



## **Down the Drain: The Destruction of Waters and Wildlife in the Southwest**

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**Julie M. Sibbing  
Wetlands Policy Specialist**

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 groundwater supplies for a rapidly-growing human population and a highly irrigation-dependent agricultural industry as well as supporting a thriving wildlife-related recreational industry. Yet instead of carefully guarding these valuable resources on which so much of life in the Southwest depends, a directive issued by the administration in January 2003 effectively opened many to unlimited 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 very future of the Southwest – both its human and wildlife populations. This report attempts to assess the growing damage, especially as it relates to wildlife and wildlife-dependent recreation in the region.

### **Background**

In January, 2003, the U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA) released a policy directive to their field staff, instructing them to begin withholding federal Clean Water Act (CWA) protections from an estimated 20 million acres of wetlands, as well as many streams, ponds and other waters. The guidance was meant to interpret the 2001 U.S. Supreme Court's decision in *Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers (SWANCC)*. Although the *SWANCC* decision only created a minor

loophole in Clean Water Act protections – prohibiting the extension of the Act’s protections to 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 headquarter’s approval prior to extending the Act’s safeguards to any water that might possibly be considered “isolated,” even allowing that some streams would 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 and
- extraction of water for use in industrial processes.

While the effects of the policy directive are being felt nationwide, a combination of factors greatly exacerbate the potential for damage in the Southwest, including: 1) the scarcity of water resources found here, 2) the large percentage of waters being ruled outside the scope of the Clean Water Act by the Corps of Engineers; and 3) some of the weakest state-level water protections in the nation.

Due to the geography of the Southwest, many of the waters here might be considered “isolated.” Included in this 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 closed basins. Playa lakes, a common wetland type in the eastern part of the region are specifically labeled by the guidance as “isolated” waters. Additionally, desert springs, ponds and arroyos are frequently being categorized as “isolated” by federal regulators.

The significant wildlife-related recreational uses of these at-risk waters, as documented by this report, should be enough to ensure their protection under current Clean Water Act rules. Corps officials, however, 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.

While administration officials have claimed that waters left unprotected under federal law are best left to state-level protections, most states currently lack the ability to pick up this responsibility. 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 federal 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 from dredge and fill activities.

## **How to Assess the Impact**

Determining the scope of impact on America’s waters due to the Clean Water Act policy directive has been extremely difficult. Record keeping is often spotty and the Corps of Engineers

districts have sometimes been reluctant to respond to Freedom of Information Act requests. 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. Recently, many Corps districts have begun to post some information about such decisions on their websites (see appendix A for a list of links to these postings), however the postings usually lack sufficient information to determine the scope of impact and the appropriateness of the decision not to extend protections.

In order to go beyond this information logjam and learn more about what specific waters are at risk and what the impacts to wildlife and wildlife-related recreation might be, the National Wildlife Federation contracted a survey of biologists and other natural resource experts from federal and state resource agencies and nonprofit organizations.

Over 30 interviews were conducted between June 7 and June 25, 2004 by Dennis G. Buechler, a recently retired U.S. Fish and Wildlife Service biologist who has extensive work experience on Section 404 of the Clean Water Act and related wetland conservation policies and regulations. All persons interviewed were knowledgeable of §404 of the Clean Water Act and the SWANCC decision. The interviews focused on Arizona, Nevada, New Mexico, Southern California and Texas.

There were two purposes for these interviews: 1) to gain additional information on wetlands and other bodies of water for which it appears that the Corps is no longer claiming jurisdiction in the arid Southwest and 2) to identify sport fish and wildlife game species and species of special public value that could be adversely affected as a result.

National Wildlife Federation staff examined information about the most recent decisions not to extend protections by Corps of Engineers offices in the Southwest, as posted on Corps' websites. Information on state-level protections was compiled by Jan Goldman-Carter, an attorney with more than 18 years experience in wetlands and Clean Water Act law.

## **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 Intermountain West Flyway waterfowl species, including mallard, greater and lesser scaup, ruddy, northern shoveler, northern pintail, American wigeon, blue-winged teal, green-winged teal, cinnamon teal, redhead, canvasback, ring-necked, bufflehead and golden eye ducks. In turn, these species are important for predators such as hawks and eagles. Other game waterbirds that use these habitats include Canada, snow, white-fronted and Ross' geese, common snipe and sandhill crane.

Just as wetlands are often associated with waterfowl, "isolated" springs and streams are just as important for resident game species such as mountain, scale, California and Gambel's quail; chukar partridge; blue and sage grouse; mourning and 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. Some of these waters also support productive trout fisheries (e.g., rainbow, brown, brook, cutthroat) and others support warm water fisheries for bass, sunfish, bullhead and perch.

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

Hunting, fishing and wildlife watching in the Southwest inject hundreds of millions of dollars into the local economy. 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 passing on a passion for such pursuits to one's children and grandchildren is often seen as trumping any economic arguments that can be made.

## **Texas**

The Texas waters most endangered by the Corps' refusal to extend Clean Water Act protections are freshwater wetlands on the coastal plain and playa lakes. 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 and, 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 and has not developed a permitting program to enforce its water quality standards. Therefore, any rollback of Clean Water Act jurisdiction over wetlands and other waters will also 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**

While there are many rivers in Texas that empty into the Gulf of Mexico, most wetlands in Texas are not associated with these rivers, but instead 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. From our interviews, 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 most Corps of Engineers offices are extending protection to wetlands in the 100 year floodplain of rivers, the Galveston District of the Corps is excluding such floodplain wetlands on

the Texas coastal plain, even those connected periodically by above normal tides and gulf storms.

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 vegetation communities that provide significant habitat for migrating Neotropical bird species.

The loss of these wetlands with their associated buffer 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, since Laguna Madre is a primary wintering ground for this species. Wintering grassland birds would also be adversely affected.

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.

Since the Galveston District has failed to provide us with information regarding the extent of waters already impacted by their failure to regulate, it is unknown just how much damage has occurred along the Texas coastal plain.

### ***Importance to Wildlife and Wildlife-related Recreation***

Wetlands on the Texas coastal plain are some of the most important wintering habitats for ducks and geese in the Central Flyway. Hunting and guiding hunts for these birds is very big business in this region. Sandhill cranes and snipe are hunted heavily, as are many duck species, including: pintail, gadwall, American wigeon, northern shoveler, redhead, greater and lesser scaup, mallard, mottled, ruddy, bufflehead, ring-neck and cinnamon teal. Hooded and red-breasted mergansers, while not preferred game, are present in sizeable numbers. In the early fall, green and blue-winged teal are hunted heavily, as are snipe. Canada, greater white-fronted, Ross’ and snow geese are also favored by hunters. The statewide annual economic impact of duck hunting in Texas is \$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. The deer population, however, has been greatly affected by removal of predators and encroachment of urban development, resulting in tiny, stunted deer in many areas. Fortunately, South Texas still has some very large ranches that actively manage for deer and other game species.

The coastal plains wetlands area is also very popular for bird watching, which is a major contributor to local economies due to the guides, restaurants and motels that birders support.

Thousands of birdwatchers 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 also are forested. They provide habitat for bald eagles and peregrine falcons. Neotropical migrants fly across the gulf at night; therefore, these wetlands are their jumping off point in the fall and their first stop 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 contests each spring where people count as many as 300 species in 3 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. All of these playas are considered “isolated” by the Corps.

#### ***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 does snapshot surveys every January. Although this survey likely results in a significant undercount of the actual number of birds, it has estimated between 30,000 and 500,000 waterfowl (mostly mallard and pintail) winter on the Texas playas. These surveys are weather-dependent, as the birds only use playas when they are not frozen.

Canada and snow geese are very abundant on the playas and all dabbling and diving duck species in the flyway use Texas’ playas to some degree. Pronghorn antelope also depend on these wetlands in their rangelands.

#### ***Economics of Wildlife-Related Recreation in Texas***

According to the U.S. Fish and Wildlife Service’s “2001 Survey of Fishing, Hunting and Wildlife-Associated Recreation,” 28 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 5.3 billion dollars in 2001.

The Texas playas are one of the few places left in the country where landowners will commonly let people hunt on their land without charging them. A 1998 article by Dr. Loren Smith of Texas Tech University (TTU) stated that there was potential to generate more than \$7.5 million from waterfowl leases and related services. Another TTU study reported by Fred Guthrie in 1984 estimated that leases for pheasant hunting centered on playas might be worth up to \$4500 per section. These values are likely to be considerably higher today.

## **New Mexico**

On April 15, 2003, the New Mexico Department of Game and Fish sent a detailed comment letter to the U.S. EPA in response to an “advanced notice of proposed rulemaking” on the Clean

Water Act Definition of Waters of the United States. This letter laid out in detail many of the types of waters most at risk in New Mexico under a broad interpretation of the SWANCC decision, including waters that lie in “closed basins,” and playa lakes.

### ***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. From our review of the district’s files, we were able to determine that the Albuquerque District claims no jurisdiction over waters within what they consider “isolated” basins, sometimes even the rivers that flow within these 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. Playa lakes also seem to be generally considered outside of Clean Water Act jurisdiction.

The New Mexico Department of Game and Fish, in a letter to the EPA on the issue of Clean Water Act jurisdiction notes the danger of a broad reading of SWANCC on closed basins in New Mexico. They 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.” They also point 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.”

### ***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 administration’s policy directive. The state has used its water quality certification authority under the Clean Water Act to deny or restrict federal permits, but has not developed an independent permitting program. While the state does have independent authority to require water pollution permits, the State’s definition of “surface water” over which this authority applies closely tracks the federal definition of “waters of the United States.” This means that waters no longer protected under the Clean Water Act are unlikely to be protected under the state program. Moreover, the state’s water quality statutes were written to control liquid discharges to open waters. Applying these protections to wetlands and headwater streams and to dredge and fill activities is thus difficult.

### ***Importance to Wildlife and Wildlife-related Recreation***

Species that utilize the waters of terminal basins include pronghorn antelope, mule deer, possibly 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 water.

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 and Pacific Flyways. Ponds and playas in this area continue to provide important

wintering habitat for many species of waterfowl, especially Canada geese, shovelers, mallards, northern pintail and blue-winged teal. In addition, over 400 bald eagles winter in NM, mostly along the main Rio Grande River, but also utilizing the closed basins to some extent. These wetlands are also very important for migrating cinnamon and green-winged teal and shorebirds.

The NM Department of Game and Fish letter also documented the significant interstate commerce link to these so-called “isolated” waters, “[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 worries about the potential impact to these important fish and game resources, “[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, stocked 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 lands, which all flow into the Tularosa River. Warmwater fisheries could also be affected.

### ***Economics of Wildlife-Related Recreation***

According to the U.S. Fish and Wildlife Service’s “2001 Survey of Fishing, Hunting and Wildlife-Associated Recreation,” 45 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) reaching more than one billion dollars in 2001.

## **Arizona**

Arizona is the second driest state in the nation. It has about 127,505 miles of waterways, 96 percent of which (122,525 miles) are ephemeral or intermittent.

### ***Waters at Risk***

Resource agency biologists are most concerned about potential impacts of the policy directive to headwater, intermittent and dry watercourses in Arizona. In general, the few local wetlands that exist are so important that they receive increased protection. Our interviews found that few waters are being left unprotected due to the policy directive, however Corps officials have long been reluctant to extend Clean Water Act protections to some dry washes in the state. Most fears regarding impacts of the policy directive in the state therefore center around riparian habitats along dry washes and the species that utilize these key habitat areas most often targeted by housing developments. So far it appears that the Los Angeles Corps of Engineers District continues to take jurisdiction on these dry washes if they can 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.



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 not greatly threatened.

### ***State-level Protections***

Arizona law allows the Arizona Department of Environmental Quality (ADEQ) to administer a permit program that is “consistent with, but no more stringent than the requirements of the CWA.” Furthermore, both the water quality standards applied to dredge and fill activities and the AZ 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 two factors make it difficult for Arizona to fill the gaps left by SWANCC and the Administration’s policy directive. As federal jurisdiction is weakened, state jurisdiction will automatically follow 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 potential game species that could be impacted include coyote, Audubon’s desert cottontail, scale quail and black-tailed jackrabbit.

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

### ***Economics of Wildlife-Related Recreation***

According to the U.S. Fish and Wildlife Service’s “2001 Survey of Fishing, Hunting and Wildlife-Associated Recreation,” 35 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 1.6 billion dollars in 2001.

## **Nevada**

### ***Waters at Risk***

Nevada is the driest state in the nation. Based on data from the National Wetlands Inventory, 0.9 percent (666,100 acres) of the total land area in NV 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 January, 2003 policy directive. Desert springs are also nearly always being considered outside Clean Water Act protections. Approximately two-thirds of the state is in closed basins, watersheds that do not flow outside the state, except through

groundwater, thus are usually being considered “isolated.” One biologist who works in the regulatory arena thought that the only water bodies for which the Corps was extending Clean Water Act protections in Nevada were the Walker, Carson and Truckee Rivers and their major tributaries. This biologist had not seen a public notice posted for the Humboldt River Drainage for a long time.

The Sacramento District of the Corps of Engineers has posted just one decision not to regulate a water in Nevada on their website since last spring – a 2000 foot section of dry wash that they determined to lie within a closed basin. While the lack of other postings for the state could mean that few impacts are being ruled outside the scope of the Clean Water Act, it is more likely that developers are simply no longer checking in with the Corps for projects in closed basins, or are doing so in an informal manner. This argument is bolstered by the information provided by the state biologist 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 typically written to protect open waters and is harder to apply to pollution discharges in wetlands and headwaters; exactly the types of waters most at risk under current Clean Water Act guidelines.

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. This is not likely to happen given budgetary shortfalls in recent years.

### ***Importance to Wildlife and Wildlife-related Recreation***

Because there are so few wetlands in the state, every one is critical to migrating waterfowl and shorebirds. These 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 predators like hawks and eagles.

For 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 the sage grouse, California big horn sheep, mule deer and 18 species of ducks. The most common are mallard, gadwall, northern pintail, green and blue-winged teal, American wigeon, ring-necked and ruddy ducks. Most of these are year-round residents. The Summit Lake Indian Reservation is nearby and provides extensive wildlife habitat as well.

In southern NV, 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 factor statewide for maintenance of wetlands. There are over 300 mountain ranges in NV that feed springs that usually end up in valleys as playas and wet meadows, which are important for hunted species like snipe. Such areas are likely to be considered non-jurisdictional by the Corps.

Springs are also very 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. The watershed is a closed; so all water entering the marsh is clean and pure. This area has the highest canvasback nesting density of anywhere 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 tallied in the Christmas bird counts. It was also once considered one of the top ten large mouth bass fisheries in the country.

There are also many closed basins in central Nevada. The mountains here support many snow fed streams that dry up or go underground after a distance, thus are commonly considered “isolated.” 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 also provide habitat for blue grouse and many endemic fish species and subspecies. Lahonton cutthroat trout have been planted in the Edwards Creek Valley Basin and provide a trout fishery.

### ***Economics of Wildlife-Related Recreation***

According to the U.S. Fish and Wildlife Service’s “2001 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 more than 689 million dollars in 2001.

## **Southern California**

### ***Waters at risk***

The Joint Corps/EPA policy directive is ambiguous regarding the continued regulation of intermittent/ephemeral waters under the Clean Water Act. 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/ephemeral waters remain connected to such waters year-round by subsurface flows. Because of their at-least periodic connection to other waters, such waterways should not be considered “isolated.”

The Los Angeles District of the Army Corps of Engineers has posted information regarding nine decisions not to extend Clean Water Act protections to waters in Southern California (waters were 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 watershed areas, 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.

### ***State-level Protections***

California has no independent dredge and fill permitting program, per se, though the state has been working administratively since 2001 to use its authority under the Porter-Cologne Water Quality Control Act to begin 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.

Despite severe budget restraints, California's State Water Resources Control Board (SWRCB) is working to strengthen the state waste discharge requirements program. In May 2004, the SWRCB approved statewide general waste discharge requirements that impose clear regulatory restrictions on dischargers to non-federal wetlands.

In the 2002 legislative session, an attempt was made to amend the California Environmental Quality Act (CEQA) to explicitly require review of activities proposed in "isolated" wetlands. This attempt failed, but led to a 2003 legislative report studying a potential SWANCC fix for California waters. In the 2004 legislative session, a bill was introduced to extend state oversight to seasonal wetlands no longer regulated under the CWA. Unfortunately, the bill died in committee due to strong opposition from agriculture and development interests.

### ***Importance to Wildlife and Wildlife-related Recreation***

Like perennial waters, intermittent/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/ephemeral streams in southern California provide breeding, foraging and/or dispersal habitat for 15 federally listed species, including the endangered Southern steelhead and the Peninsular bighorn sheep, both of which were likely taken for sport and sustenance many years ago. 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 will concentrate around water sources in the summer, with most animals found within a 2 to 3 mile radius of water.

Especially during drought years, 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. 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 dependant on riparian habitat for breeding.

Although riparian vegetation comprises 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 occur here, 88 of which are obligate riparian species. Birds use riparian habitats for nesting, wintering, or both. 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 its 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 Army Corps continue to assert Clear Water Act jurisdiction over intermittent/ephemeral waters in southern California.

### ***Economics of Wildlife-Related Recreation***

According to the U.S. Fish and Wildlife Service's "2001 Survey of Fishing, Hunting and Wildlife-Associated Recreation," 26 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 5.7 billion dollars in 2001.

## Appendix 1

### Web links to Army Corps of Engineers' decisions not to extend 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, South Eastern 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 below go down the page to nearly the bottom 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/SWANCC/SWANCC.html>

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

**Albuquerque District** – Western Texas, New Mexico, Southeastern Colorado: [http://www.spa.usace.army.mil/reg/SWANCC/swancc\\_non.htm](http://www.spa.usace.army.mil/reg/SWANCC/swancc_non.htm)

**Fort Worth District** – Southern and interior Texas: <http://www.swf.usace.army.mil/pubdata/environ/regulatory/htmlpages/nojd.asp>

**Galveston Texas** – Coastal Texas and far western Coastal Louisiana: [http://www.swg.usace.army.mil/reg/Reports/NJD%20monthly/non\\_JD\\_Reports.asp](http://www.swg.usace.army.mil/reg/Reports/NJD%20monthly/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>



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**National Wildlife Federation  
Headquarters Office  
11100 Wildlife Center Drive  
Reston, VA 20190**

**National Wildlife Federation  
Office of Congressional & Federal Affairs  
1400 16<sup>th</sup> St. NW, Suite 501  
Washington, DC 20036**