ARIZONA RIPARIAN COUNCIL

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Water Docket
Environmental Protection Agency
Mailcode 4101T
1200 Pennsylvania Ave., NW
Washington, DC 20460
RE: Docket #OW-2002-0050

Dear EPA Administrator:

The Arizona Riparian Council (ARC) appreciates the opportunity to respond to Environmental Protection Agency's (EPA) invitation for public comment about the Advance Notice of Proposed Rulemaking (ANPRM) on the Clean Water Act Regulatory Definition of "Waters of the United States" published in the *Federal Register* January 15, 2003. The EPA has also invited comment about the implications of a recently issued guidance regarding "isolated, intrastate, non-navigable waters" (hereafter called isolated waters). Isolated waters are a subset of those areas formerly regulated under the Clean Water Act. A recent court decision, *Solid Waste Agency of North Cook County (SWANCC) v. Army Corp of Engineers* (hereafter referred to as the SWANCC decision) limits which isolated waters will receive Clean Water Act protection.

The ARC was formed in 1986 as a result of the increasing concern over the rate of loss of Arizona's riparian areas. It is estimated that <10% of Arizona's original riparian acreage remains in its natural form. These habitats are considered Arizona's rarest natural communities. Our members include citizens who are interested in, care about, and understand riparian areas in Arizona, as well as regulators and scientists involved in streamside activities and studies. The purpose of ARC is to provide for the exchange of information on the status, protection, and management of riparian systems in Arizona.

The Council is concerned about ongoing and potential changes in the jurisdiction of the Clean Water Act in Arizona. The proposed rulemaking appears to reduce, not enhance, the protection of riparian areas.

The ARC's definition of "riparian" includes vegetation, habitats, or ecosystems that are associated with bodies of water (streams, springs, lakes) or are dependent on the existence of perennial, intermittent or ephemeral surface or subsurface water drainage. Riparian areas, as defined, include isolated waters and other waters of the United States as regulated by the U.S. Army Corps of Engineers. In some areas, riparian habitats extend outside the limits of the Corps jurisdiction (Figure 1).

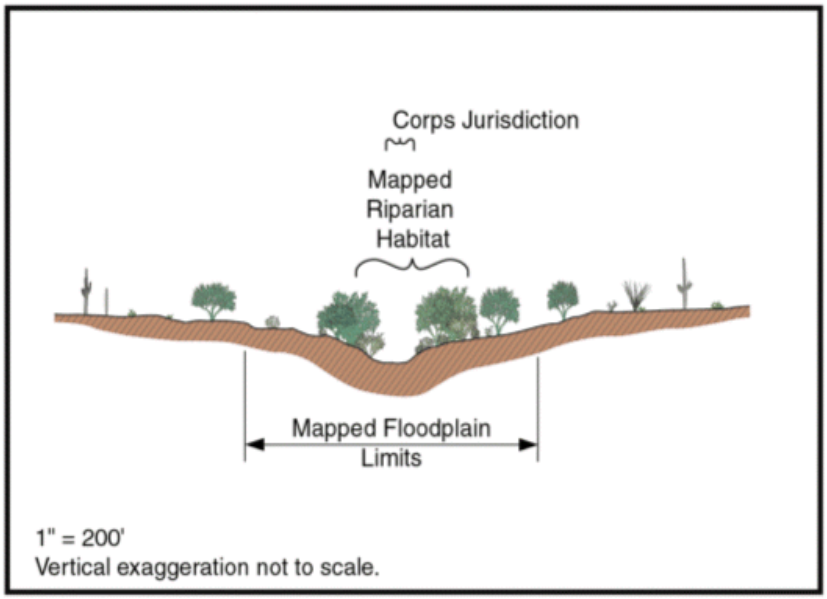

Figure 1. Schematic showing a common relationship between lateral limits of Corps jurisdictional delineations along Arizona streams. Image credit, Julia Fonseca, Pima County Flood Control District.

We will first discuss the lack of protection for riparian areas in the state of Arizona, as background to understand the effect of the proposed changes in Clean Water Act (CWA) jurisdiction. Then we will discuss isolated waters issues, followed by the potential effects of other changes in CWA jurisdiction as they might affect waters of the U.S. along Arizona's streams.

Regulatory Programs in the State of Arizona

The objective of the Clean Water Act is the restoration and maintenance of the "chemical, physical, and biological integrity of the nation's waters" (Federal Water Pollution Control Act Amendments P.L. 92-500). The state of Arizona has no wetland protection program, nor any other regulatory program addressing the biological integrity of riparian or wetland systems. The state of Arizona has historically relied upon the Section 401 water quality certification associated with Section 404 to gain a measure of state influence over changes to the physical character of its waters, and discharges of pollutants to her streams. Recently, Arizona has assumed all regulatory responsibilities for the National Pollutant Discharge Elimination System (Section 402). This is the principal state program which will address the physical and chemical integrity of waters of the U.S. It is unclear how effective the delegated program can be without additional funding and staff increases.

Reductions in scope of the CWA minimize the extent of the powers that have been delegated to the state. In light of the SWANCC decision, the effective regulation will be further reduced. It is extremely unlikely that any new state program to regulate the physical, biological or chemical integrity of the state's waters will be authorized in the near future. Arizona's Legislature has repeatedly rejected proposed measures to protect the physical or biological characteristics of even the most sensitive perennial springs and streams, let alone isolated waters or ephemeral systems.

On a local level, several jurisdictions in Pima and Maricopa counties have adopted local measures in zoning codes or floodplain regulations which encourage applicants to avoid direct damage to riparian plants and the natural bed and banks of streams. The local measures generally require mitigation in the event that the applicant elects not to avoid damage to the stream. Reductions in the scope of the Corps' jurisdiction may weaken the willingness of applicants to avoid damages to waters under local measures.

Furthermore, the CWA regulates sediment or pollutants discharged to streams during certain activities which are otherwise exempted from state floodplain regulation under ARS 48-3613. These include public highways, tailing dams and mining waste disposal areas, and power transmission lines. Curtailments in the CWA would no longer address pollutant discharges to many water courses in Arizona, thus affecting many species of fish and wildlife.

Isolated Waters

A recent Supreme Court decision (SWANCC) limits the scope of the Clean Water Act (Sections 404 and 401) that may apply to isolated, intrastate, non-navigable waters, "when the sole basis for asserting jurisdiction is the migratory bird rule." This decision places more of the responsibility of regulating or protecting such areas upon the states.

The CWA still applies to wetlands and other waters that are navigable, tributary to navigable waters, adjacent to a navigable waters or their tributaries, or if a significant nexus exists between the water and navigable waters. An example of such a nexus would be subsurface flow. In Arizona, isolated waters include playas, freshwater marshes, riparian plant communities associated with areas of elevated groundwater, and springs or seeps which lack a connection to a watercourse. The occurrence of isolated waters in Arizona is rare, compared to other states; and results from the lack of recent glaciation, general aridity, high evaporation and siltation rates, and the steep gradients of much of the topography (Brown 1982). However, this scarcity and the general productivity of areas with higher water availability makes this habitat disproportionately valuable to wildlife (Latta et al. 1999).

Isolated waters are found throughout Arizona but primarily in the following four physiographic regions: White Mountains, San Francisco Plateau (Colorado Plateau and Mogollon Rim), Southeastern (Mexican Highlands and Chihuahuan Desert) and to a lesser extent, in the Sonoran Desert (Latta et al. 1999).

In the high-elevation regions of the White Mountains, isolated waters are similar to those located farther north in the U.S. and Canada. The bird communities also show affinities to the northern latitudes. This region has long been an important waterfowl nesting locale (Brown 1985). Fleming (1959) estimated that this area accounts for more than 70% of the waterfowl produced in Arizona.

Isolated waters in the San Francisco Plateau are classified as montane marshlands (Brown 1982). These wetlands range from seasonal flooded flats to deep, permanent marshes and provide some of Arizona's best examples of natural wetlands in an intact condition (Latta et al 1999). These include features which are commonly referred to as "dry lakes" or "playas" that provide impor-

tant habitat for migratory waterfowl. In Flagstaff, the community successfully opposed development in a privately owned, ephemeral wetland known as Dry Lake, and is seeking $2.5 million to purchase the 60-acre wetland and the rest of the land within this volcanic crater (Figure 2). Isolated waters in the southeastern physiographic region occur primarily in the montane forest, Chihuahuan desertscrub and semidesert grassland biomes (Brown 1982). Wetlands that occurred naturally in the lower-elevation desertscrub and grassland areas consist of playas, cienegas, and artesian wells. Many have been diminished in size or lost due to lowering of the groundwater

Figure 2. Dry Lake, an isolated wetland near Flagstaff that has been the focus of a community effort to minimize development impacts. Photograph credit, Grand Canyon Chapter, Sierra Club.

table. This region hosts one of the few remaining U.S. populations of Mexican ducks (*Anas diazi*), which was once one of the most common nesting species in southeastern Arizona marshes (Latta et al. 1999).

At 50 square miles, one of the largest isolated wetlands in Arizona is Willcox Playa (Figure 3). This playa shelters thousands of sandhill cranes (*Grus canadensis*) each winter, as well as other migratory waterfowl. It is crossed by an interstate highway and has a U.S. military presence, so depending on the interpretation of the SWANCC decision, it may remain under the jurisdiction of the Clean Water Act.

All isolated waters in the Sonoran Desert are critically important watering places for wildlife. They include some of the region's biodiversity hotspots, harboring distinct species of springsnails, aquatic vertebrates, and rare invertebrates.

Figure 3. Willcox Playa, an ephemeral water used by wintering waterfowl. It is a remnant of Lake Cochise, and holds a treasure trove of archaeological and geological information. Photograph credit, National Park Service.

For instance, La Cebadilla (Figure 4) is a wetland that is isolated from streams, is not navigable, and does not cross international borders. It originates on a hill slope in the largely urbanized Tucson basin of Pima County. The spring does not discharge into an adjacent stream because it has been diverted for use for many decades. Portions of the wetland were graded for housing development in the early 1980s. The wetland around the spring provides habitat for a rare, possibly unique, spring snail. It is one of the few places in the Tucson basin where lowland leopard frogs (*Rana yavapaiensis*) have been recently sighted. Lowland leopard frogs are an unlisted native frog species which were once common in the streams and springs of eastern Pima County. La Cebadilla's spring-fed wetland also provides habitat for a rare plant, *Eryngium sparganophyllum*, a bushy perennial herb that was thought extirpated in Pima County until its recent discovery at this spring.

Figure 4. La Cebadilla wetland, located near Tucson, Arizona, could be considered an isolated wetland. It harbors a potentially unique species of springsnail, as well as rare plants. Photograph credit, Priscilla Titus.

The functions and values of wetland habitats associated with isolated waters have been cited repeatedly in scientific journals, agency literature, and newspapers. A literature review of the functions and values of riparian habitat to wildlife

by Ohmart and Zisner (1993) cited numerous scientific articles. The Arizona Department of Environmental Quality did a similar review of literature to understand the importance of riparian systems in minimizing point and nonpoint pollution (Engineering Science, Inc. 1994). The primary functions and values of wetlands include erosion protection, water quality improvement, recreational opportunities and the creation of habitat for fish and wildlife resources. To reduce protection for these important habitats without thoroughly identifying the individual and cumulative impacts is irresponsible and contrary to the amendments Congress made to the CWA in 1987 to address nonpoint source pollution.

In the arid Southwest any patch of wetland can be critical to the survival of migratory birds and other wildlife. Wetlands around small and isolated springs, seeps or tanks are often teaming with insects and afford food and cover for many species of wildlife, including migratory songbirds. Sparrows, warblers, vireos, swallows, flycatchers and blackbirds can find temporary safe havens at wetlands during migration. Waterfowl, rails, moorhens, coots, etc., can utilize isolated wetland habitat if they contain or are close to open water. Some specific species that would utilize smaller wetlands for migration, winter or even possibly nesting habitat include: Virginia rail (*Rallus limicola*), sora (*Porzana carolina*), common snipe (*Gallinago gallinago*), northern harrier (*Circus cyaneus*), black phoebe (*Sayornis nigricans*), vermillion flycatcher (*Pyrocephalus rubinus*), all swallows, long-billed marsh wren (*Cistothorus palustris*), common yellowthroat (*Geothlypis trichas*), grasshopper sparrow (*Ammodramus savannanum*), song sparrow (*Melospiza melodia*), Lincoln's sparrow (*M. lincolnii*), swamp sparrow (*M. georgiana*), and all blackbirds. Many of these birds are migratory species and depend on isolated wetlands to rest and refuel during the grueling migratory process.

The value of isolated wetlands can be directly related to economic benefits to the states. The "sport" of birdwatching has continued to increase in the U.S. In 1991, more than 24.7 million Americans reported that they traveled to watch birds (American Bird Conservancy 1997). This equates to $5.2 billion spent by birders on goods and services related to bird feeding and watching (American Bird Conservancy 1997).

Wetland habitat benefits are not limited to birds species alone. Americans spent $29.2 billion to observe, feed and photograph wildlife in the United States according to a 1996 report on national and state economic impacts of wildlife watching (Arizona Game and Fish Department 1998). According to this report, wildlife watching creates more than one million jobs, contributes $24.2 billion in employment income and generates $322.5 million in state income tax and $3.8 billion in federal income tax. An undetermined amount of this money comes from activities that either occur in isolated waters or are for species that may depend on isolated waters.

At this point in time, it is impossible to determine the exact number (and therefore the magnitude) of isolated wetlands that would be impacted should protection be removed. The vague definition of "isolated wetlands" compounds this difficulty. Until the total area of impact of isolated waters can be determined, and therefore their cumulative effect to the ecosystem defined; no action should be taken to limit the jurisdictional regulation of isolated wetlands under the CWA Section 404 program.

We recommend that isolated wetlands be regulated under the Clean Water Act.

Tributary Waters

The ongoing discussion about the appropriate jurisdiction of the Clean Water Act extends far beyond what might be considered isolated waters. In the corridors of government and amongst the regulated community, the Advanced Notice of Public Rule Making (ANPRM) has been interpreted as an opportunity to consider whether the current jurisdiction of the Clean Water Act goes too far.

In our experience as regulated parties and regulators, the jurisdictional limits of the CWA seem fairly limited. The "ordinary highwater mark" defines the lateral boundaries. These are determined in the field, based on physical evidence of the extent of past flows. These lateral limits generally include the bed and primary banks, seldom encompassing the 100-year floodplain of Arizona's streams. Nor do the lateral limits encompass all of the riparian vegetation associated with streams. By using the "ordinary highwater mark" to define the limit of jurisdiction, the Corps minimizes the scope of its jurisdiction to the zone which is most critical to the maintenance of chemical, physical, and biological integrity along Arizona's streams. This hardly seems to over-reach the intent of the Clean Water Act. Extending the lateral limits of jurisdiction to encompass more of the floodplain makes more sense in terms of the goals of the Act than does reducing it.

There is an effort by some to interpret SWANCC in such a way as to eliminate waters above a manmade conveyance of some substantial length. The question some ask is how to differentiate between streams that are channeled into manmade conveyances. However, if a conveyance contributes point or nonpoint source pollutants into the waters of the U.S. then it seems logical to regulate it under the Clean Water Act. It some regards, it could be argued that "ditches," channels and pipes are actually more important to regulate than wetlands, because pollutants conveyed in engineered systems have fewer opportunities to be sequestered in organic or mineral deposits, and detention time is reduced.

Some of the opposition to regulation of modified channels and artificial conveyances lies with the need for regulatory changes at a level of detail far beyond what is called for in the ANPRM. The ANPRM refers only to jurisdictional issues, but ARC recognizes that legitimate concerns have been raised by the regulated community about such issues as water quality standards and sampling methodologies. These issues are best dealt with in rule-making efforts distinct from jurisdictional issues. ARC would gladly submit comments on those issues when the request is given by EPA.

ARC is also aware that some entities have encouraged the narrowest possible interpretation of the CWA jurisdiction. Some of the proposals being discussed would exclude ephemeral, intermittent and non-navigable perennial streams from regulation. If the CWA were restricted to apply only to traditionally navigable streams, then the Colorado River would be the only stream in Arizona regulated under the federal system. The Colorado River was deemed navigable under the Rivers and Harbors Act of 1899.

At present, the CWA applies to nearly every stream in Arizona, whether intermittent, ephemeral or perennial. This makes sense in terms of the goal of the CWA. Pollutants discharged to streams

will move, regardless of the duration of the flow. To limit the application of the CWA based on flow conditions or mean discharge, as some propose, would fail to recognize the interconnected nature of watersheds.

CWA rules should not attempt to exclude watercourses from CWA jurisdiction based on an ephemeral/intermittent/perennial classification system. The terms ephemeral, intermittent, and perennial apply to a natural continuum. Some of the streams we call "intermittent" can run year round in exceptionally wet years. Some of the streams we call "ephemeral" have shallow groundwater tables that support preferential and even obligate wetland plant species, and may run intermittently in some years. The 1:24,000 USGS topographic map series does not distinguish intermittent and perennial streams. In most places, the information to distinguish these three flow classes is unavailable.

Also, in Arizona, we have "interrupted" perennial streams, where certain reaches of perennial flow are separated from one another by intermittent and ephemeral reaches. It would make no sense to try to distinguish between the two, for pollutants discharged to one reach would be conveyed to the next reach downstream. Figure 5 shows a stream where flow is interrupted. This segment of the San Pedro has documented nesting of the endangered southwestern willow flycatcher (*Empidonax traillii extimus*) in the riparian habitat.

Figure 5. San Pedro River, south of San Manuel, Arizona. This is an interrupted stream segment where perennial flow is absent. Riparian vegetation is supported by a shallow groundwater table, and provides the foundation for habitat for the endangered southwestern willow flycatcher. Photograph credit, Kris Randall, U.S. Fish and Wildlife Service.

Eighty-nine percent of the streams in Arizona are ephemeral (based on USGS 1:100,000 digital data). If the CWA applied only to intermittent and perennial streams, then the state-delegated program would regulate pollutants discharged to only 11% of the mapped stream miles which are currently regulated.

The jurisdiction of the Clean Water Act as it pertains to ephemeral streams has been previously litigated in our state. The Ninth Circuit Court of Appeals found, in the case of mining pollutants discharged to a dry wash in Arizona, that "waters of the United States" include "normally dry arroyos, where any water which might flow therein could reasonably end up in any body of water, to which or in which there is some public interest, including underground waters." *United States v. Phelps Dodge Corp.*, 391 F. Supp. 1181, 1187 (D. Ariz. 1975).

Ephemeral, intermittent tributary streams and non-navigable perennial tributary streams provide substantial opportunity for recreational use by foreign and interstate travelers. In some cases, trails used by hikers, equestrians and even vehicle operators follow ephemeral and intermittent streambeds. These trails cross state and national boundaries.

Intermittent and ephemeral streams provide vital habitat for many species of plants and animals in Arizona. The Arizona Riparian Council estimates that 60% to 75% of Arizona's wildlife species are dependent on streamside vegetation at some point in their life cycle (ARC 1994). Ephemeral, intermittent and non-navigable perennial streams in Arizona are essential for aquatic species such as Chiricahua leopard frogs (*Rana chiricahuensis*; Threatened), lowland leopard frogs, Huachuca water umbel (*Lilaeopsis schaffneriana* var. *recurva*; Endangered), Gila topminnow (*Poeciliopsis occidentalis*; Endangered), and Gila chub (*Gila intermedia*; Endangered). In addition, the vegetation provides habitat for Southwestern willow flycatcher (Endangered), cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*; Endangered), Yellow-billedCuckoo (*Coccyzus americanus*; Candidate), and many other species.

The ANPRM fails to recognize the connection between surface water and groundwater that streams provide. Ephemeral streams can be underlain by shallow aquifers which sustain obligate and facultative wetland indicator plants. Pollutants not only travel along ephemeral watercourses, they migrate down toward the aquifer. Some of our groundwater pollution is the result of pollutants dumped into ephemeral streams and low-lying areas thought to be "isolated." The state of Arizona addresses this through programs such as the Aquifer Protection Program and Nonpoint Source Program. However, the focus of these programs is solely water quality, not physical and biological integrity.

ARC's focus is primarily riparian areas in the southwestern U.S. However, riparian areas are recognized as valuable ecosystems throughout the country. In 2002, the National Research Council published the book *Riparian Areas: Functions and Strategies for Management*. In that book, the following statement is made:

> *Riparian areas provide essential life functions such as maintaining streamflows, cycling nutrients, filtering chemicals and other pollutants, trapping and redistributing sediments, absorbing and detaining floodwaters, maintaining fish and wildlife habitats, and supporting the food web for a wide range of biota. The future success of at least five*

national policy objectives - protection of water quality, protection of wetlands, protection of threatened and endangered species, reduction of flood damage, and beneficial management of federal public lands - depends on the restoration of riparian areas (National Research Council 2002, pg. 22).

Riparian areas need the protection as currently offered through the Clean Water Act. Diminishing that protection would likely have consequences that would be felt for generations to come.

In conclusion, the ARC appreciates the opportunity to comment on the ANPRM.

Sincerely,

Jeff Inwood, President
Arizona Riparian Council

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