now 35 years old, it is becoming increasingly clear that some of the most significant regulatory challenges lay ahead. Indeed, like so many other environmental statutes, the majority of the "low-lying fruits" have been picked. This leaves both regulators and those in the regulated community to face increasingly difficult choices regarding the extent to which the CWA is capable of tackling some of the more complex water pollution problems.

In California, the resolution of these problems is made even more difficult by the lack of leadership at the state level. There is perhaps no better illustration of this than in the case of municipal storm water discharges.

Municipal Storm Water Discharges: How Can We Regulate?

According to the CWA, it is unlawful for any person to discharge, unless specifically authorized, any pollutant into "the waters of the United States." 33 U.S.C. § 1311. The primary means for obtaining a discharge authorization is by applying for and receiving a National Pollutant Discharge Elimination System (NPDES) Permit. See 33 U.S.C. § 1342.

When Congress first adopted the CWA in 1972, NPDES Permits were issued solely to industrial dischargers and "Publicly Owned Treatment Works" (POTWs). At that time, neither the CWA nor the U.S. Environmental Protection Agency (EPA) envisioned that "Municipal Separate Storm Sewer Systems" (MS4s) could or would be subject to CWA regulation. In fact, in 1972, the EPA promulgated regulations specifically exempting most storm water discharges from the CWA on the grounds that regulation of such discharges was thought to be administratively infeasible. See *NRDC v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1372; *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d. 1159, 1163.

This all changed, however, in 1977 when the D.C. Circuit in *Costle*, 568 F. 2d 1369, set aside the regulations offering the exemption and ordered the EPA to regulate storm water discharges. The D.C. Circuit's

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decision eventually led Congress to adopt the Water Quality Act of 1987, which amended the CWA and required the EPA to regulate MS4 discharges. 33 U.S.C. § 1342(p); See *Defenders of Wildlife, supra*, 191 F.3d 1193; *Natural Resources Defense Council v. U.S. E.P.A.* (1992) 966 F.2d 1292, 1296.

As the populations of California and other Western states swell, state and federal agencies are taking municipalities to task for the vast amount and diverse sources of pollutants collected and funneled into the state's waterways through MS4s. Unlike sanitary sewer systems, water entering into and emanating from MS4s is not treated. Virtually everything that is discharged from our storm drains eventually makes its way into our streams, rivers, wetlands, and oceans.

Yet while state, regional, and federal agencies have been busy adopting regulations aimed at ensuring municipalities control these discharges, these agencies have failed to properly ensure that the rules and regulations are implemented in a consistent, effective, and practicable manner. The result is a hodgepodge of regulations with little to no assurances that policies and regulations governing one portion of a waterbody are applied consistently throughout the entire waterbody.

Because industrial dischargers and POTWs generally had only a discrete number of point sources, regulating pollutants emanating from these entities was a relatively easy process. On the contrary, MS4s often collect runoff from an extremely broad geographical range, eventually funneling that runoff into thousands of point sources located along a main waterbody or its tributaries. Monitoring and regulating the effluents discharged from MS4s, especially in times of flooding, is an extremely daunting and resource intensive operation.

California's Regional Boards: Varying Experiments in Implementation

Although the EPA developed the overall regulatory framework for MS4 permitting programs, it delegates the majority of the gritty details of actual implementation down to the states. Section 304 of the CWA provides states with the power to implement and enforce the provisions of the CWA. In California, the agency responsible for implementing the CWA is the State Water Resources Control Board (State Board). 54 Fed. Reg. 40664 (Oct. 3, 1989).

As the implementing agency for the CWA, the State Board is required to develop water quality standards for all waterbodies within the state, issue NPDES permits for all dischargers, and enforce violations of the CWA. 33 U.S.C. §§ 1313, 1319; Water Code §§ 13160, 13370. Although the State Board is the agency with the ultimate regulatory authority over the CWA, it too delegates a great deal of that authority down to its nine Regional Water Quality Control Boards (Regional Boards). See e.g. Water Code §§ 13240, 13225, 13263.

Under California's system, each Regional Board is given a great deal of autonomy to act as an independent regulatory agency. Although the State Board maintains an advisory role, it leaves most of the policy and enforcement actions to the Regional Boards. The purpose of this strategy is to encourage Regional Boards to adopt regulatory programs and requirements tailored to the diverse environments found throughout California. Furthermore, allowing each Regional Board to act as a "laboratory" for testing the effectiveness of different water policies increases the possibility that a successful program could develop and spread.

Under this system, each Regional Board independently develops NPDES Permits for the large MS4 systems within their jurisdictions. The Regional Board is then charged with enforcing the conditions contained in those Permits. See *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal. 4th 613, 621. Each MS4 NPDES Permit (MS4 Permit) is valid for five years. Water Code § 13378.

Because of the antibacksliding provisions of the CWA, each generation of MS4 Permits must be more stringent than the prior generation. 33 U.S.C. § 1342(o)(1); 40 C.F.R. § 131.12. Early MS4 Permits were only a few pages in length and generally required permit holders to focus on educational outreach and drafting ordinances to prohibit illicit discharges. Today, however, many MS4 Permits are hundreds of pages long and contain requirements for municipalities to implement programs such as commercial and industrial inspections, storm water mitigation plans for development and redevelopment projects, and the construction of structural devices to reduce and remove pollutants from storm water runoff. Obviously, as the requirements have increased for some permits, so have the costs.

Unfortunately, in California, not all MS4 Permits are created equal.

In place of uniform, consistent MS4 Permits, the State Board has encouraged each Regional Board to develop their MS4 Permits as they see fit. Although this policy may have the best of intentions, the Regional Boards frequently create dramatically different permit programs, often with varying levels of requirements. Under this regime, MS4 Permits can be substantially variable, even as between neighboring Regional Boards. Some Regional Boards, like the San Diego Regional Board prefer to adopt detailed MS4 Permits with specific requirements. Others, like the Central Valley Regional Board, choose to create short MS4 Permits, leaving most of the implementation discretion up to local agencies. For counties like Riverside County in Southern California, which falls under the jurisdiction of three Regional Boards, this lack of uniformity means that it must spend extra effort and resources trying to cater its programs to comply with conditions imposed by each Regional Board, even when those programs are contradictory.

As the MS4 Permits become more complex, the problems associated with these varying requirements will only increase. One area where this promises to be particularly troublesome is with respect to the incorporation of numeric effluent limits into MS4 Permits.

TMDLs and Numeric Effluent Limits: A Sign of Things to Come?

As the CWA begins to emerge from its adolescence, state and local agencies are struggling to incorporate the proper balance of regulation, enforcement, and science into their MS4 Permit programs. Nowhere is this clearer than in the development of Total Maximum Daily Loads (TMDLs).

According to § 303 of the CWA, all states must create a list of impaired waters within their jurisdiction and develop TMDLs for the purpose of addressing and eliminating those impairments. 33 U.S.C. § 1313(d). A TMDL is:

a calculation of the maximum amount of a pollutant that a water body can receive while still meeting water quality standards, and an allocation of that amount to the pollutant's sources.

Once a TMDL has been adopted, the Regional Boards must develop specific programs to monitor and

limit the amount of pollutants each MS4 can discharge without violating that TMDL. Water Code § 13240; *City of Arcadia v. State Water Resources Control Bd.* (2006) 135 Cal. App. 4th 1392, 1405. Once those programs are developed, the MS4 permit holders must implement them.

The way Regional Boards choose to develop the implementation programs for TMDLs can vary dramatically. Some Regional Boards have chosen to incorporate those TMDLs as specific numeric discharge limitations directly into the MS4 Permits. This means that, for each TMDL, the Regional Board adopts a specific quantity under which the pollutant cannot exceed for a specific waterbody. In the case of a Bacteria TMDL, for example, the Los Angeles Regional Board has adopted a phased numeric limitation into MS4 Permits, with the immediate requirement of zero bacteria discharges during the dry summer months and the eventual goal of zero bacteria discharges year round. (See Santa Monica Bay Beaches Bacteria TMDL, Los Angeles Regional Board Resolution No. 2002-004, Attachment A.) If an MS4's discharge exceeds that quantity, the public agency responsible for that MS4 can be subject to penalties of up to \$10,000 per day, per violation or lawsuits from third parties.

Other Regional Boards, however, such as the Central Valley Regional Board, have taken the opposite approach and declared that the incorporation of numeric limits into MS4 Permits is "not feasible." (Sacramento County MS4 Permit, Regional Board Order No. R5-2002-0206, p. 8, ¶¶ 38-39.) Instead of numeric limits, the Central Valley Regional Board adopts a narrative approach that requires MS4 permit holders to implement specific management practices into their MS4 programs.

The problem many municipalities have with numeric limits is that they are often overly prescriptive and difficult to comply with. When rains come after a long dry period, everything that built up during that time comes flushing through the storm drain systems and into our streams and rivers. At times like these, the likelihood of high concentrations of pollutants entering the waterways and causing exceedances of numeric limitations increases dramatically.

With numeric limits in MS4 Permits, any exceedance of a numeric limit, regardless of the cause or the permittees' ability to control, is a violation of that MS4 Permit and makes the permittee subject to enforcement action (fines) and third party citizen

suits. 33 U.S.C. § 1365. To financially strapped local agencies, the idea of fines and lawsuits for something beyond their control is both unfair and impracticable. To many Regional Boards, however, a TMDL not rooted in a numeric formula would be ineffective and contrary to the CWA. Unfortunately, these contradicting interests have often led to tension and legal battles between the state and local agencies.

In an effort to investigate this problem further, the State Board recently convened a panel of eight experts from the academic and scientific community to address the issue of whether or not numeric limits should be contained in MS4 Permits. After extensive study, this “Numeric Limits Panel” concluded:

It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target. . . For catchments not treated by a structural or treatment BMP, setting a numeric effluent limit is basically not possible. However, the approach of setting an ‘upset’ value, which is clearly above the normal observed variability, may be an interim approach that would allow ‘bad actor’ catchments to receive additional attention.

Despite these findings, however, the State Board refuses to consider a uniform policy for numeric limits. Instead, the State Board has left the decision of whether or not numeric limits should be incorporated into MS4 Permits to each individual Regional Board.

For waterbodies that occupy multiple Regional Board jurisdictions, the refusal by the State Board to adopt a consistent policy for numeric effluent limitations can be extremely problematic. For example, the EPA recently approved a Metals TMDL developed by the Los Angeles Regional Board for the San Gabriel River. According to the final report for this TMDL, 57-100 percent of the metals causing the impairment of the San Gabriel River are the result of aerial deposition. The contamination from aerial deposition occurs when particles such as copper dust from brake pads, factory emissions, and even pollution from

China float around in our air, eventually settling on the ground until they are washed by rain or an overzealous sprinkler system into our rivers and streams.

According to the San Gabriel Metals TMDL, aerial deposition is a point source that municipalities and other public agencies in the San Gabriel River watershed are responsible for treating and removing. San Gabriel TMDL, p. 8. Unfortunately, because the municipal permittees do not have control over the source of these metals, the contamination and treatment will be in vain; and no amount of money and effort will help.

Complying with this TMDL is going to be expensive. The Los Angeles Regional Board estimates that the thirty public agencies under its jurisdiction in the San Gabriel River Watershed will need to spend nearly *two billion dollars* over the next fifteen years to implement this one TMDL. What’s worse is that there are virtually no sources of money to pay for these mandates.

Under the California Constitution, counties and municipalities cannot increase storm water fees unless the residents approve a tax increase by a two-thirds majority. See *Howard Jarvis Taxpayers Assn v. City of Salinas* (2002) 98 Cal.App.4th 1351. Therefore, if a storm water tax increase doesn’t pass, the money to pay for these mandatory TMDLs must either come from the agency’s general funds, or bonds. In the end, cash strapped municipalities facing TMDLs like this one are left with an impossible choice: find a way to allocate the money or face the possibility of civil penalties and third party lawsuits.

Adrift in a Sea of Inconsistency

The Los Angeles Regional Board’s position that municipalities are accountable for aerial deposition sharply contrasts with the neighboring Santa Ana Regional Board’s position with respect to aerial deposition. According to the Santa Ana Regional Board:

The permittees may lack legal jurisdiction over storm water discharges into their systems from some State and Federal facilities, utilities and special districts, Native American tribal lands, waste water management agencies and other point and non-point source discharges otherwise permitted by the Regional Board. The Regional Board recognizes that the permittees should not be held responsible from such facilities and/or

discharges. Similarly, certain activities that generate pollutants present in storm water runoff may be beyond the ability of the permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric disposition, brake pad wear, tire wear and leaching of naturally occurring minerals from local geography.

The problem with these differing interpretations is that the San Gabriel River watershed is located within both the jurisdiction of the Los Angeles and the Santa Ana Regional Boards. Because of this, the various MS4 permit holders' subject to this TMDL will likely be required to take very divergent paths. The Los Angeles Regional Board will adopt MS4 Permits with numeric limits holding Los Angeles municipalities accountable for aerial deposition. Meanwhile, the Santa Ana Regional Board, if consistent with earlier statements, will have no numeric limits and no aerial deposition requirements in its permits. Such glaring inconsistencies are not only unfair to MS4 permit holders in the Los Angeles Region Board jurisdiction, they also frustrate the water quality objectives of the CWA. Clearly, something must be done to alleviate these inconsistencies. In other words, the State Board must intervene.

Congress' role with respect to the CWA was the easy part. Thirty-five years later, however, states, regional, and local agencies still struggle with the actual implementation of these worthy goals. Only one thing is certain. The problems associated with implementing storm water controls cannot be resolved in a piecemeal fashion.

The State Board's hands off approach, though initiated with the best of intentions, fails to adequately instruct MS4 permit holders and the Regional Boards on the proper way to effectuate the purposes of the CWA. Regional Boards, left to their own devices, are struggling to define a problem that neither Congress, the EPA, nor the State Board have deigned appropriate to tackle. The end result is that MS4 permit holders are left feeling confused, buffeted by inconsistent rules, and responsible for resolving problems far beyond the true level of their abilities. Simply put, the State Board's failure to address these important issues in a uniform and equitable manner has impeded the advance of storm water pollution reduction.

Conclusion and Implications

Obtaining true progress in this difficult area of environmental control will require the dedicated efforts of all parties involved. Nevertheless, the State Board must lead the way. Instead of piecemeal MS4 Permits, the State Board should adopt uniform policies and permit provisions developed through a collaborative effort with the Regional Boards, municipalities, and environmental groups. Not all permits must necessarily be equal, but they should at least be consistent on the major issues.

California has frequently been a leading voice in the development of environmental policy. By taking the lead on permit development, the State Board has the opportunity to regain that position. Thirty-five years after the CWA, California's local governments and Regional Boards find themselves lost in a sea of regulatory confusion. Can the State Board show them the way out?

Matthew E. Cohen is an Associate in the Environmental and Energy Department at Richards, Watson & Gershon, working from the firm's Los Angeles office. Mr. Cohen represents municipalities and public entities, as well as private sector clients, in both state and federal courts in environmental compliance and environmental litigation matters.

SCRIPPS INSTITUTION STUDY PREDICTS LAKE MEAD COULD GO DRY BY 2021

A grim study at San Diego's Scripps Institution of Oceanography predicts that changes in climate and strong demand for Colorado River water could drain Lake Mead by 2021, triggering severe shortages across the region.

The report, "When will Lake Mead go dry?" says both Lake Mead and Lake Powell could drop so low that gravity will not be able to move water downstream. According to the Scripps study, if the drought worsens and water use increases, there is a 50 percent chance Lake Mead will run dry by 2021 and a ten percent chance it will run out of usable water by 2014. According to the study, if the system of water allocation now in place remains the same, Lake Mead could become nothing more than a "dead pool."

The authors of the Scripps study contend that it was conservative in its assumptions and disputes the river flow model the U.S. Bureau of Reclamation used to develop a landmark agreement signed in November. See "Are Lake Mead, Powell at Risk of Drying Up by 2021?" *Salt Lake Tribune*, 2/14/08. The interim agreement in effect through 2026 outlines how the seven Colorado River Basin states will share the burden in the event of a water shortage, and is the first major change to the Colorado River Compact since it was written in 1922.

Others Chime In

In 1999, the Bureau of Reclamation began the environmental impact study (EIS) that underlies the 2007 water-sharing agreement. Since then, the river basin has experienced the worst drought in 100 years of recorded history, and Lake Powell and Lake Mead have gone from being nearly full to just more than half-full.

The agreement lays out how the upper basin states (Utah, Colorado, Wyoming and New Mexico) will respond to demand from the Lower Basin states (California, Arizona and Nevada), which have significantly higher populations and senior water rights. Under the agreement, Lake Powell and Lake Mead water

levels are to remain about equal. Currently, Lake Mead is half-full, as is Lake Powell.

A dry Lake Mead would pose significant problems for Arizona and Nevada. Under current water agreements between the Colorado River basin states, when water levels drop below 1,000 feet in elevation, Nevada loses access to all of its river allocation. Arizona also loses much of the water that flows through the Central Arizona Project canal. Lakes Mead and Powell are critical water resources for Arizona, which rely heavily on the Colorado River for water and power.

'Dead Pool Scenario'

According to the Central Arizona Project, which has conducted several studies of Lake Mead's level in times of drought, "[N]one of them ever made Lake Mead go dry, period, end of story. We looked 100 years out, and Lake Mead never went dry," said Larry Dozier, deputy general manager of the Central Arizona Project. See "Study Lake Mead Could Go Dry by 2021," *USA TODAY*, 2/14/08. "We did what we called our worst case, and it just didn't happen," he said. *Id.*

Tim Barnett, one of the authors of the study, acknowledged, however, that the dead-pool scenario is likely if current Colorado River management remains static—which is a big if. See "Are Lake Mead, Powell at Risk of Drying Up by 2021?" *Salt Lake Tribune*, 2/14/08. "None of us believe this is the final answer," Barnett said. "It tells us there is a major problem coming."

In the wake of the Scripps study, the Bureau of Reclamation defended its own environmental impact statement. "As of today, if nothing changes, I could agree with [the Scripps study]. But what we know about this river basin is hydrology is highly variable," Bureau hydrologist Paul Davidson said. See "Are Lake Mead, Powell at Risk of Drying Up by 2021?" *Salt Lake Tribune*, 2/14/08.

According to Davidson, the most important element is that the reservoir system is working as intended.

“It’s seen us through this drought and now it’s half empty,” Davidson said. “If the drought held for another eight years, then yeah, we have a problem with the water budget. But we don’t expect that to happen.”

Conclusion

Hydrologists predict Lake Powell will rise 50 feet this year if snowmelt occurs according to projections showing runoff will be 128 percent to 130 percent of normal, he said. (M. Becker)

COLORADO ‘SUPER DITCH COMPANY’—A LOWER ARKANSAS VALLEY EFFORT TO PRESERVE AGRICULTURAL WATER RIGHTS

A rotational land fallowing—water leasing program, nicknamed “Super Ditch Company,” is being promoted by the Lower Arkansas Valley Water Conservancy District (Lower Ark District) to provide agricultural water rights owners an alternative to the traditional “buy and dry” method of transferring water rights to municipalities and other users. Similar to an arrangement between southern California’s Palo Verde Irrigation District and the Metropolitan Water District of Southern California, the Super Ditch would allow participating members to temporarily fallow lands on a rotational basis and lease the associated water rights to other users. Farmers would continue to own the water rights, which would generate a continuing income from leases and lands would only be temporarily dried up. As conceptualized, the program would provide a solution to the negative consequences of typical water rights transfers—the “buy and dry” effect.

Buy and Dry

In the Arkansas River Valley, 85 percent of the water rights are in agriculture. Growing cities such as Colorado Springs, Pueblo, and even Aurora, seek Arkansas River agricultural water rights to add to their municipal supplies. Typically, cities buy water rights from farmers and ranchers, change the decreed use from irrigation to municipal uses in Water Court, transfer the historically consumed amount to the city supply, and permanently dry up the formerly irrigated lands. Only the amount actually historically used can be transferred to the new use. According to the 2004 State Water Supply Initiative, approximately 70,000 acres in the Arkansas Valley have been dried up to date from such transfers, and an estimated 23,000—72,000 acres more will be needed to meet projected demands by 2030.

This “buy-and-dry” practice can impact agricultural economies as producers leave agriculture and no longer support farm-related industries such as equipment, seed, and fertilizer businesses. Perhaps more noticeable is the effect on the landscape from resulting erosion and noxious weed infestation. The Colorado Legislature attempted to address landscape impacts by requiring terms and conditions in change cases to “accomplish the revegetation and noxious weed management of lands from which irrigation water is removed.” Colorado Revised Statutes, (C.R.S.) § 37-92-305 (4.5)(a). The proposed Super Ditch project aims to eliminate these consequences by rotating dry-up of portions of the land irrigated and providing a continued supplement to farm and ranch income with lease proceeds.

Organization

According to the Lower Ark District plan, a “Super Ditch Company” would be created, controlled, and owned by shareholders in ditch companies who choose to participate. The company would seek out willing end users and organize the water leasing with participating irrigators. Participating irrigators would “pool” their water rights represented by their ditch and reservoir company stock to provide the water supply. Each participating irrigator could commit all or a portion of their lands to be fallowed on a rotational basis and would be paid annually to merely participate in the company as well as an additional amount in years they are asked to fallow their committed lands.

As conceived, the Super Ditch Company would be owned by the participating irrigators who would hold shares of stock in the Super Ditch Company in tandem with their original ditch company stock. An elected board of directors would manage operations.

The irrigators' original ditch company stock would not be transferred to the Super Ditch Company, only made available for leasing. Leases would be made directly between the participating irrigator and the end user. To protect the end user's certainty of continued supply during the lease term, the leases would become an encumbrance on the original stock. Participating irrigators could sell their stock, but only subject to any leases that had been entered.

Functions of the Super Ditch Company would include hiring attorneys and engineers to facilitate leasing and to obtain change decrees and substitute water supply plans necessary for leasing. Income from water users to participate in the leasing program, plus charges to the irrigator/owners similar to ditch company assessments would fund these operations. The Super Ditch Company would apply to change the participating irrigator's water rights and, possibly, for augmentation plans depending on the particular circumstances of a given lease.

Different lease scenarios are anticipated including long-term leases similar in length to Bureau of Reclamation leases, interruptible water supply agreements, and water banking. The type of lease used at any given time would depend on what form provides the maximum value to the irrigators. For instance, dry year leases may be short term, such as interruptible supply arrangements at a higher lease rate than in wet years. Potential lessees include municipalities, state agencies, energy and industrial users, and other agricultural users, including groundwater users in need of augmentation supply.

Challenges

A similar leasing program is in place in southern California where the Palo Verde Irrigation District fallows lands to provide water to the Metropolitan Water District. Potential participants in the Super Ditch program visited the southern California operation in 2007 to speak with the participants and identify issues. That program is somewhat simpler than the proposed Super Ditch—one Irrigation District provides water to one municipal provider under one water right in the Colorado River and no adjudication process was involved; it is strictly a contract arrangement. Here, the Lower Ark District seeks to organize members of seven independent and competing ditch companies to participate in the program—the

Bessemer Ditch, Rocky Ford Highline Canal, Oxford Farmers Ditch, Otero Canal, Catlin Canal, Holbrook Canal, and Fort Lyon Canal.

These companies control water rights between Pueblo Dam and John Martin Reservoir that are relatively well situated for delivery to municipalities and other users. One challenge is the difference in yield and, therefore, value of the different water rights held by the ditch companies. Each company owns various priority rights and has different storage capabilities and consumptive use histories providing different yields and values of water. Water that is more reliable or more easily delivered carries a higher value so that some ditch company shares would bring a higher price than others based on higher yield and availability. These varying yields and values present an engineering challenge to organization of the overall leasing program. However, through cooperation, the Super Ditch Company aims to improve the irrigators' bargaining power, which can otherwise be compromised by the yield differences.

Another challenge is the restriction on use of water rights outside of the ditch companies. Presently, only two of the companies being considered allow water to be used outside their system. To be included in the Super Ditch Company leasing program, the rest of the companies would have to amend their by-laws to allow outside uses. Because such amendments typically occur by shareholder voting, at least some amount of acceptance of the overall Super Ditch program is necessary for its success, even though the individual ditch companies would not actively participate in the leasing program.

Transporting water from the participating irrigators' lands to the end users is another challenge to be addressed. There is limited exchange potential in the area. The Lower Ark District is cooperating with others to study the feasibility of a pipeline project to transport water to users which have expressed an interest in leasing.

Conclusion and Implications

If successful, the proposed Super Ditch Company could provide a practical alternative to the traditional "buy and dry" method of water rights transfers from agriculture to municipal use. As the water needs of growing urban areas continue to increase, Coloradans will be forced to become increasingly creative to

address those needs if, at the same time, they choose to maintain the state's agricultural communities and landscape. Should the Lower Ark District meet the challenges to its Super Ditch program, it may prove

to be a successful tool to achieve that goal. Even if Super Ditch does not succeed as conceived, the Lower Ark District's effort should provide guidance for other opportunities elsewhere. (S. Miller/CVC)

TEXAS DESALINATION UPDATE

The Texas Legislature has designated March 7 as Texas Desalination Day, signifying the state's increasing interest in desalination as a source of new water supplies. Texas needs all the new water it can get. The population of Texas is expected to double in the first sixty years of the 21st Century. In this time period water demands will increase by almost 30 percent, while water supplies will fall by approximately 18 percent. Ever-improving desalination technologies are increasingly opening the tap to two huge sources of new water for Texas: seawater from the Gulf of Mexico, and brackish groundwater. The state is moving with all deliberate speed toward making desalinated water a major slice of Texas' water supply pie.

Desalination of Seawater

In 2002, the Texas Water Development Board, acting at the direction of the governor, reviewed a number of proposals for large-scale seawater desalination pilot projects and selected several for possible funding. The next year, the Texas Legislature jumped on the seawater desalination water wagon and recognized the value of the unlimited and drought-proof supply of water washing up on the 367-miles of Texas coastline. The legislature tasked the Board to conduct all necessary research and development to help establish seawater desalination projects.

These initiatives resulted in the construction of the Rio Grande Regional Seawater Desalination Project. The rapidly growing Lower Rio Grande Valley needs to develop at least 184,000 acre-feet of new fresh water supplies by 2050 to keep up with increasing demands. The region is highly dependent on water from the Rio Grande River, which reaches the Gulf of Mexico between Brownsville and the Mexican city of Matamoros. However, the Rio Grande is over-appropriated and is increasingly unreliable as a water supply. Indeed, in recent years it has sporadically dried up short of reaching the ocean.

The Rio Grande desalination project is located on the Brownsville Ship Channel at the southern tip of Texas (www.desal.org). The partners in the project are the Texas Water Development Board, the Brownsville Public Utilities Board, and the Port of Brownsville. The \$2.2-million pilot plant utilizes reverse osmosis technology, and processes about 100,000 gallons of seawater per day.

Based on cost and operational data developed during the pilot phase, plans are to construct a \$150-million full-scale plant capable of producing 25 million gallons of fresh water per day for municipal and industrial purposes. This capacity would match that of the Tampa Bay Seawater Desalination plant in Tampa, Florida, currently the largest seawater desalination plant in North America. Construction of the plant is slated to begin in 2010.

Another smaller desalination pilot project is in the works for the Texas Coast near Port Isabel, near the Brownsville project. The Laguna Madre Seawater Desalination Pilot Plant Study, funded by a grant from the Texas Water Development Board to the Laguna Madre Water District, will construct an ocean water intake or drill beach wells and study the feasibility of building a 1 million gallon-per-day seawater desalination plant. The study should be completed late this year.

Desalination of Brackish Water

Whereas desalination of seawater in Texas is still in its early stages of development, large-scale desalination of brackish groundwater is well established in several parts of the state. It is estimated that the state has available to it approximately 2.7 billion gallons of brackish groundwater. Beginning in the early 1990s, many communities in Texas began viewing brackish groundwater as a boon instead of a bane, in large part because of improvements in the membrane technology involved in the double osmosis treatment process.

Since then, the total design capacity and actual production of fresh water from brackish groundwater in the state has increased from close to zero to well over 50 million gallons per day in 2005.

Late last year, this number was dramatically increased when the largest inland desalination plant in the world began serving the City of El Paso and surrounding areas. The \$87-million plant—a joint project of El Paso Water Utilities and Fort Bliss Army Post—produces a whopping 27.5 million gallons of drinking water per day. El Paso is located in the Chihuahuah Desert, and along with its Mexican sister-city Ciudad Juarez is rapidly depleting its fresh ground water supplies, mostly pumped from the Hueco Bolson (aquifer). About 60 percent of the water in the Hueco Bolson is brackish—too salty to meet drinking water standards but less salty than seawater. The Kay Bailey Hutchison Desalination Plant obtains its brackish water from approximately 40 wells, and the briny concentrate left over from the desalination process is disposed of through several deep-injection wells.

The new desalination plant is a boon to a region that was facing the frightening prospect of running out of fresh water supplies in the very near future. Desalination of groundwater may indeed in the long term prove to be the difference between continuing prosperity and dusty disaster in far west Texas.

San Antonio Water System (SAWS), the primary water supplier for the City of San Antonio, is planning its first desalination project. SAWS wants to build a groundwater desalination plant capable of producing up to 20 million gallons per day. The plant would treat brackish water from wells drilled into the Wilcox Aquifer in Atascosa County, just south of Bexar (pronounced “bear”) County where San Antonio is located. The resource would provide an additional hedge in times of drought when the ability to withdraw fresh water from the Edwards Aquifer is limited. (San Antonio derives most of its drinking water from the Edwards Aquifer—water that is very clean and requires a minimum of treatment.)

However, the proposed project has ignited political opposition in Atascosa County, based on fears that the withdrawal of brackish water could cause a depletion of the overlying freshwater zone of the Wilcox Aquifer. Among other issues, there is a technical dispute as to whether layers of muddy shale between the salty and freshwater zones of the aquifer will prevent

draining of the upper layer. SAWS will have to work with the Evergreen Underground Water Conservation District, which has jurisdiction over the Wilcox Aquifer, to satisfy the citizens of Atascosa County that their freshwater supply will not be threatened by exportation of brackish water to San Antonio. San Antonio hopes to have this desalination plant in production by the middle of 2011, but the process could be delayed by the political obstacles that must be overcome before the project moves ahead.

The “southmost” area of the state, Brownsville and surrounding areas in the southern tip of the state, have also in recent years begun to tap into substantial brackish groundwater supplies. A consortium of municipal water suppliers called the Southmost Regional Water Authority owns a desalination plant that converts brackish groundwater into drinking water. The majority partner in the consortium, the Brownsville Public Utilities Board, operates the plant, which is designed to produce 7.5 million gallons of fresh water per day. The project supplies about 40 percent of the Board’s water needs. The southmost region will provide an interesting ongoing case study on the feasibility and economics of desalination, since it is investing in the treatment of both brackish water and seawater.

Conclusion and Implications

Brownsville and El Paso have joined the growing list of Texas cities and water districts that have invested in desalination as a significant part of their water supply portfolios. The City of San Antonio will soon join this list, and the amount of water derived from desalination statewide will continue to increase at an impressive rate.

As technology improves and the cost of desalination drops, this trend will continue apace. The treatment of brackish water in many cases compares favorably with the cost of other forms of water supply enhancement. The treatment of seawater, which is much saltier and produces much brinier wastewater, is more expensive and will for some period of time continue to need public subsidization to compete with other water resources. However, the day will likely soon arrive when the large-scale desalination of seawater—a virtually unlimited resource—will become feasible on a non-subsidized basis.

Desalination is particularly valuable as an alternative source of supply when conventional supplies run

low, which happens all too often in many parts of the State of Texas. But communities in the state will become increasingly reliant on brackish and seawater supplies as a firm component of their water supplies. These supplies have the virtue of being much

more predicable than surface water, which is affected greatly by the vagaries of precipitation. It is becoming increasingly clear that Texas will not meet its long-term water supply challenges without fully exploiting its brackish and seawater resources. (S. Rogers)

LEGISLATIVE DEVELOPMENTS

**IDAHO MINING ASSOCIATION BUSY LOBBYING
STATE LEGISLATURE ON WATER ISSUES**

The Idaho Mining Association is busying lobbying the Idaho Legislature concerning to bills related to water resources. The first bill seeks to bar the Idaho Department of Environmental Quality from amending the 1992 Idaho Ground Water Quality Plan to require mining operations to remediate polluted ground water when overlaying mines are closed. The second bill would exempt mining water rights from Idaho's forfeiture and abandonment statutes.

**Mining Industry Faces Stern Opposition to
Ground Water Pollution Bill**

Phosphate mining companies including Monsanto and J.R. Simplot Co. are backing proposed legislation that would permit the perpetual contamination of ground water below open pit mining operations, provided that the contamination remains confined to ground water directly below the mining operation and associated waste rock piles and processing plants. The bill was presented during a hiatus in the negotiated rulemaking process between Idaho Mining Association, the Idaho Department of Environmental Quality, and the Idaho Conservation League.

The debate over groundwater protection and mining activities centers on the Idaho Ground Water Quality Plan—legislation passed in 1992 with the goal of balancing aquifer protection with mining operations that employ roughly 4,000 workers statewide. Both the mining industry and public interest environmental groups agreed that the original legislation, which exempts ground water pollution emanating from open pit mining in certain circumstances, was imprecise and open to too much interpretation. Mining companies worry that uncertainty over clean up and remediation requirements would dissuade new or expanded operations, while the environmental community complains that the law's current vagueness promotes unfettered ground water pollution. Given the common interest in amending the law, the mining industry and the environmental groups initiated negotiations with the Department of Environmental

Quality in early 2007. The agency suspended the negotiations in November 2007 when the various stakeholders failed to reach an agreement.

During the course of the negotiations, the mining interests disagreed with agency attempts to require mines to return ground water to its pre-mining quality within eight years of closing the overlaying mine. Conversely, the environmental groups disfavored agency-proposed provisions that expanded the definition of mining to include waste rock piles and processing plants, thereby allowing for ground water pollution below such operations.

The Idaho Mining Association concedes that its proposed legislation would legalize ground water pollution not only below pit mining operations, but also below waste rock disposal sites, reclaimed areas, and ore processing plants. However, the Mining Association insists that the industry is not looking for an unfettered license to pollute. For example, the Mining Association points out that the proposed legislation does not permit mining companies to pollute neighboring or surrounding properties, or limit liability should such off-site pollution occur. The Mining Association also contends that geological conditions below mining operations oftentimes effectively filter pollutants before they have the opportunity to migrate elsewhere.

Environmental Groups Remain Skeptical

Not surprisingly, environmental groups are less trusting of the Mining Association's geologic pollutant filtering theory, and view the industry's proposed legislation as an end-run around the stalled negotiated rulemaking process. Opponents of the proposed legislation point to selenium pollution events from abandoned phosphate mining operations in the late 1990s that killed several horses and hundreds of sheep that consumed contaminated water on neighboring farms and ranches in eastern Idaho. Many argue that predicting the flow of ground water is difficult at the least, if not impossible. Idaho legislators have

openly asked the Mining Association's lobbyist how the industry proposes to contain the ground water and prevent it from contaminating other area ground waters. Environmental groups want the Department of Environmental Quality to adopt rules that require mining companies to engineer mining projects that prevent ground water contamination altogether, rather than accepting that ground water pollution is an inevitable adjunct of mining operations. Environmental groups point to ground water protection standards employed by Canadian-based Agrium, Inc. at its North Rassmussen Ridge mine approximately 25 miles from Soda Springs, Idaho as an illustration that such standards can be employed and still make economic sense.

Opponents of the proposed legislation also point to failings of the mining industry in the past that have left states such as Idaho and Montana scarred with Superfund sites such as the former Bunker Hill mining operation in Kellogg, Idaho or the former Atlantic-Ritchfield/Anaconda Co. copper mining site in Butte, Montana. In the case of the Bunker Hill mine in the mid-1970s, mine owners knowingly operated the mine's lead smelter with a compromised pollution control device, leading to widespread pollution of the surrounding area. When the Bunker Hill owners abandoned the mine, they also managed to export company assets out of the country, leaving behind a worthless shell corporation and a Superfund site. At least Montana was able to sue Atlantic-Ritchfield for the care and remediation of copper mining activities that polluted the Clark Fork River and created a Superfund site stretching from Butte nearly all the way to Missoula, Montana. The suit commenced in 1983 and only recently ended when Atlantic-Ritch-

field agreed to add \$168 million to the \$230 million it already agreed to pay to fund cleanup of the nation's largest Superfund site.

Idaho Mining Association Proposed Amendments to Idaho Code § 42-223

In addition to its ground water pollution lobbying activities, the Idaho Mining Association is seeking amendment of Idaho Code § 42-223 in an attempt to exempt mining water rights from Idaho's abandonment and forfeiture laws. Idaho Code § 42-222 provides that water rights that are not applied to beneficial use for five consecutive years are subject to potential forfeiture unless the failure to apply the water to a beneficial use is excepted, or defended, by the provisions of Idaho Code § 42-223. As such, the Idaho Mining Association has proposed legislation that would add a mining use exemption to Idaho Code § 42-223.

Conclusion and Implications

If enacted, the proposed legislation would provide that no portion of any water right with a beneficial use related to mining, mineral processing or milling could be lost or forfeited for nonuse so long as the nonuse was the result of a mine closure, suspension, or reduced production due to the periodic and inevitable downturns in the mining industry. So long as the mining property still has valuable mineral potential, and the water right owner has maintained the property and mineral potential for future production, the Mining Association maintains that the corresponding water rights necessary to resume production should be preserved to perform the function for which they were originally granted. (A. Waldera)

REGULATORY DEVELOPMENTS

CLIMATE CHANGE AND THE CLEAN WATER ACT—ENVIRONMENTAL GROUP PETITIONS EPA TO ADDRESS OCEAN WATER QUALITY

The Center for Biological Diversity (CBD) has recently petitioned the Environmental Protection Agency (EPA) under § 304 of the Clean Water Act (CWA) to address the effects of climate change on ocean water quality. The environmental group is asking EPA to curb ocean acidification—defined broadly here as the lowering of pH to a point that affects marine life—by strengthening federal water quality criteria for pH and issuing guidance to states to strengthen protection of U.S. waters from the effects of carbon dioxide. The CBD's petition, if successful, has significant implications for federal water policy as well as for more regional considerations in coastal states. If EPA adopts the recommendations advocated by CBD, the new pH water quality standards would mark a significant expansion of the CWA to encompass carbon dioxide and to regulate it as a pollutant in ocean waters. In addition, the revision of the water quality standard for pH would require affected coastal states to list many segments of ocean waters under the states' jurisdiction as impaired, which would in turn require significant state efforts to reduce carbon dioxide pollution to bring those impaired waters back into compliance.

Ocean Acidification

The CBD's recent federal petition is based on well-publicized scientific studies in the past few years suggesting that increases of carbon dioxide in the atmosphere are having a deleterious effect on ocean health that could lead to irreversible loss of marine ecosystems. When seawater absorbs and reacts with carbon dioxide in the atmosphere, ocean pH is lowered—a phenomenon referred to as “ocean acidification.” The debate over ocean acidification generally is not about whether ocean acidification is occurring, but instead, on the significance of the effects of acidification on marine ecosystems and the timeframe for observing its negative effects. According to several recent reports, carbon dioxide pollution has lowered average ocean pH by 0.1 units from pre-industrial levels; average ocean pH levels are projected to decrease by

an additional 0.5 units by 2100, according to certain studies. Both blue-ribbon Ocean Commissions that worked on federal ocean policy issues in 2003-2004 characterized climate change impacts on ocean acidification as a significant technical and policy challenge warranting increased federal attention.

These recent studies suggest that the main impact of ocean acidification is impairment of calcification, or the process by which crabs, corals, abalone, oysters, sea urchins and other animals make shells and skeletons. Acidification is also likely harmful to calcifying phytoplankton and zooplankton, which form the basis of the marine food web. Furthermore, acidification may affect organisms such as fish by decreasing metabolic, immune, and reproductive function.

The Clean Water Act

In its petition, the Center for Biological Diversity asserts that EPA should exercise its authority under the CWA to address the problem of ocean acidification. The CBD petition recites the national goal of the CWA to guarantee “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation.” 33 U.S.C. § 1251(a)(2). CBD also notes that EPA is required to promulgate rules necessary “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” 33 U.S.C. § 1241(a).

The CBD petition focuses on the national water quality criteria for pH established under § 304, which mandates that EPA revise national water quality criteria “from time to time” to reflect the “latest scientific knowledge.” 33 U.S.C. § 1314(a)(1). EPA developed water quality criteria for pH in 1976. The CBD argues that EPA's water quality criteria for pH is significantly outdated relative to the current science, and that EPA is required by CWA § 304 to review the new evidence and evaluate a change in the water quality standard for pH.

According to the CBD's petition, under the current pH standard, a decline of 0.2 pH units in ocean waters subject to CWA jurisdiction is acceptable.

According to CBD, this currently allowed alteration of ocean pH will decimate ocean life. The petition therefore requests that EPA adopt criteria that allow no measurable deviation of pH, stating that new scientific information shows that harm to aquatic life can occur at levels below the EPA's standard. In the alternative, the petition requests that EPA publish new pH criteria that are more stringent than the current criteria and take into account the adverse effects of carbon dioxide on aquatic life.

The second aspect of the CBD's petition builds on a series of petitions under the CWA's TMDL program that CBD has submitted to several coastal states to address ocean pH issues. The CBD's recent federal petition requests that EPA issue guidance to states under existing water quality standards programs to protect U.S. waters from the effects of carbon dioxide. The CBD based this request on a requirement in the CWA that EPA develop and publish "and from time to time thereafter revise" information on four topics necessary to protect water quality. 33 U.S.C. § 1314(a)(2). These topics include the factors necessary to restore and maintain physical, chemical, and biological integrity of certain classes of water, including oceans; the factors necessary to protect fish, shellfish, and wildlife; the measurement and classification of water quality; and the identification of pollutants suitable for maximum daily load measurement. *Id.* The CBD specifically requested that EPA publish guidelines for states informing them how to prevent harmful pH changes in seawater, how to prevent acidification's adverse effects on sea life, and how to adequately measure for pH in coastal and ocean waters.

The CWA grants EPA a "reasonable" amount of time to reply to the CBD's petition. The CBD has indicated that it will likely pursue litigation to force EPA's reply if it is delayed for much more than a year.

The CBD's State Petitions

The CBD's petition to EPA dovetails with the CBD's pending state petitions regarding ocean acidification. The CBD recently petitioned several coastal states to list segments of the Atlantic and Pacific Oceans under the state's jurisdiction as "impaired" for pH on those states' CWA 303(d) lists, and to establish TMDLs for carbon dioxide. On February 27, 2007 the CBD petitioned California to list segments of the Pacific Ocean under its jurisdiction as impaired

for pH. In August 2007 the CBD similarly petitioned Alaska, Washington, Oregon, and Hawaii. Simultaneously, the CBD petitioned New Jersey, New York, and Florida to list segments of the Atlantic Ocean.

The petitions contend that states are legally required to list all segments of ocean waters under their jurisdiction because ocean acidification impairs both water quality and beneficial uses of ocean waters and because current measures are not stringent enough to protect water quality. The petitions also contend that declining ocean pH violates states' anti-degradation policies, and that TMDLs for carbon dioxide are required to correct the impairment. Each petition, though similar in its general allegations, is customized to the individual states' water quality standards.

Ultimately, the CBD seeks to have these states institute pollution controls via the TMDL and water quality standards process to reduce ocean acidification in their coastal waters. The CBD has indicated it will likely petition other coastal states as well. Under § 303(d) of the CWA and its corresponding implementing regulations, states must identify and list water bodies within each state that fail to meet state water quality criteria or antidegradation requirements (303(d) list). 33 U.S.C. § 1313(d). States must rank waters on the 303(d) list in order of priority, taking into account the severity of the pollution and designated uses of the waterbody, and must "identify the pollutants causing or expected to cause violations of the applicable water quality standards." 40 C.F.R. § 130.7(b)(4). For waters on the 303(d) list, states must establish a total maximum daily load (TMDL) for pollutants "at a level necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C).

The CBD petitions to states seek to set in motion these processes to address ocean acidification the CBD asserts is being caused by climate change. The petitioned states will consider the CBD's 303(d) petitions as they identify impaired water bodies within their jurisdictions and submit their lists to EPA through the Water Quality Assessment Cycle. Most states are expected to submit their reports to EPA in early 2008.

Discussion and Analysis

The CBD's petitions to EPA and states present a novel interpretation and use of the water quality provisions of the CWA, both in terms of the geographic

expanse and variation of the water bodies sought to be regulated as well as the broad goal of protecting marine water quality and aquatic life from harmful environmental impacts. CBD's effort is clearly an initiative driven by climate change, rather than water law, and yet, its success will depend on the creativity of EPA and states in how they interpret their authorities under the CWA. EPA, for its part, under the current Administration has declined to regulate carbon dioxide as a pollutant under the primary authority of the Clean Air Act. Thus, the likelihood of the CBD's petition being persuasive to EPA on this issue in a more remote context—the water quality impacts of climate change—seems slim. On the other hand, the water science and its implications for marine life may present compelling reasons to exercise CWA authority.

On a practical level, although the CBD petitions give voice to a real and serious problem threatening marine ecosystem health, the CWA may not be realistic or the most effective tool to address the problem of ocean acidification. Several challenges are likely if EPA decided to use its CWA authorities to address ocean acidification. On a scientific level, ocean acidification may be viewed as nonpoint source pollutant, in that carbon dioxide from diffuse national and international sources that is dissolved into ocean water, lowering pH, poses special problems of traceability and redressability. The entire span of oceans exchange carbon dioxide with the atmosphere. Carbon dioxide is a long-lived and well-mixed gas in the atmosphere, making it difficult to assess which state (or even country) is responsible for the carbon dioxide pollution that shows up in the waters under any given state's jurisdiction. Although EPA has addressed atmospheric deposition of pollutants to water bodies in TMDLs (most notably, mercury), the blueprint for such regulation of ocean acidification from climate change pollutants is hardly apparent.

In addition to difficulties tracing the source of the pollutant, stricter national and state water quality

standards for pH would pose a major challenge to EPA in redressing the problem. The TMDL program has traditionally been focused on landlocked, freshwater water bodies. Were EPA to expand the TMDL program to ocean bodies and require states to list coastal waters as impaired by carbon dioxide under their 303(d) lists, the states would be required to implement pollution controls to address the impairment and reduce acidification. However, even if water quality control strategies could be devised, the source of carbon dioxide emissions—mobile and stationary sources, in the U.S. and beyond—may not be regulable as point source dischargers under the CWA. Thus, even if the CBD's petitions cause EPA to act, the agency's ability to affect ocean acidification via the pH water quality standards of the CWA may have little practical application on any sources of climate change pollutants.

As for CBD's petitions to coastal states, similar issues abound. Given the longevity of carbon dioxide and mixing in the atmosphere, it would be difficult, if not impossible, for an individual state to implement any sort of pollution controls that would curb enough carbon dioxide emissions within that state to comply with more strict antidegradation standards for pH. In addition, there are questions of fundamental fairness in requiring a coastal state to implement costly pollution controls for a problem that is also caused in part by neighboring non-coastal states or even more remote sources.

Conclusion and Implications

The CBD's recent petitions present a creative and novel mechanism for seeking to force improvements in carbon dioxide air emissions for the purpose of water quality—specifically, ocean pH or acidification changes. The petitions may or may not succeed at EPA and the affected states, but do raise provocative questions about the ability of existing federal laws to adjust to current environmental challenges. (R. Davis/K. Hansen/ S. Piluso)

TRUCKEE RIVER OPERATING AGREEMENT FINAL EIS/EIR FINDS NO SIGNIFICANT IMPACT

On January 23, 2008, the U.S. Department of the Interior (Interior) and the California Department of Water Resources (DWR) issued the final environmental impact statement/environmental impact review (EIS/EIR) for the Truckee River Operating Agreement (TROA) finding no significant environmental impacts. In fact, the EIR/EIS concludes that the TROA would benefit the Truckee River's water quality, improve conditions for certain threatened and endangered fish species, and increase recreational opportunities at federal facilities throughout the Lake Tahoe and Truckee River basins.

Background

After decades of conflict over Truckee River water between farmers in northern Nevada, the Pyramid Lake Paiute Tribe, and urban water users in California and Nevada, Congress passed the Truckee-Carson-Pyramid Lake Water Rights Settlement Act of 1990. That act directed the Secretary of the Interior (Secretary) to negotiate an agreement with California and Nevada, in consultation with other parties designated by the Secretary or the states, to increase the operational flexibility and efficiency of reservoirs in the Lake Tahoe and Truckee River basins. In 2003, Interior, California, Nevada, the Pyramid Lake Paiute Tribe, and other entities completed the TROA and issued a draft EIS/EIR pursuant to the National Environmental Policy Act (NEPA), and the California Environmental Quality Act (CEQA). The parties continued to negotiate aspects of the TROA, and in August 2007, provided a negotiated agreement that became the basis for this final EIS/EIR.

Truckee River Operating Agreement EIS/EIR

The EIS/EIR describes three alternatives: (1) TROA, the proposed action and preferred alternative, (2) the "local water supply alternative" (LWSA), and (3) the "no action" alternative. The EIS/EIR also describes the current status of resources (*e.g.* hydrologic, biological, socioeconomic, and cultural) of the study area and presents an evaluation of the potential effects of the alternatives on those resources.

The purpose of the TROA is to modify existing operations of all designated reservoirs to enhance co-

ordination and flexibility of such operation, increase drought protection for urban areas, and improve habitat conditions for threatened and endangered fish, while ensuring compliance with existing water rights and flood control and dam safety requirements. To accomplish this goal, the TROA incorporates, modifies, or replaces various provisions of previous agreements governing the operation of the designated reservoirs, and would become the sole operating agreement for all designated reservoirs in the Lake Tahoe and Truckee River basins. Those reservoirs would continue to operate for the same purposes as under current conditions, however, the TROA expands opportunities for storing and managing water under the newly created category of "credit water."

Signatories to the TROA would be able to store "credit water" by retaining or capturing water in a reservoir that would have otherwise been released from storage or passed through the reservoir to serve a downstream water right. In cases with a change in the place or type of use, however, such storage could take place only after a transfer in accordance with applicable state water law. Once accumulated, facility operators would classify credit water by category and keep records of its storage, exchange, and release. An entity with credit water would be able to store or exchange it among the reservoirs until needed to satisfy its beneficial use.

The TROA would also increase boating- and fishing-related recreational opportunities in Federal reservoirs in California, improve stream flows and fish habitat in the Truckee River and its three main tributaries, and help improve water quality in the Truckee River downstream from the Reno/Sparks area. The final EIS/EIR concludes that the TROA will have no significant adverse impacts on the environment.

Conclusion and Implications

The TROA may be an end to a longstanding dispute over the waters of the Truckee River. It will enable permanent allocation of water between Nevada and California in the Lake Tahoe, Truckee and Carson River basins. The TROA provides opportunities to store water in existing reservoirs for future municipal and industrial demands during periods

of drought conditions thereby reducing reliance on groundwater pumping to supply such water demands in urban areas. The TROA also enhances spawning flows in the lower Truckee River for the benefit of Pyramid Lake fishes (*i.e.*, federally endangered cui-ui and threatened Lahontan cutthroat trout). Finally, the TROA increases recreational opportunities in the Federal reservoirs, improves stream flows and fish habitat through out the Truckee River Basin, and im-

proves water quality in the Truckee River. While this final EIS/EIR is only one step toward implementing the TROA, it represents a significant step forward. The U.S. Department of the Interior and the California Department of Water Resources are expected to sign a Record of Decision, and Notice of Determination respectively, after the minimum 30-day period following the release of this final EIR/EIS. (D. Kelly)

NEVADA STATE ENGINEER HOLDS HEARING ON SOUTHERN NEVADA WATER AUTHORITY'S INTER-BASIN TRANSFER APPLICATIONS

On February 4, 2008, through February 15, 2008, the Nevada State Engineer (State Engineer) held the hearing on the Southern Nevada Water Authority's (SNWA) applications to appropriate up to almost 35,000 acre-feet annually (AFA) of groundwater from the Cave Valley, Dry Lake Valley, and Delamar Valley Hydrographic Basins within White Pine and Lincoln Counties for use in the Las Vegas metropolitan area.

1989 Applications

In October of 1989, the Las Vegas Valley Water District (LVVWD) filed numerous applications, which have since been assigned to SNWA, to appropriate up to 177,000 AFA in various hydrographic basins within Lincoln and White Pine counties, including the Spring Valley Hydrographic Basin. These applications represent the largest inter-basin transfer request ever made in the history of the state. In total, more than 830 parties protested the applications. In January 2006, pursuant to SNWA's request to act upon the applications, the State Engineer held a pre-hearing conference to ascertain the extent of the participation of the various protestants and to schedule the hearings by hydrographic basins on the applications. The State Engineer determined that he would proceed with the Spring Valley hearing and then schedule hearings on the applications in Snake, Delamar, Dry Lake, and Cave valleys at a later date.

Spring Valley Ruling

After holding a hearing in September, 2006, on April 16, 2007, the State Engineer issued the long-anticipated ruling on the Spring Valley applications to appropriate up to 91,000 AFA of ground-water

from White Pine County in Northeastern Nevada. The State Engineer granted the applications for up to a maximum of 60,000 AFA, subject to staged development guidelines and findings of an initial staged development period. At the commencement of the Spring Valley hearing, a stipulation for the withdrawal of the protests filed by the Bureau of Land Management, National Park Service, Fish and Wildlife Service, and Bureau of Indian Affairs, after execution and implementation of a detailed monitoring and mitigation agreement, was entered into the record.

Nevada Law

In Nevada, an application to appropriate water will be granted by the State Engineer if there is water available for appropriation in the proposed source of supply, the proposed use does not conflict with the existing rights or with protectible interests in domestic wells, and the proposed use does not threaten to prove detrimental to the public interest. NRS 533.370(5). The applicant must also provide proof satisfactory to the State Engineer of his good faith intention to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence, and his financial ability and expectation to actually construct the work and apply the water to the intended beneficial use with reasonable diligence. NRS 533.370(1).

Moreover, if an application contemplates an inter-basin transfer of water, where the place of use is in a different basin than the point of diversion, the State Engineer must also consider whether the applicant has justified the need to import water from another basin and whether a plan of conservation has been adopted, if the State Engineer has determined such a

plan is advisable. He must also consider whether the proposed action is environmentally sound as it relates to the exporting basin, whether the proposed action is an appropriate long-term use of the water which will not unduly limit future growth and development in the exporting basin, and any other factor that the State Engineer determines to be relevant. NRS 533.370(6).

Cave Valley, Dry Lake Valley, and Delamar Valley Applications

Pre-Hearing Conference

On August 28, 2007, the State Engineer held a pre-hearing conference on SNWA's Cave, Dry Lake, and Delamar Valley applications to ascertain which protestants would be participating in the hearing, to narrow protest issues to be heard, and to schedule the hearing and presentation of evidence. The protestants which appeared were the Bureau of Land Management, National Park Service, Fish and Wildlife Service, and Bureau of Indian Affairs, the Moapa Band of Indians, and the Advocates for Community Development, which appeared on behalf of various protestants, including the various ranchers, interest groups, and counties.

The State Engineer then determined that in the Spring Valley Ruling he had ruled that various statutory criteria had been met by SNWA, and that the same facts supporting the State Engineer's ruling in Spring Valley were applicable to the instant applications. Thus, as to ten of 37 protests grounds raised by various individuals on the instant applications, the State Engineer found that those issues had been conclusively resolved in the Spring Valley Ruling, including the need to import water, SNWA's financial ability to construct the works and put the water to beneficial use, and that issues of growth control, air pollution and other non-water issues were beyond his jurisdiction to consider.

Stipulations for Withdrawal of Protests

In early January 2008, both the Department of the Interior, on behalf of all the federal agency protestants, and the Moapa Band of Indians, entered into stipulations with SNWA for the withdrawal of their protests to the applications. The federal agency settlement agreement was entered into on January

3, 2008, after execution of a detailed monitoring, management, and mitigation plan very similar to that entered into between SNWA and the Department of the Interior in regards to the Spring Valley applications.

The stipulation for the withdrawal of the Moapa Band of Indians' protests references the monitoring, management and mitigation plan between SNWA and the federal agencies, committed SNWA to manage the development of water in a way to avoid injury to the tribe's water rights and to mitigate in the event of adverse impacts. SNWA also committed to share information and data related to the relevant basins compiled by the Technical Review Panel formed pursuant to the federal stipulations.

The Hearing

Upon withdrawal of the federal and Moapa Band of Indians protests, the Advocates for Community Development made the appearance on behalf of numerous protestants. Throughout the two-week hearing, the applicants and protestants presented voluminous amounts of documents and lengthy testimony in support of their respective cases. SNWA argued that it had met all the requirements for the pumping, that critics' disaster scenarios are unfounded, and that the three valleys had limited growth potential. The Advocates for Community Development countered, by claiming, among other things, that SNWA has tried to hide evidence that the pumping may harm existing water users and the environment in rural Nevada because there is not enough water in the valleys for long-term exportation. This position was backed by testimony from Cave Valley Ranch, LLC, which claims to want to develop land in that area.

The hearing concluded on February 15, 2008. But, the State Engineer will continue to receive public comment through February 29, 2008. At that time, he will take the matter under submission and render his ruling at some undetermined time thereafter.

Conclusion and Implications

The State Engineer's decision on SNWA's Spring Valley applications was a step towards fulfilling the water authority's long-term plan to fully develop in-state resources and lessen the area's dependence upon Colorado River water. Throughout the hearings on the 1989 applications, the State Engineer has made it

clear that he will issue his rulings within the bounds of his statutory authority, as set forth in Nevada's water law statutes. He has also made it clear that concrete evidence, not supposition, regarding water availability and impacts will be required to grant the applications.

Similar to his findings and conclusions in the Spring Valley Ruling, it is likely that the State Engineer will not grant SNWA the full appropriation re-

quested, and that the development of any water rights granted will be staged and subject to monitoring and mitigation requirements. The ruling will be anxiously awaited as the State Engineer considers the evidence, testimony, and arguments presented at the hearing, and public comment submitted. The only remaining 1989 inter-basin transfer applications SNWA that remain to be heard are those for appropriations in Snake Valley, the hearing of which has not yet been scheduled. (J. Prunty)

NEW MEXICO CITIES AND TOWNS STRUGGLE TO ACHIEVE COMPLIANCE WITH EPA'S ARSENIC RULE

The U.S. Environmental Protection Agency (EPA) promulgated a stricter drinking water standard for arsenic in 2001 and sought compliance from public water systems by 2006. Many of New Mexico's public water systems face special challenges in achieving compliance.

Arsenic in New Mexico Groundwater

The Southwestern U.S. is one of several hot-spots for arsenic concentrations nationwide, particularly in parts of Arizona and in New Mexico's Middle Rio Grande Valley, probably due to desorption from volcanic rocks and iron oxide. See S.J. Ryker & A.H. Welch, *Arsenic in Ground-Water Resources of the U.S.: A New National Scale Analysis 1-2* (USGS 2001), <http://www.wr.cer.usgs.gov/Arsenic/FinalAbsPDF/ryker.pdf>.

See also Jon Spencer, *Natural Occurrence of Arsenic in Southwest Ground Water*, *Southwest Hydrology*, May/June 2002 14-15, http://www.swhydro.arizona.edu/archive/V1_N1/feature2.pdf. This results in arsenic-impacted water systems dependent on wells and springs that are clustered up and down the Middle Rio Grande. See NMED map of these systems, <http://www.nmenv.state.nm.us/dwb/contaminants/documents-/NMArsenicSystems.pdf>.

Laws and Regulations Relating to Arsenic

The Safe Drinking Water Act (SDWA), 42 U.S.C. §§ 300f-300j-26 (2000), is the main federal law for protecting public water supplies from harmful contaminants. The SDWA allows states to assume primary enforcement responsibility for public water

systems so long as they adopt regulations no less stringent than those promulgated by the EPA. 42 U.S.C. § 300g-2(a)(1) (2000). New Mexico has adopted the federal national primary drinking water regulations (NPDWRs) at NMAC 20.7.10.100, *available at* <http://www.nmcpr.state.nm.us/nmac/parts/title20-/20.007.0010.pdf>.

Under 1996 SDWA amendments, the EPA was required to promulgate a national primary drinking water regulation (NPDWR) for arsenic in public water systems by January 2001. 42 U.S.C. § 300g-1(b)(12)(A) (2000). In January of 2001, the EPA promulgated a rule (Arsenic Rule) setting the enforceable maximum contaminant level (MCL) for arsenic at ten micrograms per liter ($\mu\text{g/L}$) or ten parts per billion (ppb), 66 Fed. Reg. 6976, 6981 (Jan. 22, 2001), which has now been incorporated into the EPA regulations listing MCLs for inorganic contaminants. 40 C.F.R. § 141.62 (2006). Under 40 C.F.R. § 141.11, this MCL applies only to "community water systems," defined in § 141.2 as public water systems serving at least 15 year-round service connections or at least 25 year-round residents, and to "non-transient non-community water systems," defined as serving at least 25 of the same persons over six months per year (e.g. a school or factory). Community water systems serve a vast majority of the nation's residents, nearly 270 million as of 2006.

To deal with the persistent inability of public water systems to upgrade or replace infrastructure to comply with federal drinking water regulations, the 1996 amendments also established a drinking water state revolving loan fund (DWSRF) program to help finance projects needed to comply with SDWA rules.

42 U.S.C. § 300j-11 (2000). Under this program, EPA is authorized to award annual capitalization grants to states, which match them at a 20 percent rate and use the money to provide loans and other assistance to communities for the installation and replacement of treatment, distribution and storage facilities. Congress has funded the DWSRF at a rate of over \$800 million per year through 2006, and EPA had awarded \$5.74 billion in capitalization grants through June 2004, which, combined with the state matching funds, bond proceeds and other funds, amounted to \$9.64 billion in DWSRF funds available for infrastructure improvements. However, EPA estimated in 2003 that over \$275 billion in such improvements would be needed over 20 years to comply with drinking water regulations and ensure the provision of safe water nationwide.

Analysis

Enforcement, including exemptions for both large and small systems, continues to be a key issue. The SDWA authorizes states to use exemptions as administrative tools to allow water systems more time to acquire financial systems and develop mechanisms necessary to ensure compliance with federal drinking water standards. Public water systems can be granted exemptions for up to three years, while eligible systems serving fewer than 3,300 persons may be granted up to three exemption extensions of two years each. § 300g-5(a); 40 C.F.R. § 142.20(b)(2) (2006). In theory, this should mean that all water systems covered by the Arsenic Rule should be in compliance by 2015, 14 years from the rule's promulgation. Meanwhile, water systems operating under exemptions are permitted to maintain arsenic levels above the 2001 standard, but not above the pre-2001 standard of 50 ppb. Congress has essentially made a policy determination that exposure to the "excess compliance-period exposure" of 200 ppb×years (40 ppb "excess exposure" × five years from 2001 to 2006) should not pose an unreasonable risk to health. If compliance will be achieved beyond these five years, the maximum allowable concentration level throughout this duration will still be 200 ppb×years. Thus, a three-year exemption until 2009 means that the water system may not exceed the "excess compliance-period exposure" of 200 ppb×years over eight years, so that the annual "excess exposure" may not exceed $200 \div 8 = 25$ ppb,

and the annual arsenic concentration may not exceed $10 + 25 = 35$ ppb. This explains why Albuquerque's immediate compliance strategy is to blend ground water to maintain arsenic levels below 35 ppb.

The 2001 Arsenic Rule mandated that all surface water systems must complete monitoring for the revised arsenic MCL by December 31, 2006, and that all ground water systems must complete monitoring by December 31, 2007. In its 2004 *Arsenic Compliance Strategy*, the New Mexico Environment Department (NMED) noted that 95 of New Mexico's water systems, serving approximately 756,000 residents, or 41 percent of the state's population, would be affected by the new regulations, including some of the largest in the state, such as those serving Albuquerque, Rio Rancho and Santa Fe.

For the numeric majority of New Mexico's 95 affected systems, the very small ones serving fewer than 500 residents, infrastructure improvement to achieve compliance with the SDWA is obviously hindered by lack of a large funding base, sophisticated operations staff and limited water resource options. Even the larger systems have had to make decisions between several strategic options, many of them with what NMED terms "significant issues" or "inherent difficulties" of their own.

NMED classifies compliance options under two broad headings. First, the "non-treatment" options include blending treated water, modifying water sources, consolidating water sources, replacing water sources with new sources or consolidating with another water system. Consideration of any of these options involves substantial uncertainties. For instance, modifying a water source or obtaining a new water source require a significant amount of external funding, with grants or loans, may require the acquisition of new water rights—a tenuous proposition on its own—without guarantee that the new or modified source is not also impacted by the ubiquitous presence of arsenic in New Mexico. Blending of water sources requires an available alternative low-arsenic supply, while 38 percent of affected New Mexico systems were single-source as of 2004. Consolidation with another system similarly depends on availability and feasibility—problematic given the geographic isolation of many New Mexico communities, and even political or cultural disagreements among them, which the NMED identified as a potential consideration.

Second, the “treatment” options consist of new and existing technologies that can be implemented at a source, point of entry (Entry Point to the Distribution System or EPTDS) or Point of Use (POU), including reverse osmosis, activated alumina, ion exchange and lime softening. Treatment options are further complicated by the presence of arsenic at two separate valence levels, As(III), or arsenite, and As(V), or arsenate; because arsenite is less strongly absorbed on most mineral surfaces, it is both more plentiful in surface and ground water and more resistant to treatment. Treatment options have their own drawbacks, foremost among which is cost, especially at the small community water system level. The annual cost per household to achieve compliance—averaging \$32 nationally and falling to \$21 for mid-sized cities due to economies of scale—nearly doubles for communities of 1,000 to 3,300 people, and skyrockets to what experts estimate to be well over \$150 for communities of fewer than 500. Wallace E Oates, *The Arsenic Rule: A Case for Decentralized Standard Setting?*, 147 Resources 16-18 (Spring 2002).

Exacerbating this problem in New Mexico is the fact that, due to its mostly rural and dispersed population, the percent of its total need for DWSRF funds to achieve SDWA compliance for water systems serving 10,000 and fewer people is a whopping 49.5 percent, while the national average was 27.5 percent, and other western states such as California, Arizona and Colorado had percentages of 14.3, 15.1 and 27.1, respectively. Nationwide, 95 percent of community water systems are in compliance with the new arsenic standard, but 97 percent of those yet to achieve compliance serve fewer than 10,000 people.

Larger Cities and Towns on the Path to Compliance

It is estimated that 71 community water systems in New Mexico have arsenic levels that exceed the MCL. N.M. Env’t Dep’t, Public Water Systems with Arsenic Sampling Results Equal to or Greater Than the ten ppb MCL, [http://www.nmenv.state.nm.us/dwb/Documents/Affected percent20Systems percent20- percent20Municipalities.pdf](http://www.nmenv.state.nm.us/dwb/Documents/Affected%20Systems%20-%20Municipalities.pdf). Of these, 36 have installed or are installing treatment processes, and 35 to 40 applied for an exemption. To receive an exemption, which New Mexico Environment Department (NMED) Drinking Water Bureau senior engineer Chuck Thomas described as a “labor-inten-

sive process,” requires that the state demonstrate that a level in excess of the MCL is an “annual average.” Because the MCL went into effect in 2006, and New Mexico had already received a one-year extension, levels measured in 2007 did not constitute a violation but instead triggered quarterly monitoring through the first three quarters of 2008. To evaluate an exemption request, the SDWA allows the state to consider, again in Thomas’ words:

evidence of compelling economic factors, such as qualifying as a disadvantaged community system, and being unable to raise sufficient money right away; demonstration that the exemption will not result in an unreasonable risk to health; and documentation that they can’t make changes needed to comply earlier (such as connecting to a nearby community’s system)

See 42 U.S.C. § 300g-5(a) (2000).

Those systems with the resources to show some prospect of reaching MCL compliance thus stand a better chance of getting a variance or exemption. Of the 35 to 40 community water systems seeking an extension from the state, only 8 were successful: Albuquerque, Santa Fe, Rio Rancho, Los Lunas, Desert Sands, Bosque Farms, La Mesa and Espanola.

Albuquerque’s arsenic compliance strategy is based largely on its impending transfer from local ground water to low-arsenic water imported from the tributaries of the San Juan River in southern Colorado as the basis of its drinking water supply. The one-year exemption will allow it to reduce the initial cost of compliance with the Arsenic Rule from \$150 million to \$30 or \$40 million. Meanwhile, the Albuquerque water utility selectively pumps wells and blends ground water to keep arsenic at an acceptable concentration below 35 ppb, it has constructed an arsenic removal demonstration plant in one part of the city, and it will bring online a new treatment plant for the San Juan water meeting federal standards later in 2008.

Rio Rancho reported an arsenic concentration of 38 ppb in its *Water Quality Report 2005*, <http://www.ci.rio-rancho.nm.us/index.asp?NID=506>. However, it also notes that it is funding \$31 million in arsenic removal improvements due to be completed in 2009. Meanwhile, Bosque Farms, having received a three-year exemption, was pleasantly surprised when its two

wells measured below ten ppb in January 2008, after having previously tested at 12 and 14 ppb, thus saving more than \$5.5 million to build a treatment system.

Conclusion and Implications

The Arsenic Rule has become a source of some resentment among rural communities, because of the high per-household cost and the disparities in options available to small towns compared with large urban systems with greater financial and political resources. Because rural water companies may have less cash on hand than their urban cousins, they are expected to pass on more of the cost to their customers, who are often in a financial pinch themselves. Particularly in more rural states, some have likened the Arsenic Rule to an unfunded mandate. This resentment serves to fuel a parallel controversy between environmental

health advocates and critics of regulation over the legitimacy of the type of cost-benefit analysis exemplified by the Arsenic Rule. Although New Mexico is rural, it also has a technology base to help address and foster solutions.

New Mexico is fortunate to be home to two national laboratories—Los Alamos National Laboratories and Sandia National Laboratories. Sandia National Laboratory in Albuquerque is conducting research on arsenic removal technologies, producing demonstration projects and evaluating their cost effectiveness as part of the Arsenic Water Technology Partnership supported by a \$13 million congressional appropriation. This enterprise is especially focused on enabling water utilities serving small rural communities and Indian tribes to implement the most cost-effective solutions to their arsenic treatment needs. (C.J. Bruff/PR)

A NEW CHALLENGE TO STORMWATER REGULATION IN OREGON

Stormwater discharges continue to be a topic of much discussion with environmental groups and the Oregon Department of Environmental Quality (DEQ). A second petition for review was recently filed by the Pacific Environmental Advocacy Center on behalf of the Northwest Environmental Defense Center (NEDC), Columbia Riverkeeper (CR), and Mark Riskedahl as the executive director of the Northwest Environmental Defense Center, challenging DEQ's issuance of three general industrial stormwater permits to Diversified Marine, Inc., Zidell Marine Corporation, and Schnitzer Steel Industries, Inc. The challenge also questions the validity of the 1200Z permit and specifically addresses proposed revisions to the general storm water permit.

Background of 1200Z permit

The Clean Water Act (CWA) prohibits discharges of pollutants into "waters of the United States" without a permit. According to 40 CFR 122.26(b)(14)(i-ix,xi) and OAR 340-045-0033(5), various facilities discharging stormwater from a point source to surface water or from a conveyance system to surface water may be covered by the general permit 1200Z. In the State of Oregon, DEQ is authorized to issue national pollutant discharge effluent system (NPDES) permits

for facilities located within the state as long as the applicable statutory requirements are met. A "general permit" may be issued by the State that regulates dischargers engaged in the same business, such as industrial users. To be encompassed by the general permit, the user has to complete an application as well as a stormwater pollution control plan (SWPCP). The general permit is in lieu of and exempts the individual site user from applying for an individual permit.

The groups mentioned above previously challenged the adoption of the 1200Z general permit in 2003. As a result of that challenge, in a settlement agreement, DEQ agreed to release revisions for the 1200Z permit for public comment at agreed-upon deadlines. As part of the allegations, the aforementioned groups allege that DEQ did not comply with the public comment requirements. Consequently, in 2006, DEQ issued a proposed 1200Z permit for public review and comment. The petitioners allege that the applicable background documents were not provided for evaluation. However, changes were made to the 1200Z permit DEQ reissued in July 2007 including language specifying that discharges must not cause a violation of the water quality standards as established by OAR 340-041. The previous permit merely stated that the goal is for the permittee to comply with water

quality standards in OAR 340-041. NRDC and CRK still allege that these changes are insufficient.

Petition for Review

The primary allegations in the petition for review against DEQ are that (1) the record is inadequate and outdated; (2) scientific documents exist demonstrating that other pollutants than those managed under the 1200Z permit are being discharged in industrial stormwater; (3) DEQ did not perform an antidegradation analysis in developing the 1200Z permit; (4) DEQ has minimal involvement in overseeing implementation of the SWPCP that is developed and implemented by the facility user; (5) limited enforcement takes place if there is an exceedance of water quality standards and the permittee only needs to repeat the SWPCP review and Action Plan submittal; and, (6) in implementing its language that a facility ‘must not cause’ a violation of water quality standards, DEQ assumes that all facilities are complying water quality standards as long as a SWPCP is developed.

Three industrial users are specifically identified in the petition and allegations made against these entities. Petitioners provided information to DEQ that the three permittees, Diversified Marine, Zidell and Schnitzer Steel, exceeded benchmarks regardless of

the implemented SWPCP. Additionally, petitioners allege that these three facilities discharged industrial stormwater with other pollutants than copper, zinc, and lead. NEDC also has concerns regarding the adequacy of the SWPCP. Particularly, NEDC alleges that the best management practices (BMPs) detailed in the SWPCP are insufficient because technology-based effluent standards are not used, which prevents the ability to determine whether violations of the water quality standards are caused.

Conclusion and Implications

NEDC and CRK claim that the general permits issued to Diversified Marine, Zidell and Schnitzer Steel violate the Clean Water Act since technology-based effluent limits are not required or implemented. The claim is that DEQ failed to follow proper procedures when issuing the general permits in that proper data was not collected or relied upon in determining general permit coverage to the three facilities. The petitioners seek a declaration that the 1200Z permit is invalid. Since this petition was filed January 2008, and it will likely be consolidated with the existing Amended Petition for Review filed May 2007 challenging the validity of the 1200-COLS Permit, the outcome is pending and will be monitored by all industrial users subject to the 1200Z Permit. (R. Steen)

STATE POLLUTION HEARINGS BOARD LIMITS ‘ANTI-ENLARGEMENT’ RULE FOR WATER RIGHT CHANGES

Cornelius, et al. v. Dept. of Ecology and Washington State University,
PCHB No. 06-099, Order on Summary Judgment, Jan. 18, 2008.

The Washington Pollution Control Hearings Board (PCHB) has cut the so-called “anti-enlargement principle” down to size. In an appeal of changes to several groundwater rights held by Washington State University, the PCHB ruled that the prohibition against “enlargement” of a water right applies only to the combined total quantity of water withdrawn from an additional well and an original well authorized under a water right. The PCHB specifically overruled a 1989 decision suggesting a much broader scope for an “anti-enlargement” rule.

Background

Under Washington’s groundwater code, when the Department of Ecology authorizes an additional well for a groundwater right, the combined total quantity withdrawn from the original well and any additional well may not enlarge the right conveyed by the original groundwater permit or certificate. RCW 90.44.100(2). No similar prohibition is set forth in the Water Code for changes to the point of diversion of a surface water right. See RCW 90.03.380.

Despite the straightforward language of the groundwater code, a more amorphous notion of

“enlargement”—sometimes referred to as “enhancement”—has been occasionally asserted to preclude any change that would enable the easier exercise of a water right, or that would alter the “original intent” of the water right applicant. (See the July 2007 issue for a discussion of Ecology’s recent effort to articulate the basis for a more far-reaching concept of “enlargement” in a draft policy, since withdrawn.)

The *Cornelius* Appeal

Washington State University sought changes to six groundwater rights to enable water to be pumped from any of seven wells serving its main campus in Pullman, Washington. The university’s goal is to consolidate its pumping from a smaller number of modern wells, and to discontinue use of several older wells drilled between the 1930s and the 1960s (several of which were no longer reliable). Ecology approved the changes in points of withdrawal for the six water rights, and a group of appellants brought an appeal before the PCHB. The appellants raised numerous issues, including the claim that the changes in point of withdrawal impermissibly “enlarged” the university’s water rights. The “enlargement” issue was the subject of cross-motions for summary judgment.

The PCHB Decision

Washington State University and Ecology argued that the change authorization did not permit the University to withdraw any quantities of water over and above the quantities already authorized under its existing water rights. The appellants argued that “enlargement” would occur because the university would increase the quantity of its water withdrawals beyond the amounts presently available from existing wells which are older, unreliable, failing and/or decommissioned.

The PCHB described the appellants’ legal theory as follows:

Appellants seek a ruling from this Board that enlargement of a water right occurs, as a matter of law, whenever a change in the point of withdrawal enables a water right holder to exercise a greater quantity of an existing right than is being exercised at the original point of withdrawal. Appellants argue the approval of WSU’s

change applications will allow WSU to pump a greater amount of water than it is physically capable of pumping from its existing well locations and configurations, and that this change therefore amounts to an unlawful “enlargement” of WSU’s water rights.

Agreeing that “it is undisputed that the change/consolidation of WSU’s rights will enable WSU to pump more water than it currently withdraws,” the PCHB rejected the appellants’ theory:

We conclude, as a matter of law, that enlargement of a water right does not occur by virtue of a change in the point of withdrawal merely because it may result in a water right holder exercising more of a previously, and validly, authorized quantity of water. This is in accord with previous Board decisions.

The PCHB cited *Kile v. Ecology*, PCHB No. 96-131 (1997), in which the Board reviewed an amendment to a groundwater certificate to add a second well because the original well had limited production due to drought. In that case, the Board held that because the amendment authorized appropriation of no more water than the original certificate, “there is no enlargement of the right conveyed by the original certificate.”

The PCHB went on to address an earlier Board decision, *Jellison v. Ecology*, PCHB No. 88-124 (1989), and explicitly overruled it:

In so concluding, we specifically overrule this Board’s earlier conclusory statement in *Jellison v. Ecology*, PCHB No. 88-124 (1989) to the contrary (that granting a change in a surface water point of diversion that would allow a water right holder to exercise a greater amount of a previously authorized quantity of water would be to ‘enlarge’ the right).

The PCHB reserved for hearing a separate “enlargement” claim with respect to one groundwater permit, but granted summary judgment for respondents as to the appellants’ general “enlargement” theory.

Conclusion and Implications

In its summary judgment ruling in *Cornelius*, the PCHB squarely rejected an overly-broad concept of “enlargement” and precluded further reliance on the now-overruled language in *Jellison*. In so doing, the PCHB has brought additional clarity to the requirements for changing a water right in Washington. The rule against “enlargement” in RCW 90.44.100 prohibits an increase in the authorized quantity of water under a water right—and nothing more. Changes to

a water right to allow it to be fully exercised, or to enable its exercise in a more convenient, cost-effective, or efficient way, cannot henceforth be characterized as “enlargement” of the right. (S. Mack)

Editor’s Note: Sarah Mack represents Washington State University in the *Cornelius* appeal.

JUDICIAL DEVELOPMENTS

U.S. HIGH COURT FINDS PETITIONER'S SECTION 2501 CLAIM
SUBJECT TO JURISDICTIONAL, NON-WAIVABLE
SIX-YEAR FILING REQUIREMENT

John R. Sand & Gravel Company v. U.S., ___ U.S. ___, Case No. 06-1164 (U.S. Jan. 8, 2008).

Petitioner sued the U.S. alleging that the government had physically taken petitioner's leasehold, without paying just compensation, during the remediation of a hazardous waste site pursuant to CERCLA. The Court of Federal Claims dismissed a portion of petitioner's complaint, holding that it was barred by the six-year statute of limitation contained in 28 U.S.C. § 2501. After a bench trial, the Court of Federal Claims entered judgment for the United States. The Court of Appeals vacated and remanded with instructions to dismiss on grounds that the Court of Federal Claims lacked jurisdiction over petitioner's suit, as the claims were untimely under § 2501. On writ of *certiorari*, the U.S. Supreme Court held that § 2501's six-year filing requirement was non-waivable and jurisdictional. That reading is consistent with the principle that, in a suit against the U.S., the terms of the government's consent define the jurisdiction of the court. It is also consistent with decisions interpreting § 2501 since the mid-1800s, decisions whose rationales still apply, as the language of § 2501 has not meaningfully differed from prior versions.

Background

In May 2002, petitioner filed suit in Court of Federal Claims alleging that the U.S. had taken its leasehold without the payment of just compensation. Petitioner alleged that the EPA's remediation efforts amounted to a permanent physical taking. At issue was the EPA's construction of a landfill cap, the enclosure of an "area of institutional controls," and the installation of groundwater monitoring wells. The government moved for summary judgment, arguing that the suit was barred by § 2501 which provides that "every claim of which the U.S. Court of Federal Claims has jurisdiction shall be barred unless the petition thereon is filed within six years after such claims first accrues." The U.S. argued that petitioner's

claim was triggered when the EPA erected fences that precluded petitioner's site access during the winter of 1992-1993.

The Court of Federal Claims granted the U.S.' motion in part and denied it in part. The Court of Federal Claims held that petitioner's claim had accrued on the date on which his property was clearly and permanently taken, but that the government had not shown that the erection of fences in the winter of 1992-1993 had destroyed petitioner's right to possess or use its site. The Court of Federal Claims did hold that petitioner's claim with respect to areas covered by permanently installed monitoring wells was time barred.

Before trial, the Court of Federal Claims ordered the parties to file briefs regarding the accrual date of petitioner's claim. The Court of Federal Claims held a bench trial on liability, and entered judgment for the government. The Court of Federal Claims held that petitioner's claims accrued in May 1998, as the government suggested, and that petitioner's claims were timely. The Court of Federal Claims held that petitioner was not entitled to compensation as petitioner's contribution to the creation of hazardous waste makes the loss of petitioner's property during the remediation of that site a burden that petitioner, and not the public, should bear.

The Court of Appeals vacated and remanded with instructions to dismiss petitioner's complaint as untimely. Although the government did not argue at the Court of Appeals that petitioner's complaint was time barred, the issue was raised by an *amicus curiae*, and petitioner addressed the timeliness of the complaint in its reply brief. The Court of Appeals held that it was obligated to consider the timeliness of petitioner's complaint because § 2501 limits the jurisdiction of the Court of Federal Claims. The Court of Appeals explained that § 2501's six-year statute of limitation has been a jurisdictional requirement since 1883.

The U.S. Supreme Court's Decision

Since 1863, when Congress initially authorized the Court of Claims (later called the Court of Federal Claims) to enter money judgments against the U.S., the governing statute has always provided that a plaintiff's claim is "barred" if it is not asserted within six years after it accrues. The six-year filing requirement establishes a non-waivable jurisdictional limitation on the Court of Federal Claims's authority.

This case was decided against the backdrop of the *Kendall*, *Finn* and *Soriano* precedents. The *Kendall* case stated which judgments could not be entered against the U.S. to include those "declared barred if not asserted within time limited by the statute." The types of claims to be barred were "every claim—except those specifically enumerated—is forever barred unless asserted within six years from the time it is first asserted." [Citations omitted.]

The *Finn* Decision

The *Finn* decision addressed petitioner's claim that in not raising the timeliness of petitioner's claim on appeal, the government had waived this challenge. Citing to *Finn*, the U.S. Supreme Court affirmed the principle that while an individual could waive a defense, the government has not expressly or by implication conferred any authority upon any of its officers to waive the limitation imposed by statute upon suits against the U.S. in the Court of Claims. Therefore, although the government did not raise timeliness on appeal, the Federal Circuit properly addressed the issue *sua sponte*, and properly found petitioner's claim to have been untimely.

The *Soriano* Decision

Soriano is an example of the Court's reiteration of the principle initially set forth in *Kendall* and *Finn*, that the limitation period in 2501 does not seek to protect a defendant's case-specific interest in the timeliness, such that the limitation period would have to be pled as an affirmative defense, rather, the limitation in 2501 serves more absolute and jurisdictional goals such as the facilitation of the administration of claims such that timeliness issues are never waived.

The *Irwin* Decision

Petitioner argued that the Court had already

overturned this earlier precedent in the *Irwin* decision, and had been superseded by this Court's more recent decisions establishing a strong presumption that statutory time periods for filing suit against the government should in all respects be construed in the same way as analogous time periods governing disputes between private parties. The *Irwin* decision considered a statutory provision requiring a plaintiff in an employment discrimination suit against the federal government to file his complaint within 30 days of receipt of final notice of action taken by the Equal Employment Opportunity Commission. The Court accepted the 30-day filing requirement as having to be strictly construed, but also noted that the "same rebuttable presumption of equitable tolling applicable to suits against private defendants should also apply to suits against the United States." [Citation omitted.]

However, the U.S. Supreme Court held that *Irwin* merely announced a general, prospective rule, but did not overturn a long line of earlier cases, as the *Irwin* decision did not mention that it was overturning specific cases. Moreover, *Irwin* dealt with a different limitations statute, and did not address the seminal issue in this case—the application of statutory time limits in suits against the government, and whether such are jurisdictional. The Court's decision in *Irwin* adopted a general rule to govern the applicability of equitable tolling in suits against the Government, a rebuttable presumption of equitable tolling. However, specific statutory language to the contrary, as stated in § 2501, would express Congress' intent to the contrary, thereby defeating any rebuttal argument.

Taking petitioner's argument to its logical extent, petitioner could only succeed by convincing the Court that it has overturned, or should overturn, its earlier precedent. The Court did not agree that *Irwin* overturned the prior precedent, and applying the principles of *stare decisis*, rejected petitioner's argument. At most, all petitioner's argument showed was an anomaly between the old cases and *Irwin*, which is insufficient to overturn prior precedent as, at worst, it merely points to different interpretations of similarly worded statutes, which does not result in "unworkable" law.

Conclusion and Implications

The dissent affirmed the importance of *stare decisis*, but denied that it reflected an inflexible doctrine in

our law. While not calling for the direct overruling of the *Kendall*, *Finn* and *Soriano* cases, the dissent suggested that as these decisions were irreconcilable with the reasoning and result in *Irwin*, the Court should regard this case as an opportune time to revisit those precedents. The issue of whether statutes of limita-

tions are jurisdictional or not are an area of confusion on the Court of Appeals level. This confusion, the dissenting court argues, could have been addressed by the Court's dealing with the inconsistency between the *Kendall* line and *Irwin*. Confusion, unfortunately, as to which statutes are to be deemed "jurisdictional" continues. (T. Montoya)

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