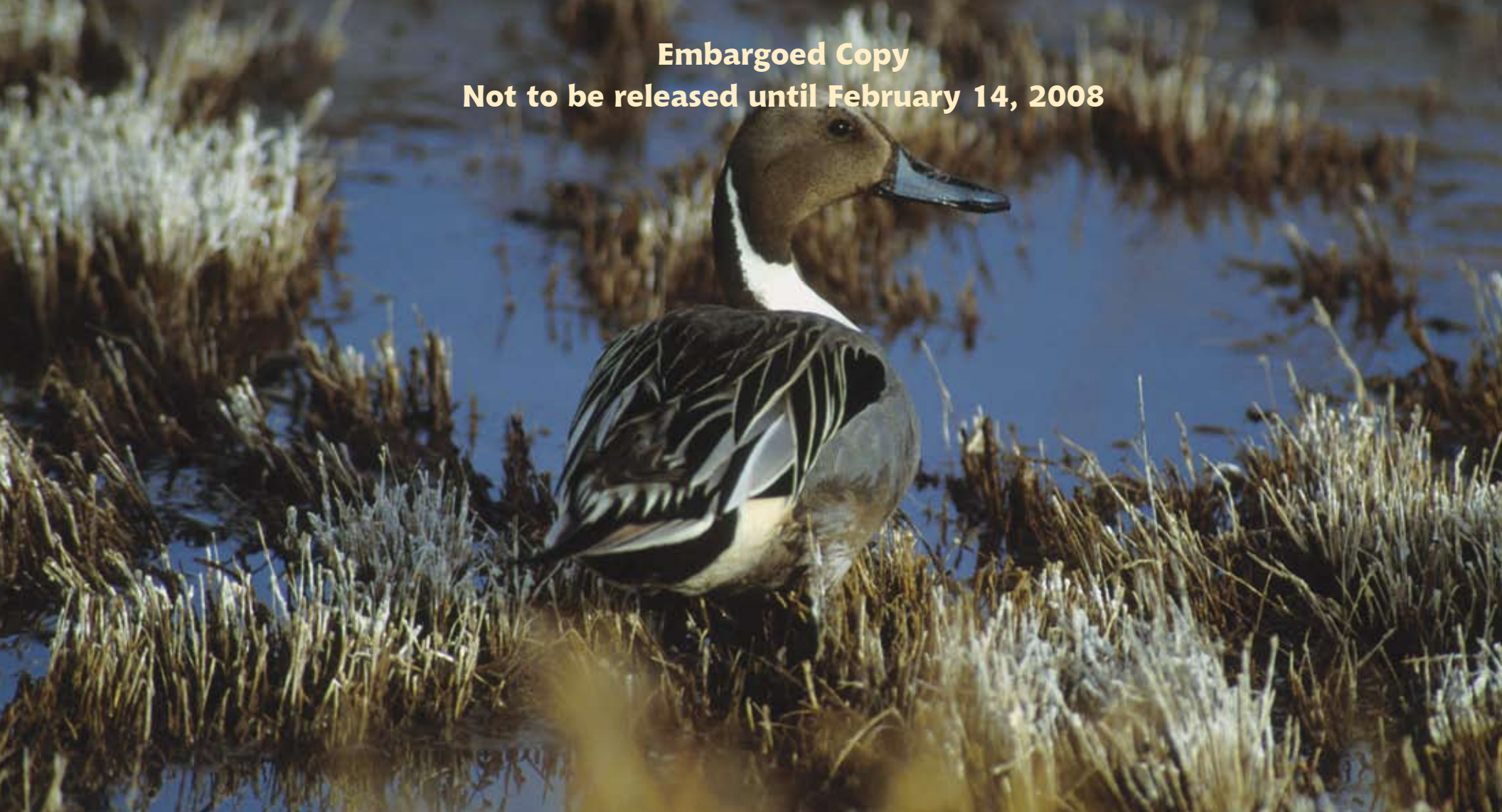
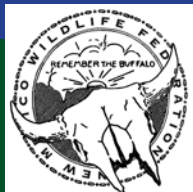


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January 2008



Imperiled Treasures:

How Recent Supreme Court Decisions and Agency Actions Have Endangered Southwest Waters and Wildlife

January 2008

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Executive Summary

Water is precious, and nowhere more so than in the arid Southwest. The Southwest hosts some of the nation's rarest and most fabled waters. While rivers like the Rio Grande and Colorado are legendary, equally important to the people and the wildlife of the region are the unique, often intermittent waters that make up the vast quantity of the overall water resources in the area. Waters such as intermittent and ephemeral streams, playa lakes, terminal (or closed) basins, and arroyos teem with life. They are rare and necessary habitat components for game and non-game species alike, providing breeding, nesting and migration areas for waterfowl, serving as habitat for deer, elk, and pronghorn antelope, supporting trout and other fisheries, and serving as critical habitats for endangered or threatened species like the least Bell's vireo and arroyo toad. They are also drinking and irrigation resources for the people of the region, and they recharge priceless aquifers upon which the Southwest depends.

For thirty years the federal Clean Water Act broadly protected waters in the nation and across the Southwest. It sought, with a great deal of success, to safeguard important waters from pollution and destruction. Historically, it applied to waters from the Rio Grande to playa lakes. However, now the protections of the Act are being whittled away. Two recent U.S. Supreme Court decisions, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (2001)* and *Rapanos v. United States (2006)*, have placed protections of many of the nation's waters, such as intermittent and ephemeral streams and so-called "isolated" wetlands, in doubt. While these Supreme Court decisions have not overturned any of the current regulations that broadly protect waters, they have created significant legal confusion over the scope of the Act's protections.

In response to these decisions, federal agencies have issued guidance that has directly affected waters vital to the Southwest. In 2003, agency guidance effectively removed protections for so-called geographically "isolated" waters like playa lakes. In response to *Rapanos*, guidance issued in 2007 makes it nearly impossible to protect many intermittent and ephemeral streams, along with wetlands that neighbor such streams.

Ironically, because water there is scarce, the Southwest has a disproportionate number of waters that are at-risk of losing federal protection because of agency guidance. In all Southwest states, the percentage of streams that are at risk because they do not flow year round is much higher than the national average, which is already an alarming 59 percent of all stream miles. For instance, in Arizona approximately 96 percent of streams are at risk of losing federal protections. Similarly, many of the region's most important wetlands are either geographically "isolated" or associated with streams that may no longer be protected. In conjunction with state laws that often provide little or no protection for these at-risk resources, a prolonged drought affecting much of the region, and climate change impacts add unprecedented stress to waters in the area, making the threat to waters in the Southwest more severe than it has been in a generation.

This report details this threat. It examines the importance of at-risk waters to wildlife and people in the Southwest – both the ecological significance and the immense economic contribution these waters provide in their support of billions of dollars of wildlife-related activity in the region. It further discusses how the agencies' guidance puts so many waters in the area in jeopardy and how this guidance is being applied by regulatory officials. The future of water resources in the Southwest and all that depends on them is at stake.

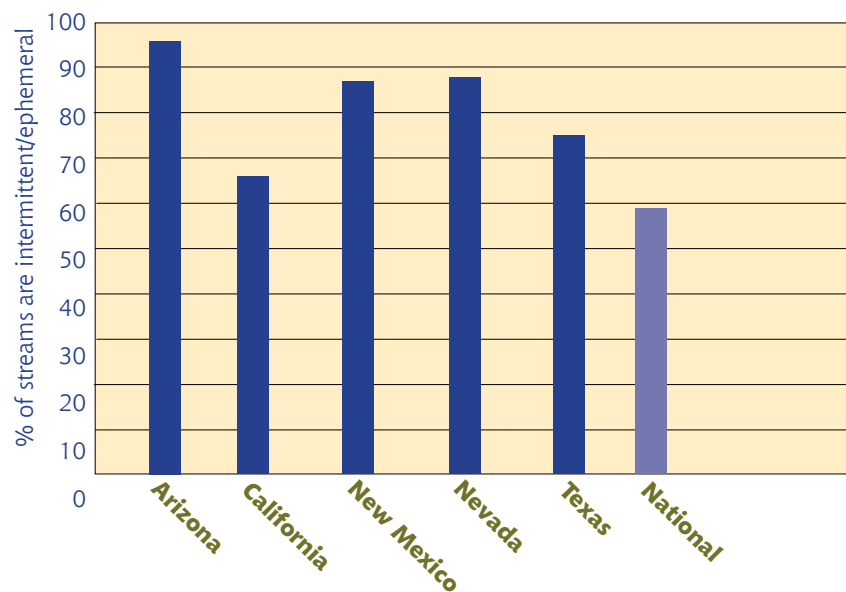
The future of water resources in the Southwest and all that depends on them is at stake.

Introduction

The Southwestern United States is known for its arid landscape – made ever drier in recent years due to an extended drought in most parts of the region. Yet, scattered across the dry expanses of desert, scrub, grasslands and mountains of the Southwest are wetlands, streams, lakes, ponds, desert springs and rivers that teem with life and serve as the lifeblood of human and wildlife populations of the region. These critical water resources recharge ground-water supplies for a rapidly-growing human population and a highly irrigation-dependent agricultural industry as well as supporting a thriving wildlife-related recreational industry. They will become even more important as climate change puts additional stress on the fragile ecosystems. Climate change threatens to increase temperature and change precipitation patterns. The result will be hotter, drier summers and rainier winters, where less snowfall will likely mean that snow melt – an important source of water in many areas – will also be less.

Yet, instead of carefully guarding these valuable resources on which so much of life in the Southwest depends, two directives issued by federal agencies in January 2003 and June 2007 effectively opened many to federally unregulated pollution and destruction. A steady march of destruction and degradation has already begun to chip away at the region's scarce water resources. At stake is the future of both the human and wildlife populations of the Southwest. This report attempts to assess the growing threat, especially as it relates to wildlife and wildlife-dependent recreation in the region.

Comparison of Intermittent/Ephemeral Streams Nationally to SW States



Brian Slobbe

Background

Agency Directives Threatening the Southwest's Waters

In the past four years, the U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA) have issued two policy directives, both in response to fractured and confusing U.S. Supreme Court decisions, that have put countless Southwest waters at risk of losing federal Clean Water Act (CWA) protections.

The 2003 Guidance

In January 2003, the Corps and EPA released a policy directive to their field staff instructing them to begin withholding CWA protections from an estimated 20 million acres of wetlands, as well as many streams, ponds and other waters. The 2003 guidance interpreted the 2001 U.S. Supreme Court's decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)*. Although the *SWANCC* decision created only a minor loophole in Clean Water Act protections – prohibiting the Act's protection of non-navigable, intrastate, isolated waters based solely on their use by migratory birds – the 2003 policy directive went much further. The directive required field staff to gain headquarters' approval prior to extending the Act's safeguards to any water that might possibly be considered "isolated" – a "phone home" policy – even allowing some streams to fall into this category. Largely ignored were three factors included in Clean Water Act rules that continue to allow protection of even "isolated" waters:

- use of the water for interstate or foreign recreation;
- use of water for extraction of fish or shellfish sold across state or national boundaries;
- extraction of water for industrial use.

Rapanos and the 2007 Guidance

In June 2006, the Supreme Court further confused the law regarding the scope of waters protected under the Clean Water Act in two consolidated cases, *Rapanos v. United States* and *Carabell v. United States* (collectively *Rapanos*). The *Rapanos* case concerned wetlands that neighbored non-navigable tributaries of larger navigable waters. In *Rapanos*, the Court failed to come to any majority conclusion, splitting three ways. The only agreement was that five Justices agreed to send the case back to the lower court for further review. Of these five opinions, Justice Scalia wrote a four-member opinion that found that only relatively permanent waters and wetlands that have a continuous surface connection to such waters are protected. Justice Kennedy, in concurrence, disagreed with this standard, instead finding that certain wetlands next to non-navigable tributaries must bear a "significant nexus" to downstream navigable waters to be protected. Justice Kennedy said such a finding would entail a case-by-case determination that the wetland in question, either individually or in combination with similarly situated wetlands in the region, substantially affected the health of the downstream water. Justice Stevens wrote for a four member dissent that would have upheld protections under the Clean Water Act for the waters at issue.

In June 2006 the Supreme Court further confused the law regarding the scope of waters protected under the Clean Water Act.

A year later, in June 2007, the Corps and EPA formally responded to the *Rapanos* decision with a second policy directive. Like the 2003 guidance, these agencies used the *Rapanos* decision as a basis to unjustifiably remove protections under the Clean Water Act for many important waters. The new guidance mischaracterizes *Rapanos* and reads the decision in a limiting manner that is not protective of Southwestern waters. It ignores the regional approach outlined by Justice Kennedy in the decision and affects tributaries as well as adjacent wetlands.

The 2007 guidance looks largely to Justice Scalia's "relatively permanent" test and does not allow field officials to meaningfully consider the important cumulative effects that wetlands and streams have on aquatic systems. Since the 2007 guidance focuses so heavily on the permanency of water in a stream or wetlands, it puts intermittent and ephemeral waters at greatest risk of losing protections. The guidance goes as far as stating explicitly that some intermittent and ephemeral waters are not worthy of protection. It generally concludes that gullies, small washes, and swales will no longer receive protection under the Clean Water Act, though without explanation it states that some such Southwest waters may at times receive protection. Yet, it leaves the agencies few tools to, in practice, protect such Southwest waters.

Finally, while it does not include a "phone home" policy, the 2007 guidance leaves the harmful 2003 policy directive in place for so-called "isolated" waters like playa lakes. The overall result is that thousands of so-called isolated waters, headwater streams and wetlands will not be protected under the Clean Water Act.

The Agencies' Guidance and the Southwest

The effects of these policy directives are being felt nationwide. However, a combination of factors greatly exacerbates the potential for damage in the Southwest, including: 1) the scarcity of water resources found there; 2) the large percentage of waters in the region that are or will be ruled outside the scope of the Clean Water Act by the Corps as a result of agency guidance; 3) some of the weakest state-level water protections in the nation; 4) prolonged drought affecting much of the region; and 5) the impacts of climate change, which will increase stress on Southwest ecosystems, making water protection all the more vital.

Due to the geography of the Southwest, many of the waters there might be considered "isolated" or lacking a "significant nexus." Included are entire watersheds that flow into what are called "terminal basins" – watershed areas where water leaves the basin only through groundwater or evaporation. It is estimated that about 20 percent of the landscape of New Mexico and two-thirds of Nevada are in terminal basins. Playa lakes, a common wetland type in the eastern part of the region, are specifically labeled by the 2003 guidance as "isolated" waters. Additionally, desert springs, ponds and arroyos are frequently being categorized as "isolated" by federal regulators.

The Southwest is also home to an enormous number of ephemeral or intermittent waters. It is estimated that around 90 percent of stream miles in New Mexico and about 96 percent of stream miles in Arizona are intermittent or ephemeral. The 2007 guidance makes it nearly impossible to protect many of these waters under the Clean Water Act.

The significant wildlife-related recreational uses of these at-risk waters along with their important ecological value should be enough to ensure their protection under current Clean Water Act rules, especially when these impacts are viewed cumulatively. But the two directives restrict regulatory officials' ability to look at many important considerations that could be used to protect waters. Corps officials also frequently make determinations regarding the status of a particular waterbody without conducting a site visit and rarely look beyond maps and consultant reports for reasons to protect the waterbody. This serves to make protection of many waters less likely.

It is estimated that around 90 percent of stream miles in New Mexico and about 96 percent of stream miles in Arizona are intermittent or ephemeral. The 2007 guidance makes it nearly impossible to protect many of these waters under the Clean Water Act.

While some administration officials and opponents of comprehensive protections under the Clean Water Act have claimed that waters left unprotected under federal law are best left to state-level protections, most states currently lack the ability or demonstrated willingness to pick up this responsibility. Additionally, as has been the case in New Mexico, many opponents of the Clean Water Act have lobbied against such state protections.

The Southwestern states are among the least able to protect their waters. Texas, New Mexico and Arizona currently have no state-level water protection programs that can effectively prevent pollution, degradation or outright destruction of waters no longer protected under the Clean Water Act. Nevada and California have programs to regulate wastewater pollution of at-risk waters, but have serious gaps in their programs that make it difficult to effectively protect so-called “isolated” waters and ephemeral and intermittent waters from dredge and fill activities.

Assessing the Impact

Determining the scope of impact on America’s waters due to these two Clean Water Act policy directives has been extremely difficult. Record keeping varies and the Corps districts have sometimes been reluctant to respond to Freedom of Information Act (FOIA) requests. For instance, prior to *Rapanos*, the Galveston, Texas District of the Corps insisted that it did not have any documentation of decisions not to regulate wetlands or other waters, but then proceeded to post more than a dozen such decisions to their website. The 2007 guidance has detailed forms that now must be filled out by officials making jurisdictional determinations and should be posted on the website for each Corps district (see Appendix for a list of links to these postings). However, few of these have yet been posted, indicating a serious regulatory logjam is occurring.

Thus, at the current time, Corps districts appear to be tied in knots trying to make sense of *Rapanos* and the confusing 2007 guidance. Most Corps districts now post some information about determinations of whether waters are protected by the CWA on their websites. Since the 2007 guidance was issued in June there are very few determinations posted, according to a website search done through November of 2007. Those districts that are using the new form associated with the 2007 guidance are generally making determinations only for traditionally navigable waters, relatively permanent waters or wetlands directly abutting one of these. There are a handful of recent determinations for waters that are intermittent or ephemeral based on the “significant nexus” analysis, but it appears that determinations for such waters are being issued very slowly. Also, many of these determinations, at least as of fall 2007, still appear to be issued using forms that preceded the 2007 guidance.

Prior to *Rapanos*, the postings usually lacked sufficient information to determine the scope of impact and the appropriateness of the decision not to extend protections. While the new form is longer and provides additional opportunities to expand reasoning for the determination, a review of posted new forms revealed that the form is rarely filled out completely and in some cases provides even less information than previous forms. Even the information received through FOIA requests lacks much reasoning for Corps’ determinations.

Further, the lack of site visits by Corps officials has resulted in troubling statements such as this from the Albuquerque District: “It appears that no jurisdictional waters of the United States are located within the project site. However, a site visit was not made and waters of the United States may be located on the site.” Another file contains detailed data collected by a consulting firm and determines that the project site contains several jurisdictional wetlands totaling 3.3 acres. The Corps letter says they evaluated the data and assert jurisdiction over only three of the wetlands totaling 2.66 acres, with no reasoning to support the disparity.

Texas, New Mexico and Arizona currently have no state-level water protection programs that can effectively prevent pollution, degradation or outright destruction of waters no longer protected under the Clean Water Act.

Southwest Regional Summary

While water in arid states may cover a very small percentage of the total land base, it is this very fact that makes it even more crucial to protect such areas. Wetlands, for instance, provide migration, wintering and/or nesting habitat for all of the Central and Pacific Flyway duck species, including mallard, greater and lesser scaup, ruddy duck, northern shoveler, northern pintail, American wigeon, blue-winged teal, green-winged teal, cinnamon teal, redhead, canvasback, ring-necked duck, bufflehead and common goldeneye. Other waterfowl and wetland-associated gamebirds that use these habitats include Canada, snow, white-fronted and Ross's geese, common snipe and sandhill crane.

"Isolated" springs, intermittent, and headwater streams can be even more important for resident game species such as mountain, scale, California and Gambel's quail; chukar partridge; blue and sage grouse; mourning and white winged-dove; coyote; Audubon's desert cottontail; black-tailed jackrabbit; pronghorn antelope; mule deer; elk; black bear; javelina; desert and California big horn sheep; and ring-necked pheasant. Cats that hunt these areas and depend on them for water include ocelots, jaguar and mountain lion. Many of these waters, particularly headwater streams, are also vital to productive trout fisheries (e.g., rainbow, brown, brook, cutthroat). Others support warm water fisheries for bass, sunfish, catfish and perch.

A vast array of neotropical migratory songbirds also utilize wetland and riparian habitats of the Southwest as wintering, migratory and breeding habitats. The region has become tremendously popular among birders, at a time when this recreational pursuit has exploded in popularity and in dollars expended to pursue it.

Hunting, fishing and wildlife watching are important activities in the Southwest, with significant associated economic benefits at the regional and local levels. In 2006, there were almost 20 million people who hunted, fished or watched wildlife in the states of New Mexico, Arizona, Nevada, Texas and California, almost 23 percent of the total across the United States. These people expended over \$19 billion (over 16 percent of the national total) to support the regional and local economies in which these activities took place. In addition, hunters and anglers provide millions of dollars to the region's state fish and wildlife agencies, which depend on license sales for the bulk of their budgets. Yet, beyond the considerable potential economic impacts at stake with the loss of aquatic habitats used by fish and wildlife species is the very significant potential cultural impact to a region in which hunting, fishing and wildlife watching is deeply ingrained in the local ethos. The value of being able to pass on the passion for such pursuits to one's children and grandchildren is considered priceless by many of the people who live in and visit the region.

"Isolated" Wetlands in the Region and Their Ecological Value

Water and wetlands are scarce in the Southwest, and water's presence at the surface of the land, in whatever form and at whatever time of the year, makes these areas central elements of critically important wildlife habitats. In New Mexico, for example, over 55 percent of all vertebrate species rely entirely or in part on wetland habitats. In the arid Southwest as a whole, 70 percent of the threatened and endangered species are entirely dependent on riparian habitats. This high percentage reflects the disproportionate impact of loss of wetlands and other aquatic habitats in the region.



Wetland adjacent to non-navigable small ephemeral stream. Cedro Creek near Tiejeras, New Mexico.

NM Env. Dept.

A recent assessment of all 50 states with respect to various characteristics of their biological diversity and associated risks revealed that California, Texas, Arizona and New Mexico ranked number one through four, respectively, for their diversity of species. However, California and Nevada ranked number two and number three in the level of rarity and risk to species in their states, and California and Texas ranked number three and number four in the number of species already lost to extinction. These rankings for states of the Southwest indicate the potentially significant consequences to wildlife of continued wetland loss in the region.

As a result of both the aridity and geography of the Southwest, most of the wetlands of the region are considered “geographically isolated.” The region contains seven different types of geographically isolated wetlands, six of which are depressional, and one seepage-fed and located on slopes. These wetland types include a diverse range of systems including the bedrock/flatrock systems of the Edwards Plateau, playa lakes, interdunal swales, and fan palm oases.

Two of the most important categories of geographically isolated wetlands in the region are the playa lakes, and desert springs and their associated wetlands. Desert springs are discharge points for water that can be 8,000-12,000 years old. The relative isolation of these desert oases, some of which have been isolated for 12,000-20,000 years, makes them particularly important as habitats for unique, endemic desert fishes, invertebrates and plants. However, despite outward appearances, these wetlands can provide stark examples of the fact that few geographically isolated wetlands are truly isolated from other waters. For example, pumping of groundwater for irrigation and development purposes in California and Nevada can cause hydrologically connected but geographically isolated wetlands to run dry and species to disappear, as was the case with a species of poolfish.

The most abundant wetlands in the region are the nearly circular, geographically isolated shallow basins called playa lakes. The Southwest has the world’s highest density of playas, with Texas having almost 20,000 and New Mexico with roughly 4,000. Playas are considered to be the only remaining native habitats in the Southern High Plains. However, many have already been lost or severely degraded and nearly all are now without Clean Water Act protection. These wetland habitats are tremendously important to waterfowl and other migratory waterbirds in the region. For example, the playas of Texas provide habitat for more than 90 percent of the region’s wintering waterfowl, which can include up to 3 million ducks and geese. More than 90 percent of the mid-continent population of sandhill cranes also uses these habitats. Although the frequency with which playa lakes dry out precludes them from being fish habitat, that fact historically has made them particularly valuable as habitat for a diverse range of amphibians that, especially in their juvenile stages, would otherwise serve as prey for fish.

Many playas, like desert wetlands, are hydrologically connected to other waters and therefore play important functions in the region’s hydrology, and in contributing to maintaining the quality and quantity of drinking and irrigation water. Wetlands often play an important role in recharging local and regional groundwater supplies. Many playa wetlands are focal points for groundwater recharge, for example, and are therefore hydrologically connected to the enormous Ogallala aquifer, shared by eight states. The ability of playas to continue to serve this important function must be maintained in light of the projection that the Ogallala aquifer that underlies much of the southern Great Plains could stop yielding significant amounts of water by 2050, by which time water use in Texas alone is projected to increase by 27 percent.

All types of wetlands have the capability to improve water quality by trapping, precipitating, transforming, recycling and/or exporting many of its chemical and waterborne constituents. Wetlands remove excess nutrients, e.g., phosphorus and nitrogen, and isolated wetlands also serve as chemical and nutrient sinks, trapping and holding these compounds. This wetlands function is evidenced by the better quality water that has been noted in playas compared to the quality of water found in storm runoff entering the wetland.



NM Env. Dept.

Laguna Madre playa near the Maxwell National Wildlife Refuge in New Mexico has been modified for irrigation storage.

The direct linkages between wetlands such as playa lakes and the underlying aquifers makes groundwater vulnerable to contamination by pollutants that can be introduced into wetlands left unprotected by the Clean Water Act. Wetlands of the region therefore help maintain or improve the quality of both surface and groundwater. Increased levels of urban runoff have increased water collection in some playas and infiltration has also increased, thereby increasing the contribution of playas to Ogallala aquifer recharge. Thus, the protection of playas and other Southwest wetlands is an important component of protecting the quality of drinking water and irrigation water in the region.

Intermittent and Ephemeral Streams in the Region and Their Ecological Value

Small springs and streams can have tremendous biological value, even when intermittent, unconnected to waters outside the state (i.e., “terminal”), or ephemeral. In the Southwest, many streams and even mainstem rivers are at least spatially intermittent, drying up in all or portions of their run during dry seasons. Yet, despite not using them at certain times of the year, trout and other fishes, amphibians, and many aquatic invertebrates in the Southwest are adapted to persisting in these environments, by either moving to seek deeper waters and recolonizing previously dry reaches when available, or becoming dormant until flow levels increase. These seasonally-dry streams not only provide habitat that simply adds more space in which these organisms can live, but they provide specific and unique habitat some species require during certain life stages. For instance, small and even intermittent streams provide important spawning and rearing habitat for trout, with requisite lower flows for early life stages and protection from competitors or predators that cannot spawn in or use these smaller habitats. Furthermore, because of their complex nature, small headwater streams provide a diversity of habitat and are important sources of biodiversity. Species such as salamanders, minnows and aquatic insects often have very small geographic ranges, and in many cases substantial proportions of their ranges are found only in first or second order streams.* Additionally, many waters in the Southwest are considered terminal, but because they are the majority of waters in some regions they encompass large amounts of habitat for many species. In Nevada, for instance, terminal waters comprise the entire range for important federally-listed species such as Lahontan cutthroat trout.

Aside from providing habitat directly, small streams – including those that are intermittent or ephemeral – provide an essential interface between land and water and upstream and downstream habitats. Many organisms depend on allochthonous sources of food, or food which is deposited in water from terrestrial habitats, and the transfer of these food types is much greater in these small streams characterized by a higher land-water interface. These streams also export adult emerging aquatic insects to terrestrial systems, providing an important food source for higher levels in the food chain. According to a study by Baxter and colleagues (2005), emerging adult stream insects can provide 25-100 percent of the energy to organisms such as birds, bats, salamanders, beetles, spiders, and these organisms support yet many others of recreational and ecological value higher in the food chain. Desert streams can be particularly productive in this sense because warmer water temperatures facilitate rapid insect growth and a greater flux of food to terrestrial organisms. In fact, as the authors of the Baxter study put it, in streams of arid ecosystems “the export of emergent insects may be essential to fuel terrestrial predators.” Furthermore, small streams transfer invertebrates and organic material to downstream reaches that are critical for the maintenance of species in these habitats. In one case, fishless headwater streams were estimated to export enough drifting insects and other invertebrates to support approximately half of the fish production in downstream waters.

** First order streams are streams that do not have other streams flowing into them. When two first order streams converge, they create a second order stream. Second order streams converge to create third order streams and so on.*



Brian Slobe

Many playa lakes, like the one above in Texas, face threats from development and agricultural activities.

Texas

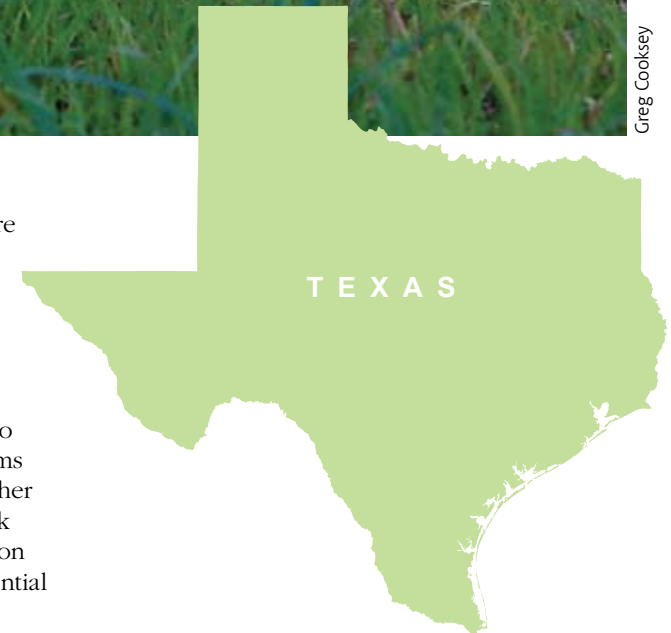


Greg Cooksey

The Texas waters most endangered by the Corps' refusal to extend Clean Water Act protections are freshwater wetlands on the coastal plain, playa lakes, and headwater streams. Numerous species of fish and wildlife depend on these waters and the economic activity generated by hunting, fishing and wildlife observation activities in these areas is substantial.

State-level Protections

Texas regulatory programs are closely tied to complementary federal programs. Therefore, waters no longer protected under the Clean Water Act are not likely to be protected under state regulatory programs either. The state has no independent wetlands regulatory program. Its current permitting program for other discharges is closely focused on complying with federal permitting requirements. Therefore, any rollback of Clean Water Act jurisdiction over wetlands and other waters will also effectively remove state regulation of activities in these waters, leaving them vulnerable to dredging, filling and potentially subject to residential and industrial pollution and oil spills.



Texas Coastal Plain Region

Most wetlands in Texas are scattered along the coastal plain. There are about 3.3 million acres of non-estuarine wetlands and 0.7 million acres of estuarine wetlands in this region. However, between 1956 and 1989, approximately 54 percent of freshwater marshes in coastal areas and 8 percent of estuarine marshlands were lost in Texas. Overall, Texas had lost 52 percent of its original wetlands by the mid-1980s.

From interviews conducted in 2004, as well as a review of Corps jurisdiction determinations, it appears that the Galveston District of the Army Corps of Engineers is refusing to extend Clean Water Act protections to any of the non-estuarine wetlands on the coastal plain. While prior to *Rapanos* most Corps offices were extending protection to wetlands in the 100-year floodplain of rivers, the Galveston District of the Corps was excluding such floodplain wetlands on the Texas coastal plain, even those connected periodically by above-normal tides and Gulf storms. The 2007 guidance makes it harder to protect these wetlands. As of November 2007, there had been no postings since the 2007 guidance. There is no indication that anything has changed to provide protection for these waters.

The Galveston District considers almost all freshwater wetlands in the coastal area to be non-jurisdictional, including those on narrow barrier islands surrounded by salt water (e.g., Mustang Island and Padre Island). These islands are located near Corpus Christi and are experiencing very heavy developmental pressure. Other important habitat areas under heavy developmental pressure that have significant numbers of so-called “isolated” freshwater wetlands include the Live Oak and Lamar Peninsulas. These areas support important live oak/red bay vegetative communities that provide significant habitat for migrating neotropical bird species.

The loss of these wetlands and their associated plant communities, especially on the barrier islands, is an increasing concern. Over time, the cumulative loss of these freshwater wetlands could lead to serious impacts to North America’s redhead duck population inasmuch as Laguna Madre is a primary wintering area for this species. In addition, recent studies have shown that loss of freshwater and feeding habitats is causing pintails wintering in this region to be in much poorer condition than those wintering elsewhere. This is having a negative impact on their ability to migrate north in the spring and most likely on their capacity to reproduce. Wintering grassland birds would also be adversely affected by accelerated wetlands loss. Increased urban development of these wetlands will only exacerbate increasing impacts due to urban water development projects, including groundwater pumping and desalination projects for barrier islands and near-coast groundwater.

It is unknown just how much damage has occurred along the Texas coastal plain. Since *SWANCC*, investigations conducted for this report have shown that the Galveston District has made far more non-jurisdictional determinations than other Corps districts in the Southwest. The size of wetlands in many of the Galveston District’s no-jurisdiction determinations is listed as “unknown,” further raising concerns over the amount of loss of critical wetlands. Given the substantial number of waters in the region that are at risk, it is anticipated that the impacts in the coastal region could be quite substantial.

Brian Slobe



Without Clean Water Act protections, playas, like this one in Texas, can be degraded and destroyed with no safeguards.

Importance to Wildlife and Wildlife-related Recreation

Wetlands on the Texas coastal plain are some of the most important wintering habitats for ducks, geese and other waterbirds in the Central Flyway. Hunting and guiding hunts for these birds is big business in this region. Many duck species, including northern pintail, gadwall, American wigeon, northern shoveler, redhead, greater and lesser scaup, mallard, mottled duck, ruddy duck, bufflehead, ring-necked duck and cinnamon teal, provide significant hunting opportunities in the region. In the early fall, early migrating teal provide special opportunities, and important economic incentives, for wetland management among landowners and hunters. Canada, greater white-fronted, Ross' and snow geese, as well as sandhill cranes and other migratory bird species are also hunted. The statewide annual economic impact of duck hunting in Texas is approximately \$100 million, about \$55 million of which occurs within the coastal marshes and prairie wetlands of the Texas Coastal Plain.

In addition to waterfowl, hunters spend a lot of time in the field hunting deer, feral pigs, wild turkey and raccoons, all of which are often associated with wetland habitats. The coastal plains wetlands are also very popular for birding, a major contributor to local economies due to the guides, restaurants and motels that birders support. Thousands of birders are attracted to the Texas Coastal Plain to view songbirds (e.g., warblers), woodpeckers, flycatchers, vireos, wood storks, herons and egrets.

Many coastal plain wetlands are forested. However, across Texas, an estimated 63 percent of forested wetlands have been lost. These areas provide habitat for hundreds of species and millions of individual birds. Neotropical migratory birds typically fly across the Gulf of Mexico at night. Therefore, these wetlands are their jumping off point in the fall and their first stop upon their return in the spring. One study indicated that 259 million songbirds used the forested wetlands in a 100 by 200-mile area on the Texas coast. There are competitions each spring in which people count as many as 300 species in three days.

Texas Panhandle Playa Lakes

To quantify the extent of playa lakes on the Texas panhandle, Texas Tech University at Lubbock undertook very detailed studies. They accomplished these highly accurate surveys using digitized soil maps and focusing on certain wetland soil types (e.g., Randal clays). They calculated that there are almost 20,000 playas in Texas comprising 200,000 acres. These playas are considered "isolated" by the Corps, despite the fact that playas have been shown to be connected to and provide recharge to the Ogallala aquifer that underlies and is shared by residents of Texas, New Mexico, and six other states.

According to determinations posted by the Tulsa and Fort Worth Districts, which each have jurisdiction in the Texas panhandle, at least 230 acres of playa lakes have been determined to be non-jurisdictional since 2004. It is likely that more and more landowners are learning that playa lakes are no longer being protected by the Corps, so the actual acreage of playa lakes that has been impacted is likely much greater. There appears to be no evidence that any playas in Texas are being protected under the Clean Water Act.



Brian Slobe

Playa lake, panhandle of Texas.

Importance to Wildlife and Wildlife-related Recreation

Mallard, pintail, wigeon and green-winged teal commonly use playa lakes for migration and wintering. The Texas Parks and Wildlife Department conducts surveys every January. Although this survey is simply an index (and therefore an undercount of the actual number), it has been estimated that up to three million ducks may winter on the Texas playas. In addition, approximately 400,000 to 500,000 sandhill cranes and an equal number of geese may winter there. It is estimated that a total of between 12 and 15 million birds use the playa lake region of Texas and New Mexico. Pronghorn antelope, along with many other game species, also depend on these wetlands as part of their range.

Headwater Streams

About 75 percent of stream miles in Texas are intermittent or ephemeral. These waters are extremely important to the health of downstream waters and have been placed at risk of losing protections as a result of the 2007 guidance. Given the Galveston District's poor record in light of the 2003 guidance, it can unfortunately be surmised that it will be similarly dismissive of protecting most of these at-risk stream miles in Texas.

Economics of Wildlife-Related Recreation in Texas

According to the U.S. Fish and Wildlife Service's "2006 Survey of Fishing, Hunting and Wildlife-Associated Recreation," 32 percent of Texas residents older than 16 participated in wildlife-associated recreation, with recreational expenditures in the state (including those made by out-of-state visitors) reaching more than \$8.4 billion in 2006. Birders spend an average of \$90 million every year in the Rio Grande Valley of southern Texas. Overall, more than 7.8 million residents and non-residents fished, hunted, or watched wildlife in Texas in 2006. Texas had more resident hunters than any other state in the 2006 survey, ranked number two for anglers, and ranked number three for wildlife watchers. A significant portion of this recreational and economic activity is dependent upon wetlands.

Texas had more resident hunters than any other state in the 2006 survey, ranked number two for anglers, and ranked number three for wildlife watchers.

New Mexico



Rusty Dodson

Waters at Risk

The National Wildlife Federation requested Freedom of Information Act documents from the Albuquerque District of the Army Corps of Engineers concerning jurisdictional determinations in the wake of the 2001 *SWANCC* decision. Similar documents were also requested and received following the 2007 guidance. From a review of the District's files, it was revealed that the Albuquerque District claims no jurisdiction over waters within what they consider "isolated" basins. Basins in which the Corps has already made non-jurisdictional calls include New Mexico's Sacramento River Basin (the Sacramento River and its tributaries), Ysletano Canyon (Tularosa Creek and its tributaries), the Mimbres River Basin (the Mimbres River and its tributaries), the San Augustine Plains, Santa Clara Canyon (Santa Clara Creek), the Estancia Basin (Bachelor Draw), the Jornada del Muerto Basin and the Tularosa Basin. The state's 4,000 remaining playa lakes also seem to be generally considered outside of Clean Water Act jurisdiction. There have been very few determinations using the 2007 guidance, but the guidance's treatment of ephemeral, intermittent and terminal waters appears to put these waters at additional risk.

NEW MEXICO

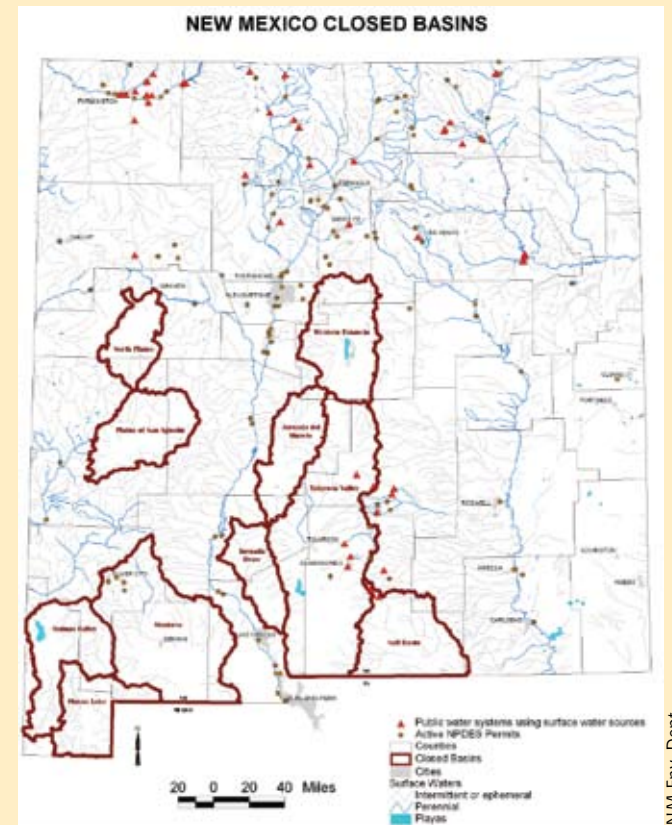
The New Mexico Department of Game and Fish, in a 2003 letter to the EPA on the issue of Clean Water Act jurisdiction noted the danger facing closed basins in New Mexico as a result of the uncertainty created by the SWANCC decision. The Department noted that “[m]ore than 84 miles of perennial and 3900 miles of intermittent waters exist within these closed basins, representing over 14% of the perennial and intermittent waters in the state.” It also pointed out that “[i]solated wetlands (playas, municipal lakes and ponds), which are abundant in the Eastern Plains of New Mexico and provide important waterfowl wintering habitat, are also at risk of losing CWA protection.” Given the uncertainty *Rapanos* created regarding the regulation of intermittent, ephemeral and terminal waters, this risk is even more acute now. Further loss of New Mexico’s wetlands poses a particular risk to the state given that by the mid-1980s, a third of New Mexico’s original wetlands had already been lost. This is the equivalent of losing about 3.25 acres every day over the last 200 years.

Information contained on the Albuquerque Corps District’s website shows that the threat and losses continue, and information obtained pursuant to FOIA requests provides some additional details. On November 7, 2006, for example, the Corps refused to take jurisdiction over a project that crossed several ephemeral stream channels because they flowed into a terminal basin. While the Albuquerque District has protected arroyos that flow directly into traditionally navigable waters, it does not appear to be protecting waters within intrastate, terminal basins.

Documents received through FOIA requests make it difficult to determine what criteria separate non-jurisdictional ephemeral streams like arroyos in New Mexico from those that are jurisdictional. Information obtained seems to indicate that jurisdiction may be asserted where a pollutant is already present that could be washed into a downstream water. Instances where jurisdiction was not asserted were not always accompanied by much supporting information. While a factor that should warrant the assertion of jurisdiction over a particular water, jurisdiction should not depend on whether harmful pollutants are actually present at a site.

State-level Protections

New Mexico has no state-level permitting program to regulate those waters that are most at risk as a result of the agencies’ 2003 and 2007 guidance. The state has, however, used its water quality certification authority under the Clean Water Act to deny or restrict federal permits. Additionally, the state has considered, but has not yet implemented, an independent permitting program that would assert primacy over the federal discharge permit program and, using independent, state-level authority, provide a safety net for surface waters that are not covered under the federal definition of “waters of the United States.” On this count, the state, in its last triennial review, recently decoupled the state-level definition of “surface water” from the federal definition to ensure that water quality standards are provided for all surface waters, not just federal surface waters. The state, with assistance from the conservation community, successfully defended its new definition at the New Mexico State Court of Appeals against a challenge by a consortium of development interests. Nonetheless, because the state has been unable to develop a safety net permit program, and because of limited resources and persistent pressure by industry groups, state-level water quality protections for wetlands, headwater streams, and dredge and fill activities are still lacking.



NM Env. Dept.

New Mexico has many closed or terminal basins. All of these basins are at risk, and already the important waters in some of these basins are no longer being protected against pollution and destruction.

Importance to Wildlife and Wildlife-related Recreation

Over 55 percent of all vertebrate species in New Mexico rely wholly or in part upon wetland habitats, and nearly 25 percent of the threatened or endangered species in the state are restricted to wetlands. Examples of recreationally and economically important species that utilize the waters of terminal basins include pronghorn antelope, mule deer, elk in the Mimbres Basin, and black bear and mountain lion in the Tularosa and Mimbres Basins. Wild turkey, blue grouse, pheasant, and Gambel's, Montezuma and scaled quail also depend on these aquatic systems for food and other habitat components.

All of the waterfowl species of the Central Flyway use basins in eastern and central New Mexico. Wetlands found further west in the state serve the habitat needs of birds using the Intermountain migration routes. Wetlands in this area continue to provide important migration and wintering habitat for many species of waterfowl, for example, Canada geese, northern shovelers, mallards, northern pintail, cinnamon teal, green-winged teal, and blue-winged teal. In addition, over 400 bald eagles winter in New Mexico, mostly along the channel of the Rio Grande River, but they also utilize the terminal basins. The playas and other wetlands of New Mexico are also important migration habitat for shorebirds.

The New Mexico Department of Game and Fish 2003 letter also documented the significant interstate commerce link to these so-called "isolated" waters, stating that "[i]n the 2001-2002 hunting season 27,931 non-resident large and small game licenses were sold to out-of-state hunters, which provided \$5,739,050 dollars in revenue to the Department (NMGF statistics)." In its letter, the Department expressed concern about the potential impact to these important fish and game resources, saying that "[b]ecause New Mexico is an arid state, the loss of any of these waters to development or water pollution ...could adversely affect the persistence of wildlife populations in these arid areas. Waterfowl surveys in New Mexico have indicated a declining trend in waterfowl numbers wintering in the state, at least partially as a result of shrinking water supplies in lakes and rivers from the ongoing severe drought."

With regard to fisheries, rainbow trout and to a lesser degree brook and brown trout, could be adversely affected in the Mimbres and Tularosa Basins. Examples include the Tularosa Creek, Three Rivers in the Lincoln National Forest and Indian Creek on Mescalero Tribal land. Warmwater fisheries could also be affected.

Economics of Wildlife-Related Recreation

According to the U.S. Fish and Wildlife Service's "2006 Survey of Fishing, Hunting and Wildlife-Associated Recreation," 39 percent of New Mexico residents older than 16 participated in wildlife-associated recreation, with recreational expenditures in the state (including those made by out-of-state visitors) generating approximately \$808 million in 2006. Almost 1.1 million residents and non-residents fished, hunted or watched wildlife in New Mexico in 2006.



Pronghorn antelope feeding at one of many unnamed playa lakes in New Mexico (eastern plains).

NM Env. Dept.



Sinkholes provide habitat for wildlife and recreational opportunities for outdoor enthusiasts. They are at risk of losing federal water pollution protections.

NM Env. Dept.

Arizona



Janine White

Arizona is the second driest state in the nation. It has about 127,505 miles of waterways, about 96 percent of which (122,525 miles) are ephemeral or intermittent. Arizona had lost 36 percent of its original wetlands by the mid-1980s.

Waters at Risk

Resource agency biologists are most concerned about potential impacts of the 2003 guidance to headwater, intermittent and dry watercourses in Arizona. This threat has only intensified since the 2007 guidance, and it has been documented in comments by the Arizona Department of Environmental Quality (ADEQ). In general, the few local wetlands that exist are so important that they receive increased protection. Our interviews in 2004 found that few waters are being left unprotected due to the 2003 guidance. However, Corps officials have long been reluctant to extend Clean Water Act protections to some dry washes in the state. The 2007 guidance makes protecting many of these washes even more difficult. The Los Angeles District, which has responsibility for regulating Arizona waters under the 404 program of the CWA, has been slow to make jurisdictional decisions since the 2007 guidance. A representative from the District stated that the District has been trying to catch up with the backlog of determinations from the time the *Rapanos* case was decided in June 2006 until the guidance was issued in June 2007.



The greatest concern in Arizona is losing riparian habitats along dry washes and the species that utilize these key habitat areas that are most often targeted by housing developments. Prior to the 2007 guidance, the Los Angeles District often took jurisdiction on these dry washes if they could readily identify an “Ordinary High Water Mark,” though this factor should not be the only one used to determine Clean Water Act jurisdiction, even in intermittent waterways. Additionally, the ADEQ recently noted in comments on the 2007 guidance that, “Arizona’s ephemeral streams have been considered jurisdictional waters at least since the first days of the 1972 [Clean Water Act].” The 2007 guidance adds burdensome hurdles to protecting such waters and it is doubtful that many of these ephemeral and intermittent streams and washes will continue to see protection.

The results of this rollback could be quite substantial. The ADEQ has stated in its recent comments that pollution problems will likely follow a rollback of Clean Water Act protections. The ADEQ noted that many currently regulated sources of pollution, such as treated sewage, are emitted into ephemeral streams. Without the Clean Water Act regulating intermittent and ephemeral streams in Arizona, the ADEQ stated that it “will be unable to assure the general public that these discharges of effluent in the desert are not harmful to the environment, and we will be unable to achieve our overall mission to enhance and protect Arizona’s environment.”

Similar jurisdictional problems are taking place on the plateaus and mountains with regard to headwater streams and recreational/retirement development. However, most of the land in these areas is publicly held. There are few “isolated” waters on the plains, except for natural and man-made stock ponds, but these waters are generally not at risk.

State-level Protections

Arizona has no state wetlands protection program in place, and can only protect wetlands through its water quality certification where federal protections apply. Additionally, Arizona law allows the ADEQ to administer a permit program that is “consistent with, but no more stringent than the requirements of the [C]lean [W]ater [A]ct.” Furthermore, both the water quality standards applied to dredge and fill activities and the Arizona Pollution Discharge Elimination System (ASPDES) permitting rules for point source pollution discharges apply only to “surface waters” or “navigable waters,” defined in state law as coextensive with “waters of the United States.” These factors make it difficult for Arizona to fill the gaps left by SWANCC, *Rapanos*, and the agencies’ subsequent policy directives. As federal jurisdiction is weakened, state jurisdiction, by law, necessarily follows suit.

Importance to Wildlife and Wildlife-related Recreation

Wildlife species that depend on riparian habitats and waterways also spend much of their time in uplands. Therefore, the adjacency of these two habitat types is important. Priority hunted species that typically use this riparian/upland habitat connection in the Sonoran desert include javelina, mule deer, Coues whitetail deer, elk, American pronghorn, Gambel’s quail and mourning and white winged doves. One subspecies of pronghorn, the Sonoran, is already considered by the state to be threatened and the other three subspecies are declining. Additional game species that could be impacted include Audubon’s desert cottontail, scaled quail, black-tailed jackrabbit and bobcat.

Other important species that use these habitats include red-tailed hawk, Harris’s hawk, great horned owl, black-tailed gnatcatcher, verdin, gopher snake, zebra-tailed lizard, western whiptail lizard, Harris’s antelope ground squirrel, tree lizard, western diamondback rattler, white-throated woodrat and many other neotropical migratory birds (e.g., warblers). Jaguars also use streams and tributaries that might now be considered non-jurisdictional.

The greatest concern in Arizona is losing riparian habitats along dry washes and the species that utilize these key habitat areas that are most often targeted by housing developments.

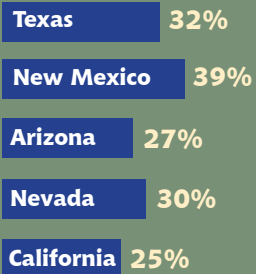


Gary Stolz

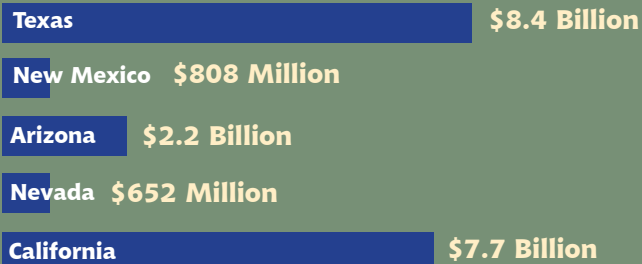
Economics of Wildlife-Related Recreation

According to the U.S. Fish and Wildlife Service's "2006 Survey of Fishing, Hunting and Wildlife-Associated Recreation," 27 percent of Arizona residents older than 16 participated in wildlife-associated recreation, with recreational expenditures in the state (including those made by out-of-state visitors) reaching more than \$2.2 billion in 2006. There were more than 1.8 million residents and non-residents who fished, hunted or watched wildlife in Arizona in 2006.

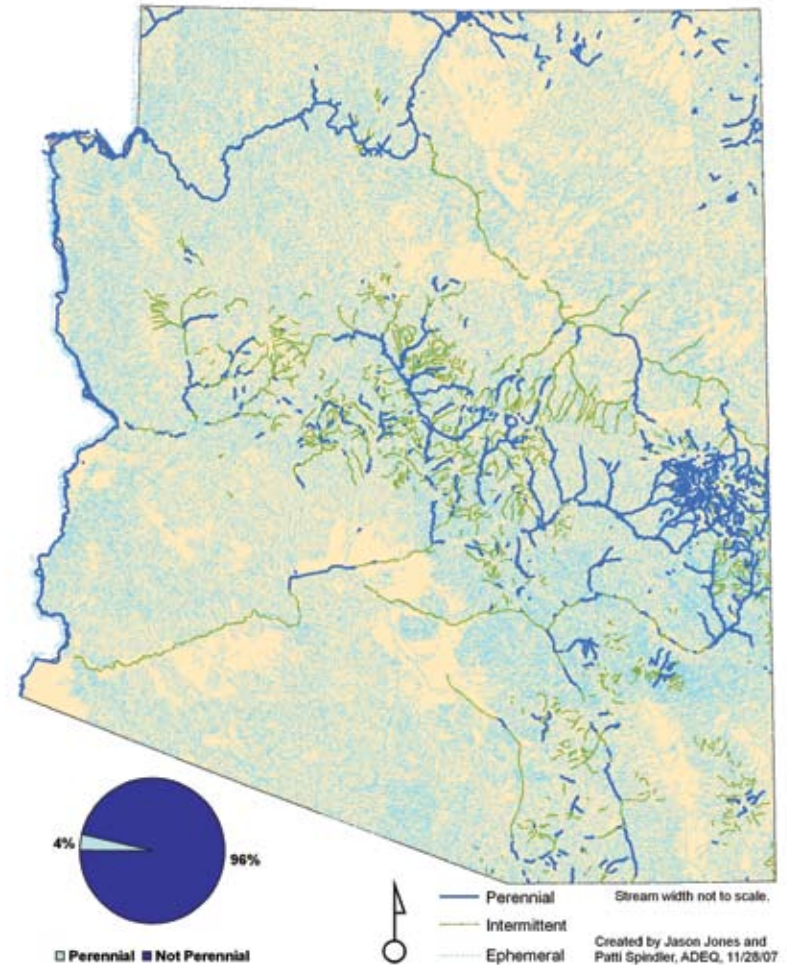
In 2006, Percentage of Residents Participating in Wildlife-related Activities:



In 2006, Wildlife-associated Recreational Expenditures (In-State & Out-of-State):



Arizona Streams



Nevada



Waters at Risk

Nevada is the driest state in the nation, having been made even drier over the last 200 years due to the drainage or filling of 52 percent of its original scarce wetlands. Based on data from the National Wetlands Inventory, 0.9 percent (666,100 acres) of the total land area in Nevada is wetland or open water. More than half of the wetlands in the state are playas, for which Clean Water Act protections are frequently being withheld due to language in the 2003 policy directive. Desert springs are also nearly always being considered outside Clean Water Act protections by the Corps. Approximately two-thirds of the state is in closed or terminal basins. One biologist working in a regulatory capacity understood that the only water bodies to which the Corps was extending Clean Water Act protections in Nevada were the Walker, Carson and Truckee Rivers and their major tributaries.

As of November 2007, the Sacramento and Los Angeles Districts of the Corps have failed to post any recent determinations to regulate waters in Nevada, making it hard to assess the impacts of the agencies' guidance to waters in Nevada. But given the dryness of the state, it is plausible that developers are simply no longer checking in with the Corps for projects in terminal basins, or are doing so in an informal manner. This argument is bolstered by the information provided by the state biologist in 2004 who noted the lack of public notices for a watershed that previously had many notices.



State-level Protections

Nevada waters, while relatively well protected from discharges of pollutants, are not as well protected from dredge and fill activities. Nevada law defines “waters of the state” quite broadly. It includes man-made conveyances and holding ponds such as irrigation systems and reservoirs, and subsurface waters such as springs and wells. The state has independent authority to enforce water quality standards in these waters through its state water pollution permitting authority. However, the State’s water quality program was primarily written to protect open waters and is difficult to apply to pollution discharges in wetlands and headwaters – exactly the types of waters most at risk under current agency guidance.

Establishing a state-level program to enforce water quality standards for these waters, independent of the Clean Water Act, would require additional resources and rulemaking. It is far from apparent that either the will or the resources exist to make protective changes in the law.

Importance to Wildlife and Wildlife-related Recreation

Inasmuch as there are so few wetlands in the state, most are vital to migrating waterfowl and shorebirds. The state’s wetlands are also important for maintaining populations of local, resident species like pronghorn antelope, snipe, mule deer, coyotes, mink, weasel, Gambel’s quail, California quail, chukar, sage grouse and mountain quail, as well as migratory raptors such as hawks and eagles.

As an example, the Sheldon National Wildlife Refuge is in a closed basin in the far northwest corner of the state. It was established primarily to conserve pronghorn antelope herds, but it also provides habitat for sage grouse, California big horn sheep, mule deer, and 18 species of ducks, including mallard, gadwall, northern pintail, green and blue-winged teal, American wigeon, ring-necked ducks and ruddy ducks. The nearby Summit Lake Indian Reservation provides extensive wildlife habitat as well. Another example of the importance of Nevada’s wetlands is provided by the fact that the Silver Lake Playa is used by 87 species of birds, 17 species of mammals, eight species of reptiles, and four species of amphibians.

In southern Nevada, most jurisdictional wetlands are protected by public ownership. In rare cases where they are not, such as portions of Meadow Valley Wash in Lincoln County, the Endangered Species Act offers some additional protection. However, where no federal permits are required, no endangered species consultation occurs. In the Las Vegas valley where the Corps has issued the majority of 404 permits in the past, the ephemeral washes are in an urban setting and of lower habitat value.

Springs are probably the most critical hydrological factor in maintaining wetlands across the state. There are over 300 mountain ranges in Nevada that feed springs that usually discharge in valleys to playas and wet meadows, which are important for hunted species like waterfowl. Such areas are likely to now be considered non-jurisdictional by the Corps.

Springs are also important because of their clean water, and they are almost always considered to be isolated. For example, Ruby Lake National Wildlife Refuge in northeast Nevada is a Great Basin oasis. It depends on water that comes from over 150 springs at the base of the Ruby Mountain range on the western edge of the refuge. This terminal basin has the highest canvasback nesting density in North America. Numerous species of waterfowl, waterbirds, songbirds, and raptors nest or migrate through the marsh, and, despite the harsh winters, some 60 bird species are typically documented in the Christmas bird counts. It was also once considered one of the top ten largemouth bass fisheries in the country.

In Nevada, it is far from apparent that either the will or the resources exist to make protective changes in the law.



Claire Dobert

Central Nevada also contains many terminal basins. The mountains here support many snow-fed streams that dry up or go underground after a distance, and thus have often been considered “isolated” since SWANCC and therefore not protected. However, these streams are very important for elk in the Toiyabe, Toiyama, and especially the Monitor Mountain Ranges, which also have adjacent valleys of high value to wildlife. They additionally provide habitat for blue grouse and many fish endemic to Nevada. Lahontan cutthroat trout (shown below) are federally-listed as threatened yet provide an important trout fishery, and their entire native range is found in terminal waters.

The basin-and-range topography of Nevada has created many isolated aquatic habitats which support a tremendous diversity of aquatic organisms. Many species are endemic to Nevada and many of these are already at-risk given today’s habitat and climatic conditions. For instance, Nevada has at least 87 endemic species and sub-species of fishes, over 53 percent of which are listed and protected under either the federal Endangered Species Act or the Nevada Administrative Code. Nevada also supports over 100 species of freshwater snails, five species of freshwater mussels, and many other amphibians and aquatic insects that depend on the state’s fragile aquatic resources.

Economics of Wildlife-Related Recreation

According to the U.S. Fish and Wildlife Service’s “2006 Survey of Fishing, Hunting and Wildlife-Associated Recreation,” 30 percent of Nevada residents older than 16 participated in wildlife-associated recreation, with recreational expenditures in the state (including those made by out-of-state visitors) reaching approximately \$652 million in 2006. There were approximately 900,000 residents and non-residents who fished, hunted or watched wildlife in Nevada in 2006.

30 percent of Nevada residents older than 16 participated in wildlife-associated recreation in 2006.



Steven Ambroz

Southern California

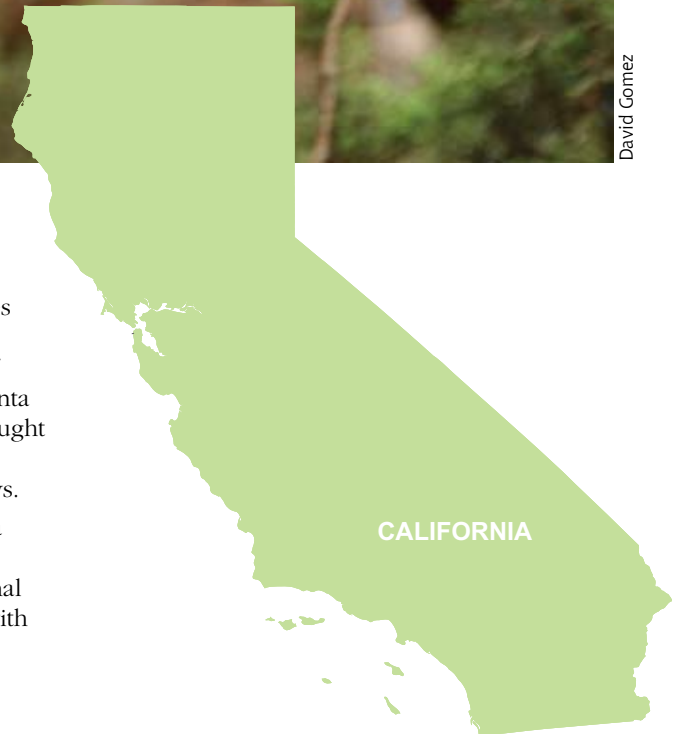


David Gomez

Waters at Risk

By the mid-1980s, California had lost 91 percent of its original wetlands. The 2007 guidance makes the continued regulation under the Clean Water Act of many of the remaining geographically “isolated” wetlands, and intermittent and ephemeral waters extremely difficult. All or portions of most of the major waterways in southern California (e.g., Los Angeles, Santa Ana, San Mateo, Santa Margarita, San Luis Rey, San Diego and Sweetwater rivers) often flow intermittently, especially during drought years. Although they do not maintain constant surface flows to navigable waters and/or their tributaries, many intermittent and ephemeral waters remain connected to such waters year-round by subsurface flows.

The Los Angeles District has recently started posting a few jurisdictional determinations for California using the 2007 guidance. Many of the postings for non-jurisdictional determinations contain little or no information regarding the basis for the determination. Also most of the recent postings are for jurisdictional requests made prior to the 2007 guidance. This appears to reflect the District’s ongoing attempt to deal with the backlog of cases that accumulated after *Rapanos* and prior to the issuance of 2007 guidance when determinations were not being made.



An earlier examination in 2004 revealed nine decisions not to extend Clean Water Act protections to waters in Southern California (located in Kern, Los Angeles, Riverside and Orange counties) over a six-month period (April-October 2004). Six of these decisions involved dry washes or streams for which the Corps found no evidence of a connection to other waters. Eight involved some type of wetland or pond, including several playa lakes (one was larger than 50 acres and reportedly would support “very limited” navigation, yet still was ruled non-navigable), a wet meadow (larger than 50 acres, but because there was no proof that canoes or rafts were used on it, it was ruled not to be navigable) and several smaller wetlands. Some entire watersheds, with a pond, wetland and several streams included, were considered to be “isolated.” These scarce desert oases were all ruled to be outside the scope of the Clean Water Act. The Los Angeles District website lists seventeen additional instances between 2004 and 2006 where the Corps refused to assert jurisdiction over dry washes and streams.

State-level Protections

California has no independent dredge and fill permitting program, per se, though the state has exercised its authority under the Porter-Cologne Water Quality Control Act to extend protections to waters no longer regulated by federal agencies. Under Porter-Cologne, the state, acting through nine regional water quality control boards (RWQCBs), can impose “waste discharge requirements” on discharges of dredged and fill material and other wastes that may harm the beneficial uses of waters of the state. Beneficial uses of all surface waters must be protected under state law.

State law defines “waters of the state” very broadly to include “any surface water or groundwater, including saline waters, within the boundaries of the state.” While the definition is quite broad, California lacks a standard definition of wetlands to assist in regulating these waters. In addition, California lacks wetland-specific water quality standards that designate wetland beneficial uses, making it difficult for the RWQCBs to specify how discharges threaten the beneficial uses and how to avoid and mitigate the harm to these uses.

Importance to Wildlife and Wildlife-related Recreation

Like perennial waters, intermittent and ephemeral waters provide a suite of functions that are important in maintaining wildlife habitats and watershed integrity. These include: maintenance of habitat for a variety of fish and wildlife species; maintenance of habitat interspersed and connectivity for wildlife and for plant seed dispersal; nutrient cycling; detention of imported elements and compounds; organic carbon export; flood attenuation; sediment generation; and groundwater recharge that may supply adjacent springs.

Intermittent and ephemeral streams in southern California provide breeding, foraging and/or dispersal habitat for several federally-listed species, including the endangered Southern steelhead and the Peninsular bighorn sheep. Peninsular bighorn sheep rely on seasonal pools of standing water, known as tenajas, which are frequently the only water source in an otherwise hot, arid landscape. A number of studies have shown that desert bighorn sheep concentrate around water sources in the summer, with most animals within two to three miles of water.

The Santa Ana sucker, unarmored threespine stickleback, Mohave tui chub and southern steelhead all rely on isolated pools that remain in intermittent streams for their long-term survival, especially during drought. The arroyo toad breeds in pools that form in slow-moving intermittent streams. Two federally-listed migratory songbird species, the least Bell’s vireo and southwestern willow flycatcher, are dependent on riparian habitat for breeding.



Gary Stolz

Bighorn sheep depend on many isolated waters for survival.

Although riparian habitats comprise a small proportion of the California landscape relative to various other habitat types, they support more species of birds than any other habitat type in California. More than 140 species, 88 of which are obligate riparian species, use these areas as nesting, migration, or wintering habitat. The mammalian community is also diverse and consists of several species that are dependent upon riparian woodlands for water, forage and cover, such as the long-tailed weasel and bobcat. Insects are abundant and play important ecological roles as both predators and prey. Many species of fish, reptiles and amphibians occupy riparian habitats and contribute to California's immense diversity.

Today less than 10 percent of the riparian woodlands in existence at the time of the gold rush remain and those are but fragmented remnants. Therefore, the resource agencies believe it is critical that the Corps continue to assert Clean Water Act jurisdiction over intermittent and ephemeral waters in southern California.

Economics of Wildlife-Related Recreation

According to the U.S. Fish and Wildlife Service's "2006 Survey of Fishing, Hunting and Wildlife-Associated Recreation," 25 percent of California residents older than 16 participated in wildlife-associated recreation, with recreational expenditures in the state (including those made by out-of-state visitors) reaching more than \$7.7 billion in 2006. There were more than 8.2 million residents and non-residents who fished, hunted, or watched wildlife in California in 2006, ranking it number one in the nation for wildlife-watchers and number three among anglers.



USFWS

Appendix

Web links to Army Corps of Engineers' decisions regarding Clean Water Act protections over waters in the Southwest

Sacramento District – Most of Interior California, Northern Nevada, Central Utah, most of Colorado, Northern Arizona, Southern Wyoming, Southern Idaho, Southeastern Oregon: <http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/index.html>. A direct link to the list is not possible. From the website above, go to the right-hand column and click the link called “Non-Jurisdiction Due to SWANCC.”

Los Angeles District – Southern California, most of Arizona, Nevada: http://www.spl.usace.army.mil/regulatory/jdocs/readx_nj_ca.pl?order_by=filename&order=abc (California)

http://www.spl.usace.army.mil/regulatory/jdocs/readx_nj_az.pl?order_by=filename&order=abc (Arizona)

San Francisco District – Coastal California North of Los Angeles and a small part of Southern Oregon: <http://www.spn.usace.army.mil/regulatory/sum.html#NJD>

Albuquerque District – Western Texas, New Mexico, Southeastern Colorado: http://www.spa.usace.army.mil/reg/SWANCC/swancc_non.asp

Fort Worth District – Southern and interior Texas: <http://www.swf.usace.army.mil/pubdata/environ/regulatory/public/njd/>

Galveston Texas – Coastal Texas and far western Coastal Louisiana: http://www.swg.usace.army.mil/reg/Reports/NJD%20quarterly/non_jd_reports.asp

Tulsa District – Southern Oklahoma, Northern Texas, Southern Kansas: <http://www.swt.usace.army.mil/permits/Documents%20-%20Non%20Jurisdiction/NonJurisdiction.htm>



