BEFORE THE

ARIZONA NAVIGABLE STREAM ADJUDICATION COMMISSION

IN THE MATTER OF THE NAVIGABILITY OF SMALL AND MINOR WATERCOURSES IN COCONINO COUNTY, ARIZONA, EXCLUDING THE COLORADO RIVER AND LITTLE COLORADO RIVER	No.: 05-010-NAV

REPORT, FINDINGS AND DETERMINATION REGARDING THE NAVIGABILITY OF SMALL AND MINOR WATERCOURSES IN COCONINO COUNTY, ARIZONA

TABLE OF CONTENTS

LIST OF EXHIBITS

Pursuant to Title 37, Chapter 7, Arizona Revised Statutes, the Arizona Navigable Stream Adjudication Commission ("Commission") has undertaken to receive, compile, review and consider relevant historical and scientific data and information, documents and other evidence regarding the issue of whether any small and minor watercourse in Coconino County, Arizona, excluding the Colorado River and the Little Colorado River, was navigable or nonnavigable for title purposes as of February 14, 1912. Proper and legal public notice was given in accordance with law and a hearing was held at which all parties were afforded the opportunity to present evidence, as well as their views, on this issue. The Commission, having considered all of the historical and scientific data and information, documents and other evidence, including the oral and written presentations made by persons appearing at the public hearing and being fully advised in the premises, hereby submits its report, findings and determination.

There are 5,276 documented small and minor watercourses in Coconino County, of which 4,977 are unnamed. All of these watercourses, both named and unnamed, are the subject of and included in this report. Excluded from this report is the Colorado River which was long ago determined by the federal government to be navigable. Also excluded is the Little Colorado River which is deemed to be major watercourse and is the subject of a separate report. Attached hereto as Exhibit "A" is a list of all of the small and minor watercourses in Coconino County, Arizona, both named and unnamed, covered by this report.

I. Procedure

On March 23, 2005, March 30, 2005, April 6, 2005, May 13, 2005, May 20, 2005 and May 27, 2005 (published twice in Coconino County due to change in the hearing date), the Commission gave proper prior notice of its intent to consider the issue of whether small and minor watercourses in Coconino County, Arizona, were navigable or nonnavigable for title purposes as of February 14, 1912, in accordance with A.R.S. § 37 1123B. Publication was in the Arizona Daily Sun in Flagstaff, Coconino County

and in the Arizona Republic in Phoenix, Maricopa County. Copies of the Notices of Intent to Study and Receive, Review and Consider Evidence on the issue of navigability of small and minor watercourses in Coconino County are attached hereto as Exhibit "B."

After collecting and documenting all reasonably available evidence received pursuant to the Notice of Intent to Study and to Receive, Review and Consider Evidence, the Commission scheduled a public hearing to receive additional evidence and testimony regarding the navigability or nonnavigability of small and minor watercourses located in Coconino County, Arizona. Public notice of this hearing was given by legal advertising on June 10, 2005 in the Arizona Daily Sun in Coconino County, Arizona, and on June 9, 2005 in the Arizona Business Gazette, as required by law pursuant to A.R.S. §37-1126 and, in addition, by mail to all those requesting individual notice and by means of the ANSAC website (azstreambeds.com). This hearing was held on July 14, 2005, in the City of Flagstaff, the county seat of Coconino County to give an opportunity for as many citizens and residents of Coconino County to appear and be heard, and since the law requires that such hearing be held in the county in which the watercourses being studied are located. Attached hereto as Exhibit "C" are copies of the notices of the public hearing.

All parties were advised that anyone who desired to appear and give testimony at the public hearings could do so and, in making its findings and determination as to navigability and nonnavigability, the Commission would consider all matters presented to it at the hearing, as well as other historical and scientific data, information, documents and evidence that had been submitted to the Commission at any time prior to the date of the said hearing, including all data, information, documents, and evidence previously submitted to the Commission.

Following the public hearing held on July 14, 2005 in Flagstaff, Arizona, all parties were advised that they could file post-hearing memoranda pursuant to the Rules adopted by the Commission. Post-hearing memoranda were filed by Salt River

Project Agricultural Improvement and Power District and Salt River Valley Water Users Association. On November 16, 2005, at a public hearing in Phoenix, Arizona, after considering all of the evidence and testimony submitted, and the post-hearing memorandum filed with the Commission, and the comments and oral argument presented by the parties, and being fully advised in the premises, the Commission, with a unanimous vote, found and determined in accordance with A.R.S. § 37-1128 that all small and minor watercourses in Coconino County, Arizona, were nonnavigable as of February 14, 1912 and were not susceptible of navigability. Attached as Exhibit "D" are the minutes of this hearing, as well as the earlier hearing in Flagstaff held on July 14, 2005 at which evidence was presented.

II. Coconino County, Arizona

Coconino County, Arizona, is located in the north central portion of the state and is approximately 18,644 square miles in land area, with a population of 127,450 as of 2007. It is the second largest county in land area in the United States and is larger than each of the nine smallest states. A substantial portion of the land in the county is held by the federal government: tribal lands (primarily Navajo and Hopi Reservations) comprise 38.4%; Forest Service, 28.3%; Bureau of Land Management, 5.8%; and National Park Service, 6.8%. The State of Arizona owns 9.5% of the land area of the county. Only 12% of the land area in Coconino County (2,236 square miles) is owned by individuals or corporations and about 3/4 of the privately held land is in large ranches held by approximately 10 owners. The county borders the State of Utah to the north, and the counties of Navajo to the east, Mohave to the west, and Yavapai and Gila to the south. Coconino County lies within the following ranges: latitude 34°16'00" North to latitude 37°00'08" North and longitude 110°45'00" West to 113°20'00" West.

Arizona Revised Statutes Section 11-105 describes the boundaries of Coconino County as follows:

> Coconino County, the county seat of which is Flagstaff is bounded as follows:

Commencing at the point where the boundary line between Utah and Arizona, being approximately the thirty-seventh parallel of north latitude and the meridian of one hundred ten degrees forty-five minutes west longitude intersect; thence south along such meridian to the Mogollon Rim; thence westerly along the Mogollon Rim, and the northern boundary of Gila county to the east line of range seven east, Gila and Salt River Guide meridian; thence north on such range line to the fourth standard parallel north; thence west on such parallel to the east line of range five east; thence north on such range line to the north line of township eighteen north; thence west on such line to the Gila and Salt river meridian; thence north on such meridian to the fifth standard parallel north; thence west on such parallel to the east line of range two west; thence north on such line to a point one mile north of the center of the right-of-way of the Atchison, Topeka & Santa Fe railway as it existed in 1891; thence westerly in a line one mile north of and parallel with the center of such right-of-way to the meridian one hundred thirteen degrees twenty minutes west longitude, as defined by the Mohave-Yavapai county boundary survey of 1908; thence north along such meridian line as defined to the point where such meridian line intersects the Colorado river; thence up the centerline of the Colorado river to the mouth of Kanab creek; thence up Kanab creek to a point where such creek intersects the boundary line between Utah and Arizona, being approximately the thirty-seventh parallel of north latitude; thence east along such boundary to its intersection with the meridian of one hundred ten degrees forty-five minutes west longitude, the place of beginning.

Coconino County lies in the mountain and plateau range of north central Arizona. Its landscape is characterized as rugged mountains, deep canyons, and thick forests of pine, fir, juniper, piñon, aspen and oak. Between the mountains and canyons are high plateaus with some grasslands. The highest point in the county is Humphrey's Peak located in the San Francisco Mountains at 12,633 feet above sea level at latitude 35°20'45"North and longitude 111°40'30"West. The lowest point in the county is in the Grand Canyon on the Colorado River at 2,400 feet above sea level at latitude 25°53'00"North and longitude 113°18'00"West.

Coconino County was established in 1891 and is the largest county in the state. On the north and northeast is the Grand Canyon, one of the world's most well-known natural wonders. In the north and east is Lake Powell and the Colorado River, the Kaibito and Moenkopi Plateaus, and Painted Desert of the Navajo Reservation. The Coconino and Kaibab National Forests lie to the south, with the San Francisco Peaks, the tallest in the state, in the center just north of Flagstaff.

The major population centers of Coconino County are the cities of Flagstaff, which is also the county seat, Fredonia, Page, Grand Canyon Village, Williams, Sedona, Seligman, Ash Fork, and Tuba City. Smaller towns or settlements located in Coconino County are Munds Park, Winona, Leupp, Two Guns, Mormon Lake, Supai, Tusayan, Cameron, and a number of Native American villages and settlements on the Navajo Reservation. The major commercial industries of Coconino County are ranching and tourism. In earlier days, logging, timber and lumber was very important to the economy of the county, but has since decreased. The racial makeup of the county is 63.09% Caucasian, including 10.94% Hispanic or Latino; 28.51% Native American and the balance from other races. 18.59 % of the population speak Navajo at home and 6.58% speak Spanish.

Interstate 17, Highways 87, 89, and 160 are the main north-south corridors of transportation, and Interstate 40, Highways 64 and 180 are the principal corridors running east and west. The main line of the BNSF Railroad (Burlington Northern Santa Fe) runs east and west through the center of the county, generally paralleling Interstate 40. (This railroad was formerly known as the Atchison Topeka and Santa Fe Railroad until merging with Burlington Northern Railroad in 1996). AMTRAK has a passenger station in Flagstaff with daily service east toward Chicago and west toward Los Angeles. A tourist train provides daily service from Williams to the South Rim of the Grand Canyon. Flagstaff's Pulliam Airport is just south of Flagstaff and is served by two commercial airlines. The Grand Canyon National Park Airport is a public airport located in Tusayan near the South Rim of the Grand Canyon. Greyhound Bus Lines has a terminal in Flagstaff and service is available along the two interstates, north and south on Interstate 17 and east and west on Interstate 40.

Flagstaff, the county seat, (latitude 35°11'57"North, longitude 111°37'52"West) is the largest city in Coconino County with an estimated population of 60,220 in 2008. Flagstaff lies to the south of the middle of the county in the shadow of Mt. Elden, just

south of the San Francisco Peaks. It is on the western side of the largest contiguous Ponderosa pine forest in the continental United States. It is the home of Lowell Observatory where the planet Pluto was discovered in 1930 and the United States Naval Observatory Flagstaff Station, whose personnel discovered Pluto's satellite or moon, Charon in 1978. Also located in Flagstaff is the Northern Arizona University, one of the three universities in Arizona, Coconino Community College, the Museum of Northern Arizona, and the United States Geological Survey Flagstaff Station. It has its own symphony orchestra and many other cultural activities and events.

Major areas of interest in Coconino County are Grand Canyon National Park, Painted Desert, Glen Canyon Dam and Lake Powell, Wupatki National Monument and Sunset Crater, Meteor Crater, Arizona Snow Bowl in the San Francisco Mountains, Museum of Northern Arizona in Flagstaff, Walnut Canyon National Monument and the Grand Falls of the Little Colorado River. Northern Arizona University is located in Flagstaff, Arizona, and Navajo Army Depot, operated by the Arizona Army National Guard is located near Bellemont, west of Flagstaff.

III. Background and Historical Perspectives

A. Public Trust Doctrine and Equal Footing Doctrine

The reason for the legislative mandated study of navigability of watercourses within the state is to determine who holds title to the beds and banks of such rivers and watercourses. Under the public trust doctrine, as developed by common law over many years, the tidal lands and beds of navigable rivers and watercourses, as well as the banks up to the high water mark, are held by the sovereign in a special title for the benefit of all the people. In quoting the U.S. Supreme Court, the Arizona Court of Appeals described the public trust doctrine in its decision in *The Center for Law v. Hassell*, 172 Ariz. 356, 837 P.2d 158 (App.1991), review denied October 6, 1992.

> An ancient doctrine of common law restricts the sovereign's ability to dispose of resources held in public trust. This doctrine, integral to watercourse sovereignty, was explained by the Supreme Court in *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387, 13 S.Ct. 110, 36 L.Ed. 1018 (1892). A

> state's title to lands under navigable waters is a title different in character from that which the State holds in lands intended for sale. . . . It is a title held in trust for the people of the State that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein freed from the obstruction or interference of private parties. *Id.* at 452, 13 S.Ct. at 118; *see also Martin v. Waddell*, 41 U.S. (16 Pet.) at 413 (describing watercourse sovereignty as "a public trust for the benefit of the whole community, to be freely used by all for navigation and fishery, as well for shellfish as floating fish").

Id., 172 Ariz. at 364, 837 P.2d at 166.

This doctrine is quite ancient and was first formally codified in the Code of the Roman Emperor Justinian between 529 and 534 A.D.[1] The provisions of this Code, however, were based, often verbatim, upon much earlier institutes and journals of Roman and Greek law. Some historians believe that the doctrine has even earlier progenitors in the rules of travel on rivers and waterways in ancient Egypt and Mesopotamia. This rule evolved through common law in England which established that the king as sovereign owned the beds of commercially navigable waterways in order to protect their accessibility for commerce, fishing and navigation for his subjects. In England the beds of nonnavigable waterways where transportation for commerce was not an issue were owned by the adjacent landowners.

This principle was well established by English common law long before the American Revolution and was a part of the law of the American colonies at the time of the Revolution. Following the American Revolution, the rights, duties and responsibilities of the crown passed to the thirteen new independent states, thus making them the owners of the beds of commercially navigable streams, lakes and other waterways within their boundaries by virtue of their newly established sovereignty. The ownership of trust lands by the thirteen original states was never ceded to the federal government. However, in exchange for the national government's agreeing to pay the debts of the thirteen original states incurred in financing the Revolutionary War, the states ceded to the national government their undeveloped western lands. In the Northwest Ordinance of 1787, adopted just prior to the

[1] *Putting the Public Trust Doctrine to Work*, David C. Slade, Esq. (Nov. 1990), pp. xvii and 4.

ratification of the U. S. Constitution and subsequently re-enacted by Congress on August 7, 1789, it was provided that new states could be carved out of this western territory and allowed to join the Union and that they "shall be admitted . . . on an equal footing with the original states, in all respects whatsoever." (Ordinance of 1787: The Northwest Territorial Government, § 14, Art. V, 1 stat. 50. See also U. S. Constitution, Art. IV, Section 3). This has been interpreted by the courts to mean that on admission to the Union, the sovereign power of ownership of the beds of navigable streams passes from the federal government to the new state. *Pollard's Lessee v. Hagan, et al.*, 44 U.S. (3 How.) 212 (1845), and *Utah Division of State Lands v. United States*, 482 U.S. 193 (1987).

In discussing the equal footing doctrine as it applies to the State's claim to title of beds and banks of navigable streams, the Court of Appeals stated in *Hassell*:

> The state's claims originated in a common-law doctrine, dating back at least as far as Magna Charta, vesting title in the sovereign to lands affected by the ebb and flow of tides. *See Martin v. Waddell*, 41 U.S. (16 Pet.) 367, 412-13, 10 L.Ed. 997 (1842). The sovereign did not hold these lands for private usage, but as a "high prerogative trust . . ., a public trust for the benefit of the whole community." *Id.* at 413. In the American Revolution, "when the people ... took into their own hands the powers of sovereignty, the prerogatives and regalities which before belong either to the crown or the Parliament, became immediately and rightfully vested in the state." *Id.* at 416.
>
> Although watercourse sovereignty ran with the tidewaters in England, an island country, in America the doctrine was extended to navigable inland watercourses as well. *See Barney v. Keokuk*, 94 U.S. 324, 24 L.Ed. 224 (1877); *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387, 434, 13 S.Ct. 110, 111, 36 L.Ed. 1018 (1892). Moreover, by the "equal footing" doctrine, announced in *Pollard's Lessee v.* Hagan, 44 U.S. (3 How.) 212, 11 L.Ed. 565 (1845), the Supreme Court attributed watercourse sovereignty to future, as well as then-existent, states. The Court reasoned that the United States government held lands under territorial navigable waters in trust for future states, which would accede to sovereignty on an "equal footing" with established states upon admission to the Union. *Id.* at 222-23, 229; *accord Montana v. United States*, 450 U.S. 544, 101 S.Ct. 1245, 67 L.Ed.2d 493 (1981); *Land Department v. O'Toole*, 154 Ariz. 43, 44, 739 P.2d 1360, 1361 (App. 1987).
>
> The Supreme Court has grounded the states' watercourse sovereignty in the Constitution, observing that "[t]he shores of navigable waters, and the soils under them, were not granted by the Constitution to the United States, but were reserved to the states respectively." *Pollard's Lessee*, 44 U.S. (3 How.) at 230; *see also Oregon ex rel. State Land Board v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 374, 97 S.Ct. 582, 589, 50 L.Ed.2d 550 (1977)

(states' "title to lands underlying navigable waters within [their] boundaries is conferred . . . by the [United States] constitution itself").

Id., 172 Ariz. 359-60, 837 P.2d at 161-162.

In the case of Arizona, the "equal footing" doctrine means that if any stream or watercourse within the State of Arizona was navigable on February 14, 1912, the date Arizona was admitted to the Union, the title to its bed is held by the State of Arizona in a special title under the public trust doctrine. If the stream was not navigable on that date, ownership of the streambed remained in such ownership as it was prior to statehood--the United States if federal land, or some private party if it had previously been patented or disposed of by the federal government--and could later be sold or disposed of in the manner of other land since it had not been in a special or trust title under the public trust doctrine. Thus, in order to determine title to the beds of rivers, streams, and other watercourses within the State of Arizona, it must be determined whether or not they were navigable or nonnavigable as of the date of statehood.

B. Legal Precedent to Current State Statutes

Until 1985, most Arizona residents assumed that all rivers and watercourses in Arizona, except for the Colorado River, were nonnavigable and accordingly there was no problem with the title to the beds and banks of any rivers, streams or other watercourses.[2] However, in 1985 Arizona officials upset this long-standing assumption and took action to claim title to the bed of the Verde River. *Land Department v. O'Toole*, 154 Ariz. 43, 739 P.2d 1360 (App. 1987). Subsequently, various State officials alleged that the State might hold title to certain lands in or near other watercourses as well. *Id.*, 154 Ariz. at 44, 739 P.2d at 1361. In order to resolve the title questions to the beds of Arizona rivers and streams, the Legislature enacted a law in 1987 substantially

[2] In 1865, the Arizona Territorial Legislature declared the Colorado river to be "navigable." See Memorial of the Legislature of Arizona, 38th Cong. 2nd Sess., Mis. Doc. No. 17 (January 25, 1865). The Territorial Legislature, in its first session, expressly held that "the Colorado River is the only navigable water in this Territory . . . ." *Id.* (emphasis added)

relinquishing the state's interest in any such lands.[3] With regard to the Gila, Verde and Salt Rivers, this statute provided that any record title holder of lands in or near the beds of those rivers could obtain a quitclaim deed from the State Land Commissioner for all of the interest the sate might have in such lands by the payment of a quitclaim fee of $25.00 per acre. The Arizona Center for Law in the Public Interest filed suit against Milo J. Hassell in his capacity as State Land Commissioner, claiming that the statute was unconstitutional under the public trust doctrine and gift clause of the Arizona Constitution as no determination had been made of what interest the state had in such lands and what was the reasonable value thereof so that it could be determined that the state was getting full value for the interests it was conveying. The Superior Court entered judgment in favor of the defendants and an appeal was taken. In its decision in *Hassell,* the Court of Appeals held that this statute violated the public trust doctrine and the Arizona Constitution and further set forth guidelines under which the state could set up a procedure for determining the navigability of rivers and watercourses in Arizona. In response to this decision, the Legislature established the Arizona Navigable Stream Adjudication Commission and enacted the statutes pertaining to its operation. 1992 Arizona Session Laws, Chapter 297 (1992 Act). The charge given to the Commission by the 1992 Act was to conduct full evidentiary public hearings across the state and to adjudicate the State's claims to ownership of lands in the beds of watercourses. See generally former A.R.S. §§ 37-1122 to 37-1128.

The 1992 Act provided that the Commission would make findings of navigability or nonnavigability for each watercourse. See former A.R.S. § 37-1128(A). Those findings were based upon the "federal test" of navigability in former A.R.S. § 37-1101(6). The Commission would examine the "public trust values" associated with a

[3] Prior to the enactment of the 1987 statute, the Legislature made an attempt to pass such a law, but the same was vetoed by the Governor. The 1987 enactment was signed by the Governor and became law. 1987 Arizona Sessions Law, Chapter 127.

particular watercourse only if and when it determined that the watercourse was navigable. See former A.R.S. §§ 37-1123(A)(3), 37-1128(A).

The Commission began to take evidence on certain watercourses during the fall of 1993 and spring of 1994. In light of perceived difficulties with the 1992 Act, the Legislature revisited this issue during the 1994 session and amended the underlying legislation. See 1994 Arizona Session Laws, ch. 178 ("1994 Act"). Among other things, the 1994 Act provided that the Commission would make a recommendation to the Legislature, which would then hold additional hearings and make a final determination of navigability by passing a statute with respect to each watercourse. The 1994 Act also established certain presumptions of nonnavigability and exclusions of some types of evidence.

Based upon the 1994 Act, the Commission went forth with its job of compiling evidence and making a determination of whether each watercourse in the state was navigable as of February 14, 1912. The Arizona State Land Department issued technical reports on each watercourse, and numerous private parties and public agencies submitted additional evidence in favor of or opposed to navigability for particular watercourses. See, *Defenders of Wildlife v. Hull*, 199 Ariz. 411, 416, 18 P.3d 722, 727 (App. 2001). The Commission reviewed the evidence and issued reports on each watercourse which were transmitted to the Legislature. The Legislature then enacted legislation relating to the navigability of each specific watercourse. The Court of Appeals struck down that legislation in its *Hull* decision, finding that the Legislature had not applied the proper standards of navigability. *Id.* 199 Ariz. at 427-28, 18 P.2d at 738-39.

In 2001, the Legislature again amended the underlying statute in another attempt to comply with the Court's pronouncements in *Hassell* and *Hull*. See, 2001 Arizona Session Laws, ch. 166, § 1. The 2001 legislation now governs the Commission in making its findings with respect to the small and minor watercourses in Coconino County.

IV. Issues Presented

The applicable Arizona statutes state that the Commission has jurisdiction to determine which, if any, Arizona watercourses were "navigable" on February 14, 1912 and for any watercourses determined to be navigable, to identify the public trust values. A.R.S. § 37-1123. A.R.S. § 37-1123A provides as follows:

> A. The commission shall receive, review and consider all relevant historical and other evidence presented to the commission by the state land department and by other persons regarding the navigability or nonnavigability of watercourses in this state as of February 14, 1912, together with associated public trust values, except for evidence with respect to the Colorado river, and, after public hearings conducted pursuant to section 37-1126:
>
> 1. Based only on evidence of navigability or nonnavigability, determine which watercourses were not navigable as of February 14, 1912.
>
> 2. Based only on evidence of navigability or nonnavigability, determine which watercourses were navigable as of February 14, 1912.
>
> 3. In a separate, subsequent proceeding pursuant to section 37-1128, subsection B, consider evidence of public trust values and then identify and make a public report of any public trust values that are now associated with the navigable watercourses.

A.R.S. §§ 37-1128A and B provide as follows:

> A. After the commission completes the public hearing with respect to a watercourse, the commission shall again review all available evidence and render its determination as to whether the particular watercourse was navigable as of February 14, 1912. If the preponderance of the evidence establishes that the watercourse was navigable, the commission shall issue its determination confirming the watercourse was navigable. If the preponderance of the evidence fails to establish that the watercourse was navigable, the commission shall issue its determination confirming that the watercourse was nonnavigable.
>
> B. With respect to those watercourses that the commission determines were navigable, the commission shall, in a separate, subsequent proceeding, identify and make a public report of any public trust values associated with the navigable watercourse.

Thus, in compliance with the statutes, the Commission is required to collect evidence, hold hearings, and determine which watercourses in existence on February 14, 1912, were navigable or nonnavigable. This report pertains to all of the small and minor watercourses in Coconino County, Arizona, and excludes the Colorado

River and Little Colorado River. In the hearings to which this report pertains, the Commission considered all of the available historical and scientific data and information, documents and other evidence relating to the issue of navigability of the small and minor watercourses in Coconino County, Arizona, as of February 14, 1912.

Public trust values were not considered in these hearings but will be considered in separate, subsequent proceedings, if required. A.R.S. §§ 37-1123A3 and 37-1128B. In discussing the use of an administrative body such as the Commission on issues of navigability and public trust values, the Arizona Court of Appeals in its decision in *Hassell* found that the State must undertake a "particularized assessment" of its "public trust" claims but expressly recognized that such assessment need not take place in a "full blown judicial" proceeding.

> We do not suggest that a full-blown judicial determination of historical navigability and present value must precede the relinquishment of any state claims to a particular parcel of riverbed land. An administrative process might reasonably permit the systematic investigation and evaluation of each of the state's claims. Under the present act, however, we cannot find that the gift clause requirement of equitable and reasonable consideration has been met.

Id., 172 Ariz. at 370, 837 P.2d at 172.

The 2001 *Hull* court, although finding certain defects in specific aspects of the statute then applicable, expressly recognized that a determination of "navigability" was essential to the State having any "public trust" ownership claims to lands in the bed of a particular watercourse:

> The concept of navigability is "essentially intertwined" with public trust discussions and "[t]he navigability question often resolves whether any public trust interest exists in the resource at all." Tracy Dickman Zobenica, *The Public Trust Doctrine in Arizona's Streambeds*, 38 Ariz.L.Rev. 1053, 1058 (1996). In practical terms, this means that **before a state has a recognized public trust interest in its watercourse bedlands, it first must be determined whether the land was acquired through the equal footing doctrine. However, for bedlands to pass to a state on equal footing grounds, the watercourse overlying the land must have been "navigable" on the day that the state entered the union.**

199 Ariz. at 418, 18 P.3d at 729 (also citing *O'Toole*, 154 Ariz. at 45, 739 P.2d at 1362 (emphasis added).

The Legislature and the Court of Appeals in *Hull* have recognized that, unless the watercourse was "navigable" at statehood, the State has no "public trust" ownership claim to lands along that watercourse. Using the language of *Hassell*, if the watercourse was not "navigable," the "validity of the equal footing claims that [the State] relinquishes" is **zero**. *Hassell*, 172 Ariz. at 371, 837 P.2d at 173. Thus, if there is no claim to relinquish, there is no reason to waste public resources determining (1) the value of any lands the State **might** own **if** it had a claim to ownership, (2) "equitable and reasonable considerations" relating to claims it might relinquish without compromising the "public trust," or (3) any conditions the State might want to impose on transfers of its ownership interest. See *id.*

V. Burden of Proof

The Commission in making its findings and determinations utilized the standard of the preponderance of the evidence as the burden of proof as to whether or not a stream was navigable or nonnavigable. A.R.S. § 37-1128A provides as follows:

> After the commission completes the public hearing with respect to a watercourse, the commission shall again review all available evidence and render its determination as to whether the particular watercourse was navigable as of February 14, 1912. If the preponderance of the evidence establishes that the watercourse was navigable, the commission shall issue its determination confirming that the watercourse was navigable. If the preponderance of the evidence fails to establish that the watercourse was navigable, the commission shall issue its determination confirming that the watercourse was nonnavigable.

This statute is consistent with the decision of the Arizona courts that have considered the matter. *Hull*, 199 Ariz. at 420, 18 P.3d at 731 ("... a 'preponderance' of the evidence appears to be the standard used by the courts. See, *e.g.*, *North Dakota v. United States*, 972 F.2d 235-38 (8th Cir. 1992)"); *Hassell*, 172 Ariz. at 363, n. 10, 837 P.2d at 165, n. 10 (The question of whether a watercourse is navigable is one of fact. The burden of proof rests on the party asserting navigability ..."); *O'Toole*, 154 Ariz. at 46, n. 2, 739 P.2d at 1363, n. 2.

The most commonly used legal dictionary contains the following definition of "preponderance of the evidence":

> Evidence which is of greater weight or more convincing than the evidence which is offered in opposition to it; that is, evidence which as a whole shows that the fact sought to be proven is more probable than not. *Braud v. Kinchen,* La.App., 310 So.2d 657, 659. With respect to burden of proof in civil actions, means greater weight of evidence, or evidence which is more credible and convincing to the mind. That which best accords with reason and probability. The word "preponderance" means something more than "weight"; it denotes a superiority of weight, or outweighing. The words are not synonymous, but substantially different. There is generally a "weight" of evidence on each side in case of contested facts. But juries cannot properly act upon the weight of evidence, in favor of the one having the onus, unless it overbears, in some degree, the weight upon the other side.

Black's Law Dictionary, 1064 (5th ed. 1979).

The "preponderance of the evidence" standard is sometimes referred to as requiring "fifty percent plus one" in favor of the party with the burden of proof. One could imagine a set of scales. If the evidence on each side weighs exactly evenly, the party without the burden of proof must prevail. In order for the party with the burden to prevail, sufficient evidence must exist in order to tip the scales (even slightly) in its favor. See, generally, *United States v. Fatico,* 458 U.S. 388, 403-06 (E.D. N.Y. 1978), *aff'd*

603 F.2d 1053 (2nd Cir. 1979), *cert. denied* 444 U.S. 1073 (1980); *United States v. Schipani*, 289 F.Supp. 43, 56 (E.D. N.Y. 1968), aff'd, 414 F.2d 1262 (2nd Cir. 1969).[4]

VI. Standard for Determining Navigability

The statute defines a navigable watercourse as follows:

> "Navigable" or "navigable watercourse" means a watercourse that was in existence on February 14, 1912, and at that time was used or was susceptible to being used, in its ordinary and natural condition, as a highway for commerce, over which trade and travel were or could have been conducted in the customary modes of trade and travel on water.

A.R.S. § 37-1101(5).

The foregoing statutory definition is taken almost verbatim from the U. S. Supreme Court decision in *The Daniel Ball*, 77 U.S. (10 Wall) 557, 19 L.Ed. 999 (1870), which is considered by most authorities as the best statement of navigability for title purposes.[5] In its decision, the Supreme Court stated:

> Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water.

---

[4] In a recent Memorandum Decision of the Arizona Court of Appeals, the Defenders of Wildlife and others through their representative, Arizona Center for Law in the Public Interest, attacked the constitutionality of the burden of proof for navigability determination by the Commission specified in A.R.S. § 37-1128(A). In that case, the Defenders claimed that the burden of proof specified in the statute conflicts with federal law and should be declared invalid because it is contrary to a presumption favoring sovereign ownership of bedlands. In discussing and rejecting *Defenders* position the Court stated: ". . . In support of this argument, Defenders cite to our decision in *Defenders*, see 199 Ariz. At 426, ¶ 54, 18 P.3d at 737, and to *United States v. Oregon*, 295 U.S. 1, 14 (1935). But neither of these decisions held that the burden of proof in a navigability determination must be placed on the party opposing navigability. Moreover, this court has twice stated that the burden of proof rests on the party asserting navigability. *Hassell*, 172 Ariz. At 363 n. 10, 837 P.2d at 165 n. 10; *O'Toole*, 154 Ariz. At 46 n. 2, 739 P.2d at 1363 n. 2. We have also recognized that a 'preponderance' of the evidence appears to be the standard used by the courts" as the burden of proof. *Defenders*, 199 Ariz. At 420, ¶ 23, 18 P.3d at 731 (citing *North Dakota v. United States*, 972 F.2d 235, 237-38 (8th Cir. 1992)). Defenders have not cited any persuasive authority suggesting that these provisions in § 37-1128(A) are unconstitutional or contrary to federal law. We agree with this court's prior statements and conclude that neither placing the burden of proof on the proponents of navigability nor specifying the burden as a preponderance of the evidence violates the State or Federal Constitutions or conflicts with federal law." *State of Arizona v. Honorable Edward O. Burke* 1 CA-SA 02-0268 and 1 CA-SA 02-0269 (Consolidated); Arizona Court of Appeals, Division One, (Memorandum Decision filed December 23, 2004).

[5] The *Daniel Ball* was actually an admiralty case, but the U.S. Supreme Court adopted its definition of navigability in title and equal footing cases. *Utah v. United States*, 403 U.S. 9, 91 S.Ct. 1775, 29 L.Ed.2 279 (1971) and *United States v. Oregon*, 295 U.S. 1, 55 S.Ct. 610, 70 L.Ed.2 1263 (1935).

77 U.S. at 563.

In a later opinion in *U. S. v. Holt Bank*, 270 U.S. 46 (1926), the Supreme Court stated:

> [Waters] which are navigable in fact must be regarded as navigable in law; that they are navigable in fact when they are used, or are susceptible of being used, in their natural and ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and ravel on water; and further that navigability does not depend on the particular mode in which such use is or may be had—whether by steamboats, sailing vessels or flatboats—nor on an absence of occasional difficulties in navigation, but on the fact, if it be a fact, that the [water] in its natural and ordinary condition affords a channel for useful commerce.

270 U.S. at 55-56.

The Commission also considered the following definitions contained in A.R.S. § 37-1101 to assist it in determining whether small and minor watercourses in Greenlee County were navigable at statehood.

> 11. "Watercourse" means the main body or a portion or reach of any lake, river, creek, stream, wash, arroyo, channel or other body of water. Watercourse does not include a manmade water conveyance system described in paragraph 4 of this section, except to the extent that the system encompasses lands that were part of a natural watercourse as of February 14, 1912.
>
> 5. "Navigable" or "navigable watercourse" means a watercourse that was in existence on February 14, 1912, and at that time was used or was susceptible to being used, in its ordinary and natural condition, as a highway for commerce, over which trade and travel were or could have been conducted in the customary modes of trade and travel on water.
>
> 3. "Highway for commerce" means a corridor or conduit within which the exchange of goods, commodities or property or the transportation of persons may be conducted.
>
> 2. "Bed" means the land lying between the ordinary high watermarks of a watercourse.
>
> 6. "Ordinary high watermark" means the line on the banks of a watercourse established by fluctuations of water and indicated by physical characteristics, such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation or the presence of litter and debris, or by other appropriate

means that consider the characteristics of the surrounding areas. Ordinary high watermark does not mean the line reached by unusual floods.

8. "Public trust land" means the portion of the bed of a watercourse that is located in this state and that is determined to have been a navigable watercourse as of February 14, 1912. Public trust land does not include land held by this state pursuant to any other trust.

Thus, the State of Arizona in its current statutes follows the federal test for determining navigability.

VII. Evidence Received and Considered by the Commission

Pursuant to A.R.S. § 37-1123, and other provisions of Title 37, Chapter 7, Arizona Revised Statutes, the Commission received, compiled, and reviewed evidence and records regarding the navigability and nonnavigability of small and minor watercourses located in Coconino County, Arizona. Evidence consisting of studies, written documents, newspapers and other historical accounts, pictures and testimony were submitted. A comprehensive study entitled "Final Report - Small & Minor Watercourses Analysis for Coconino County, Arizona" prepared by Stantec Consulting Inc., in association with JE Fuller/Hydrology & Geomorphology, Inc., under supervision of the Arizona State Land Department, dated October, 2000, was submitted. The Commission also considered documents, studies, and reports submitted mainly in conjunction with the studies on the Little Colorado River and Verde River by the Arizona Center for Law in the Public Interest, the Central Arizona Paddlers Club (Dorothy Riddle), Chicago Title Insurance Company, Arizona Audubon Council, Winkelman Natural Conservation District and several individuals, including Timothy Flood, A. Ralph Curtis and Richard Lee Duncan. The list of evidence and records, together with a summarization is attached as Exhibit "E". The Commission also heard testimony and received and considered evidence at the public hearing on small and minor watercourses located in Coconino County, Arizona, held in Flagstaff, Arizona, on July 14, 2005. The minutes of the hearing are attached hereto as Exhibit "D".

A. Small & Minor Watercourses Analysis for Coconino County, Arizona

1. Analysis Methods

Due to the large number of small and minor watercourses located in Coconino County, Arizona (5,276 watercourses, of which 4,977 are unnamed), it is impractical and unnecessary to consider each watercourse with the same detail that the Commission considered major watercourses. The study of small and minor watercourses developed by Stantec Consulting Inc. and its associate J. E. Fuller Hydrology & Geomorphology, Inc. provided for an evaluation using a three-level process which contained criteria that would be necessarily present for a stream to be considered navigable.[6] A master database listing all small and minor watercourses was developed from the Arizona Land Resource Information System (ALRIS) with input from the U. S. Geological Survey, the U. S. Environmental Protection Agency and other agencies and sources. The final version of the master database called "Streams" includes a hydrological unit code (HUC), segment number, mileage, watercourse type and watercourse name, if available. Thus there is a hydrological unit code for each of the segments of the 5,276 small and minor watercourses in Coconino County, Arizona. In addition, the database locates each segment by section, township, and range. Some of the satellite databases discussed below also locate certain significant reference points by latitude and longitude.

Using the master database, the contractor also set up six satellite databases, each relating to a specific stream characteristic or criterion, that would normally be found in a watercourse considered to be navigable or susceptible of navigability. These stream criteria are as follows:

1. Perennial stream flow;
2. Dam located on stream;
3. Fish found in stream;

[6] The three-level process begins with a presumption and hypothesis that each stream is navigable. Analysis at each level attempts to reject that hypothesis. Fuller Final Report for Mohave County, November 22, 2002.

4. Historical record of boating;

5. Record of modern boating; and

6. Special status (other water related characteristics, including in-stream flow application and/or permit, unique waters, wild and scenic, riparian, and preserve).

All watercourses were evaluated at level one which is a binary (yes or no) sorting process as to whether or not these characteristics are present. For a stream or watercourse not to be rejected at level one, it must be shown that at least one of these characteristics is present. If none of these characteristics are present, the stream or watercourse is determined to require no further study and is rejected at level one as having no characteristics of navigability.

All streams and watercourses surviving the level one sorting (i.e., determined to have one or more of the above characteristics) are evaluated at level two. The level two analysis is more qualitative than level one and its assessment requires a more in-depth analysis to verify and interpret the reasons that caused a particular stream to advance from level one. Each of the above characteristics on which there was an affirmative answer at level one is analyzed individually at level two to determine whether the stream is potentially susceptible to navigation or not susceptible to navigation; for example, a watercourse that at first appears to be perennial in flow but upon further analysis is determined to have only a small flow from a spring for a short distance and therefore cannot be considered perennial for any substantial portion of the watercourse.

In addition, the level two analysis utilized a refinement with value engineering techniques analyzing watercourses with more than one affirmative response at level one and assigned values to each of the six categories mentioned above. Clearly, perennial flow, historical boating, and modern boating are more important to the issue of navigability than the categories of dam impacted, special status, or fish. Thus, for the purpose of the value engineering study, the following rough values were assigned to

each of the six categories: historical boating-10, modern boating-8, perennial stream-7, dam impacted-4, fish-4, and special status-2. These values were arrived at after much calculation, analysis and evaluation of each stream having affirmative responses at level one. This system is a recognized tool used in value engineering studies, and seven qualified engineers from the state Land Department and consulting staff of the contractor participated in determining the values used for each category. This system establishes that a value in excess of 13 is required for a stream to survive the level two evaluation and pass to level three for consideration.[7] Thus, a stream having both perennial flow and historical boating (sum value of 17), or a combination of the values set for other criteria equaling more than 13, would require that the stream pass to evaluation at level three. If a stream does not have a sum value greater than 13, it is determined to require no further study and is rejected at level two as having insufficient characteristics of navigability.

If a stream survives the evaluation at level two, it goes on to level three which uses quantitative hydrologic and hydraulic analysis procedures including any stream gauge data available, as well as engineering estimates of depth, width and velocity of any water flow in the subject watercourse and comparing the same to minimum standards required for different types of vessels. Also considered is the configuration of the channel and whether it contains rapids, boulders, sand bars or other obstacles. If a stream or watercourse is not rejected or eliminated at level three, it is removed from this process and subjected to a separate detailed study similar to that performed on a major watercourse, and a separate report will be issued on that stream or watercourse. Since three streams survived the level three analysis, a separate detailed stream navigability study was performed on each of them and separate reports are included herein.

[7] When this procedure was first developed, a cutoff value of 11 was established for a stream to survive level two and pass to level three for evaluation. As the procedure was refined, the cutoff value of 13 was substitute for 11 as it was felt to be more accurate. In this case it makes no difference which value is used since no stream has a value between 11 and 13.

2. Application of Analysis Methods to Small and Minor Watercourses in Coconino County

The application of the level one analysis to the 5,276 small and minor watercourses located in Coconino County resulted in 5,147 watercourses or 97.6% being determined as not having any of the six characteristics listed above, and these 5,147 were therefore rejected or eliminated and did not proceed to a further evaluation at level two. Attached as Exhibit "F" is a list of the watercourses in Coconino County which were determined to have no characteristics of navigability or characteristics indicating susceptibility of navigability at level one.

Only 129 watercourses, approximately 2.4%, received an affirmative response to one or more of the above characteristics or criteria and were evaluated at level two. Sixty-seven of these watercourses had only one positive response at level one and, after further analysis of that affirmative response, were rejected and determined not to have characteristics of navigability requiring further study. Sixty-two of the watercourses received an affirmative response to more than one of the characteristics listed but, after analysis, were determined to have a total value of 13 or less and were rejected and determined to have insufficient characteristics of navigability or susceptibility of navigability to warrant further study. In the value engineering analysis, it was determined that only fourteen of those watercourses had a sum value of more than 13 when analyzed pursuant to the value engineering techniques and therefore should be advanced for further study at level three. It was thus determined that 115 of the streams analyzed at level two could not be considered as susceptible of navigability and were therefore rejected at level two. Attached as Exhibit "G" is a list of the 129 watercourses that received a positive response to one or more of the characteristics listed above and were evaluated at level two. The fourteen streams that survived the value engineering analysis at level two and were considered at level three are: Oak Creek, West Clear Creek, Wet Beaver Creek, Fossil Creek, Sycamore Creek, Barbershop

Canyon, Canyon Creek, Chevelon Creek, Clear Creek, East Clear Creek, Kanab Creek, Paria River, West Canyon Creek and Tonto Creek.

3. Level Three Analysis for Oak Creek

Oak Creek is located in the southern portion of Coconino County, south of Flagstaff and the northeastern portion of Yavapai County. It received four affirmative responses in the level one analysis including perennial stream flow, modern boating, fish in stream and special status.

Oak Creek originates from springs at the head of Oak Creek Canyon just south and west of Flagstaff and flows due south through Sedona and bears west where it crosses the Yavapai County line, flowing past Cornville to its confluence with the Verde River. It is approximately 42 miles in length and has a drainage area of 474 square miles. The watershed is bounded by mountains, especially in its upper reach where it flows through a narrow canyon. Below Sedona the canyon widens and the stream is a meandering sand and cobble channel with a wide shallow cross section until it flows into the Verde River. Elevations within the watershed range from 8,656 feet at Mormon Mountain to 3,173 feet at its confluence with the Verde River. Vegetation within the watershed varies from Arizona upland desert scrub in the lower elevations to oak, woodland, and ponderosa pine in the upper elevations. Along Oak Creek the vegetation includes rich cottonwood, willow and walnut riparian forests, along with a variety of grasses and reeds. The upper reach consists of a series of boulder-lined chutes and pools formed in local bedrock like those at Slide Rock State Park. The channel in this canyon reach is located at the bottom of a deep canyon with near vertical walls and a small to nonexistent floodplain. The lower reach is a meandering sand and cobble bed channel approximately 60 feet wide with occasional bedrock outcroppings in the bed and banks of the main channel. Oak Creek is perennial throughout its length.

There are three U. S. Geological Survey stream gauges which provide a historical record of stream flow for Oak Creek. The average annual flow is 90 to 100 cubic feet per

second (cfs) with the larger flows recorded at the middle gauging station at Sedona. The months of February, March and April are the highest flow months due to melting snow in the mountains in the upper watershed. The average depth is one-half foot to one foot, although it is less where the stream widens out in the lower reach. Boulders and ripples in the stream make boating difficult, but the stream is listed as a seasonal boating stream by the Arizona State Parks Department and certain reaches are popular for canoeing or kayaking during the late winter and early spring when the flow is highest. The consultants recommended a detailed study for Oak Creek due to the presence of a perennial flow and reliable recreational boating conditions during a small portion of the year. Accordingly, this watercourse was not rejected at level three and a separate detailed study was conducted.

4. Level Three Analysis for West Clear Creek

West Clear Creek is located in the southernmost portion of Coconino County above the Mogollon Rim and the east central portion of Yavapai County. It received three affirmative responses in the level one analysis, including perennial stream flow, modern boating, and fish in stream.

West Clear Creek originates in the deep canyons of Coconino National Forest in southern Coconino County north of the Mogollon Rim and just west of Clint's Well. It flows in a westerly direction until it crosses the county line into Yavapai County, and then veers slightly south until it converges with the Verde River south and east of Camp Verde after crossing State Highway 260. It is 34.4 miles in length and has a drainage area or watershed of 293 square miles which drains a portion of the Coconino National Forest. The watershed is bounded by the mountains of Coconino National Forest to the north and east and Mogollon Rim and Mogollon Mesa to the south. Elevations within the watershed range from 8,870 feet at Mahan Mountain to 2,990 feet at the confluence of West Clear Creek with the Verde River. Vegetation in the watershed varies from oak, woodland, and piñon juniper forests in the upper elevations

to high desert grass and brush in the lower elevations. Along West Clear Creek the vegetation includes cottonwood, willow, and walnut riparian forests at some locations as well as a variety of desert grasses and reeds in its lower reach.

The upper portion of West Clear Creek is in deep canyons and slightly sinuous cobble and boulder bed channel approximately 25 feet wide in most places. This reach generally has a narrow deep cross section with a single channel located at the bottom of a large V-shaped canyon. Slot canyons with bedrock walls occur throughout the reach, creating pools of up to 20 feet deep and up to 200 feet long. Many locations in the canyon reach are popular for hiking, swimming and fishing. The floodplain is narrow in this reach, although some thin floodplain corridors exist. The upper canyon reach of West Clear Creek is perennial with a base flow of about 15 cfs. The main channel of the valley or lower reach is a wide braided sand and cobble bed channel due to the canyon's widening out. Downstream of State Route 260 the stream widens with a broad overflow area of up to 200 feet that transition into a wider geologic floodplain. Flow is perennial in the valley reach, although a small percentage of the flow is lost to infiltration and irrigation diversions. Low flow in the lower reach is generally in pool and riffle sequence with occasional braiding.

There is one U.S. Geological Survey stream gauge which is located in Yavapai County and is near the exit of West Clear Creek from the Canyon reach to the broader plain reach. The stream gauge data indicate that West Clear Creek is a perennial stream and has an average mean flow of 67 cfs. The highest seasonal flow occurs during the months of February, March and April when the snow melts in the upstream forests. During unusual periods of high precipitation and flooding, the stream flow is much higher and has recently had a peak flow of 24,800 cfs in 1963. Comparing the stream flow data with boating criteria, it would appear that portions of the stream could be boated by low draft canoes or kayaks about 10 percent of the time. Deep pools in the upper canyon reach would float a variety of boat types, but the largest of these pools is

less than a couple of hundred feet in length. Impediments to boating in the upper reach include severely limited access, numerous waterfalls, huge boulder fields, and dense riparian and aquatic vegetation.

The Arizona State Parks Department lists West Clear Creek as a modern recreational boating stream, however, generally limited to use by kayaks and canoes during the period of the normal spring runoff and typically conducted downstream in the lower reach. There is no history of commercial boating or fishing on this stream. Due to the presence of perennial flow and records of modern recreational boating, as well as a rich history of occupation in the Verde Valley along West Clear Creek, the contractors have recommended a more in-depth study of potential or susceptibility of navigability of West Clear Creek and, accordingly, this watercourse was not rejected at level three and a separate detailed study was conducted.

5. Level Three Analysis for Wet Beaver Creek

Wet Beaver Creek is located in the southwestern portion of Coconino County and the east central portion of Yavapai County. It parallels West Clear Creek to the north and drains the area of Coconino National Forest north of the West Clear Creek watershed. It received four affirmative responses in the level one analysis, including perennial stream flow, modern boating, fish in stream, and special status.

Wet Beaver Creek originates in the deep canyons of the Coconino National Forest just west of Happy Jack and flows west with a southerly cant until it crosses the Yavapai County line, and then flows past Montezuma Well near Montezuma Castle National Monument to its confluence with the Verde River. It is 30.1 miles in length and has a drainage area or watershed of 434 square miles. The watershed is bounded by the mountains and canyons of the Coconino National Forest to the north, east and south until it flows out into the plains in the Verde Valley. Elevations within the watershed range from 7,713 feet at Mt. Nester to 3,083 feet at its confluence with the Verde River. Vegetation in the watershed varies from oak, woodland, and piñon

juniper forests in the upper elevations to high desert grass and brush in the lower elevations. Along Wet Beaver Creek the vegetation includes cottonwood, willow, and walnut riparian forests at some locations as well as a variety of desert grasses and reeds in its lower reach.

The upper portion of Wet Beaver Creek is in deep canyons and slightly sinuous cobble and boulder bed channel approximately 25 feet wide in most places. This reach generally has a narrow deep cross section with a single channel located at the bottom of a large V-shaped canyon. Slot canyons with bedrock walls occur throughout the reach, creating pools of up to 20 feet deep and up to 200 feet long. Many locations in the canyon reach are popular for hiking, swimming and fishing. The floodplain is narrow in this reach, although some thin floodplain corridors exist. The upper canyon reach of Wet Beaver Creek is perennial with a base flow of about 15 cfs. The main channel of the valley or lower reach is a wide braided sand and cobble bed channel due to the canyon's widening out. Downstream of State Route 260 the stream widens with a broad overflow area of up to 200 feet that transition into a wider geologic floodplain. Flow is perennial in the valley reach, although a small percentage of the flow is lost to infiltration and irrigation diversions. Low flow in the lower reach is generally in pool and riffle sequence with occasional braiding.

There are two U.S. Geological Survey stream gauges on Wet Beaver Creek, the lower one being near the confluence with the Verde River near Camp Verde and the other being about halfway long its length upstream from Rimrock and downstream from the Wet Beaver Wilderness. The average mean flow at the upper gauging station is 36 cfs and at the lower, 125 cfs. Comparing the stream flow data with boating criteria, it would appear that portions of the stream could be boated by low draft canoes or kayaks about 10 percent of the time. Deep pools in the upper canyon reach would float a variety of boat types, but the largest of these pools is less than a couple of hundred feet in length. Impediments to boating in the upper reach include severely limited

access, numerous waterfalls, huge boulder fields, and dense riparian and aquatic vegetation.

The Arizona State Parks Department lists Wet Beaver Creek as a modern recreational boating stream, however, generally limited to use by kayaks and canoes during the period of the normal spring runoff and typically conducted downstream in the lower reach. There is no history of commercial boating or fishing on this stream. Due to the presence of perennial flow and records of modern recreational boating, as well as a rich history of occupation in the Verde Valley along Wet Beaver Creek, the contractors have recommended a more in-depth study of potential or susceptibility of navigability of Wet Beaver Creek and, accordingly, this watercourse was not rejected at level three and a separate detailed study was conducted.

6. Level Three Analysis for Fossil Creek

Fossil Creek is located in the southernmost portion of Coconino County where it drains the Fossil Springs Wilderness and flows in a southwesterly direction forming the boundary between Gila County and Yavapai County. It received three affirmative responses in the level one analysis, including perennial flow, fish in stream and impacted by a dam.

Fossil Creek drains the western extent of the Mogollon Rim and flows into the Verde River. It is 16.5 miles in length and drains a watershed of 140 square miles. The watershed ranges in elevation from 7,858 feet at Twenty-nine Mile Butte to 2,554 feet at the Verde River/Fossil Creek confluence. Vegetation within the watershed varies from Arizona upland desert scrub in the lower elevations to oak woodland and juniper in the upper elevations. Vegetation along Fossil Creek is rich and flourishing and includes cottonwood, willow, and walnut riparian forests at some locations, as well as a variety of grasses and reeds.

The main channel of the mountain canyon reach upstream from Fossil Springs is a steep step-pool pattern controlled by local bedrock. The average width of the channel

is about 40 feet and the streambed materials range from coarse sands to large cobbles and boulders. The floodplain is small to non-existent with a narrow cord of riparian vegetation. This reach is ephemeral.

Reach No. 2 between Fossil Springs and the Fossil Creek Dam is surrounded by a rich riparian habitat as a result of constant runoff of approximately 43 cfs from several springs. The channel ranges from 20 to 45 feet in width and the floodplain is up to 60 feet wide. The streambed is in the deep bedrock canyon walls and contains fine sands and cobbles with a classic pool and riffle sequence. This reach is perennial.

The lower portion of this stream which is downstream from Fossil Creek Dam consists of a cobble and boulder bed channel ranging from 30 to 50 feet wide. Small slot canyons and deep pools are scattered throughout the reach. Fish and other aquatic life are present in this area. Travertine rock forms pools and sills throughout the reach. The floodplain widths reach 100 feet but are confined by bedrock and steep canyon walls up to the Verde River confluence. This reach is considered perennial.

Fossil Creek Dam was constructed prior to statehood in 1912. Water has been diverted from this creek at the dam site since prior to statehood for the hydroelectric power plant located near Childs. The dam was decommissioned in 2000 and removed in 2007 and 2008. The absence of this diversion has increased the amount of flow but not enough to make the stream susceptible of navigability.

There are no U. S. Geological Survey stream gauges on Fossil Creek, but gauge data for the Fossil Creek diversion pipeline to the power plant was available, as well as gauge data from nearby watersheds. The highest normal mean flow on Fossil Creek is between 40 and 50 cfs, although a peak discharge during a 50-year flood could range as high as 17,000 cfs. Comparing the boating criteria and hydrological data for Fossil Creek with approved boating criteria indicates that during normal flow the creek can be utilized by low draft canoes, kayaks and other recreational craft in a portion of its reaches, particularly the large pools which are less than a few hundred feet in length.

The removal of Fossil Creek Dam has added to the flow in the lower two reaches of Fossil Creek, however, due to the steep slopes, small waterfalls and rapids, and overhanging vegetation, commercial boating or boating in an upstream direction would not be possible. There is no history of boating on this stream and no history of commercial fishing.

In view of the foregoing, Fossil Creek was considered as not susceptible to navigability during its ordinary flow and was therefore rejected at level three.

7. Level Three Analysis for Sycamore Creek

Sycamore Creek is located in the south central portion of Coconino County and the north central portion of Yavapai County. Its headwaters lie to the west of Bellemont and Camp Navajo Military Reservation, and it flows in a southerly direction through the Sycamore Cany Wilderness Area, crossing the Yavapai County line and flowing into the Verde River near Perkinsville. Sycamore Creek was named after the historical Sycamore Townsite located at its mouth. It received three affirmative responses in the level one analysis, including perennial flow, fish in stream, and special status.

Sycamore Creek drains a portion of the Coconino Plateau. It is 38.1 miles in length and drains a watershed of 348 square miles. The watershed ranges in elevation from over 9,389 feet at Sitgreaves Mountain to 3,553 feet at the Verde River/Sycamore Creek confluence. Vegetation within the watershed varies from Arizona upland desert scrub in the lower elevations to oak woodland, sycamore, and juniper in the upper elevations of Sycamore Canyon. Vegetation along Sycamore Creek includes oak woodland, as well as walnut, cottonwood and sycamore trees along the lower elevation stream banks. The main channel of Sycamore Creek is slightly sinuous with a cobble and boulder bed and an average width of 60 feet. The stream flows through a deep canyon which alternates between narrow and wide sections. Wider segments are typically braided, whereas narrow reaches have a confined single channel. Sediment size in the streambed tends to be larger at the downstream end and floodplain widths

range from non-existent to up to 150 feet. Most often the creek is confined by steeply sloping hills of local bedrock or near vertical canyon walls. Sycamore Creek is an interrupted stream with perennial, intermittent, and ephemeral segments that are distributed according to the local geology and streams that feed the creek. Over all, it is considered intermittent or interrupted.

Stream gauge data was not available for Sycamore Creek, but gauge data from surrounding watersheds were collected to provide an indication of the likely flow conditions at Sycamore Creek. The annual mean flow is estimated at 40 cfs, but a peak discharge in a 50-year flood could reach 24,000 cfs. Its main flow is in late winter from February through April due to snow melt in the high elevation portions of the watershed. During other times of the year much of the streambed is dry.

Comparison of the boating criteria and hydrological data for Sycamore Creek with approved boating criteria indicates the stream cannot be boated by low draft canoes or kayaks during most of the year. High velocities, overhanging vegetation, large boulders and other natural obstructions would make boating during a semi-flooded or bank full condition very hazardous. Boating by larger commercial craft is not possible. There is no history of boating on this stream and no history of commercial fishing.

In view of the foregoing, Sycamore Creek was considered as not being susceptible of navigability during its ordinary flow and was therefore rejected at level three.

8. Level Three Analysis for Barbershop Canyon

Barbershop Canyon is located in the southernmost area of Coconino County on the northern side of the Mogollon Rim. It received three affirmative responses in the level one analysis, including perennial stream, fish in stream and special status.

Barbershop Canyon has its headwaters in the south near the Coconino County limits on the north slope of the Mogollon Rim and flows in a northerly direction to its

confluence with East Clear Creek. It is 14.5 miles in length and drains a watershed of approximately 25 square miles. Elevations in the watershed along Barbershop Canyon range from a maximum of 7,760 feet at its headwaters to about 6,527 feet at its confluence with East Clear Creek. This watercourse is not a totally perennial stream but is considered an interrupted stream. It is dry at its headwaters and then becomes perennial for six to seven miles, becoming dry again for a couple of miles and then perennial for the rest of the reach until its confluence with East Clear Creek.

Stream flow data for Barbershop Canyon was not available as no gauge stations were ever constructed on it. Accordingly, two gauge stations on Clear Creek were used for comparison. Its estimated mean annual flow is seven cfs and a two-year peak discharge is estimated at 190 cfs. Comparison of the boating criteria and hydrological information for Barbershop Canyon with approved boating criteria indicates that this watercourse cannot be boated by even low draft canoes or kayaks and that boating by any larger commercial craft would be impossible. The stream itself has overhanging vegetation and other obstructions such as boulders in the streambed. There are no modern or historical accounts of any time of boating in Barbershop Canyon and no history of commercial fishing.

In view of the foregoing Barbershop Canyon was considered as not being susceptible of navigability during its ordinary flow and was therefore rejected at level three.

9. Level Three Analysis for Canyon Creek

Canyon Creek lies in the central Arizona mountainous areas in Coconino, Gila and Navajo Counties. It received three affirmative responses in the level one analysis, including perennial stream, fish in stream, and special status.

Canyon Creek is 51 miles long but only 3,500 feet of the creek is located in Coconino County. This reach is the stream segment at its headwaters which has the least water supply. The streambed consists of a small alluvial channel with an

intermittent trickle of flow. Average flow depths in this reach are much less than the minimum required to float even the lowest draft recreational boats. A complete level three report for Canyon Creek will be provided in the navigable stream investigations for small and minor watercourses in Gila County. Obviously, due to the small portion and condition of the stream in Coconino County, Canyon Creek was considered as being not susceptible of navigability during its ordinary flow in Coconino County and was therefore rejected at level three.

10. Level Three Analysis for Chevelon Creek

Chevelon Creek is located in the lower eastern portion of Coconino County and the western lower portion of Navajo County. It received six affirmative responses in the level one analysis, including perennial stream, modern boating, historical boating, fish in stream, dam impacted and special status.

Chevelon Creek has its headwaters in Willow Springs Canyon on the north slope of the Mogollon Rim between Kohls Ranch and Forest Lakes to the west of Heber and flows in a northeasterly direction to its confluence with the Little Colorado River, approximately four miles southeast of Winslow. It is 91.4 miles long and drains a watershed of 790 square miles. Elevations in the watershed range from a maximum of 7,660 feet at the headwaters in Willow Springs Canyon to approximately 4,900 feet at its confluence with the Little Colorado River.

Chevelon Creek can be divided into two stream reaches. The upper stream reach is about 22.1 miles long and extends from the headwaters in Willow Springs Canyon to Chevelon Canyon Dam. The upper reach has a relatively steep average channel slope and flows through steep canyons. The lower reach is about 69.3 miles long and extends from Chevelon Canyon Dam to the confluence with the Little Colorado River. The channel slope varies considerably along the lower reach, and the floodplain is much wider. Chevelon Creek is not a totally perennial stream but is an interrupted stream. It has sections of perennial and non-perennial that alternate throughout its length. There

are two U. S. Geological Survey stream gauges along the creek, both of which are near its headwaters. These stream gauges disclose a mean annual flow of between 47 and 50 cfs with a two-year peak flood of between 2,300 and 2,400 cfs. The higher flows in Chevelon Creek are in the late winter months of February through April due to melting snow. Chevelon Canyon Dam was constructed in June 1967 and the lake has a capacity of 6,193 acre feet. The dam does not have a controlled spillway but does act to control floods. The depth of the stream during normal flow is between .64 feet to 1.35 feet and the width is between 12 and 30 feet.

Comparison of Chevelon Creek flow data with approved boating criteria indicates that during its ordinary flow recreational watercraft can be utilized approximately 10% of the time. In the upper reach of Chevelon Creek there are many channel obstructions such as vegetation and boulders in the stream. There are accounts of both historical and modern boating and accordingly a separate detailed study of this watercourse was conducted.

11. Level Three Analysis for Clear Creek

Clear Creek lies in the southeastern portion of Coconino County and the west central portion of Navajo County. It received three affirmative responses in the level one analysis, including perennial stream, fish in stream and dam impacted. Clear Creek trends to the northeast from its headwaters at the confluence with East Clear Creek, crossing the county line into Navajo County and flowing on to its confluence with the Little Colorado River just east of Winslow. It is 68.2 miles long and drains a watershed of 610 square miles. Elevations in the watershed range from a maximum of about 7,760 feet at its headwaters near Barbershop Canyon to about 4,860 feet at its confluence with the Little Colorado River.

Clear Creek can be divided into two stream reaches. The upper reach is about 42.2 miles in length and extends from the headwaters at the confluence with East Clear Creek to the border of Coconino and Navajo Counties. This reach is characterized by a

relatively narrow deep channel with lush vegetation. The lower reach is about 26 miles long and extends from the Coconino-Navajo County border to the confluence with the Little Colorado River. The channel slope varies considerably along the lower reach. There are two U. S. Geological Survey stream gauges on Clear Creek. Data from these gauging stations disclose a mean annual flow of 79 to 82 cfs with a two-year flood peak of between 2,360 and 2,800 cfs. The greatest flow is during the late winter and spring months of February, March and April during the snow melt in the higher elevations. The flow data indicates that Clear Creek is a perennial stream for its entire length except for the last 3/4-mile segment near its confluence with the Little Colorado River. In the dry months of the year, there is no flow at all in this creek.

Typical flow rates for all months of the year for both reaches range from one to 70 cfs with exceptional flows occurring during the winter and spring months. During the normal flow, the depth is between two and nine feet and the width between nine and 54 feet. Two adjacent dam structures were built in 1929 and 1986 in Clear Creek at its lower reach. The reservoir created by these structures allows for recreational use such as boating and fishing. Comparison of the boating criteria with the hydrological data for Clear Creek indicates that other than the dam reservoirs the stream could not support recreational watercraft at its normal flow. There is no history of boating on this stream and no history of fishing, commercial or otherwise, except for the reservoirs behind the dam structures.

In view of the foregoing, Clear Creek was considered as not being susceptible of navigability during its ordinary flow and was therefore rejected at level three.

12. Level Three Analysis for East Clear Creek

East Clear Creek, a tributary to Clear Creek, lies in the southwest corner of Coconino County near the Mogollon Rim. It received four affirmative responses in the level one analysis, including perennial stream, fish in stream, dam impacted, and special status.

The headwaters of East Clear Creek are in Kehl Canyon and Potato Lake in the southwest corner of Coconino County at the Mogollon Rim and runs in a northwesterly direction to its confluence with Clear Creek at Leonard Canyon. It is 32.4 miles in length and drains a watershed of approximately 200 square miles. Elevations in the watershed along East Clear Creek range from a maximum of 7,560 feet at its headwaters to about 6,527 feet at the confluence with Barbershop Canyon, and 6,133 feet at its confluence with Clear Creek. East Clear Creek is not a totally perennial stream but should be classified as an interrupted stream. It can be divided into two stream reaches for study. The upper reach is comprised of the non-perennial segment approximately 15 miles long. The lower reach is comprised of the perennial segment and measures approximately 17.2 miles in length. The lower reach has a much lower slope than does the upper reach.

Stream flow data for East Clear Creek is not available since no gauging station was ever constructed on the stream, but comparisons were made with nearby gauging stations on other creeks having very similar conditions. The mean annual flow for East Clear Creek is estimated at 52 cfs and a two-year peak discharge of 1,490 cfs is also estimated. The average depth of the stream is 1.23 feet to 2 feet, and the width is 10 to 20 feet. Comparing the hydrological data with approved boating criteria indicates that East Clear Creek could not be boated even by low draft canoes or kayaks during its normal flow and that boating by larger commercial craft would not be possible. There is much overhanging vegetation and other obstructions in the creek that would make boating extremely difficult. There is no history of boating on this stream and no history of commercial fishing.

In view of the foregoing, East Clear Creek was considered as not being susceptible of navigability during its ordinary flow and was therefore rejected at level three.

13. Level Three Analysis for Kanab Creek

Kanab Creek is located in the northeastern portion of Mohave County and the northwestern portion of Coconino County and forms the boundary between Mohave and Coconino Counties. It received four affirmative responses in the level one analysis, including perennial stream flow, dam impacted, fish in stream, and special status.

Kanab Creek originates in the mountains of Utah and flows across the Utah-Arizona border through the strip area to the North Rim of the Grand Canyon and into the Colorado River. Its watershed consists of approximately 2,322 square miles, most of which is in Arizona. The elevations on this watershed range from 9,350 feet near its headwaters to 2,590 feet at its confluence with the Colorado River. The upper reach of this stream in Arizona flows through an alluvial valley located between Kanab, Utah, and Fredonia, Arizona. Most of the natural runoff of this reach is diverted for municipal or agricultural use. This reach is perennial where it enters Arizona until it reaches the town of Fredonia where it becomes ephemeral for the rest of its length to the Grand Canyon. The lower reach from Johnson Wash to its confluence with the Colorado River is non-perennial, although numerous springs provide a level of base flow to short reaches of the stream. The lower reach consists of flat bottom boulder-strewn channels between vertical bedrock canyons and has a slope of less than one percent.

There are two gauge stations on this stream, one near Kanab, Utah, and the other near Fredonia, Arizona. Both of these stations for a period between 1997 and 1999 have indicated a mean annual flow during ordinary times of less than seven cubic feet per second (cfs). This flow gives a depth of less than 3/10 of a foot, although its width is 16 feet or wider, and its velocity is between 1.1 and 1.4 feet per second. The two-year flood peak is, of course, much higher but cannot be considered as the ordinary condition of the stream. This flow is less than the minimum required for recreational craft and certainly less than that required for commercial use. There is no history of boating on

this stream, and the lower reach is strewn with boulders and other obstructions that would make it extremely difficult to navigate. In view of the foregoing, it was determined that Kanab Creek is not susceptible of navigability and was therefore rejected at level three.

14. Level Three Analysis for Paria River

The Paria River is located in the north central portion of Coconino County. It received three affirmative responses in the level one analysis, including perennial stream flow, fish in stream, and special status.

The Paria River is named for a Ute word meaning "elk water" due to the flourishing elk population along the upper reaches of the river. The headwaters of the Paria River are near Bryce Canyon National Park, and it flows through Kane and Garfield Counties in southern Utah, crossing into Arizona where it drains the Vermillion Cliffs Wilderness and surrounding plateaus until it flows into the Colorado River at Lees Ferry. It is 78 miles in length and drains a watershed of 1,446 square miles. The elevations in the watershed area range from 7,000 feet in the upper watershed in Utah to 3,123 feet at the confluence with the Colorado River at Lees Ferry. Vegetation within the watershed varies from desert scrub and cacti at lower elevations to piñon and juniper in the upper elevations of the plateaus. Vegetation along the Paria River includes desert grasses and reeds, with sparse sycamore, cottonwood and willows along the banks of the perennial reaches. The main channel of the Paria River consists of a sinuous sand bed channel which averages about 30 feet wide with bank heights of four to seven feet. A slightly more sinuous perennial low flow channel is inset within the broader main channel. The low flow channel averages about ten feet wide and three inches deep. A broad flat floodplain separates the main channel from the bedrock canyon walls which define the lateral extent of the Paria River. This floodplain ranges from 10 to 1,000 feet wide and appears to convey seasonal high flows on a regular basis. The Paria River is considered perennial.

Data from the U. S. Geological Survey stream gauge located near the confluence with the Colorado River at Lees Ferry discloses an annual mean flow of 29 cfs with a high flow of 6,750 cfs on September 13, 1927, with an average depth of one foot and average width of 15 feet. There are a number of small diversion structures constructed in connection with the Lee Homestead at Lees Ferry along the lower reaches of the Paria River in the late 1800's and early 1900's but none of these diversions appear to have significantly affected the natural hydrology or geomorphology of the river. The highest flow months on the Paria River are late winter and early spring (January, February and March) during the snow melt, and July, August and September during the summer monsoon months. There is no record of modern or historical boating on this river and no history of commercial fishing. Comparison of the boating criteria and hydrological data for the Paria River indicates that the stream could be boated by canoes and kayaks but only rarely during an increased flow. Boating at flood stage would be hazardous due to high velocities and high concentrations of debris and sediment in the stream.

In view of the foregoing the Paria River was considered as not being susceptible of navigability during its ordinary flow and was therefore rejected at level three.

15. Level Three Analysis for West Canyon Creek

West Canyon Creek is located in the northwestern portion of Coconino County. It received three affirmative responses in the level one analysis, including perennial stream flow, fish in stream, and dam impacted.

West Canyon Creek flows from its headwaters south of Octagon Butte in a northwesterly direction, draining the Kaibito Plateau until it flows into Lake Powell, a part of the Glen Canyon National Recreation Area. It is 15.8 miles in length and drains a watershed of 31.2 square miles. Elevations on the watershed range from over 6,700 feet at Octagon Butte to about 3,830 where it flows into Lake Powell. Vegetation within the watershed ranges from sparse Arizona desert grasses and sagebrush in the lower elevations to piñon and juniper pine in the upper elevations above steep canyon walls.

Vegetation along West Canyon Creek consists mostly of grasses, reeds, and cottonwood in perennial and intermittent reaches to desert scrub species in more arid regions.

West Canyon Creek was divided into two stream reaches for study purposes. Reach one is called the canyon reach and runs from the headwaters to the Lake Powell high water mark. Reach two of the Lake Powell reach is a canyon which is submerged by Lake Powell. Reach one of West Canyon Creek is a braided sand bed stream and flows within a deep bedrock canyon. The canyon floor varies from as narrow as two feet wide in slot canyon reaches to as much as 200 feet wide in the wider canyon reaches. The main channel is typically about 15 feet wide with a narrow floodplain that occupies the remainder of the canyon floor. A low flow channel visible only in flowing reaches averages about four feet wide and about one inch deep. The near vertical to overhanging bedrock canyon walls range from 50 to 400 feet high and are cut through the beautiful sculpted Navajo sandstone. West Canyon Creek has an interrupted flow regime with short perennial reaches near springs and shallow bedrock and normally dry reaches in areas of deeper alluvium. Reach one best represents the condition of West Canyon Creek at the time of statehood. The Arizona segment of reach two of West Canyon Creek is now submerged in the waters of Lake Powell as is that portion of reach two located in the State of Utah. Lake Powell was formed by the impoundment upstream of Glen Canyon Dam which was built in the 1960's. The length of this reach varies seasonably with the water level at Lake Powell. The water surface in reach two varies in width from 50 feet to several hundred feet, generally increasing in width in the downstream direction. Reach two is perennially inundated.

Stream gauge data were not available for West Canyon Creek, but gauge data from nearby watersheds with similar conditions were collected to estimate a range of likely flow conditions on West Canyon Creek. The average mean flow of West Canyon Creek at the time of statehood, and currently in reach one, is 29 or 30 cfs. During flood and high runoff periods, the average flow can be 6,000 to 6,750 cfs. The average depth

is estimated at one-half foot and the width at approximately 10 feet. Although classified as perennial, it seems clear that West Canyon Creek is interrupted with perennial reaches near springs and shallow bedrock which forces underground flow to the surface and dry reaches in areas of deeper alluvium which are further from the springs. The highest average flows occur during the late summer monsoon storms of August and September, with additional rises in average flow rates during the snow melt from February to May. Comparing the hydrological data of West Canyon Creek with approved boating criteria indicates that the stream cannot be boated in reach one even by low draft canoes or kayaks during ordinary flow. Boating during semi-flood conditions would be very hazardous due to steep slope, large boulders, relatively large waterfalls and narrow slot canyons located along the stream. Boating by larger commercial craft would not be possible. There is no history of boating on this stream and no history of commercial fishing. Reach two, on the other hand, due to the backup of water from Glen Canyon Dam, is typically used for all types of recreational navigation and could be used for commercial navigation. However, Glen Canyon Dam was not constructed until the 1960's and the stream conditions in reach two in 1912 were much more similar to those described for reach one, which are substantially less susceptible of navigation.

In view of the foregoing, West Canyon Creek was considered as not being susceptible of navigability during its ordinary flow as of February 14, 1912, and was therefore rejected at level three.

16. Level Three Analysis for Tonto Creek

Tonto Creek, named after is water source, Tonto Spring, is located primarily in Gila County in central Arizona. Only about 3,800 feet of the 115-mile long Tonto Creek is located in Coconino County and consists of the stream segment at the headwaters which has the least water supply. A complete level three report for Tonto Creek will be

provided with the navigability investigations and study for small and minor watercourses in Gila County.

Tonto Creek received four affirmative responses in the level one analysis, including perennial stream flow, modern boating, fish in stream, and special status. Field observations of the short segment of Tonto Creek in Coconino County indicate that it consists of small ephemeral alluvial channel. Average flow depths in this reach were much less than the one-half foot required to float even the lowest draft recreational boats. Accordingly, Tonto Creek, for purposes of the Coconino County study of small and minor watercourses, was considered as not being susceptible of navigability during its ordinary flow, and was therefore rejected at level three.

17. Summary of Results of Small and Minor Watercourses Analysis for Coconino County, Arizona

All of the 5,276 small and minor watercourses in Coconino County were analyzed in the three-level process developed by the State Land Department and its contractors Stantec and J.E Fuller Hydrology. At level one, 5,147 watercourses or 97.6% were determined as not having an affirmative response to any of the six characteristics utilized at level one and were therefore rejected and eliminated at level one. One hundred twenty-nine watercourses, approximately 2.4%, received an affirmative response to one or more of the characteristics or criteria and were evaluated at level two. Sixty-seven of these watercourses received only one affirmative response at level one, and further analysis disclosed that they should be rejected as not having the characteristics of navigability requiring further study. Sixty-two of the watercourses received more than one affirmative response at level one and were analyzed under the value engineering system described above. In this analysis 48 of the watercourses had a sum value of less than 11 and were determined as not having the characteristics of navigability requiring further study. Only fourteen streams had a sum value of more than 11 and were determined to require further study at level three. Four of these streams, Oak Creek, West Clear Creek, Wet Beaver Creek and Chevelon Creek, were

evaluated at level three and, due to stream flow, the configuration of the streams and other considerations, including concerns expressed by numerous private and public landowners and land managers along these streams, the contractors have recommended a more in-depth study of the potential or susceptibility of navigability of these creeks. Accordingly they were not rejected at level three, and separate detailed studies of Oak Creek, West Clear Creek, Wet Beaver Creek and Chevelon Creek were conducted.

B. The Lakes of Coconino County

There are two small natural lakes in Coconino County which were in existence in 1912 and should be considered in this report. These are Mormon Lake and Stoneman Lake. While there are many other lakes and reservoirs not only in Coconino County but in other parts of the state, they are not considered since they were not in existence until after statehood and were manmade due to the dams being built which created the lake or reservoir. A.R.S. § 37-1101(11) provides the definition of watercourse as follows:

> "Watercourse" means the main body or a portion or reach of any lake, river, creek, stream, wash, arroyo, channel or other body of water. Watercourse does not include a man-made water conveyance system described in paragraph 4 of this section, except to the extent that the system encompasses lands that were part of a natural watercourse as of February 14, 1912.

A.R.S. § 37-1101(5) defines navigable watercourse as follows:

> "Navigable" or "navigable watercourse" means a watercourse that was in existence on February 14, 1912, and at that time was used or was susceptible of being used, in its ordinary and natural condition, as a highway for commerce, over which trade and travel were or could have been conducted in the customary modes of trade and travel on water.

Both Mormon Lake and Stoneman Lake being natural lakes were in existence prior to 1912 and were not manmade or backed up behind a dam, they were considered by the Commission.

1. Mormon Lake

Mormon Lake (latitude 34°56'51"north, longitude 111°27'18" west) is a shallow, intermittent lake with an average depth of only 10 feet and the surface area of the lake is

extremely volatile and fluctuates seasonally. When full, the lake has a surface area of about 12 square miles, making it the largest natural lake in Arizona. There are no major streams or watercourses that flow into Mormon Lake and it is fed by precipitation (rain and snow fall from the surrounding hills). In particularly dry times, the lake has been known to dry up, leaving behind a remnant marsh. Its average surface area is 600 acres and is located at an elevation of 7,100 feet. It lies within the confines of Coconino National Forest and is the area used by campers and hikers and when there is water in the lake, for fishing. The lake itself is occasionally stocked with fish species such as bullhead catfish and northern pike, but due to its intermittent nature, it may contain few or no fish following the dry season.

Since there are no streams or watercourses flowing into or out of the lake, there is no corridor or conduit within which goods, commodities or property may be transported to constitute a highway for commerce. Accordingly, due to the foregoing and the shallowness and intermittent nature of the lake, as well as its small size, it was not considered to be navigable or susceptible of navigability as of February 14, 1912.

2. Stoneman Lake

Stoneman Lake (latitude 34°46'59.3" north, longitude 111°31'17.2" west) is a small lake located about 30 miles south of the City of Flagstaff just to the east of Interstate 17. Its surface elevation is 6,719 feet. Like the nearby Mormon Lake, it is one of the few natural lakes in Arizona.

Stoneman Lake is small and shallow with an average surface area of less than 100 acres and a depth of less than 10 feet. As such, it is subject to considerable fluctuations due to local rainfall and snow melt conditions and in any year may even dry up completely. There are no streams or watercourses that flow into Stoneman Lake but it is fed strictly by rainfall and snow melt from the local surrounding hills. Due to the lake intermittently drying up, the availability of fish is unreliable. In wet years, northern pike and yellow perch are stocked in the lake and the lake is then good for

fishing. The activity around Stoneman lake is strictly recreational and limited to boating, wildlife viewing, camping and hiking.

Of particular interest to geologists is the origin of the lake. The lake fills a nearly circular basin in a region with some historical volcanic activity leading to the possibility that the lake is either a crater lake or a filled in sinkhole. During a series of dry years, a resident has even planted alfalfa and other field or grazing-type crops in the bottom of the dry lake.

Since there are no streams or watercourses flowing into or out of the lake, there is no corridor or conduit within which goods, commodities or property may be transported to constitute a highway for commerce. Accordingly, due to the foregoing and the shallowness and intermittent nature of the lake, as well as its small size, it was not considered to be navigable or susceptible of navigability as of February 14, 1912.

C. Prehistoric and Historical Conditions Affecting Small and Minor Watercourses in Coconino County, Arizona

In addition to the small and minor watercourse analysis and other evidence described above, the Commission also considered evidence of prehistoric conditions in Coconino County and the historical development of Coconino County as disclosed in the various studies, reports and testimony presented to the Commission, including the reports on the Little Colorado River and other watercourses which flow through parts of Coconino County.

1. Prehistory or Pre-Columbian Conditions

There is some archaeological evidence of paleoindian occupation of Coconino County as early as 11,000 to 12,000 years ago, although it is rather sparse and consists usually of surface finds of lithic tools.[8] A Clovis style projectile point from the paleoindian period was found in the Arizona Strip area in the northern part of Mohave County, to the west of Coconino County, and another was found by a rancher in the

[8] The paleoindian period is generally considered to be between 10,000 B.C. or 12,000 B.P (before the present) to approximately 6,000 B.C. or 8,000 B.P. The paleoindian period is followed by the Archaic period which lasted until 1,000 to 100 B.C. when the Pre-Columbian cultures began to develop.

Aquarius Mountains. As the megafauna died out at the end of the last glacial period, the paleoindians converted to a culture of hunting smaller animals using the Folsom point and the gathering of berries and grains. The Archaic period in Coconino County is characterized by sites showing stone tools and flakes made from the working of stone tools, and in some sites split twig figurines which were no doubt used for religious purposes.

Approximately 200 B.C. the culture known as the Anasazi developed in the Four Corners area. Most archaeologists believe it developed from the indigenous Archaic people who had previously occupied the area. At first they lived in pit houses, but later built rock pueblos and villages and moved into cliff dwellings. Betatakin and Keet Seel on the northern part of the Navajo Reservation just over the county line in Navajo County are examples of very large cliff dwellings which were built around 900 to 1100 A.D.

Approximately 500 A.D. a new culture known by archaeologists as the Sinagua Culture began to farm near the San Francisco Peaks and the Flagstaff area. These Indians practiced dry farming, using the water retaining abilities of the volcanic ash found in the area for moisture. The largest concentration of Sinagua-type ruins is found at Wupatki National Monument, although many archaeologists feel that Wupatki was also greatly influenced by the Anasazi. From 700 A.D. on, the Sinagua moved south from the Flagstaff area into the Verde Valley, and ruins such as Tuzigoot and Montezuma Castle are evidence of this occupation. In the Verde Valley, the Sinagua Culture was greatly influenced by the Hohokam who migrated up from the Salt River Valley. Unlike the Anasazi who were further away and not as influenced by the Hohokam, the Sinagua built numerous ball courts which are more characteristic of the Hohokam and Mesoamerican Cultures. In the northeastern part of the county a culture known as the Cohonino developed, which was probably a derivative of the Patayan Cultures along the Colorado River but greatly influenced by the Anasazi.

In 1064 Sunset Crater erupted and caused a mass dislocation of people from that area to the south and east. The ruins of Walnut Canyon National Monument were the recipients of a number of these displaced persons, and it is felt by many that Homol'ovi at the confluence of Chevelon Creek and the Little Colorado was also a location to which these people moved. Between 1276 and 1299, a great drought occurred in northern Arizona which was felt by many archaeologists as the event that caused abandonment of many of the Anasazi settlements as well as Sinagua settlements around Flagstaff. In the 1300's the Yavapai Indians from the river area moved into the southern part of the county and soon thereafter Athabascan-speaking Navajos moved from the northeast into the northern part of the county. Later another Athabascan-speaking group, the Apaches, also moved into the mountains of southern Coconino County.

All of these pre-Columbia cultures utilized the small and minor watercourses, as well as the major rivers of northern Arizona, as a source of water, and in the southern part of the county in the Verde Valley there was even some irrigated agriculture. However, none of these pre-Columbian cultures utilized any of the rivers and watercourses for travel or commerce. All travel by the early Indian occupants of Arizona was by foot. The horse was not introduced until the late 1500's and 1600's when they were brought in by the Spanish conquistadors.

2. Historical Settlement in Coconino County

The first European presence in northern Arizona was the Coronado Expedition of 1539 to 1542. Hearing rumors of fabulous cities of gold in the north, the Viceroy of Mexico sent a Franciscan priest, Friar Marcos de Niza on a reconnaissance mission to verify the existence of these golden cities. In 1539 de Niza and his slave Esteban crossed into Arizona and went as far as the Indian village of Hawikuh near Zuni, New Mexico. The inhospitable natives killed the slave Esteban and the friar hurried back to Mexico City with reports of golden cities and much wealth. Thus in February 1540 Francisco Vasquez de Coronado, with an army of 300 horsemen and foot soldiers and 1,000

Indian allies, ventured into Arizona to search for these cities of gold. Coronado and his main party did not cross into Coconino County, but he sent subordinates to the east into what is now Coconino County. Captain Pedro de Tovar and a small party arrived at the Hopi villages and learned from them of this waterway across the continent to the north and west. After reporting to Coronado, another expedition of 25 horsemen led by Captain Lopez de Cardenas was sent to the Colorado River. He viewed the river at the bottom of the Grand Canyon from the South Rim. Coronado never found his golden cities and returned to Mexico in 1542 after exploring northern New Mexico, west Texas and part of Kansas.

In 1581 and 1582 Antonio de Espejo, who had come up the Rio Grande into New Mexico, led a group of prospectors across northern Arizona to the Hopi villages and then dropped down into the Verde Valley looking for valuable ore deposits. In 1598 another explorer, Juan de Oñate, traveled across much of Arizona after first establishing a colony in New Mexico. One of his officers, Capt. Marcos Farfan, is credited with locating the large copper ore deposit that was later mined at Jerome and finding some silver ore near Prescott. Due to the distance from other Spanish settlements, the rugged terrain, and the hostility of the Hopi Indians to being converted by Spanish missionaries, there was little Spanish activity in Coconino County for the next couple of hundred years, although some Spanish friars crossed the territory on exploratory missions during the 1700's.

After Mexico won its independence from Spain in 1821, there was little change in government policy regarding settlement of the area. Mexico actively discouraged incursions into its territories by citizens of the United States. Notwithstanding this policy, fur trappers and mountain men began exploring the southwest as early as the 1820's. This trapping activity continued, particularly on the Verde River and its major tributaries, through the 1840's. The war with Mexico (1846-48) ended with the Treaty of Guadalupe Hidalgo and the United States acquired all of the Mexican territory in the

southwest north of the Gila River. Following the acquisition of this vast territory by the United States, expeditions commanded by young Army engineering officers were sent to explore the newly acquired territory and find good routes for roads and railroads. The Sitgreaves Expedition of 1851 guided by Antoine LaRue crossed the middle of Coconino County and traveled south in Mohave County to the Colorado River. In 1854 the Whipple Expedition followed the route of the Little Colorado River and mapped this stream, and the Atlantic and Pacific Railroad subsequently followed this surveyed area. In 1857 Edward F. Beale mapped out a road across northern Arizona which was later followed by Highway 66, and the northern Arizona route along the 35th parallel became a regularly traveled route for persons traveling from Santa Fe and points east to California.

In 1882 the Atlantic and Pacific Railroad was built across northern Arizona and a number of small towns, including Ash Fork, Seligman, Williams, Flagstaff, Winslow, and Holbrook grew up as points along the railroad at which trains could be serviced. Although very rugged, a road was built from Flagstaff south into the Verde Valley, and another from Ash Fork south through the Chino Valley to Prescott. There is no record of commercial travel or floating of logs on any of the small and minor watercourses in Coconino County and no evidence of commercial fishing on any of these streams. The customary mode of transportation in Coconino County at or about the time of statehood was by foot, horseback, mule, ox-drawn wagons and rail and later, as the road network improved, by automobile and trucks.

A state teacher's college now known as Northern Arizona University was established in Flagstaff in the latter part of the 1800's. In the latter part of the 1800's and early 1900's the logging industry became extremely important in Flagstaff, but that industry has much less importance at this time. Flagstaff and its surrounding environs, including the Grand Canyon, have become very important as tourist locations. During the 1920's and 1930's the "mother road" Highway 66 was built from Chicago to Los

Angeles and became famous for all travelers. The main industry of Coconino County in the late 1800's and early 1900's has been ranching.

VIII. Present Climate and Weather Conditions Same or Similar to that of 1912

Testimony presented at the hearing for all small and minor watercourses in Coconino County established that the present climate and weather conditions in Coconino County are the same or very similar to that which existed in 1912 when Arizona became a state.

IX. Separate Detailed Stream Navigability Study for Oak Creek

Since Oak Creek survived the level three analysis of small and minor watercourse analyses for Coconino County, a separate detailed study of its navigability was conducted. The separate detailed report on Oak Creek is incorporated in this report, findings and determination, although a portion of Oak Creek is located in Yavapai County which is adjacent to Coconino County to the south. The level three analysis of Oak Creek reported in Section IV B 3 of this report is incorporated by reference in this separate detailed stream navigability study for Oak Creek.

The headwaters of Oak Creek are south of the divide in springs at the head of Oak Creek Canyon, just south and slightly east of Flagstaff, in the East Half of Section 1, Township 19 North, Range 6 East, Gila and Salt River Base and Meridian, latitude 35°01'27" North, longitude 111°44'08" West. It flows south through Oak Creek Canyon to Sedona, where it turns in a southwesterly direction passing Page Springs and Cornville and flows into the Verde River between Camp Verde and Cottonwood in the Southeast Quarter of Section 20, Township 15 North, Range 4 East, latitude 34°40'40" North, longitude 111°56'26" West. The watershed is bounded by mountains, particularly in the upper reach where it flows through the narrow Oak Creek Canyon. Below Sedona the canyon widens and the stream is a meandering sand and cobble channel with a wide shallow cross-section until it flows into the Verde River. It has a average slope of 1.4 percent and there is no evidence that the location or alignment of

the stream has varied significantly over time, although the stream has meandered within its floodplain especially south of Sedona.

Elevations within the watershed range from 8,656 feet at Mormon Mountain to 3,173 feet at its confluence with the Verde River. Vegetation within the watershed varies from Arizona upland desert scrub in the lower elevations to oak woodland and ponderosa pine in the upper elevations. Along Oak Creek itself, the vegetation includes rich cottonwood, willow and walnut riparian forests along with a variety of grasses and reeds. A map of the area showing where Oak Creek is located in the county and state is attached as Exhibit "H."

A. History of Oak Creek Canyon

Archaeological evidence indicates some settlement in the lower Oak Creek Canyon as early as 3,000 years ago when hunting and gathering bands dwelled in caves in the red sandstone cliffs. Later, they built shallow pit houses and surface dwellings to accommodate seasonal use of the area around Oak Creek. From 800 to 1125 A.D. much more significant prehistoric settlement occurred, indicating a strong Hohokam influence which was probably the result of migration from the Salt River Valley up the Verde River and on to Oak Creek. There is some evidence of diversion canals with lateral canals for irrigation in the lower Oak Creek area. Many of the agricultural features such as canals and laterals, and even ruins, have been destroyed by modern development. Some prehistoric sites are estimated at 100 rooms or more and certain famous ruins such as Montezuma Castle, Tuzigoot, and the ruins around Montezuma Well have been designated as National Monuments. Some time after 700 A.D. the Sinagua Culture, which was probably a result of persons migrating from the Flagstaff area, appears and mixes with the Hohokam. Following 1125 the population increased, and it seems clear that the creek was an accessible permanent water supply used for irrigation and possibly fishing purposes. There is no evidence of any trade, commerce or boating being conducted on Oak Creek by members of these prehistoric cultures.

By 1300 A.D. the Yavapai Indians moved into Oak Creek Canyon and the Verde Valley from the south and west. Some time later the Tonto Apache, an Athabascan-speaking native American, also appeared. In 1582 and 1583 Antonio de Espejo explored along the middle Verde River valley and Oak Creek, looking for silver he heard the Indians had been mining. He did not stay long as he was disappointed to find that the chief ore was copper and he is probably the one who discovered the ore deposits later mined at Jerome. In 1598 through 1600 Governor Juan de Oñate of New Mexico and Marcos Farfan de las Godas also explored this area searching for deposits of gold and silver.

In 1826 American trappers James Ohio Paddy, Ewing Young and others traveled through the area trapping for beaver. In 1829 Ewing Young documented a return to the Verde Valley with 40 other trappers including Kit Carson and apparently found the beaver plentiful. Following the war with Mexico in 1848 and the acquisition of the present western part of the United States by the Treaty of Guadalupe Hidalgo, the military conducted a number of surveys in the 1850's primarily to locate railroad routes from the eastern United States to California. In 1863 gold was discovered in Lynx Creek near Prescott, and a gold rush into that area occurred. The First Cavalry of the New Mexico Volunteers established the first Ft. Whipple at Del Rio Springs in Chino Valley in 1863, and that same year the County of Arizona was detached from the Territory of New Mexico and established as the Arizona Territory. The first capital was at Ft. Whipple but in 1864 it was moved to Prescott. The New Mexico Volunteers also established a garrison on the middle Verde River near Oak Creek, officially designated as Camp Lincoln but later renamed Camp Verde.

Prior to 1900 lower Oak Creek was leased by the federal government to various ranching operations for cattle grazing. The first settler to claim Oak Creek Canyon property under the Homestead Act was an Irishman by the name of Jim Thompson in 1876. He named the area he homesteaded as "Indian Gardens" because of the vacant

patches of Tonto Apache gardens of corn, squash and beans he found when he arrived in the area. The second settler in the upper Oak Creek Canyon was Jesse Jefferson Howard who came into the area as a fugitive and built a cabin in an isolated spot near the mouth of Oak Creek's west fork. The first settler at what would be called Red Rock was Henry Schuerman who found only a primitive cabin with an old Indian irrigation ditch. Between 1900 and 1939 four homesteads were established on part of lower Oak Creek. The earlier settlers made their living by ranching, trapping, and orchards. There was also one mining claim filed in the area.

Transportation through Oak Creek Canyon at the time of statehood was mainly by foot, horseback and horse-drawn wagon. In 1882 the Atlantic & Pacific Railroad, later known as the Santa Fe Railroad, and after a merger is now known as the Burlington Northern Santa Fe Railroad was established along the 35th parallel through Flagstaff. Roads in the Oak Creek Canyon area were in very poor condition, with rough surfaces and overhanging vegetation. The main thoroughfare through the Oak Creek area was the Verde Cutoff, later called Munds Road and currently referred to as Schnebly Hill Road. Construction of this road was begun in 1896 in an effort to shorten the inconvenient and circuitous route between Flagstaff and the Verde Valley. Highway 89A which travels up Oak Creek Canyon was not completed until July 1913 when a small wooden bridge was erected at Oak Creek Falls, which is now Slide Rock. It was not paved until 1939. Now, of course, there is highway transportation into the area, and the population has increased substantially due to better access. There is no historical record of commercial, recreation, or any other type of boating on Oak Creek and no record of any commercial fishing.

B. Wildlife, Habitat and Hydrology

Oak Creek Canyon and the lower valley possesses a diversity of wildlife due to the wide range of climate and elevation. Though now absent from the area, moose once roamed this watershed. Currently, the area hosts elk, bear, mountain lion and other big

cats, skunk, muskrat, and raccoon, as well as snakes, lizards and scorpions in the lower desert area. Hundreds of species of birds flourish in the Oak Creek region, including golden eagles, hummingbirds, cardinals, bluebirds, shrikes, butcherbirds, buzzards, mockingbirds, sparrows and crested quail. The stream itself currently supports mammal, amphibian, reptile, bird and native fish species. Fish such as rainbow and brown trout are regularly stocked by the Arizona Game and Fish Department. Other fish such as bass, bluegill, and sunfish have migrated upstream into the area and adapted well. Twenty species of fish reside in Oak Creek and its tributaries. Only three minnows (Colorado chub, speckled dace, and spikedace) and two suckers (Gila and Gila-mountain suckers) are native to the stream. The Colorado River Squawfish was once native to the stream but is now gone from the area.

Vegetation in Oak Creek can be divided into five major communities. Beginning at the head of the canyon and moving downstream, these communities are ponderosa pine-douglas fir forest, chaparral, piñon-juniper woodland, oak woodland, and cypress-juniper woodland. The oak woodland for which the creek takes its name occurs where the canyon widens at about 1500 meter elevation and is particularly well developed on the south canyon wall from the Banjo Bill Campground to Indian Gardens. Riparian communities along the creek were divided into upper and lower, with the West Fork of Oak Creek serving as the division boundary. Downstream from Sedona, the creek passes through semi-desert grasslands before reaching the confluence with the Verde River.

The 474 square mile Oak Creek watershed drains a significant area of the Coconino Plateau. Hydrological data for Oak Creek is available from the U.S. Geological Survey gauges at Sedona and near Cornville. Although there are no hydrological records for the year of statehood, other years around that time and currently indicate that Oak Creek has an annual mean flow of 90 to 100 cfs. A maximum discharge incident during recent years was 6400 cfs. The highest average

flow occurs during the months of February, March and April when the snow is melting in the higher elevations. Oak Creek flows at an average depth of less than one-half foot during normal times with a width of 18 to 30 feet.

For purposes of geomorphology study, Oak Creek was divided into two reaches. The upper reach in the canyon above Sedona consists of a series of boulder-lined chutes and pools formed in local bedrock. Some chutes such as those at Slide Rock State Park, together with other natural attractions associated with bedrock pools and waterfalls are popular with hikers and sightseers. The channel in the canyon reach is located in the bottom of a moderately deep canyon with near vertical walls and a small to non-existent floodplain and a corridor of well-established riparian vegetation. This reach is clearly perennial. The lower reach from Sedona to the confluence with the Verde River is a wider meandering sand and cobble-bedded channel approximately 60 feet wide. The reach generally has wide shallow cross-sections with a single channel. Occasionally bedrock crops out of the bed and banks of the main channel. This reach is also perennial.

The upper reach in the canyon is not susceptible of recreational boating due to the swift flow, boulders, waterfalls and other obstructions. The reaches downstream from Sedona are popular for canoeing and kayaking during the late winter and spring. Oak Creek is listed as a boating stream by the Arizona State Parks Department, as well as recreational boating groups. Commercial use of any portion of Oak Creek is not possible since even in the lower reach the pools used by kayakers and canoers are typically less than a few hundred feet in length and separated by shallow boulder riffles and small waterfalls. No evidence was presented to suggest that flow conditions at or near the time of statehood would have allowed for any flotation of logs, and there is no history of any commercial fishing, although Oak Creek is a well-known recreational fishing stream where fishing is done from the banks.

At all times since man first settled in the area, transportation along the Oak Creek canyon and valley area was accomplished by foot, horseback, or wagon and, since statehood as the road net improved, by truck and automobile. There is no record of any boating or use of Oak Creek for passenger or commercial craft. Oak Creek is not listed in the Rivers and Harbors Act of 1899.

In view of the foregoing, it seems clear that Oak Creek was neither navigable nor susceptible of navigability as of February 14, 1912.

X. Separate Detailed Stream Navigability Study for West Clear Creek

Since West Clear Creek survived the level three analysis of the small and minor watercourse analyses for Coconino County, a separate detailed study of its navigability was conducted. The separate detailed report of West Clear Creek is incorporated in this Report, Findings and Determination, although a portion of West Clear Creek is located in Yavapai County which is adjacent to Coconino County to the south and, in this case, west of the upper Clear Creek watershed. The level three analysis of West Clear Creek reported in Section IV B 4 of this report is incorporated by reference in this separate detailed stream navigability study for West Clear Creek.

The headwaters of West Clear Creek originate in the deep canyons of Coconino National Forest in southern Coconino County, north of the Mogollon Rim and just west of Clints Well, in the Southwest Quarter of Section 33, Township 14 North, Range 10 East, Gila and Salt River Base and Meridian, latitude 34°33'04" North, longitude 111°24'11" West. It flows almost due west through the deep canyons of the mountains in southern Coconino County until it crosses the county line into Yavapai County and then veers slightly south until it converges with the Verde River south and east of Camp Verde after crossing State Highway 260 at the center of Section 21, Township 13 North, Range 6 East, Gila and Salt River Base and Meridian, at latitude 34°30'14" North and longitude 111°49'40" West. It is 34.4 miles in length and has a drainage area or watershed of 293 square miles which drains a large portion of the southern Coconino

National Forest. The stream has an average slope of about 1.7%. Elevations within the watershed range from 8,870 feet at Mahan Mountain to 2,990 feet at the confluence of the Verde River and West Clear Creek. A map of the area showing where West Clear Creek is located in the county and state is attached as Exhibit "I."

A. History of West Clear Creek Verde Valley Area

The first evidence of human presence in the Verde Valley is indicated by projectile points of the Clovis and Folsom style that date from 10,000 to 12,000 years ago. These paleoindians were a primitive hunting and gathering society and this remained the dominant lifestyle through the archaic period until approximately 2,000 years ago when there is evidence of proto Hohokam Culture Indians who probably migrated from the Phoenix Salt River area into the lowland areas along the Verde River and brought primitive irrigation agricultural technology. There is little evidence of permanent occupation of the West Clear Creek valley due to the rough terrain except near the Verde River confluence. Population increased from 800 to 1200 A.D. and by the late 1100's and early 1200's a new culture designated as the Sinagua Indians appears. These people probably migrated south from the Flagstaff area and mixed with the Hohokam Culture that was already located in the Verde Valley. Prominent archaeological sites in the area dating from 1300 to 1425 include Tuzigoot, Montezuma Castle, the ruins at Montezuma Well, and the Clear Creek ruins. Although there appear to be ample resources, the Hohokam and Sinagua occupation of the area ceased at about 1425 to 1450. Drought, waterlogging of soil, disease, warfare, invasion or dissolution of trade networks have all been proposed to explain their disappearance, but no one explanation is completely satisfactory. Although there was one diversion canal located on West Clear Creek, there is no evidence of any boating or use of either West Clear Creek or the Verde River by the early pre-Columbian indigenous peoples for boating or travel along West Clear Creek.

Exploration of the region by Spanish conquistadors began in the late 1500's with the expedition in 1582 and 1583 by Antonio de Espejo who was attempting to locate two Franciscan priests who had been captured by Indians, as well as searching for gold and other precious metals. From 1598 to 1600 Governor Oñate of New Mexico and Marcos Farfan de las Godas also explored the area and probably were the first to locate the rich body of copper ore at Jerome. Other early Spanish explorers included Fray Francisco Farfan in 1598 and Zaldivar in 1599. Their primary purpose was to search for precious metals and they did not remain in permanent residence. In 1826 the first expedition of the mountain men led by Ewing Young came through the area, trapping for beaver. Following the war with Mexico in 1848 and the acquisition of the present western part of the United States by the Treaty of Guadalupe Hidalgo, a number of expeditions led by military officers were conducted in the area, primarily for the purpose of surveying possible railroad routes from the eastern United States to California. Leading among these was the 1854 surveying party along the 35th parallel led by Lt. A. W. Whipple and the 1864 Woolsey expedition which branched south to Montezuma Well and into the Verde Valley.

The first pioneers to settle in the Verde Valley were of the Swetnum-Parish party which arrived on a scouting trip in January 1865. In April of that year a settlement party of 19 people with six wagons settled at the confluence of Clear Creek and the Verde River. When attacked by Indians they asked the government for military support and a post was established near the confluence of Beaver Creek and the Verde River called Camp Lincoln. It was later renamed Camp Verde and in 1879 was made a permanent fort by the name of Ft. Verde. Famed Oak Creek settler Jim Thompson first settled in 1876 on West Clear Creek at a place now known as the Bull Pen. He later moved to Oak Creek Canyon and Indian Gardens.

The first settlers in the area relied more on farming than ranching, making their living by selling their produce to miners and soldiers in Prescott, Jerome and Ft. Verde.

The early farms diverted water from the Verde River, but there were also small ditches off West Clear Creek for irrigation and water supply. The establishment of railroads in the 1880's and improved wagon roads created easier shipping of cattle to the east and midwest, and the emphasis eventually shifted from farming to ranching.

Transportation in this area at the time of statehood was primarily by foot, horseback, and horse-drawn wagon. In 1876 a stage route was established between Prescott and Flagstaff and a station was built at the head of Beaver Creek. In 1882, the Atlantic and Pacific Railroad, which later became the Santa Fe Railroad, and after a merger is now know known as the Burlington Northern Santa Fe Railroad, reached the small community of Flagstaff. Later a branch of the railroad was brought into the Verde Valley which allowed ranchers the ability to drive cattle only a short distance to find rail transportation to market. Thus rail also became a major mode of transportation. There is a report that boats were used at Ft. Verde to cross the Verde River during high water, but there is no record of any commercial or recreational boat usage on West Clear Creek at or about the time of statehood.

B. Wildlife, Habitat and Hydrology

Because of the history of erosion, hunting, overgrazing, and competition from domestic animals, the present day distribution of plants and animals in the Verde Valley West Clear Creek area only weakly resembles prehistoric conditions. Large animals that dwelled in the higher elevations during prehistoric times included elk, bear, and mountain sheep, while some deer and antelope inhabited the lower foothills and valleys. Other animals that would have been available to early hunters were cottontails, jackrabbits, prairie dogs, woodrats, wild turkey, quail and doves.

The vegetation of the West Clear Creek valley varies from semi-desert grasses and brush near the Verde River to piñon-juniper forests in the area near the Yavapai-Coconino County line. Vegetation above the Mogollon Rim is mainly ponderosa pine. The riparian vegetation along West Clear Creek in the lower zone is characteristic of the

xeric climate. The dominant tree species include cottonwood, sycamore, willow and alder. The vegetation at these lower sites is not dense, featuring an occasional barberry and buckthorn interspersed with trees. In the upper areas the predominant tree species along the creek are box elder and alder with occasional walnut and big-toothed maple. Shrubs form the dense stands along the stream and include gambel oak, New Mexico locust, rock spirea, hophornbean, and dogwood. Dense stands of bracken fern and clumps of horsetail are also found on the banks. Peregrine falcon, bald eagles, black hawks and many other bird species are also found near West Clear Creek, and the stream itself supports numerous mammal, amphibian, reptile, bird and native fish species.

There are no hydrologic records for West Clear Creek as of the year of statehood, but a stream gauge was later installed just upstream from the confluence with the Verde River. This record, which is believed to be comparable to that at or near statehood, discloses that the annual mean flow of West Clear Creek is approximately 67 cfs, although the median flow is only 19 cfs. This difference is the result of a much higher monthly average flow which occurs as a result of winter storms and snow melt during the months of December through April. Storms causing flash floods occur with some frequency in the area and a recent peak flow on January 8, 1993, of 24,800 cfs was recorded.

For purposes of study, West Clear Creek was divided into two reaches, the canyon reach which is upstream from the crossing at State Route 260, and the valley reach which is downstream of the crossing at State Route 260. The main channel in the canyon reach is a slightly sinuous cobble and boulder bed channel approximately 25 feet wide. It has a narrow deep cross section with a single channel located at the bottom of steep walled canyons. Slot canyons with bedrock walls occur throughout this reach, creating pools of up to 20 feet deep but no more than a couple of hundred feet long. Many locations along the canyon reach are popular for hiking, swimming and fishing.

Floodplains in the canyon reach are narrow if they exist at all. This reach is perennial with a base flow of about 15 cfs. The main channel in the valley reach is a wide braided sand and cobble bed channel. Downstream from the crossing of State Route 260, the stream widens, with broad overflow areas up to 200 feet that transition into the wider geologic floodplain. The flow is perennial in the valley reach, although a small percentage is lost to infiltration, evaporation, and irrigation diversions.

The Arizona State Parks Department lists West Clear Creek as a modern recreational boating stream. Comparison of the conditions on West Clear Creek with the available recreational boating criteria indicates that the stream could be boated by canoes, kayaks and tubes approximately ten percent of the time. At normal flow, the stream is only one-half foot in depth and larger commercial craft cannot navigate the stream. There is no reference to historical or commercial boating on West Clear Creek. No evidence was presented to suggest that the location or alignment of the stream has varied significantly since statehood, although there is some evidence that meandering movement is possible in the lower valley reach near the Verde River confluence.

Although West Clear Creek is perennial, its normal flow is relatively small and can only be boated for recreation during the winter and spring months when the runoff is much higher due to snow melt. No evidence was found of any commercial trade or navigation of West Clear Creek, including the flotation of logs downstream. While West Clear Creek is a recreational fishing area from its banks, there is no history of commercial fishing. While there may have been irrigation diversion dams and structures at the beginning of the century that would have been an impediment to navigation, there are currently no permanent dams on West Clear Creek, although there is one existing bridge for a road crossing. Transportation at or near the date of statehood was accomplished by foot, horseback, and wagon and later, as roads developed, by automobile and truck. West Clear Creek is not listed in the Rivers and Harbors Act of 1899.

In view of the foregoing, it seems clear that West Clear Creek was neither navigable nor susceptible of navigability as of February 14, 1912.

XI. Separate Detailed Stream Navigability Study for Wet Beaver Creek

Since Wet Beaver Creek survived the level three analysis of the small and minor watercourse analyses in Coconino County, a separate detailed study of its navigability was conducted. The separate detailed report on Wet Beaver Creek is incorporated in this Report, Findings and Determination, although a portion of Wet Beaver Creek is located in Yavapai County which is adjacent to Coconino County to the south and west of the headwaters of Wet Beaver Creek. The level three analysis of Wet Beaver Creek reported in Section IV B 5 of this report is incorporated by reference in this separate detailed stream navigability study for Wet Beaver Creek.

The headwaters of Wet Beaver Creek are found in deep canyons of the Coconino National Forest just west of Happy Jack in the South Half of Section 17, Township 15 North, Range 8 East, Gila and Salt River Base and Meridian, latitude 34°41'00" North, longitude 111°31'24" West. Wet Beaver Creek flows from its headwaters almost due west with a southerly cant until it crosses the Yavapai County line and then flows past Montezuma Well near Montezuma Castle National Monument to its confluence with the Verde River in the South Half of Section 4, Township 14 North, Range 5 East, Gila and Salt River Base and Meridian, latitude 34°34'26" North, longitude 111°51'15" West. It is 30.1 miles in length and has a drainage area or watershed of 434 square miles. The watershed is bounded by high mountains for most of its length until the canyons widen out where it flows into the plains of the Verde Valley near McGuireville. Elevations within the watershed range from 7,713 feet at Mt. Nestor to 3,083 feet at its confluence with the Verde River. A map of the area showing where Wet Beaver Creek is located in the county and state is attached as Exhibit "J."

A. History of the Wet Beaver Creek Canyon and Valley Area

The first evidence of human presence in the Verde Valley is indicated by projectile points of the Clovis and Folsom style that date from 10,000 to 12,000 years ago. These paleoindians were a primitive hunting and gathering society and this remained the dominant lifestyle through the archaic period until approximately 2,000 years ago when there is evidence of proto Hohokam Culture Indians who probably migrated from the Phoenix Salt River area into the lowland areas along the Verde River and brought primitive irrigation agricultural technology. There is little evidence of permanent occupation of the Wet Beaver Creek valley due to the rough terrain except near the Verde River confluence. Population increased from 800 to 1200 A.D. and by the late 1100's and early 1200's a new culture designated as the Sinagua Indians appears. These people probably migrated south from the Flagstaff area and mixed with the Hohokam Culture that was already located in the Verde Valley. Prominent archaeological sites in the area dating from 1300 to 1425 include Tuzigoot, Montezuma Castle, the ruins at Montezuma Well, and the Clear Creek ruins. Although there appear to be ample resources, the Hohokam and Sinagua occupation of the area ceased at about 1425 to 1450. Drought, waterlogging of soil, disease, warfare, invasion or dissolution of trade networks have all been proposed to explain their disappearance, but no one explanation is completely satisfactory. There is no evidence of any boating or use of either Wet Beaver Creek or the Verde River by the early pre-Columbian indigenous peoples for boating or travel along Wet Beaver Creek.

Exploration of the region by Spanish conquistadors began in the late 1500's with the expedition in 1582 and 1583 by Antonio de Espejo who was attempting to locate two Franciscan priests who had been captured by Indians, as well as searching for gold and other precious metals. From 1598 to 1600 Governor Oñate of New Mexico and Marcos Farfan de las Godas also explored the area and probably were the first to locate the rich body of copper ore at Jerome. Other early Spanish explorers included Fray Francisco

Farfan in 1598 and Zaldivar in 1599. Their primary purpose was to search for precious metals and they did not remain in permanent residence. In 1826 the first expedition of the mountain men led by Ewing Young came through the area, trapping for beaver. Following the war with Mexico in 1848 and the acquisition of the present western part of the United States by the Treaty of Guadalupe Hidalgo, a number of expeditions led by military officers were conducted in the area, primarily for the purpose of surveying possible railroad routes from the eastern United States to California. Leading among these was the 1854 surveying party along the 35th parallel led by Lt. A. W. Whipple and the 1864 Woolsey expedition which branched south to Montezuma Well and into the Verde Valley.

The first pioneers to settle in the Verde Valley were of the Swetnum-Parish party which arrived on a scouting trip in January 1865. In April of that year a settlement party of 19 people with six wagons settled at the confluence of Clear Creek and the Verde River. When attacked by Indians they asked the government for military support and a post was established near the confluence of Wet Beaver Creek and the Verde River called Camp Lincoln. It was later renamed Camp Verde and in 1879 was made a permanent fort by the name of Ft. Verde. Famed Oak Creek settler Jim Thompson first settled in 1876 on West Clear Creek at a place now known as the Bull Pen. He later moved to Oak Creek Canyon and Indian Gardens.

The first settlers in the area relied more on farming than ranching, making their living by selling their produce to miners and soldiers in Prescott, Jerome and Ft. Verde. The early farms diverted water from the Verde River, but there were also small ditches off West Clear Creek for irrigation and water supply. The establishment of railroads in the 1880's and improved wagon roads created easier shipping of cattle to the east and midwest, and the emphasis eventually shifted from farming to ranching.

Transportation in this area at the time of statehood was primarily by foot, horseback, and horse-drawn wagon. In 1876 a stage route was established between

Prescott and Flagstaff and a station was built at the head of Beaver Creek. In 1882, the Atlantic and Pacific Railroad, which later became the Santa Fe Railroad, and after a merger is now known as the Burlington Northern Santa Fe Railroad, reached the small community of Flagstaff. Later a branch of the railroad was brought into the Verde Valley which allowed ranchers the ability to drive cattle only a short distance to find rail transportation to market. Thus rail also became a major mode of transportation. There is a report that boats were used at Ft. Verde to cross the Verde River during high water, but there is no record of any commercial or recreational boat usage on Wet Beaver Creek at or about the time of statehood.

B. Wildlife, Habitat and Hydrology

Because of the history of erosion, hunting, overgrazing, and competition from domestic animals, the present day distribution of plants and animals in the Verde Valley Wet Beaver Creek area only weakly resembles prehistoric conditions. Large animals that dwelled in the higher elevations during prehistoric times included elk, bear, and mountain sheep, while some deer and antelope inhabited the lower foothills and valleys. Other animals that would have been available to early hunters were cottontails, jackrabbits, prairie dogs, woodrats, wild turkey, quail and doves.

The vegetation of the Wet Beaver Creek valley varies from semi-desert grasses and brush near the Verde River to piñon-juniper forests in the area near the Yavapai-Coconino County line. Vegetation above the Mogollon Rim is mainly ponderosa pine. The riparian vegetation along Wet Beaver Creek in the lower zone is characteristic of the xeric climate. The dominant tree species include cottonwood, sycamore, willow and alder. The vegetation at these lower sites is not dense, featuring an occasional barberry and buckthorn interspersed with trees. In the upper areas the predominant tree species along the creek are box elder and alder with occasional walnut and big-toothed maple. Shrubs form the dense stands along the stream and include gambel oak, New Mexico locust, rock spirea, hophornbean, and dogwood. Dense stands of bracken fern and

clumps of horsetail are also found on the banks. Peregrine falcons, bald eagles, black hawks and many other bird species are also found near Wet Beaver Creek, and the stream itself supports numerous mammal, amphibian, reptile, bird and native fish species.

There are no hydrologic records for Wet Beaver Creek as of the year of statehood, but a stream gauge was later installed just upstream from the confluence with the Verde River. This record, which is believed to be comparable to that at or near statehood, discloses that the annual mean flow of Wet Beaver Creek is approximately 36 cfs, which corresponds to an average depth of less than one-half foot, and the width is about 8 to 25 feet. This difference is the result of a much higher monthly average flow which occurs as a result of winter storms and snow melt during the months of December through April. Storms causing flash floods occur with some frequency in the area and a recent peak flow on January 8, 1993, of 24,800 cfs was recorded.

For purposes of study, Wet Beaver Creek was divided into two reaches, the canyon reach which is upstream from Forest Road 618, and the valley reach which is downstream from Forest Road 618. The main channel in the canyon reach is a slightly sinuous cobble and boulder bed channel approximately 25 feet wide. It has a narrow deep cross section with a single channel located at the bottom of steep walled canyons. Slot canyons with bedrock walls occur throughout this reach, creating pools of up to 20 feet deep but no more than a couple of hundred feet long. Many locations along the canyon reach are popular for hiking, swimming and fishing. Floodplains in the canyon reach are narrow if they exist at all. This reach is perennial with a base flow of about 15 cfs. The main channel in the valley reach is a wide braided sand and cobble bed channel. Downstream from the crossing of Forest Road 618, the stream widens, with broad overflow areas up to 200 feet that transition into the wider geologic floodplain. The flow is perennial in the valley reach, although a small percentage is lost to infiltration, evaporation, and irrigation diversions.

The Arizona State Parks Department lists Wet Beaver Creek as a modern recreational boating stream. Comparison of the conditions on Wet Beaver Creek with the available recreational boating criteria indicates that the stream could be boated by canoes, kayaks and tubes approximately ten percent of the time. At normal flow, the stream is only one-half foot in depth and larger commercial craft cannot navigate the stream. There is no reference to historical or commercial boating on Wet Beaver Creek. No evidence was presented to suggest that the location or alignment of the stream has varied significantly since statehood, although there is some evidence that meandering movement is possible in the lower valley reach near the Verde River confluence.

Although Wet Beaver Creek is perennial, its normal flow is relatively small and can only be boated for recreation during the winter and spring months when the runoff is much higher due to snow melt. No evidence was found of any commercial trade or navigation of Wet Beaver Creek, including the flotation of logs downstream. While Wet Beaver Creek is a recreational fishing area from its banks, there is no history of commercial fishing. While there may have been irrigation diversion dams and structures at the beginning of the century that would have been an impediment to navigation, there are currently no permanent dams on West Clear Creek, although there is one existing bridge for a road crossing. Transportation at or near the date of statehood was accomplished by foot, horseback, and wagon and later, as roads developed, by automobile and truck. Wet Beaver Creek is not listed in the Rivers and Harbors Act of 1899.

In view of the foregoing, it seems clear that Wet Beaver Creek was neither navigable nor susceptible of navigability as of February 14, 1912.

XII. Separate Detailed Stream Navigability Study for Chevelon Creek

Since Chevelon Creek survived the level three analysis of the small and minor watercourse analyses for Coconino County, a separate detailed study of its navigability was conducted. The separate detailed report on Chevelon Creek is incorporated in this

Report, Findings and Determination although a major portion of Chevelon Creek is located in Navajo County which is adjacent Coconino County to the east. The level three analysis for Chevelon Creek reported in Section IV B 10 of this report is incorporated by reference in this separate detailed stream navigability study for Chevelon Creek.

The headwaters of Chevelon Creek are located in Willow Springs Canyon on the northeastern slope of the Mogollon Rim near Woods Canyon Lake in Section 29, Township 11 North, Range 14 East, Gila and Salt River Base and Meridian, latitude 34°20'00" North, longitude 110°56'00" West. It flows in a northeasterly direction through deep canyons in the Coconino National Forest past Chevelon Crossing and crosses the Navajo County line continuing in a northeasterly direction in lesser canyons until it flows into the Little Colorado River east of Winslow at Section 15, Township 18 North, Range 17 East, Gila and Salt River Base and Meridian, latitude 34°57'05" North, longitude 110°31'14" West. Chevelon Creek is 91.4 miles long and drains a watershed of 820 square miles. Elevations in the watershed range from a maximum of 7,660 at its headwaters to approximately 4,900 feet at its confluence with the Little Colorado River. The annual mean flow is approximately 50 cfs. The depth of the stream during normal flow is between .64 feet to 1.35 feet with a width of 12 to 30 feet.

The watershed is bounded by high mountains and deep canyons of the north slope of the Mogollon Rim and the canyons of the high plateau which tilt to the north as the creek runs into the Little Colorado River. A map of the area showing where Chevelon Creek is located in the county and state is attached as Exhibit "K."

A. History of Chevelon Canyon

Archaeological sites indicate that the region surrounding Chevelon Canyon has been occupied for several thousand years, although few site-specific records of ruins were found. No doubt paleoindians traveled through the area utilizing the waters in Chevelon Creek as they hunted and gathered for their sustenance. There are hardly any

permanent sites that date to the archaic period in which hunting and gathering cultures also passed through and made temporary camps in the area. As the more well-known pre-Columbian cultures developed, it seems that the Chevelon Creek area was a meeting place for Anasazi and Sinagua cultures. The best known archaeological site in the area is Chevelon Ruin at Homol'ovi State Park. The Homol'ovi site is a series of eight to twelve separate buildings or ruins located at the confluence of Chevelon Creek and the Little Colorado River. The Chevelon Ruin is a 400-room village site situated on a hilltop. The occupants of this site were thought to have used irrigated agriculture primarily from the Little Colorado and not Chevelon Creek. There is also evidence of later occupation by Zuni, Hopi, Navajo and Apache Indians which brings the archaeological record down to the mid-1800's.

The first Anglo-American explorer in the area was Col. John M. Washington's Navajo Expedition in 1849. Following the end of the Mexican American War in 1848 with the Treaty of Guadalupe Hidalgo, the United States sponsored a number of expeditions led by military officers who surveyed the northern part of this area as a railroad site for a transcontinental railroad. One of the first was Capt. Lorenzo Sitgreaves in 1851 who led an American surveying expedition down the Little Colorado River and across what would become northern Arizona, surveying the 35th parallel site which was later developed into a transcontinental railroad. In 1853. Lt. Whipple passed through the area and noted the great kivas at various of the ruins, particularly Homol'ovi. In the late 1850's E. F. Beale developed a wagon road across northern Arizona which generally followed the present route of the railroad and Highway 66.

The first Anglo settlement in the Chevelon Creek area was a town called Sunset which is now known as Winslow. Led by Lot Smith, Mormon colonists maintained a dairy at what was to be known as Mormon Lake and had a sawmill nearby at a place called Sawmill Springs. Other groups of Mormon settlers came from Utah and established themselves at Sunset or Mormon Crossing near Homol'ovi and Joseph City.

These early settlements had a great deal of trouble irrigating and growing crops due to the lack of water part of the time and excessive flooding at other times.

Throughout the early 1900's other settlers made their homes along Chevelon Creek or in the flatlands next to the steep canyon walls. Several ranching operations started in those years are still operating today near the creek, but they do not include permanent residences or commercial buildings within the canyon. Two pumping stations and three dams have been constructed along Chevelon Creek for water supply and recreation, but none of these dams existed at the time of statehood. The principal economic activity in the region in the late 1800's and early 1900's was ranching. The only crop agriculture attempted along Chevelon Creek were merely gardens to provide vegetables to the ranchers. No mines or mining claims were established in the Chevelon Canyon area.

Transportation through the Chevelon Creek area was primarily by foot, horseback and horse-drawn wagon until 1882 when the Atlantic and Pacific Railroad reached Winslow. This is the track which later became the Santa Fe Railroad and after a recent merger is now known as the Burlington Northern Santa Fe Railroad. The railroad parallels Interstate 40, a transcontinental 4-lane highway. There is no record of any boating or other attempts at travel on Chevelon Creek and no evidence of any commercial fishing. The water from the creek was used primarily for grazing of cattle, with some isolated irrigation uses.

B. Wildlife, Habitat and Hydrology

Two U. S. Geological Survey stream gauge stations are located on Chevelon Creek, one just inside the Navajo County line at the mid-point of the stream flow and the other near the confluence with the Little Colorado River. The stream is listed as being perennial but in fact is intermittent and during portions of the year some areas of the stream are dry. The annual mean flow at both stream gauge stations is approximately 50 cfs. The largest monthly flow occurs during the winter and spring

months of January through April when the snow is melting on the mountains of the Mogollon Rim. The stream gauge near Winslow reported a peak occurrence during the largest flood on record of 33,600 cfs on December 18, 1978.

The vegetation on Chevelon Creek varies with the elevation. Ponderosa pine and Douglas fir dominate in the southern area in the high mountains, with some piñon-juniper communities in some areas. Further downstream the riparian community transitions to cottonwood and walnut along with canyon grape. Near the Little Colorado confluence, the banks are covered with dense thickets of tamarisk, a non-native tree thought to have been introduced after Anglo settlement of the west in order to halt erosion. The most downstream zone is a part of the northern desert community and is a southern extension of the Great Basin sagebrush country. Sage dominates in most of this area and is accompanied by rabbit brush and salt brush. Before Anglo settlement, the grasslands were dominated almost exclusively by antelope with occasional deer and elk. After Anglo settlement, cattle and sheep became dominant. Wolves once served as grassland predators but are now gone and replaced by coyote as the dominant predator of jackrabbits and badgers found in the area. Further south as elevation increases beaver, elk, porcupine, wild turkey, bobcat, fox and mountain lion are found. The present elk herd in this area is wapiti which were imported from Wyoming in 1913 by the Elks Club of Winslow after the native elk population became extinct.

There are two reservoirs on Chevelon Creek, Woods Canyon Lake near its headwaters, and Chevelon Canyon Lake constructed in June 1967 with a lake capacity of 6,193 acre feet. Recreational boating and fishing are conducted on both Woods Canyon and Chevelon Canyon Lakes. The flow data indicates that during ordinary flow, recreational watercraft could be utilized on portions of the creek other than the lakes approximately 10% of the time. In the upper and middle reaches of Chevelon Creek there are many channel obstructions such as vegetation, riffles and boulders in

the stream. All reaches of Chevelon Creek are either perennial or intermittent, flowing in response to discharge of springs, interception of groundwater, and particularly runoff responding to snow melt in the late winter and early spring.

No evidence was found to indicate that sustained trade or travel occurred in boats in either the upstream or downstream direction of Chevelon Creek at the time of statehood. Although there is some history of recreational boating during high water periods, no evidence was found to indicate any commercial enterprise being conducted using Chevelon Creek for trade or travel by boat. Certainly, commercial boats, including keelboats, steamboats, or powered barges were and are impossible to use on this creek. All boating or fishing was for recreational purposes and there is no record of any use of Chevelon Creek for flotation of logs or other materials. While there is some evidence of water being diverted from Chevelon Creek for irrigation at several locations prior to 1912 and after, there is no evidence that entries were made under the Desert Land Act of 1877. Likewise, Chevelon Creek was not regulated as a watercourse under the Federal Rivers and Harbors Act of 1899.

While there are currently three dams and two irrigation diversions on Chevelon Creek that would be impediments of some types of navigation, these dams and diversions did not exist at the time of statehood. Transportation in proximity to Chevelon Creek at the time of statehood was customarily accomplished by foot, horseback, wagon and railroad and later, as the road conditions improved, by automobile and truck.

In view of the foregoing, it seems clear that Chevelon Creek was neither navigable nor susceptible of navigability as of February 14, 1912.

XIII. Findings and Determination

The Commission conducted a particularized assessment of equal footing claims the State of Arizona might have to the beds and banks of the 5,276 small and minor watercourses in Coconino County, Arizona and, based on all of the historical and

scientific data and information, documents, and other evidence produced, finds that none of the said small and minor watercourses, including Oak Creek, West Clear Creek, Wet Beaver Creek, and Chevelon Creek on which separate detailed studies were conducted, were used or were susceptible to being used, in their ordinary and natural condition, as a highway for commerce, over which trade and travel were or could have been conducted in the customary modes of trade and travel on water as of February 14, 1912.

The Commission also finds that none of the small and minor watercourses in Coconino County, Arizona, except Oak Creek, West Clear Creek, Wet Beaver Creek and Chevelon Creek, are or were truly perennial throughout their length and that as of February 14, 1912 and currently, they flow/flowed only in direct response to precipitation and are or were dry at all other times.

The Commission also finds that there is no evidence of any historical or modern commercial boating having occurred on any of the small and minor watercourses in Coconino County, Arizona.

The Commission also finds that there is no evidence of any fishing, except recreational fishing, having occurred on the small and minor watercourses in Coconino County, Arizona.

The Commission further finds that all notices of these hearings and proceedings were properly and timely given.

In view of the foregoing, the Commission, pursuant to A.R.S. § 37-1128A, finds and determines that the small and minor watercourses and the two lakes mentioned above in Coconino County, Arizona, were not navigable nor susceptible of navigability as of February 14, 1912.

DATED this 20th day of April 2011.

Earl Eisenhower, Chair

Cecil Miller, Member

James Henness, Member

Dolly Echeverria, Vice Chair
Deceased July 1, 2010

Jay Brashear, Member
Deceased September 15, 2007

STAFF MEMBERS:

George Mennert
Executive Director

Curtis A. Jennings
Legal Counsel to the Commission

1945-0

EXHIBIT A

Table A-3
List of Small and Minor Watercourses in Coconino County

120 Mile Creek
122 Mile Creek
127 Mile Creek
128 Mile Creek
133 Mile Creek
193 Mile Creek
196 Mile Creek
205 Mile Creek
215 Mile Creek
222 Mile Creek
a - Seg 503 Coconino
a - Seg 9 Coconino
Albers Wash
Alder Creek - Coconino
Anderson Canyon
Antelope Creek - Coconino
Antelope Wash - Coconino
Ash Fork Draw - Coconino
Ash Fork Draw - Coconino/Yavapai
Ashurst Run
Awatubi Creek
Aztec Creek
b - Seg 30 Coconino
Babbit Spring
Babbitt Wash
Badger Creek - Coconino
Badger Wash
Ball Court Wash
Barbershop Canyon
Basalt Creek
Bear Canyon
Begashibito Wash
Bekihatso Wash
Big Wash - Coconino
Billy Goat Wash
Bitter Spring Wash
Black Tank Wash
Blacktail Canyon Creek
Bonita Creek - Coconino
Boucher Creek
Boulder Creek - Coconino
Brady Canyon
Bright Angel Creek
Bright Angel Wash
Burro Canyon Wash
c - Seg 21 Coconino
c - Seg 32 Coconino
Campbell Francis
Canyon Creek 1
Canyon Diablo
Carbon Creek
Cardenas Creek
Cataract Creek
Cathedral Wash
Cedar Creek 1
Cedar Wash - Coconino
Chaiyahi Creek
Chevelon Canyon
Chino Wash
Chuar Creek
Citadel Wash
Clear Creek 1
Clear Creek 2
Clover Creek - Coconino
Coconino Wash
Comanche Creek
Corduroy Wash
Corn Creek Wash
Cottonwood Creek - Coconino
Coyote Wash
Coyote Wash 1 - Coconino
Crackerbox Canyon
Cremation Creek
Crystal Creek
Curve Wash
Deadman Wash - Coconino
Deer Creek - Coconino
Deer Tank Wash
Devil Dog Canyon
Diamond Creek 1
Dinnebito Wash
Dogtown Wash
Doney Mountain Wash
Dragon Creek
Dry Beaver Creek
Dry Creek 1 - Coconino/Yavapai
Dry Wash - Coconino
East Clear Creek
East Fork Canyon
East Fork Carbon
Eightmile Creek
Emmett Wash

Table A-3
List of Small and Minor Watercourses in Coconino County

Espejo Creek
Fall Creek
Fivemile Wash - Coconino
Flint Creek
Fossil Creek
Foster Creek
Garden Creek 1 - Coconino
Garden Creek 2 - Coconino
Gold Spring Wash
Grapevine Canyon
Grapevine Creek - Coconino
Gray Spot Wash
Gray Wash
Grindstone Wash
Haada Is Taani D
Hack Canyon
Hail Canyon
Hamblin Wash
Hanaa Ninadzidza
Hance Creek
Havasu Creek
Heather Wash
Heiser Wash
Hell Canyon
Hermit Creek
Hogansaani Wash
Horn Creek
Horse Tank Wash
House Rock Wash
Howard Draw
Hulls Wash
J D Dam Wash
Jackass Creek
Jackrabbit Wash - Coconino
Jackrabbit Canyon
Jacks Canyon - Coconino
Jacks Canyon 1
Jacks Canyon 2
Jacob Canyon
Jadito Wash
Johnson Creek
Johnson Run
Johnson Wash - Coconino
Jumpup Canyon
Kaibab Wash
Kaibito Creek
Kana A Wash
Kanab Creek
Kane Canyon
Kish Zhini Wash
Kwagunt Creek
Landmark Wash
Last Chance Creek
Lava Wash
Leche-e Wash
Lee Canyon
Leonard Canyon
Lilkiizh Shijei
Little Coyote Canyon
Little Mexican
Little Red Horse
Little Roden Wash
Little Wash
Long Canyon
Long Canyon Wash
Lost Spring Wash
M C Canyon
Malgosa Creek
Manzanita Creek
Martin Dam Draw
Matkatamiba Creek
Mays Wash
Meath Wash
Milk Creek - Coconino
Miller Canyon
Miller Wash - Coconino
Moenkopi Wash
Mohawk Canyon
Monument Creek
Monument Wash
Mule Creek
Nankoweap Creek
Narrow Wash
Navajo Creek
Needmore Wash
Ninetyfour Mile
Ninetyone Mile Creek
North Canyon Wash
Oak Creek
Oraibi Wash
Padre Canyon
Paiute Trail Wash

Table A-3
List of Small and Minor Watercourses in Coconino County

Papago Creek
Paria River
Partridge Creek
Pasture Wash
Peach Wash
Phantom Creek
Pine Creek
Pine Creek Wash
Pine Valley Road
Pineveta Wash
Pipe Creek
Pleasant Valley
Polacca Wash
Polson Dam Draw
Porcupine Wash
Prairie Wash
Priest Draw
Prospect Creek
Pumphouse Wash
Railroad Draw
Rain Tank Wash
Rarick Canyon
Rattlesnake Canyon
Rattlesnake Wash
Red Horse Wash
Red Lake Wash
Rio de Flag
Rock Canyon - Coconino
Royal Arch Creek
Russell Wash - Coconino
Salt Creek - Coconino
Salt Water Wash
Saltwater Wash
San Francisco Wash
Sand Draw
Sand Wash - Coconino
Sandstone Wash
Schoolhouse Draw
Schultz Creek
Seaman Wash
Sei Biibikooh
Sei Haasgaii Wash
Seventyfive Mile
Sheep Spring Wash
Sheep Wash - Coconino
Shinumo Creek
Shinumo Wash
Shonto Wash
Sinclair Wash
Sixtymile Creek
Slate Creek - Coconino
Snake Gulch
Soap Creek - Coconino
Soldier Wash
Sour Water Wash
South Canyon
South Fork Soap
Sowats Canyon
Spring Creek 1 – Coconino/Yavapai
Spring Valley Wash
Square Butte Wash
Standing Water Wash
Stone Creek - Coconino
Stone House Wash
Strawberry Creek
Sycamore Creek 1
Taah Liti Wash
Tanner Wash - Coconino
Tapeats Creek
Tappan Wash
Tatahatso Wash
Tatahoysa Wash
Thunder River
Tiger Wash - Coconino
Tin Can Wash
To Hajisho
Tohachi Wash
Toms Creek
Tonahakaad Wash
Tonto Creek
Trinity Creek
Tse To Baah Naal
Tucker Flat Wash
Tule Tank Wash
Tuna Creek
Turkey Creek - Coconino
Unkar Creek
Vishnu Creek
Volunteer Wash
Wall Creek
Wallace Canyon
Walnut Creek - Coconino

Table A-3
List of Small and Minor Watercourses in Coconino County

Warm Springs Canyon
Webber Creek
West Canyon Creek
West Cataract Creek
West Chevelon Canyon
West Clear Creek
West Fork Oak Creek - Coconino
West Webber Creek
Wet Beaver Creek
Whe-Yol-Da Sah Wash
White Creek
White Sage Wash
White Water Wash
Wildcat Canyon
Wildcat Canyon - Coconino
Willow Creek - Coconino
Woods Canyon
Woody Wash
Yaeger Canyon
Yeager Canyon
Yellow Butte Was
Yellow Jacket Canyon
Youngs Canyon
4977 Unnamed Watercourses

EXHIBIT B

AFFIDAVIT/PROOF OF PUBLICATION

STATE OF ARIZONA
} ss.
County of Coconino

Bobbie Crosby being duly sworn, deposes and says:

That she is the legal clerk of the Arizona Daily Sun a newspaper published at Flagstaff, Coconino County, Arizona; that the legal 6703 a copy of which is hereunto attached, was first published in said newspaper in its issue dated the 23 day of March, 2005, and was published in each one issue of said newspaper for three consecutive weeks the last publication being in the issue dated the 6 day of April, 2005.

[signature]

"OFFICIAL SEAL"
Jeoyanne Jaimes
Notary Public-Arizona
Coconino County
My Commission Expires 9/2/2006

Subscribed and sworn to before me this 8th day of April, 2005

[signature]

Notary Public

My Commission expires 9/2/2006

Legal No. 6703
STATEMENT OF INTENT
State of Arizona
Navigable Stream Adjudication Commission

Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold watercourse navigability hearings regarding the Little Colorado River in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence regarding the navigability or nonnavigability of the Little Colorado River in Coconino County. Interested parties are requested to file all documentary evidence they propose to submit to ANSAC by May 23, 2005. All evidence submitted to ANSAC will be the property of ANSAC and the State of Arizona., Evidence submitted will be available for public inspection at the ANSAC offices during regular office hours:

Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold a watercourse navigability hearing regarding all of the small and minor watercourses in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence re-

Shonto Wash, Sinclair Wash, Sixtymile Creek, Slate Creek - Coconino, Snake Gulch, Soap Creek - Cochise, Sour Water Wash, South Canyon, South Fork Soap, Sowats Canyon, Spring Valley Wash, Square Butte Wash, Standing Water Wash, Stone Creek - Coconino, Stone House Wash, Strawberry Creek, Sycamore Creek 1, Taah Liti Wash, Tanner Wash - Coconino, Tapeats Creek, Tappan Wash, Tatahatso Wash, Tatahoysa Wash, Thunder River, Tiger Wash - Coconino, Tin Can Wash, To Hajisho, Tohachi Wash, Toms Creek, Tonahakaad Wash, Trinity Creek, Tse To Baah Nazl, Tucker Flat Wash, Tule Tank Wash, Tuna Creek, Turkey Creek - Coconino, Unkar Creek, Vishnu Creek, Volunteer Wash, Well Creek, Wallace Canyon, Walnut Creek - Coconino, Warm Springs Canyon, Webber Creek, West Canyon Creek, West Cataract Creek, West Chevelon Canyon, West Clear Creek, West Fork Oak Creek - Coconino, West Webber Creek, Wet Beaver Creek, White Creek, White Sage Wash, White Water Wash, Wildcat Canyon, Wildcat Canyon - Coconino, Willow Creek - Coconino, Woods Canyon, Woody Wash, Yaoger Canyon, Yeager Canyon, Yellow Butte Was, Yellow Jacket Canyon, Youngs Canyon, a - Seg 503 Coconino, a - Seg 9 Coconino, b - Seg 30 Coconino, c - Seg 21 Coconino, c - Seg 32, Coconino, and all other named and unnamed small and minor watercourses.

An unbound original plus seven bound copies of documentary evidence is to be submitted. ANSAC offices are located at 1700 West Washington, Room 304, Phoenix, AZ 85007. The telephone number is (602) 542-9214. The web site address is http://www.azstreambeds.com. The e-mail address is streams@mindspring.com. Individuals with disabilities who need a reasonable accommodation to communicate evidence to ANSAC, or who require this information in an alternate format may contact the ANSAC office at (602) 542-9214 to make their needs known. PUB: Mar. 23, 30 [illegible] 2005 6703

Legal No. 6703
STATEMENT OF INTENT
State of Arizona
Navigable Stream Adjudication Commission
Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold watercourse navigability hearings regarding the Little Colorado River in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence regarding the navigability or nonnavigability of the Little Colorado River in Coconino County. Interested parties are requested to file all documentary evidence they propose to submit to ANSAC by May 23, 2005.
All evidence submitted to ANSAC will be the property of ANSAC and the State of Arizona. Evidence submitted will be available for public inspection at the ANSAC offices during regular office hours.
Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold a watercourse navigability hearing regarding all of the small and minor watercourses in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence re-

Shonto Wash, Sinclair Wash, Sixtymile Creek, Slate Creek - Coconino, Snake Gulch, Soap Creek - Cochise, Sour Water Wash, South Canyon, South Fork Soap, Sowats Canyon, Spring Valley Wash, Square Butte Wash, Standing Water Wash, Stone Creek - Coconino, Stone House Wash, Strawberry Creek, Sycamore Creek 1, Taah Liti Wash, Tanner Wash - Coconino, Tapeats Creek, Tappan Wash, Tatahatso Wash, Tatahoysa Wash, Thunder River, Tiger Wash - Coconino, Tin Can Wash, To Hajisho, Tohachi Wash, Toms Creek, Tonahakaad Wash, Trinity Creek, Tse To Baah Nazl, Tucker Flat Wash, Tule Tank Wash, Tuna Creek, Turkey Creek - Coconino, Unkar Creek, Vishnu Creek, Volunteer Wash, Wall Creek, Wallace Canyon, Walnut Creek - Coconino, Warm Springs Canyon, Webber Creek, West Canyon Creek, West Cataract Creek, West Chevelon Canyon, West Clear Creek, West Fork Oak Creek - Coconino, West Webber Creek, Wet Beaver Creek, White Creek, White Sage Wash, White Water Wash, Wildcat Canyon, Wildcat Canyon - Coconino, Willow Creek - Coconino, Woods Canyon, Woody Wash, Yaeger Canyon, Yeager Canyon, Yellow Butte Was, Yellow Jacket Canyon, Youngs Canyon, a - Seg 503 Coconino, a - Seg 9 Coconino, b - Seg 30 Coconino, c - Seg 21 Coconino, c - Seg 32 Coconino, and all other named and unnamed small and minor watercourses.
An unbound original plus seven bound copies of documentary evidence is to be submitted.
ANSAC offices are located at 1700 West Washington, Room 304, Phoenix, AZ 85007. The telephone number is (602) 542-9214. The web site address is http://www.azstreambeds.com. The e-mail address is streams@mindspring.com.
Individuals with disabilities who need a reasonable accommodation to communicate evidence to ANSAC, or who require this information in an alternate format may contact the ANSAC office at (602) 542-9214 to make their needs known. PUB: Mar. 23, 30 Apr. 6, 2005 6703

AFFIDAVIT/PROOF OF PUBLICATION

STATE OF ARIZONA

} ss.

County of Coconino

Bobbie Crosby being duly sworn, deposes and says:

That she is the legal clerk of the Arizona Daily Sun

a newspaper published at Flagstaff, Coconino County, Arizona; that the

legal 6844

a copy of which is

hereunto attached, was first published in said newspaper in its issue dated

the 13 day of May, 2005, and was

published in each one issue of said newspaper for three

consecutive weeks the last publication being in the issue dated the

27 day of May, 2005.

"OFFICIAL SEAL"
Joeyanne Jaimes
Notary Public-Arizona
Coconino County
My Commission Expires

Subscribed and sworn to before me this

1st day of June, 2005

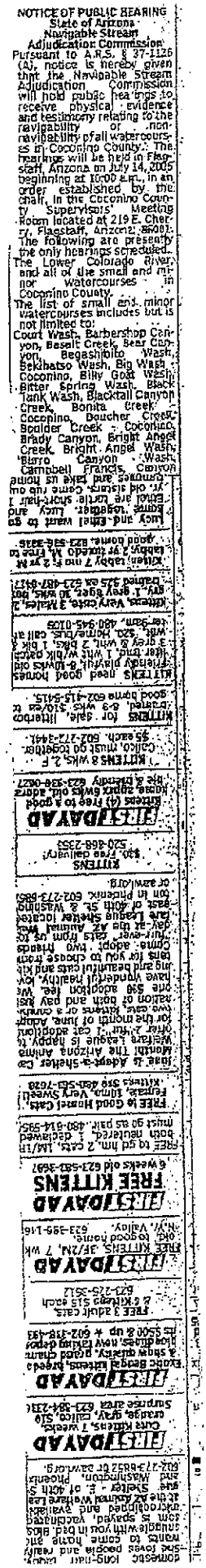
Notary Public

My Commission expires 9/27/2006

Legal No. 6844
STATEMENT OF INTENT State of Arizona Navigable Stream Adjudication Commission.
This is the second occasion this Statement of Intent has been published. Initially, it contained an evidence due date of May 23, 2005 because that was the scheduled date for the hearing on Coconino County watercourses. However, the hearing date has been changed and the hearing will be held in July 2005, therefore we are republishing the Statement of Intent a second time with an evidence due date of July 12, 2005.
Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold watercourse navigability hearings regarding the Little Colorado River in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence regarding the navigability or nonnavigability of the Little Colorado River in Coconino County. Interested parties are requested to file all documentary evidence they propose to submit to ANSAC by July 12, 2005. All evidence submitted to ANSAC will be the property of ANSAC and the State of Arizona. Evidence submitted will be available for public inspection at the ANSAC offices during regular office hours.
Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold a watercourse navigability hearing regarding all of the small and minor watercourses in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence regarding the navigability or nonnavigability of all small and minor watercourses in Coconino County. Interested parties are requested to file all documentary evidence they propose to submit to ANSAC by July 12, 2005. All evidence sub-

Legal No. 6844
STATEMENT OF INTENT State of Arizona Navigable Stream Adjudication Commission
This is the second occasion this Statement of Intent has been published. Initially, it contained an evidence due date of May 23, 2005 because that was the scheduled date for the hearing on Coconino County watercourses. However, the hearing date has been changed and the hearing will be held in July 2005, therefore we are republishing the Statement of Intent a second time with an evidence due date of July 12, 2005.
Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold watercourse navigability hearings regarding the Little Colorado River in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence regarding the navigability or nonnavigability of the Little Colorado River in Coconino County. Interested parties are requested to file all documentary evidence they propose to submit to ANSAC by July 12, 2005. All evidence submitted to ANSAC will be the property of ANSAC and the State of Arizona. Evidence submitted will be available for public inspection at the ANSAC offices during regular office hours.
Pursuant to A.R.S. §37-1101, et. seq., the Arizona Navigable Stream Adjudication Commission (ANSAC) is planning to hold a watercourse navigability hearing regarding all of the small and minor watercourses in Coconino County, Arizona. Notice is hereby given, pursuant to A.R.S. §37-1123 (B), that ANSAC intends to receive, review, and consider evidence regarding the navigability or nonnavigability of all small and minor watercourses in Coconino County. Interested parties are requested to file all documentary evidence they propose to submit to ANSAC by July 12, 2005. All evidence submitted to ANSAC will be

EXHIBIT C



NOTICE OF PUBLIC HEARING
State of Arizona
Navigable Stream
Adjudication Commission

Pursuant to A.R.S. § 37-1126 (A), notice is hereby given that the Navigable Stream Adjudication Commission will hold public hearings to receive physical evidence and testimony relating to the navigability or non-navigability of all watercourses in Coconino County. The hearings will be held in Flagstaff, Arizona on July 14, 2005 beginning at 10:00 a.m., in an order established by the chair, in the Coconino County Supervisors' Meeting Room located at 219 E. Cherry, Flagstaff, Arizona 86001. The following are presently the only hearings scheduled.

The Lower Colorado River, and all of the small and minor watercourses in Coconino County.

The list of small and minor watercourses includes but is not limited to:

Court Wash, Barbershop Canyon, Basalt Creek, Bear Canyon, Begashibito Wash, Bekibatso Wash, Big Wash, Coconino, Billy Goat Wash, Bitter Spring Wash, Black Tank Wash, Blacktail Canyon, Bonita Creek, Cocopino, Boucher Creek, Boulder Creek, Coconino, Brady Canyon, Bright Angel Creek, Bright Angel Wash, Burro Canyon Wash, Campbell Francis Canyon

THE ARIZONA REPUBLIC

AFFIDAVIT OF PUBLICATION

STATE OF ARIZONA
COUNTY OF MARICOPA } SS.

Diana Chavez, being first duly sworn, upon oath deposes and says: That she is a legal advertising representative of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published at Phoenix, Arizona, by Phoenix Newspapers Inc., which also publishes The Arizona Republic, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates as indicated.

The Arizona Republic

June 9, 2005

Sworn to before me this
9TH day of
June A.D. 2005

OFFICIAL SEAL
MARILYN GREENWOOD
NOTARY PUBLIC-ARIZONA
MARICOPA COUNTY
My Comm. Expires May 23, 2007

Notary Public

home. Blossom is a 1-yr old, domestic long-hair tabby. She loves people and really wants to come home and snuggle with you in bed. Blossom is spayed, vaccinated, microchipped and available at the **AZ Animal Welfare League Shelter** - E. of 40th St. and Washington, Phoenix. 602-273-6852 or aawl.org.

FIRST DAY AD
Cute Kittens, 7 weeks, orange, gray, calico, $10 Surprise area 623-584-231

FIRST DAY AD
Exotic Bengal kittens, breeds & show quality, grand champ bloodlines, new taking deposits $500 & up ★ 602-318-493

FREE 3 adult cats, & 6 Kittens $15 each 623-225-3512

FIRST DAY AD
FREE KITTENS, 3F/2M, 7 wks old, to good home. N.W. Valley. 623-386-146

FIRST DAY AD
FREE KITTENS
6 weeks old 623-583-3697

FREE to good hm, 2 cats, 1M/1F both neutered, 1 declawed must go as pair. 480-614-595

FREE to Good Home! Cats, Female, Llmo, Very Sweet! Kittens $10 480-563-7628

June is Adopt-a-Shelter Cat Month! The Arizona Animal Welfare League is happy to offer 2-"fur"-1 cat adoptions for the month of June. Adopt two cats, kittens or a combination of both and pay just one $90 adoption fee. We have wonderful healthy, loving and beautiful cats and kittens for you to choose from. Come adopt two friends "furr-ever" cats from us today at the **AZ Animal Welfare League Shelter** located east of 40th St. & Washington in Phoenix. 602-273-6852 or aawl.org.

KITTENS
$30. Free delivery!
520-868-2353

FIRST DAY AD
Kittens (4) Free to a good home, appx 6wks old, adorable & friendly 623-939-0627

KITTENS 8 wks, 2, F Calico, must go together. $5 each. 602-272-3441

KITTENS for sale, litterbox trained, 8-9 wks $10/ea to good home 602-415-5415.

KITTENS need good homes Friendly playful, 8-10wks old litter trnd, 1 wht w/blk patch 3 grey & wht, 2 blks, 1 blk & wht, $20. Home/bus. call after 9am, 480-945-0109

Kittens, Very cute, 3 Males, 2 gry, 1 grey tiger, 10 wks, box trained $25 ea 623-487-0417

Kitten, tabby 7 mo F; 2 yr M tabby; 2 yr tuxedo M, Free to good home. 623-536-3335

Lucy and Ethel want to go home together. Lucy and Ethel are tortie short-hair 1 yr. old sisters. Come rub our tummies and take us home

NOTICE OF PUBLIC HEARING
State of Arizona
Navigable Stream
Adjudication Commission

Pursuant to A.R.S. § 37-1126 (A), notice is hereby given that the Navigable Stream Adjudication Commission will hold public hearings to receive physical evidence and testimony relating to the navigability of certain watercourses in Coconino County. The hearings will be held in Flagstaff, Arizona on July 14, 2005 beginning at 10:00 a.m., in an order established by the chair, in the Coconino County Supervisors' Meeting Room located at 219 E. Cherry, Flagstaff, Arizona, 86001. The following are presently the only hearings scheduled... the Lower Colorado River and all of the small and minor watercourses in Coconino County.

The list of small and minor watercourses includes but is not limited to:

Court Wash, Barbershop Canyon, Basalt Creek, Bear Canyon, Begashibito Wash, Bekahatso Wash, Big Wash, Coconino, Billy Goat Wash, Bitter Spring Wash, Black Tank Wash, Blackfall Canyon, Creek, Bonita Creek, Coconino, Boucher Creek, Boulder Creek, Coconino, Brady Canyon, Bright Angel Creek, Bright Angel Wash, Burro Canyon, Wash, Campbell Ranch, Canyon

AFFIDAVIT/PROOF OF PUBLICATION

STATE OF ARIZONA

} ss.

County of Coconino

Bobbie Crosby being duly sworn, deposes and says:

That she is the legal clerk of the Arizona Daily Sun

a newspaper published at Flagstaff, Coconino County, Arizona; that the

legal 6925

a copy of which is

hereunto attached, was first published in said newspaper in its issue dated

the 10 day of June, 2005 and was

published in each one issue of said newspaper for one

consecutive day the last publication being in the issue dated the

10 day of June, 2005

B

Subscribed and sworn to before me this

10th day of June, 2005

"OFFICIAL SEAL"
Jeannine Jaimes
Notary Public-Arizona
Coconino County
My Commission Expires 9/2/2006

Notary Public

My Commission expires 9/2/2006

Legal No. 6925
NOTICE OF PUBLIC HEARING
State of Arizona
Navigable Stream Adjudication Commission
Pursuant to A.R.S. § 37-1126 (A), notice is hereby given that the Navigable Stream Adjudication Commission will hold public hearings to receive physical evidence and testimony relating to the navigability or non-navigability of all watercourses in Coconino County. The hearings will be held in Flagstaff, Arizona on July 14, 2005 beginning at 10:00 a.m., in an order established by the chair, in the Coconino County Supervisors' Meeting Room located at 219 E. Cherry, Flagstaff, Arizona, 86001. The following are presently the only hearings scheduled. The Lower Colorado River, and all of the small and minor watercourses in Coconino County. The list of small and minor watercourses includes, but is not limited to: Court Wash, Barbershop Canyon, Basalt Creek, Bear Canyon, Begashibito Wash, Bekhatso Wash, Big Wash - Coconino, Billy Goat Wash, Bitter Spring Wash, Black Tank Wash, Blacktail Canyon Creek, Bonita Creek - Coconino, Boucher Creek, Boulder Creek - Coconino, Brady Canyon, Bright Angel Creek, Bright Angel Wash, Burro Canyon Wash, Campbell Francis, Canyon Creek 1, Canyon Diablo, Carbon Creek, Cardenas Creek, Cataract Creek, Cathedral Wash, Cedar Creek 1, Cedar Wash - Coconino, Chaiyahi Creek, Chevelon Canyon, Chino Wash, Chuar Creek, Citadel Wash, Clear Creek 1, Clear Creek 2, Clover Creek - Coconino, Coconino Wash, Comanche Creek, Corduroy Wash, Corn Creek Wash, Cottonwood Creek Coconino, Coyote Wash, Coyote Wash 1 Coconino, Crackerbox Canyon, Cremation Creek, Crystal Creek, Curve Wash, Deadman Wash - Coconino, Deer Creek - Coconino, Deer Tank Wash, Devil Dog Canyon, Diamond Creek 1, Dinnebito Wash

Legal No. 6925
NOTICE OF PUBLIC HEARING
State of Arizona
Navigable Stream Adjudication Commission
Pursuant to A.R.S. § 37-1126 (A), notice is hereby given that the Navigable Stream Adjudication Commission will hold public hearings to receive physical evidence and testimony relating to the navigability or non-navigability of all watercourses in Coconino County. The hearings will be held in Flagstaff, Arizona on July 14, 2005 beginning at 10:00 a.m., in an order established by the chair, in the Coconino County Supervisors' Meeting Room located at 219 E. Cherry, Flagstaff, Arizona, 86001. The following are presently the only hearings scheduled.
The Lower Colorado River, and all of the small and minor watercourses in Coconino County.
The list of small and minor watercourses includes but is not limited to:
Court Wash, Barbershop Canyon, Basalt Creek, Bear Canyon, Begashibito Wash, Bekihatso Wash, Big Wash - Coconino, Billy Goat Wash, Bitter Spring Wash, Black Tank Wash, Blacktail Canyon Creek, Bonita Creek - Coconino, Boucher Creek, Boulder Creek - Coconino, Brady Canyon, Bright Angel Creek, Bright Angel Wash, Burro Canyon Wash, Campbell Francis, Canyon Creek 1, Canyon Diablo, Carbon Creek, Cardenas Creek, Cataract Creek, Cathedral Wash, Cedar Creek 1, Cedar Wash - Coconino, Chaiyahi Creek, Chevelon Canyon, Chino Wash, Chuar Creek, Citadel Wash, Clear Creek 1, Clear Creek 2, Clover Creek - Coconino, Coconino Wash, Comanche Creek, Corduroy Wash, Corn Creek Wash, Cottonwood Creek - Coconino, Coyote Wash, Coyote Wash 1 - Coconino, Crackerbox Canyon, Cremation Creek, Crystal Creek, Curve Wash, Deadman Wash - Coconino, Deer Creek - Coconino, Deer Tank Wash, Devil Dog Canyon, Diamond Creek 1, Dinnebito Wash, Dootown Wash, Doney

STATE OF ARIZONA
NAVIGABLE STREAM ADJUDICATION COMMISSION
1700 West Washington, Room 304, Phoenix, Arizona 85007
Phone (602) 542-9214 FAX (602) 542-9220
E-mail: streams@mindspring.com Web Page: http://www.azstreambeds.com

JANET NAPOLITANO
Governor

GEORGE MEHNERT
Executive Director

AGENDA AND NOTICE OF A PUBLIC HEARING TO BE HELD
July 14, 2005, at 10:00 a.m., in Flagstaff, Arizona

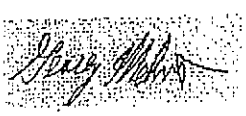
Pursuant to A.R.S. §38-431.02, notice is hereby given that the Navigable Stream Adjudication Commission will hold a meeting open to the public on July 14, 2005 at 10:00 a.m. in the Coconino County Supervisors Meeting Room located at 219 East Cherry Street, Flagstaff, Arizona.

Pursuant to A.R.S. §38-431.03(A)(3), the Navigable Stream Adjudication Commission may vote to go into Executive Session for purposes of obtaining legal advice from the Commission's attorney on any matter listed on the agenda, or pursuant to A.R.S. §38-431.03(A) or for discussion of records exempt by law from public inspection on any matter listed on the agenda, or for personnel matters listed on the agenda.

Title 2 of the American with Disabilities Act (ADA) prohibits the Commission from discriminating on the basis of disability in its public meetings. Individuals with disabilities who need a reasonable accommodation to attend or communicate at the Commission's meeting, or who require this information in alternate format, may contact George Mehnert at (602) 542-9214 to make their needs known. Requests should be made as soon as possible so the Commission will have sufficient time to respond. For those individuals who have a hearing impairment, this Commission can be reached through the Arizona Relay Service at 1-800-367-8939 (TTY) or 1-800-842-4681 (Voice). The agenda for the meeting is as follows:

1. **CALL TO ORDER.**
2. **ROLL CALL.**
3. **APPROVAL OF MINUTES** (discussion and action).
   A. April 25, 2005, Navajo County.
   B. April 25, 2005, Navajo County Executive Session.
   C. April 26, 2005, Apache County.
4. **HEARING REGARDING THE NAVIGABILITY OR NON-NAVIGABILITY OF THE SMALL AND MINOR WATERCOURSES IN COCONINO COUNTY, 05-010-NAV.**
5. **HEARING REGARDING THE NAVIGABILITY OR NON-NAVIGABILITY OF THE LITTLE COLORADO RIVER, 05-007-NAV.**
6. **CALL FOR PUBLIC COMMENT** (comment sheets).
   (Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.)
7. **FUTURE AGENDA ITEMS AND ESTABLISHMENT OF FUTURE HEARINGS AND OTHER MEETINGS.**
8. **ADJOURNMENT.**

The chair reserves the right to alter the order of the agenda.



Dated this 7th day of June, 2005, George Mehnert, Director, Navigable Stream Adjudication Commission

STATE OF ARIZONA
NAVIGABLE STREAM ADJUDICATION COMMISSION
1700 West Washington, Room 304, Phoenix, Arizona 85007
Phone (602) 542-9214 FAX (602) 542-9220
E-mail: streams@mindspring.com Web Page: http://www.azstreambeds.com

JANET NAPOLITANO
Governor

GEORGE MEHNERT
Executive Director

AGENDA AND NOTICE OF A PUBLIC HEARING TO BE HELD
July 14, 2005, at 10:00 a.m., in Flagstaff, Arizona
(First Amended Agenda)

Pursuant to A.R.S. §38-431.02, notice is hereby given that the Navigable Stream Adjudication Commission will hold a meeting open to the public on July 14, 2005 at 10:00 a.m. in the Coconino County Supervisors Meeting Room located at 219 East Cherry Street, Flagstaff, Arizona

Pursuant to A.R.S. §38-431.03(A)(3), the Navigable Stream Adjudication Commission may vote to go into Executive Session for purposes of obtaining legal advice from the Commission's attorney on any matter listed on the agenda, or pursuant to A.R.S. §38-431.03(A) or for discussion of records exempt by law from public inspection on any matter listed on the agenda, or for personnel matters listed on the agenda.

Title 2 of the American with Disabilities Act (ADA) prohibits the Commission from discriminating on the basis of disability in its public meetings. Individuals with disabilities who need a reasonable accommodation to attend or communicate at the Commission's meeting, or who require this information in alternate format, may contact George Mehnert at (602) 542-9214 to make their needs known. Requests should be made as soon as possible so the Commission will have sufficient time to respond. For those individuals who have a hearing impairment, this Commission can be reached through the Arizona Relay Service at 1-800-367-8939 (TTY) or 1-800-842-4681 (Voice). The agenda for the meeting is as follows:

1. CALL TO ORDER.
2. ROLL CALL.
3. APPROVAL OF MINUTES (discussion and action).
   A. April 25, 2005, Navajo County.
   B. April 25, 2005, Navajo County Executive Session.
   C. April 26, 2005, Apache County.
4. HEARING REGARDING THE NAVIGABILITY OR NON-NAVIGABILITY OF THE SMALL AND MINOR WATERCOURSES IN COCONINO COUNTY, 05-010-NAV.
5. HEARING REGARDING THE NAVIGABILITY OR NON-NAVIGABILITY OF THE LITTLE COLORADO RIVER, 05-007-NAV.
6. NAVIGABILITY DETERMINATION OF THE SMALL AND MINOR WATERCOURSES IN YAVAPAI COUNTY (DISCUSSION AND ACTION).
7. NAVIGABILLITY DETERMINATION OF THE SMALL AND MINOR WATERCOURSES IN NAVAJO COUNTY (DISCUSSION AND ACTION).
8. NAVIGABILITY DETERMINATION OF THE SMALL AND MINOR WATERCOURSES IN APACHE COUNTY (DISCUSSION AND ACTION).
9. NAVIGABILITY DETERMINATION OF THE PUERCO RIVER (DISCUSSION AND ACTION).
10. CALL FOR PUBLIC COMMENT (comment sheets).
    (Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.)
11. FUTURE AGENDA ITEMS AND ESTABLISHMENT OF FUTURE HEARINGS AND OTHER MEETINGS.
12. ADJOURNMENT.

The chair reserves the right to alter the order of the agenda.

Dated this 6th day of July, 2005. George Mehnert, Director, Arizona Navigable Stream Adjudication Commission.

STATE OF ARIZONA
NAVIGABLE STREAM ADJUDICATION COMMISSION
1700 West Washington, Room 304, Phoenix, Arizona 85007
Phone (602) 542-9214 FAX (602) 542-9220
E-mail: streams@mindspring.com Web Page: http://www.azstreambeds.com

JANET NAPOLITANO
Governor

GEORGE MEHNERT
Executive Director

AGENDA AND NOTICE OF A PUBLIC HEARING TO BE HELD
November 16, 2005 at 9:30 a.m. in Phoenix, Arizona

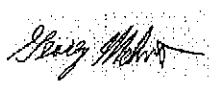
Pursuant to A.R.S. §38-431.02, notice is hereby given that the Navigable Stream Adjudication Commission will hold a meeting open to the public at 9:30 a.m. on November 16, 2005 at the La Quinta Inn located at 2510 West Greenway Road, Phoenix, Arizona (Northeast corner of I-17 and West Greenway Road).

Pursuant to A.R.S. §38-431.03(A)(3), the Navigable Stream Adjudication Commission may vote to go into Executive Session for purposes of obtaining legal advice from the Commission's attorney on any matter listed on the agenda, or pursuant to A.R.S. §38-431.03(A) for discussion of records exempt by law from public inspection on any matter listed on the agenda, or for personnel matters listed on the agenda.

Title 2 of the Americans with Disabilities Act (ADA) prohibits the Commission from discriminating on the basis of disability in its public meetings. Individuals with disabilities who need a reasonable accommodation to attend or communicate at the Commission's meeting, or who require this information in alternate format, may contact George Mehnert at (602) 542-9214 to make their needs known. Requests should be made as soon as possible so the Commission will have sufficient time to respond. For those individuals who have a hearing impairment, this Commission can be reached through the Arizona Relay Service at 1-800-367-8939 (TTY) or 1-800-842-4681 (Voice). The agenda for the meeting is as follows:

1. CALL TO ORDER.
2. Roll Call.
3. Approval of Minutes (discussion and action). Minutes of October 20, 2005, Maricopa County.
4. Hearing regarding the navigability of the Gila River 03-007-NAV.
5. Hearing regarding the navigability of the Verde River 04-009-NAV.
6. Hearing regarding the navigability of the small and minor watercourses in Maricopa County, 05-014-NAV.
7. Call for Public Comment (comment sheets).
   (Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.)
8. Future agenda items and establishment of future hearings and other meetings.
9. Commission budget and continuation.
10. ADJOURNMENT.

The chair reserves the right to alter the order of the agenda.



Dated this 6th day of October, 2005, George Mehnert, Director, Navigable Stream Adjudication Commission

STATE OF ARIZONA
NAVIGABLE STREAM ADJUDICATION COMMISSION
1700 West Washington, Room 304, Phoenix, Arizona 85007
Phone (602) 542-9214 FAX (602) 542-9220
E-mail: streams@mindspring.com Web Page: http://www.azstreambeds.com

JANET NAPOLITANO
Governor

GEORGE MEHNERT
Executive Director

AGENDA AND NOTICE OF A PUBLIC HEARING TO BE HELD
November 16, 2005 at 9:30 a.m. in Phoenix, Arizona
(First Amended Agenda)

Pursuant to A.R.S. §38-431.02, notice is hereby given that the Navigable Stream Adjudication Commission will hold a meeting open to the public at 9:30 a.m. on November 16, 2005 at the La Quinta Inn located at 2510 West Greenway Road, Phoenix, Arizona (Northeast corner of I-17 and West Greenway Road).

Pursuant to A.R.S. §38-431.03(A)(3), the Navigable Stream Adjudication Commission may vote to go into Executive Session for purposes of obtaining legal advice from the Commission's attorney on any matter listed on the agenda, or pursuant to A.R.S. §38-431.03(A) for discussion of records exempt by law from public inspection on any matter listed on the agenda, or for personnel matters listed on the agenda.

Title 2 of the Americans with Disabilities Act (ADA) prohibits the Commission from discriminating on the basis of disability in its public meetings. Individuals with disabilities who need a reasonable accommodation to attend or communicate at the Commission's meeting, or who require this information in alternate format, may contact George Mehnert at (602) 542-9214 to make their needs known. Requests should be made as soon as possible so the Commission will have sufficient time to respond. For those individuals who have a hearing impairment, this Commission can be reached through the Arizona Relay Service at 1-800-367-8939 (TTY) or 1-800-842-4681 (Voice). The agenda for the meeting is as follows:

1. CALL TO ORDER.
2. Roll Call.
3. Approval of Minutes (discussion and action). Minutes of October 20, 2005, Maricopa County.
4. All motions and responses to "SALT RIVER PROJECT'S MOTION FOR FINDING OF LACK OF STATUTORY SUBJECT MATTER JURISDICTION TO DETERMINE NAVIGABILILTY OF ROOSEVELT LAKE" in both 04-008-NAV and 04-010-NAV (discussion and action).
5. Adoption of the Commission report regarding the Pima County Small & Minor Watercourses (discussion and action).
6. Hearing regarding the navigability of the Gila River 03-007-NAV.
7. Hearing regarding the navigability of the Verde River 04-009-NAV.
8. Hearing regarding the navigability of the small and minor watercourses in Maricopa County, 05-014-NAV.
9. Call for Public Comment (comment sheets).
   (Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.)
10. Future agenda items and establishment of future hearings and other meetings.
11. Commission budget and continuation.
12. ADJOURNMENT.

The chair reserves the right to alter the order of the agenda.

Dated this 26th day of October, 2005, George Mehnert, Director, Navigable Stream Adjudication Commission

STATE OF ARIZONA
NAVIGABLE STREAM ADJUDICATION COMMISSION
1700 West Washington, Room 304, Phoenix, Arizona 85007
Phone (602) 542-9214 FAX (602) 542-9220
E-mail: streams@mindspring.com Web Page: http://www.azstreambeds.com

JANET NAPOLITANO
Governor

GEORGE MEHNERT
Executive Director

AGENDA AND NOTICE OF A PUBLIC HEARING TO BE HELD
November 16, 2005 at 9:30 a.m. in Phoenix, Arizona
(2nd Amended Agenda)

Pursuant to A.R.S. §38-431.02, notice is hereby given that the Navigable Stream Adjudication Commission will hold a meeting open to the public at 9:30 a.m. on November 16, 2005 at the La Quinta Inn located at 2510 West Greenway Road, Phoenix, Arizona (Northeast corner of I-17 and West Greenway Road).

Pursuant to A.R.S. §38-431.03(A)(3), the Navigable Stream Adjudication Commission may vote to go into Executive Session for purposes of obtaining legal advice from the Commission's attorney on any matter listed on the agenda, or pursuant to A.R.S. §38-431.03(A) for discussion of records exempt by law from public inspection on any matter listed on the agenda, or for personnel matters listed on the agenda.

Title 2 of the Americans with Disabilities Act (ADA) prohibits the Commission from discriminating on the basis of disability in its public meetings. Individuals with disabilities who need a reasonable accommodation to attend or communicate at the Commission's meeting, or who require this information in alternate format, may contact George Mehnert at (602) 542-9214 to make their needs known. Requests should be made as soon as possible so the Commission will have sufficient time to respond. For those individuals who have a hearing impairment, this Commission can be reached through the Arizona Relay Service at 1-800-367-8939 (TTY) or 1-800-842-4681 (Voice). The agenda for the meeting is as follows:

1. CALL TO ORDER.
2. Roll Call.
3. Approval of Minutes (discussion and action). Minutes of October 20, 2005, Maricopa County.
4. All motions and responses to "SALT RIVER PROJECT'S MOTION FOR FINDING OF LACK OF STATUTORY SUBJECT MATTER JURISDICTION TO DETERMINE NAVIGABILILTY OF ROOSEVELT LAKE" in both 04-008-NAV and 04-010-NAV (discussion and action).
5. Adoption of the Commission report regarding the Pima County Small & Minor Watercourses (discussion and action).
6. Hearing regarding the navigability of the Gila River 03-007-NAV.
7. Hearing regarding the navigability of the Verde River 04-009-NAV.
8. Hearing regarding the navigability of the small and minor watercourses in Maricopa County, 05-014-NAV.
9. Determination of the navigability of the Coconino County Small and Minor Watercourses 05-010-NAV (discussion and action).
10. Call for Public Comment (comment sheets).
(Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.)
11. Future agenda items and establishment of future hearings and other meetings.
12. Commission budget and continuation.
13. Legal advice regarding laws and terms relating to navigability.
14. ADJOURNMENT.

The chair reserves the right to alter the order of the agenda.

Dated this 8th[th] day of November, 2005, George Mehnert, Director, Navigable Stream Adjudication Commission

EXHIBIT D

STATE OF ARIZONA
NAVIGABLE STREAM ADJUDICATION COMMISSION
1700 West Washington, Room 304, Phoenix, Arizona 85007
Phone (602) 542-9214 FAX (602) 542-9220
E-mail: streams@mindspring.com Web Page: http://www.azstreambeds.com

JANET NAPOLITANO
Governor

GEORGE MEHNERT
Executive Director

MEETING MINUTES
Flagstaff, Arizona, July 14, 2005

COMMISSION MEMBERS PRESENT
Jay Brashear, Earl Eisenhower, Jim Henness, and Cecil Miller.
COMMISSION MEMBERS ABSENT
Dolly Echeverria.
STAFF PRESENT
George Mehnert, and Commission Legal Counsel Curtis Jennings.

1. **CALL TO ORDER.**
Chair Eisenhower called the meeting to order at approximately 10:06 a.m.

2. **ROLL CALL.**
See above.

3. **APPROVAL OF MINUTES** (discussion and action).
A. April 25, 2005, Navajo County.
Motion by: Jim Henness Second by: Cecil Miller
Motion: To approve the minutes of April 25, 2005.
Vote: All aye.
B. April 25, 2005, Navajo County Executive Session.
Motion by: Cecil Miller Second by: Jim Henness
Motion: To approve the Executive Session Minutes of April 25, 2005.
Vote: All aye.
C. April 26, 2005, Apache County.
Motion by: Jim Henness Second by: Cecil Miller
Motion: To approve the minutes of April 26, 2005.
Vote: All aye.

4. **HEARING REGARDING THE NAVIGABILITY OR NON-NAVIGABILITY OF THE SMALL AND MINOR WATERCOURSES IN COCONINO COUNTY, 05-010-NAV.** Persons who spoke and responded to questions regarding this matter were Cheryl Doyle representing the State Land Department and Hydrologist for the State Land Department, Jon Fuller. The Chair announced this hearing was closed for the purpose of taking evidence.

5. **HEARING REGARDING THE NAVIGABILITY OR NON-NAVIGABILITY OF THE LITTLE COLORADO RIVER, 05-007-NAV.**
Persons who spoke and responded to questions regarding this matter were Cheryl Doyle representing the State Land Department and Hydrologist for the State Land

Department, Jon Fuller. The Chair announced this hearing was closed for the purpose of taking evidence.

6. **NAVIGABILITY DETERMINATION OF THE SMALL AND MINOR WATERCOURSES IN YAVAPAI COUNTY (DISCUSSION AND ACTION).**

Motion by: Jay Brashear Second by: Jim Henness

Motion: That all of the Small and Minor Watercourses in Yavapai County were non-navigable as of statehood.

Vote: All aye.

7. **NAVIGABILITY DETERMINATION OF THE SMALL AND MINOR WATERCOURSES IN NAVAJO COUNTY (DISCUSSION AND ACTION).**

Motion by: Cecil Miller Second by: Jim Henness

Motion: That all of the Small and Minor Watercourses in Navajo County were non-navigable as of statehood.

Vote: All aye.

8. **NAVIGABILITY DETERMINATION OF THE SMALL AND MINOR WATERCOURSES IN APACHE COUNTY (DISCUSSION AND ACTION).**

Motion by: Jim Henness Second by: Cecil Miller

Motion: That all of the Small and Minor Watercourses in Apache County were non-navigable as of statehood.

Vote: All aye.

9. **NAVIGABILITY DETERMINATION OF THE PUERCO RIVER (DISCUSSION AND ACTION).**

Motion by: Jim Henness Second by: Jay Brashear

Motion: That Puerco River was non-navigable as of statehood.

Vote: All aye.

10. **CALL FOR PUBLIC COMMENT (comment sheets).**

(Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.)

11. **FUTURE AGENDA ITEMS AND ESTABLISHMENT OF FUTURE HEARINGS AND OTHER MEETINGS.**

The Commissioners, representatives of the State and of the Salt River Project spoke regarding hearing dates. The Chair concluded that likely future hearing dates beyond those scheduled in Mohave and La Paz Counties on August 8, 2005 and August 9, 2005, respectively, will be hearings regarding the navigability of the Agua Fria River, the Hassyampa River and the Maricopa County Small and Minor Watercourses during September 2005. Commissioner Brashear asked about Roosevelt Lake, since it existed at time of statehood. The Chair said Roosevelt Lake will likely be considered during the hearing regarding the Gila County Small and Minor Watercourses. The Chair indicated that hearings will likely be held during October 2005 regarding the navigability of the Upper Salt River and of the Gila County Small and Minor Watercourses. The Chair stated that hearings will likely be held during November 2005, on two consecutive days, regarding the navigability of the Gila River and the Verde River.

12. **ADJOURNMENT.**

Motion by: Cecil Miller Second by: Jim Henness

Motion: To adjourn. Vote: All aye.

Meeting adjourned at approximately 11:05 a.m.

Respectfully submitted,

George Mehnert, Director
July 14, 2005

STATE OF ARIZONA
NAVIGABLE STREAM ADJUDICATION COMMISSION
1700 West Washington, Room 304, Phoenix, Arizona 85007
Phone (602) 542-9214 FAX (602) 542-9220
E-mail: streams@mindspring.com Web Page: http://www.azstreambeds.com

JANET NAPOLITANO
Governor

GEORGE MEHNERT
Executive Director

CONSOLIDATED MEETING MINUTES

Meeting was continued and included 3 separate dates, November 16, 2005, November 17, 2005, and January 18, 2006.
Phoenix, Arizona

November 16, 2005

COMMISSION MEMBERS PRESENT

Jay Brashear, Dolly Echeverria, Earl Eisenhower, Jim Henness & Cecil Miller.

COMMISSION MEMBERS ABSENT

None, Jay arrived about 10 minutes after meeting was called to order.

STAFF PRESENT

George Mehnert, Dir and Curtis Jennings, Attorney who arrived about 10 minutes after meeting was called to order.

1. **CALL TO ORDER.**
   Chair Eisenhower called the meeting to order at approximately 9:36 A.M.
2. **ROLL CALL.**
   See Above.
3. **APPROVAL OF MINUTES** (discussion and action).
   A. October 20, 2005 Maricopa County
   Motion by: Dolly Echeverria Second by: Cecil Miller
   Motion: To accept minutes as submitted. Vote: All aye.
4. **All motions and responses to "SALT RIVER PROJECT'S MOTION FOR FINDING OF LACK OF STATUTORY SUBJECT MATTER JURISDICTION TO DETERMINE NAVIGABILILTY OF ROOSEVELT LAKE" in both 04-008-NAV and 04-010-NAV** (discussion and action). Two people spoke on the subject, Mark McGinnis, John Helm.
5. **Adoption of the Commission report regarding the Pima County Small & Minor Watercourses (discussion and action).**
   Motion by: Cecil Miller Second by: Jim Henness
   Motion: To adopt the Commission Report as Written. Vote: All aye.
6. **Hearing regarding the navigability of the Gila River 03-007-NAV.**

Witnesses included: Laurie Hachtel. Jon Fuller, Dennis Gilpin, Gary Huckleberry, Douglas Littlefield, Jack August, David Weedman, Alan Gookin, and John Hestand.

7. **Hearing regarding the navigability of the Verde River 04-009-NAV.** David Weedman testified because he cannot appear at a later date, and the balance of this hearing was completed on January 18, 2006.

8. **Hearing regarding the navigability of the small and minor watercourses in Maricopa County, 05-014-NAV.** Matter was continued to November 17, 2005.

9. **Determination of the navigability of the Coconino County Small and Minor Watercourses 05-010-NAV (discussion and action).**

10. **Call for Public Comment (comment sheets).** *(Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.)* None.

11. **Future agenda items and establishment of future hearings and other meetings.**

12. **Commission budget and continuation.** Continued to future date.

13. **Legal advice regarding laws and terms relating to navigability.** Continued to future date.

14. **ADJOURNMENT.** Meeting was not adjourned. At approximately 4:40 P.M. the Chair continued the meeting to November 17, 2005 at 9:00 A.M.

November 17, 2005
Meeting Continued from November 16, 2005

COMMISSION MEMBERS PRESENT
Dolly Echeverria, Earl Eisenhower, & Jim Henness.

COMMISSION MEMBERS ABSENT
Jay Brashear, Cecil Miller.

STAFF PRESENT
George Mehnert, Dir and Curtis Jennings.

1. **CALL TO ORDER.**
   Chair Eisenhower called the meeting to order at approximately 9:11 A.M.
2. **ROLL CALL.**
   See Above.
3. **APPROVAL OF MINUTES** (discussion and action).
   None.
4. **All motions and responses to "SALT RIVER PROJECT'S MOTION FOR FINDING OF LACK OF STATUTORY SUBJECT MATTER JURISDICTION TO DETERMINE NAVIGABILILTY OF ROOSEVELT LAKE" in both 04-008-NAV and 04-010-NAV** (discussion and action). No discussion.
5. **Adoption of the Commission report regarding the Pima County Small & Minor Watercourses (discussion and action).**
   Completed on November 16, 2005.
6. **Hearing regarding the navigability of the Gila River 03-007-NAV.**
   Witnesses included: Stanley Schumm, Douglas Littlefield, D.C. Jackson, Hjalmar Hjalmarson, and Jon Colby. The Chair closed the hearing for the taking of evidence and indicated that the deadline date for filing post hearing opening memorandums will be determined in relation to the Commission's receipt of the court reporter's transcript of the proceedings.
7. **Hearing regarding the navigability of the Verde River 04-009-NAV.**
   Hearing continued to January 18, 2006.
8. **Hearing regarding the navigability of the small and minor watercourses in Maricopa County, 05-014-NAV.**
   Witness was Jon Fuller. Chair closed this matter for taking of evidence.
9. **Determination of the navigability of the Coconino County Small and Minor Watercourses 05-010-NAV (discussion and action).**
   Motion by: Jim Henness Second by: Dolly Echeverria
   Motion: Not navigable as of statehood. Vote: All aye.
10. **Call for Public Comment (comment sheets).**
    (Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.) None.
11. **Future agenda items and establishment of future hearings and other meetings.**

12. **Commission budget and continuation.** Continued to future date.
13. **Legal advice regarding laws and terms relating to navigability.** Continued to future date.
14. **ADJOURNMENT.** Meeting was not adjourned. At approximately 8:42 P.M. the Chair continued the meeting to January 18, 2006 at 10:00 A.M.

January 18, 2006
Meeting Continued from November 18, 2005

COMMISSION MEMBERS PRESENT
Jay Brashear, Dolly Echeverria, Earl Eisenhower, & Jim Henness.

COMMISSION MEMBERS ABSENT
Cecil Miller.

STAFF PRESENT
George Mehnert, Dir and Curtis Jennings.

1. **CALL TO ORDER.**
   Chair Eisenhower called the meeting to order at approximately 10:06 A.M.
2. **ROLL CALL.**
   See Above.
   Motion by: Dolly Echevereria Second by: Jim Henness
   Motion: To go into executive session. Vote: All aye.
   Meeting went into Executive Session beginning at approximately 10:04 A.M. regarding agenda items 4, 12, and 13, and the Executive Session ended at approximately 10:38 A.M.
3. **APPROVAL OF MINUTES** (discussion and action).
   None.
4. **All motions and responses to "SALT RIVER PROJECT'S MOTION FOR FINDING OF LACK OF STATUTORY SUBJECT MATTER JURISDICTION TO DETERMINE NAVIGABILILTY OF ROOSEVELT LAKE" in both 04-008-NAV and 04-010-NAV** (discussion and action). The Chair stated that the Commission will accept jurisdiction regarding the navigability of Roosevelt Lake.
5. **Adoption of the Commission report regarding the Pima County Small & Minor Watercourses (discussion and action).**
   Completed on November 16, 2005.
6. **Hearing regarding the navigability of the Gila River 03-007-NAV.**

Completed on November 17, 2005.

7. **Hearing regarding the navigability of the Verde River 04-009-NAV.**
David Weedman was permitted to testify regarding this matter on November 16, 2005 and did not appear on January 18, 2006; however, the Chair stated that his the transcript of his testimony on November 16, 2005 will be appear as Appendix a to the Verde River hearing transcript. Appearing as witnesses were: Jon Fuller, Philip Pearthree, Jon Colby, Douglas Littlefield, and Jim Slingluff. AAG Laurie Hachtel said she will write a letter to the Commission regarding the status of an appeal regarding Indian Nations and the State Land Department. Following completion of the testimony, the Chair closed the hearing for taking evidence and indicated that a date will be established for the deadline to receive post hearing legal memorandums based on the date the Commission receives the court reporter's transcript of the hearing. Attorney Joy Herr-Cardillo will mail to the Commission a copy of the CD containing the PowerPoint photographic slides presented by witness Jim Slingluff.

8. **Hearing regarding the navigability of the small and minor watercourses in Maricopa County, 05-014-NAV.**
Completed on November 17, 2005.

9. **Determination of the navigability of the Coconino County Small and Minor Watercourses 05-010-NAV (discussion and action).**
Completed on November 17, 2005

10. **Call for Public Comment (comment sheets).**
(Pursuant to Attorney General Opinion No. I99-006 [R99-002]. Public Comment: Consideration and discussion of comments and complaints from the public. Those wishing to address the Commission need not request permission in advance. Action taken as a result of public comment will be limited to directing staff to study the matter or rescheduling the matter for further consideration and decision at a later date.) None.

11. **Future agenda items and establishment of future hearings and other meetings.**

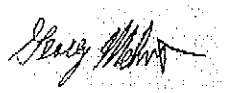
12. **Commission budget and continuation.** Continued to future date.

13. **Legal advice regarding laws and terms relating to navigability.** Continued to future date.

14. **ADJOURNMENT.** Meeting was not adjourned. At approximately 8:42 P.M. the Chair continued the meeting to January 18, 2006 at 10:00 A.M.
Motion by: Jay Brashear Second by: Jim Henness
Motion: To go into executive session. Vote: All aye.

Meeting adjourned at approximately 3:30 P.M.

Respectfully submitted,



George Mehnert, Director
January 19, 2006

EXHIBIT E

Evidence Log

Hearing No. 05-010-NAV

Page No. 1

Arizona Navigable Stream Adjudication Commission

Coconino County Small and Minor Watercourses
July 14, 2005

Item Number	Received Date	Source to ANSAC	Description	Entry By
1	02/18/97	Evidence on Hand at ANSAC	Letter from David Baron dated February 18, 1997.	George Mehnert
2	09/19/97	Evidence on Hand at ANSAC	Small and Minor Watercourse Criteria Final Report.	George Mehnert
3	09/?/99	Evidence on hand at ANSAC	Final Report, 3 County Pilot Study.	George Mehnert
4	09/?/00	SLD, Stantec, Jon Fuller, etc.	Draft Final Report	George Mehnert
5	10/?/00	SLD, Stantec, Jon Fuller, etc.	Final Report	George Mehnert
6	06/15/04	Chuck Kranz	Letter One Page	George Mehnert
7	07/20/04	Coby Muckelroy	Letter One Page	George Mehnert
8	07/14/05	Jon Fuller & SLD	Power Point Filed in Pinal Cy Records	George Mehnert

EXHIBIT F

Table A-1A
Watercourses in Coconino County Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
1	1	120 Mile Creek	7	Coconino	8.283	T33.0N,R2.0W,S23	No	No	No	No	No	No	0
2	2	122 Mile Creek	2	Coconino	3.881	T33.0N,R2.0W,S21	No	No	No	No	No	No	0
3	3	127 Mile Creek	1	Coconino	3.430	T33.0N,R2.0W,S03	No	No	No	No	No	No	0
4	4	128 Mile Creek	1	Coconino	4.386	T34.0N,R2.0W,S27	No	No	No	No	No	No	0
5	5	133 Mile Creek	2	Coconino	2.147	T34.0N,R1.0W,S06	No	No	No	No	No	No	0
6	6	193 Mile Creek	10	Coconino	9.451	T31.0N,R9.0W,S10	No	No	No	No	No	No	0
7	7	196 Mile Creek	2	Coconino	4.264	T31.0N,R9.0W,S07	No	No	No	No	No	No	0
8	8	205 Mile Creek	3	Coconino	4.505	T30.0N,R10.0W,S10	No	No	No	No	No	No	0
9	10	215 Mile Creek	2	Coconino	1.929	T29.0N,R10.0W,S24	No	No	No	No	No	No	0
10	11	222 Mile Creek	1	Coconino	2.822	T28.0N,R10.0W,S22	No	No	No	No	No	No	0
11	26	Albers Wash	44	Coconino	41.921	T33.0N,R6.0W,S13	No	No	No	No	No	No	0
12	27	Alder Creek - Coconino	6	Coconino	15.212	T14.0N,R14.0E,S29	No	No	No	No	No	No	0
13	46	Anderson Canyon	15	Coconino	26.051	T20.0N,R12.0E,S29	No	No	No	No	No	No	0
14	52	Antelope Wash - Coconino	2	Coconino	4.642	,,S88	No	No	No	No	No	No	0
15	93	Ash Fork Draw - Coconino	9	Coconino	10.762	T22.0N,R1.0W,S16	No	No	No	No	No	No	0
16	103	Awatubi Creek	1	Coconino	2.783	,,S88	No	No	No	No	No	No	0
17	105	Babbit Spring	3	Coconino	2.759	T20.0N,R8.0E,S34	No	No	No	No	No	No	0
18	106	Babbitt Wash	2	Coconino	8.215	T21.0N,R11.0E,S25	No	No	No	No	No	No	0
19	114	Badger Wash	5	Coconino	6.842	,,S88	No	No	No	No	No	No	0
20	116	Ball Court Wash	4	Coconino	5.959	T25.0N,R8.0E,S25	No	No	No	No	No	No	0
21	130	Basalt Creek	1	Coconino	5.184	,,S88	No	No	No	No	No	No	0
22	162	Bekihatso Wash	6	Coconino	17.459	,,S88	No	No	No	No	No	No	0
23	190	Big Wash - Coconino	1	Coconino	3.328	,,S88	No	No	No	No	No	No	0
24	201	Billy Goat Wash	3	Coconino	3.463	,,S88	No	No	No	No	No	No	0
25	212	Bitter Spring Wash	2	Coconino	9.447	,,S88	No	No	No	No	No	No	0
26	233	Black Tank Wash	10	Coconino	15.751	T31.0N,R3.0W,S22	No	No	No	No	No	No	0
27	275	Boulder Creek - Coconino	1	Coconino	2.272	T31.0N,R3.0E,S13	No	No	No	No	No	No	0
28	289	Brady Canyon	6	Coconino	7.366	T16.0N,R8.0E,S17	No	No	No	No	No	No	0
29	294	Bright Angel Wash	6	Coconino	5.921	T30.0N,R2.0E,S07	No	No	No	No	No	No	0
30	335	Burro Canyon Wash	6	Coconino	17.095	T26.0N,R8.0E,S06	No	No	No	No	No	No	0
31	366	Campbell Francis	5	Coconino	8.121	T27.0N,R8.0E,S10	No	No	No	No	No	No	0
32	400	Cathedral Wash	1	Coconino	3.872	T40.0N,R7.0E,S26	No	No	No	No	No	No	0
33	411	Cedar Creek 1	0	Coconino/Yavapai	10.960	T18.0N,R3.0E,S10	No	No	No	No	No	No	0
34	457	Chino Wash	28	Coconino/Yavapai	36.213	T23.0N,R6.0W,S35	No	No	No	No	No	No	0
35	478	Citadel Wash	5	Coconino	10.952	T26.0N,R10.0E,S28	No	No	No	No	No	No	0
36	495	Coconino Wash	52	Coconino	63.305	T29.0N,R1.0E,S21	No	No	No	No	No	No	0
37	506	Comanche Creek	1	Coconino	2.584	,,S88	No	No	No	No	No	No	0
38	534	Corduroy Wash	1	Coconino	5.122	T13.0N,R9.0E,S20	No	No	No	No	No	No	0
39	537	Corn Creek Wash	2	Coconino	10.586	,,S88	No	No	No	No	No	No	0
40	542	Cottonwood Creek - Coconino	4	Coconino	3.696	,,S88	No	No	No	No	No	No	0
41	579	Coyote Wash	2	Coconino/Navajo	4.948	T21.0N,R15.0E,S17	No	No	No	No	No	No	0
42	586	Coyote Wash 1 - Coconino	11	Coconino	12.608	T41.0N,R3.0E,S23	No	No	No	No	No	No	0
43	598	Cremation Creek	3	Coconino	3.337	T31.0N,R3.0E,S09	No	No	No	No	No	No	0
44	610	Curve Wash	1	Coconino	1.840	,,S88	No	No	No	No	No	No	0
45	631	Deadman Wash - Coconino	12	Coconino	36.794	T25.0N,R10.0E,S01	No	No	No	No	No	No	0

NOTES: The column headings are defined as follows:

W_ID: Unique ID number given to the watercourse
W_NAME: Name of the watercourse.
SEGCOUNT: Number of segments merged together to comprise the watercourse.
W_COUNTIES: County(ies) where the watercourse is located.
W_MILES: Length of the watercourse in miles.
W_ADDRESS: Township, Range and Section of the mouth of the watercourse. [S88 - No designated Township, Range, and Section]
W_PER: Stream classification-perennial or not.
W_MBOAT: With modern boating or not.
W_HBOAT: With historical boating or not.
W_FISH: With fish or not.
W_DIMP: Impacted by dam or not.
W_SSTATUS: With special status designation or not.
HITS: Number of affirmative hits based on the six attribute data.

Table A-1A
Watercourses in Coconino County Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
46	647	Deer Tank Wash	4	Coconino	10.585	T29.0N,R6.0E,S05	No	No	No	No	No	No	0
47	655	Devil Dog Canyon	4	Coconino/Yavapai	14.766	T20.0N,R1.0W,S30	No	No	No	No	No	No	0
48	665	Dinnebito Wash	80	Coconino/Navajo	140.464	„S88	No	No	No	No	No	No	0
49	675	Doney Mountain Wash	5	Coconino	7.910	T26.0N,R10.0E,S33	No	No	No	No	No	No	0
50	691	Dry Creek 1 - Coconino/Yavapai	15	Coconino/Yavapai	22.669	T16.0N,R4.0E,S12	No	No	No	No	No	No	0
51	698	Dry Wash - Coconino	7	Coconino	13.192	„S88	No	No	No	No	No	No	0
52	719	East Fork Canyon	2	Coconino/Gila	3.037	T10.0N,R15.0E,S21	No	No	No	No	No	No	0
53	720	East Fork Carbon	1	Coconino	3.410	„S88	No	No	No	No	No	No	0
54	745	Emmett Wash	2	Coconino	7.386	T38.0N,R5.0E,S36	No	No	No	No	No	No	0
55	750	Espejo Creek	1	Coconino	1.453	„S88	No	No	No	No	No	No	0
56	754	Fall Creek	2	Coconino	9.604	T40.0N,R8.0E,S29	No	No	No	No	No	No	0
57	771	Fivemile Wash - Coconino	11	Coconino	16.174	„S88	No	No	No	No	No	No	0
58	778	Flint Creek	5	Coconino	5.245	T33.0N,R1.0E,S21	No	No	No	No	No	No	0
59	815	Garden Creek 1 - Coconino	3	Coconino	3.303	T31.0N,R3.0E,S07	No	No	No	No	No	No	0
60	816	Garden Creek 2 - Coconino	3	Coconino	4.205	„S88	No	No	No	No	No	No	0
61	832	Gold Spring Wash	4	Coconino	3.423	„S88	No	No	No	No	No	No	0
62	851	Grapevine Canyon	9	Coconino	20.584	T18.0N,R12.0E,S33	No	No	No	No	No	No	0
63	854	Grapevine Creek - Coconino	3	Coconino	6.696	T31.0N,R4.0E,S19	No	No	No	No	No	No	0
64	862	Gray Spot Wash	1	Coconino	3.972	„S88	No	No	No	No	No	No	0
65	863	Gray Wash	1	Coconino	3.234	„S88	No	No	No	No	No	No	0
66	874	Grindstone Wash	12	Coconino/Yavapai	15.546	T16.0N,R1.0E,S29	No	No	No	No	No	No	0
67	37601	Haada Is Taani D	7	Coconino	10.594	„S86	No	No	No	No	No	No	0
68	37603	Hack Canyon	31	Coconino/Mohave	37.438	T36.0N,R3.0W,S06	No	No	No	No	No	No	0
69	37614	Hall Canyon	19	Coconino	30.279	T38.0N,R1.0W,S11	No	No	No	No	No	No	0
70	37618	Hamblin Wash	17	Coconino	30.289	„S88	No	No	No	No	No	No	0
71	37620	Hanaa Ninadzidza	4	Coconino	9.319	„S88	No	No	No	No	No	No	0
72	37621	Hance Creek	2	Coconino	6.159	„S88	No	No	No	No	No	No	0
73	37642	Heather Wash	11	Coconino	20.090	T31.0N,R2.0W,S32	No	No	No	No	No	No	0
74	37644	Heiser Wash	2	Coconino	2.862	T25.0N,R10.0E,S22	No	No	No	No	No	No	0
75	37645	Hell Canyon	27	Coconino/Yavapai	42.127	T21.0N,R2.0E,S35	No	No	No	No	No	No	0
76	37666	Hogansaani Wash	3	Coconino	6.847	„S88	No	No	No	No	No	No	0
77	37673	Horn Creek	2	Coconino	1.946	T31.0N,R2.0E,S11	No	No	No	No	No	No	0
78	37684	Horse Tank Wash	6	Coconino/Gila	9.243	T13.0N,R8.0E,S29	No	No	No	No	No	No	0
79	37698	House Rock Wash	28	Coconino	37.380	T38.0N,R6.0E,S22	No	No	No	No	No	No	0
80	37701	Howard Draw	4	Coconino	6.096	T20.0N,R7.0E,S25	No	No	No	No	No	No	0
81	37704	Hulls Wash	5	Coconino	6.605	T25.0N,R9.0E,S18	No	No	No	No	No	No	0
82	37737	Jackass Creek	5	Coconino	7.168	T39.0N,R7.0E,S21	No	No	No	No	No	No	0
83	37739	Jackrabbit Wash - Coconino	6	Coconino	11.225	T26.0N,R10.0E,S09	No	No	No	No	No	No	0
84	37740	Jackrabbit Canyon	3	Coconino	4.838	„S88	No	No	No	No	No	No	0
85	37742	Jacks Canyon - Coconino	8	Coconino	17.023	T15.0N,R8.0E,S17	No	No	No	No	No	No	0
86	37743	Jacks Canyon 1	8	Coconino/Yavapai	11.404	T16.0N,R5.0E,S36	No	No	No	No	No	No	0
87	37746	Jacob Canyon	9	Coconino	33.228	T40.0N,R2.0W,S19	No	No	No	No	No	No	0
88	37748	Jadito Wash	53	Apache/Coconino/Navajo	73.668	T24.0N,R17.0E,S88	No	No	No	No	No	No	0
89	37761	Johnson Run	2	Coconino	2.896	T41.0N,R2.0W,S29	No	No	No	No	No	No	0
90	37762	Johnson Wash - Coconino	14	Coconino	22.314	T41.0N,R1.0W,S15	No	No	No	No	No	No	0

NOTES: **The column headings are defined as follows:**

W_ID: Unique ID number given to the watercourse
W_NAME: Name of the watercourse.
SEGCOUNT: Number of segments merged together to comprise the watercourse.
W_COUNTIES: County(ies) where the watercourse is located.
W_MILES: Length of the watercourse in miles.
W_ADDRESS: Township, Range and Section of the mouth of the watercourse. (S88 - No designated Township, Range, and Section).
W_PER: Stream classification-perennial or not.
W_MBOAT: With modern boating or not.
W_HBOAT: With historical boating or not.
W_FISH: With fish or not.
W_DIMP: Impacted by dam or not.
W_SSTATUS: With special status designation or not.
HITS: Number of affirmative hits based on the six attribute data.

Table A-1A

Watercourses in Coconino County Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
91	37770	Jumpup Canyon	11	Coconino	22.014	T36.0N,R3.0W,S14	No	No	No	No	No	No	0
92	37774	Kaibab Wash	2	Coconino	8.617	T41.0N,R1.0W,S14	No	No	No	No	No	No	0
93	37779	Kana A Wash	8	Coconino	13.690	T25.0N,R10.0E,S01	No	No	No	No	No	No	0
94	37781	Kane Canyon	12	Coconino	23.410	T37.0N,R5.0E,S04	No	No	No	No	No	No	0
95	37792	Kish Zhinl Wash	6	Coconino	8.357	,,S88	No	No	No	No	No	No	0
96	37800	Kwagunt Creek	4	Coconino	8.469	,,S88	No	No	No	No	No	No	0
97	37810	Landmark Wash	10	Coconino	12.060	,,S88	No	No	No	No	No	No	0
98	37816	Lava Wash	2	Coconino	12.740	T27.0N,R7.0E,S14	No	No	No	No	No	No	0
99	37821	Leche-e Wash	2	Coconino	12.265	,,S88	No	No	No	No	No	No	0
100	37822	Lee Canyon	28	Coconino	21.562	,,S88	No	No	No	No	No	No	0
101	37835	Liikilzh Shijei	1	Coconino	5.277	,,S88	No	No	No	No	No	No	0
102	37853	Little Coyote Canyon	28	Coconino	29.386	T33.0N,R4.0W,S04	No	No	No	No	No	No	0
103	37861	Little Mexican S	6	Coconino	8.170	,,S88	No	No	No	No	No	No	0
104	37863	Little Red Horse	7	Coconino	17.435	T28.0N,R2.0E,S20	No	No	No	No	No	No	0
105	37865	Little Roden Wash	1	Coconino	3.340	,,S88	No	No	No	No	No	No	0
106	37875	Little Wash	1	Coconino	1.884	,,S88	No	No	No	No	No	No	0
107	37884	Long Canyon	8	Coconino/Yavapai	12.904	T15.0N,R7.0E,S32	No	No	No	No	No	No	0
108	37885	Long Canyon Wash	2	Coconino	7.178	,,S88	No	No	No	No	No	No	0
109	37901	Lost Spring Wash	2	Coconino	3.939	T41.0N,R2.0W,S08	No	No	No	No	No	No	0
110	37912	M C Canyon	8	Coconino/Yavapai	20.331	T18.0N,R1.0E,S20	No	No	No	No	No	No	0
111	37918	Malgosa Creek	1	Coconino	3.441	,,S88	No	No	No	No	No	No	0
112	37922	Manzanita Creek	2	Coconino	2.319	T32.0N,R3.0E,S01	No	No	No	No	No	No	0
113	37937	Mays Wash	5	Coconino	12.641	T27.0N,R10.0E,S10	No	No	No	No	No	No	0
114	37980	Milk Creek - Coconino	2	Coconino	6.813	T21.5N,R2.0E,S34	No	No	No	No	No	No	0
115	37991	Miller Wash - Coconino	25	Coconino	44.637	T27.0N,R1.0W,S36	No	No	No	No	No	No	0
116	38010	Mohawk Canyon	55	Coconino	27.061	T33.0N,R6.0W,S29	No	No	No	No	No	No	0
117	38017	Monument Wash	18	Coconino	23.157	T27.0N,R2.0W,S34	No	No	No	No	No	No	0
118	38052	Narrow Wash	5	Coconino/Navajo	17.824	,,S88	No	No	No	No	No	No	0
119	38059	Needmore Wash	4	Coconino	11.829	T28.0N,R8.0E,S14	No	No	No	No	No	No	0
120	38067	Ninetyfour Mile	2	Coconino	3.642	T31.0N,R2.0E,S05	No	No	No	No	No	No	0
121	38068	Ninetyone Mile Creek	1	Coconino	2.415	T31.0N,R2.0E,S02	No	No	No	No	No	No	0
122	38129	Oraibi Wash	81	Apache/Coconino/Navajo	133.756	,,S88	No	No	No	No	No	No	0
123	38153	Paiute Trail Wash	5	Coconino	9.520	,,S88	No	No	No	No	No	No	0
124	38165	Papago Creek	2	Coconino	2.895	,,S88	No	No	No	No	No	No	0
125	38185	Peach Wash	5	Coconino	7.586	,,S88	No	No	No	No	No	No	0
126	38224	Pine Creek Wash	1	Coconino	3.225	T23.0N,R2.0E,S32	No	No	No	No	No	No	0
127	38226	Pine Valley Road	1	Coconino	3.626	T15.0N,R11.0E,S27	No	No	No	No	No	No	0
128	38231	Pineveta Wash	18	Coconino/Yavapai	19.890	T21.0N,R3.0W,S22	No	No	No	No	No	No	0
129	38246	Pleasant Valley	6	Coconino	16.913	T36.0N,R4.0E,S03	No	No	No	No	No	No	0
130	38255	Polacca Wash	56	Apache/Coconino/Navajo	105.594	,,S88	No	No	No	No	No	No	0
131	38258	Poison Dam Draw	2	Coconino	1.790	T23.0N,R1.0W,S26	No	No	No	No	No	No	0
132	38263	Porcupine Wash	3	Coconino	12.883	,,S88	No	No	No	No	No	No	0
133	38272	Prairie Wash	14	Coconino	9.196	T31.0N,R2.0W,S24	No	No	No	No	No	No	0
134	38275	Priest Draw	1	Coconino	3.519	T20.0N,R7.0E,S25	No	No	No	No	No	No	0
135	38278	Prospect Creek	24	Coconino	27.140	T32.0N,R7.0W,S06	No	No	No	No	No	No	0

NOTES: The column headings are defined as follows:

W_ID: Unique ID number given to the watercourse

W_NAME: Name of the watercourse.

SEGCOUNT: Number of segments merged together to comprise the watercourse.

W_COUNTIES: County(ies) where the watercourse is located.

W_MILES: Length of the watercourse in miles.

W_ADDRESS: Township, Range and Section of the mouth of the watercourse. [S88 - No designated Township, Range, and Section].

W_PER: Stream classification-perennial or not.

W_MBOAT: With modern boating or not.

W_HBOAT: With historical boating or not.

W_FISH: With fish or not.

W_DIMP: Impacted by dam or not.

W_SSTATUS: With special status designation or not.

HITS: Number of affirmative hits based on the six attribute data.

Table A-1A
Watercourses in Coconino County Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
136	38299	Railroad Draw	7	Coconino/Yavapai	12.431	T17.0N,R2.0E,S12	No	No	No	No	No	No	0
137	38300	Rain Tank Wash	6	Coconino	8.729	T29.0N,R1.0E,S26	No	No	No	No	No	No	0
138	38308	Rarick Canyon	10	Coconino/Yavapai	23.283	T15.0N,R6.0E,S31	No	No	No	No	No	No	0
139	38310	Rattlesnake Canyon	7	Coconino/Yavapai	17.335	T16.0N,R6.0E,S21	No	No	No	No	No	No	0
140	38312	Rattlesnake Wash	6	Coconino/Yavapai	16.227	T18.0N,R1.0E,S18	No	No	No	No	No	No	0
141	38320	Red Horse Wash	35	Coconino	40.007	T27.0N,R1.0E,S10	No	No	No	No	No	No	0
142	38354	Rock Canyon - Coconino	15	Coconino	34.575	T41.0N,R1.0E,S06	No	No	No	No	No	No	0
143	38384	Russell Wash - Coconino	1	Coconino	3.638	T28.0N,R5.0E,S05	No	No	No	No	No	No	0
144	38398	Salt Creek - Coconino	1	Coconino	1.866	T31.0N,R2.0E,S03	No	No	No	No	No	No	0
145	38407	Salt Water Wash	1	Coconino	6.063	T39.0N,R7.0E,S31	No	No	No	No	No	No	0
146	38408	Saltwater Wash	6	Coconino	9.507	,,S88	No	No	No	No	No	No	0
147	38412	San Francisco Wash	11	Coconino	31.965	T22.0N,R9.0E,S34	No	No	No	No	No	No	0
148	38422	Sand Draw	5	Coconino	12.544	T16.0N,R14.0E,S21	No	No	No	No	No	No	0
149	38425	Sand Wash - Coconino	1	Coconino	5.382	,,S88	No	No	No	No	No	No	0
150	38433	Sandstone Wash	47	Coconino	53.774	T27.0N,R2.0W,S13	No	No	No	No	No	No	0
151	38450	Schoolhouse Draw	2	Coconino	4.381	T20.0N,R7.0E,S20	No	No	No	No	No	No	0
152	38452	Schultz Creek	3	Coconino	5.928	T22.0N,R7.0E,S22	No	No	No	No	No	No	0
153	38454	Seaman Wash	1	Coconino	2.311	T41.0N,R1.0E,S03	No	No	No	No	No	No	0
154	38458	Sei Bitbikooh	1	Coconino	11.047	Outside Arizona	No	No	No	No	No	No	0
155	38459	Sei Haasgaii Wash	5	Coconino	6.329	,,S88	No	No	No	No	No	No	0
156	38476	Sheep Spring Wash	2	Coconino	8.596	T37.0N,R6.0E,S30	No	No	No	No	No	No	0
157	38478	Sheep Wash - Coconino	8	Coconino	17.848	,,S88	No	No	No	No	No	No	0
158	38487	Shinumo Wash	6	Coconino	20.535	T36.0N,R6.0E,S11	No	No	No	No	No	No	0
159	38489	Shonto Wash	17	Coconino/Navajo	26.484	,,S88	No	No	No	No	No	No	0
160	38507	Sinclair Wash	3	Coconino	7.799	T21.0N,R7.0E,S28	No	No	No	No	No	No	0
161	38510	Sixtymile Creek	1	Coconino	3.980	,,S88	No	No	No	No	No	No	0
162	38515	Slate Creek - Coconino	1	Coconino	4.380	T32.0N,R1.0E,S26	No	No	No	No	No	No	0
163	38531	Snake Gulch	12	Coconino	23.329	T36.0N,R3.0W,S34	No	No	No	No	No	No	0
164	38544	Soldier Wash	1	Coconino/Yavapai	3.935	T17.0N,R6.0E,S18	No	No	No	No	No	No	0
165	38550	Sour Water Wash	8	Coconino	18.936	,,S88	No	No	No	No	No	No	0
166	38552	South Canyon	6	Coconino	18.085	T36.0N,R5.0E,S22	No	No	No	No	No	No	0
167	38573	South Fork Soap	4	Coconino	10.922	T39.0N,R6.0E,S36	No	No	No	No	No	No	0
168	38582	Sowats Canyon	13	Coconino	20.168	T36.0N,R3.0W,S14	No	No	No	No	No	No	0
169	38595	Spring Valley Wash	5	Coconino	16.361	T26.0N,R1.0E,S16	No	No	No	No	No	No	0
170	38598	Square Butte Wash	1	Coconino	6.187	,,S88	No	No	No	No	No	No	0
171	38611	Standing Water Wash	7	Coconino	18.102	,,S88	No	No	No	No	No	No	0
172	38627	Stone House Wash	3	Coconino	3.324	T25.0N,R11.0E,S32	No	No	No	No	No	No	0
173	38631	Strawberry Creek	4	Coconino/Gila	7.201	T12.0N,R8.0E,S30	No	No	No	No	No	No	0
174	38662	Taah Liti Wash	1	Coconino	3.104	,,S88	No	No	No	No	No	No	0
175	38669	Tanner Wash - Coconino	41	Coconino	35.733	,,S88	No	No	No	No	No	No	0
176	38673	Tappan Wash	13	Coconino	23.006	T28.0N,R8.0E,S14	No	No	No	No	No	No	0
177	38678	Tatahatso Wash	7	Coconino	16.556	,,S88	No	No	No	No	No	No	0
178	38679	Tatahoysa Wash	2	Coconino	11.733	,,S88	No	No	No	No	No	No	0
179	38705	Tiger Wash - Coconino	2	Coconino	10.463	T37.0N,R5.0E,S36	No	No	No	No	No	No	0
180	38710	Tin Can Wash	2	Coconino	2.948	,,S88	No	No	No	No	No	No	0

NOTES: The column headings are defined as follows:

W_ID: Unique ID number given to the watercourse
W_NAME: Name of the watercourse.
SEGCOUNT: Number of segments merged together to comprise the watercourse.
W_COUNTIES: County(ies) where the watercourse is located.
W_MILES: Length of the watercourse in miles.
W_ADDRESS: Township, Range and Section of the mouth of the watercourse. [S88 - No designated Township, Range, and Section].

W_PER: Stream classification-perennial or not.
W_MBOAT: With modern boating or not.
W_HBOAT: With historical boating or not.
W_FISH: With fish or not.
W_DIMP: Impacted by dam or not.
W_SSTATUS: With special status designation or not.
HITS: Number of affirmative hits based on the six attribute data.

Table A-1A
Watercourses in Coconino County Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
181	38714	To Hajisho	1	Coconino	6.986	T36.0N,R5.0E,S02	No	No	No	No	No	No	0
182	38717	Tohachi Wash	19	Coconino	21.309	,,S88	No	No	No	No	No	No	0
183	38722	Toms Creek	4	Coconino	8.346	T13.0N,R9.0E,S20	No	No	No	No	No	No	0
184	38723	Tonahakaad Wash	11	Coconino	15.516	,,S88	No	No	No	No	No	No	0
185	38741	Trinity Creek	3	Coconino	5.410	T31.0N,R2.0E,S02	No	No	No	No	No	No	0
186	38751	Tse To Baah Naal	6	Coconino	5.347	,,S88	No	No	No	No	No	No	0
187	38758	Tucker Flat Wash	2	Coconino	3.774	T19.0N,R15.0E,S18	No	No	No	No	No	No	0
188	38764	Tule Tank Wash	11	Coconino	14.725	T19.0N,R4.0E,S17	No	No	No	No	No	No	0
189	38767	Tuna Creek	3	Coconino	6.164	T32.0N,R1.0E,S23	No	No	No	No	No	No	0
190	38772	Turkey Creek - Coconino	4	Coconino	9.465	T13.0N,R13.0E,S29	No	No	No	No	No	No	0
191	38816	Vishnu Creek	1	Coconino	6.415	,,S88	No	No	No	No	No	No	0
192	38818	Volunteer Wash	10	Coconino	21.879	T20.0N,R4.0E,S22	No	No	No	No	No	No	0
193	38825	Wall Creek	1	Coconino	1.917	T32.0N,R3.0E,S14	No	No	No	No	No	No	0
194	38826	Wallace Canyon	4	Coconino	15.870	T20.0N,R12.5E,S34	No	No	No	No	No	No	0
195	38837	Warm Springs Canyon	14	Coconino	23.316	T38.0N,R1.0W,S11	No	No	No	No	No	No	0
196	38857	West Chevelon Canyon	11	Coconino	30.735	T14.0N,R18.0E,S09	No	No	No	No	No	No	0
197	38882	Whe-Yol-Da Sah Wash	2	Coconino/Navajo	3.715	T23.0N,R15.0E,S88	No	No	No	No	No	No	0
198	38892	White Sage Wash	7	Coconino	10.925	T41.0N,R1.0W,S15	No	No	No	No	No	No	0
199	38895	White Water Wash	7	Coconino	7.084	,,S88	No	No	No	No	No	No	0
200	38907	Wildcat Canyon	11	Coconino/Navajo	34.025	T14.0N,R15.0E,S01	No	No	No	No	No	No	0
201	38908	Wildcat Canyon - Coconino	3	Coconino	19.423	T40.0N,R2.0W,S04	No	No	No	No	No	No	0
202	38947	Woody Wash	2	Coconino	3.344	T20.0N,R6.0E,S25	No	No	No	No	No	No	0
203	38957	Yeager Canyon	1	Coconino	13.715	T14.0N,R11.0E,S25	No	No	No	No	No	No	0
204	38958	Yellow Bulle Was	1	Coconino	6.097	,,S88	No	No	No	No	No	No	0
205	38960	Yellow Jacket Canyon	7	Coconino	23.972	,,S88	No	No	No	No	No	No	0
206	38966	Youngs Canyon	10	Coconino	24.441	T21.0N,R11.0E,S14	No	No	No	No	No	No	0
207	38989	a - Seg 503 Coconino	1	Coconino	0.104	T27.0N,R9.0E,S19	No	No	No	No	No	No	0
208	38994	a - Seg 9 Coconino	16	Coconino	28.186	T28.0N,R10.0E,S08	No	No	No	No	No	No	0
209	39003	b - Seg 30 Coconino	6	Coconino	8.160	T21.0N,R4.0E,S29	No	No	No	No	No	No	0
210	39013	c - Seg 21 Coconino	7	Coconino	18.259	T18.0N,R12.0E,S14	No	No	No	No	No	No	0
211	39015	c - Seg 32 Coconino	1	Coconino	2.515	T21.0N,R2.0E,S26	No	No	No	No	No	No	0
212	-	4936 Unnamed Watercourses	-	Coconino	Varies	Varies	No	No	No	No	No	No	0

NOTES: The column headings are defined as follows:

W_ID: Unique ID number given to the watercourse
W_NAME: Name of the watercourse.
SEGCOUNT: Number of segments merged together to comprise the watercourse.
W_COUNTIES: County(ies) where the watercourse is located.
W_MILES: Length of the watercourse in miles.
W_ADDRESS: Township, Range and Section of the mouth of the watercourse. (S88 - No designated Township, Range, and Section).
W_PER: Stream classification-perennial or not.
W_MBOAT: With modern boating or not.
W_HBOAT: With historical boating or not.
W_FISH: With fish or not.
W_DIMP: Impacted by dam or not.
W_SSTATUS: With special status designation or not.
HITS: Number of affirmative hits based on the six attribute data.

EXHIBIT G

Table A-1B
Watercourses in Coconino County Not Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
1	448	Chevelon Canyon	55	Coconino/Navajo	98.57	T18.0N,R17.0E,S15	Yes	Yes	Yes	Yes	Yes	Yes	6
2	38858	West Clear Creek	51	Coconino/Yavapai	65.30	T13.0N,R5.0E,S21	Yes	Yes	No	Yes	Yes	Yes	5
3	715	East Clear Creek	29	Coconino	50.96	T14.0N,R11.0E,S25	Yes	No	No	Yes	Yes	Yes	4
4	789	Fossil Creek	18	Coconino/Gila/Yavapai	17.72	T11.0N,R6.0E,S25	Yes	No	No	Yes	Yes	Yes	4
5	37780	Kanab Creek	47	Coconino/Mohave	72.52	T36.0N,R3.0W,S06	Yes	No	No	Yes	Yes	Yes	4
6	38108	Oak Creek	40	Coconino/Yavapai	54.36	T15.0N,R4.0E,S20	Yes	Yes	No	Yes	Yes	No	4
7	38724	Tonto Creek	115	Coconino/Gila	96.13	T9.0N,R11.0E,S01	Yes	Yes	No	Yes	Yes	No	4
8	38880	Wet Beaver Creek	21	Coconino/Yavapai	24.33	T15.0N,R6.0E,S24	Yes	Yes	No	Yes	Yes	No	4
9	129	Barbershop Canyon	7	Coconino	14.47	T13.0N,R11.0E,S14	Yes	No	No	Yes	Yes	No	3
10	376	Canyon Creek 1	51	Coconino/Gila/Navajo	51.84	T7.0N,R15.5E,S36	Yes	No	No	Yes	Yes	No	3
11	484	Clear Creek 1	41	Coconino/Navajo	68.22	T16.0N,R14.0E,S21	Yes	No	No	Yes	No	Yes	3
12	605	Crystal Creek	9	Coconino	16.53	T32.0N,R1.0E,S25	Yes	No	No	Yes	Yes	No	3
13	37837	Havasu Creek	69	Coconino	75.59	T32.0N,R3.0W,S28	Yes	No	No	Yes	Yes	No	3
14	37649	Hermit Creek	3	Coconino	5.56	T31.0N,R2.0E,S06	Yes	No	No	Yes	Yes	No	3
15	38171	Paria River	17	Coconino	29.42	T41.0N,R6.0E,S15	Yes	No	No	Yes	Yes	No	3
16	38486	Shinumo Creek	12	Coconino	19.44	T33.0N,R1.0W,S24	Yes	No	No	Yes	Yes	No	3
17	38592	Spring Creek 1 - Coconino/Yavapai	16	Coconino/Yavapai	29.04	T16.0N,R4.0E,S34	Yes	No	No	Yes	Yes	No	3
18	38652	Sycamore Creek 1	49	Coconino/Yavapai	52.41	T18.0N,R3.0E,S10	Yes	No	No	Yes	Yes	No	3
19	38672	Tapeats Creek	14	Coconino	12.81	T35.0N,R2.0W,S36	Yes	No	No	Yes	No	Yes	3
20	38945	Woods Canyon	6	Coconino	12.90	T11.0N,R14.0E,S07	Yes	No	No	Yes	No	No	2
21	104	Aztec Creek	8	Coconino	10.34	..S88	No	No	No	Yes	Yes	No	2
22	274	Boucher Creek	2	Coconino	4.35	T32.0N,R1.0E,S36	Yes	No	No	Yes	No	No	2
23	293	Bright Angel Creek	17	Coconino	18.07	T32.0N,R3.0E,S32	Yes	No	No	No	No	Yes	2
24	399	Cataract Creek	25	Coconino	52.84	T27.0N,R1.0W,S36	No	No	No	Yes	Yes	No	2
25	461	Chuar Creek	3	Coconino	7.91	..S88	Yes	No	No	Yes	No	No	2
26	592	Crackerbox Canyon	8	Coconino	7.92	T13.0N,R11.0E,S09	No	No	No	Yes	Yes	No	2
27	637	Deer Creek - Coconino	4	Coconino	8.97	T35.0N,R2.0W,S33	Yes	No	No	No	No	Yes	2
28	673	Dogtown Wash	9	Coconino	17.84	T22.0N,R2.0E,S04	Yes	No	No	No	No	Yes	2
29	26761	H65_0406	10	Coconino	13.45	T18.0N,R6.0E,S27	Yes	No	No	No	No	Yes	2
30	37760	Johnson Creek	19	Coconino/Yavapai	25.95	T21.0N,R2.0W,S15	Yes	No	No	No	No	Yes	2
31	37817	Last Chance Creek	1	Coconino	5.98	T41.0N,R6.0E,S24	Yes	No	No	No	No	Yes	2
32	37930	Martin Dam Draw	38	Coconino	33.46	T22.0N,R2.0W,S05	Yes	No	No	No	No	Yes	2
33	37960	Marsh Wash	15	Coconino/Yavapai	21.34	T20.0N,R2.0W,S35	Yes	No	No	No	No	Yes	2
34	37988	Miller Canyon	2	Coconino	11.15	T13.0N,R10.0E,S01	No	No	No	Yes	Yes	No	2
35	38178	Partridge Creek	38	Coconino/Yavapai	54.83	T21.0N,R3.0W,S22	Yes	No	No	No	No	Yes	2
36	38201	Phantom Creek	5	Coconino	9.13	T32.0N,R3.0E,S32	Yes	No	No	Yes	No	No	2
37	38215	Pine Creek	18	Coconino/Gila	20.38	T10.0N,R8.0E,S12	Yes	No	No	Yes	No	No	2
38	38346	Rio de Flag	17	Coconino	30.84	T21.0N,R9.0E,S05	Yes	No	No	No	No	Yes	2
39	38526	Stone Creek - Coconino	1	Coconino	3.41	T34.0N,R2.0W,S13	No	No	No	Yes	Yes	No	2
40	38702	Thunder River	1	Coconino	0.49	T35.0N,R2.0W,S36	Yes	No	No	Yes	No	No	2
41	38848	Webber Creek	15	Coconino/Gila	14.26	T11.0N,R10.0E,S09	Yes	No	No	Yes	No	No	2
42	38854	West Canyon Creek	3	Coconino	13.30	..S88	Yes	No	No	No	No	Yes	2
43	38855	West Cataract Creek	5	Coconino	6.40	T22.0N,R2.0E,S29	Yes	No	No	No	No	No	2
44	38864	West Fork Oak Creek - Coconino	10	Coconino	15.83	T19.0N,R6.0E,S34	Yes	No	No	Yes	No	No	2
45	49	Antelope Creek - Coconino	11	Coconino	20.15	T41.0N,R9.0E,S26	No	No	No	No	No	Yes	1

NOTES: The column headings are defined as follows:
W_ID: Unique ID number given to the watercourse
W_NAME: Name of the watercourse.
SEGCOUNT: Number of segments merged together to comprise the watercourse.
W_COUNTIES: County(ies) where the watercourse is located.
W_MILES: Length of the watercourse in miles.
W_ADDRESS: Township, Range and Section of the mouth of the watercourse. [S88 = No designated Township, Range and Section].

W_PER: Stream classification-perennial or not.
W_MBOAT: With modern boating or not.
W_HBOAT: With historical boating or not.
W_FISH: With fish or not.
W_DIMP: Impacted by dam or not.
W_SSTATUS: With special status designation or not.
HITS: Number of affirmative hits based on the six attribute data.

Table A-1B
Watercourses in Coconino County Not Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
46	94	Ash Fork Draw - Coconino/Yavapai	5	Coconino/Yavapai	6.79	T21.0N,R2.0W,S03	No	No	No	No	No	Yes	1
47	98	Ashurst Run	7	Coconino	9.80	T18.0N,R9.0E,S14	No	No	No	No	No	Yes	1
48	111	Badger Creek - Coconino	4	Coconino	3.63	T39.0N,R7.0E,S17	Yes	No	No	No	No	No	1
49	136	Bear Canyon	7	Coconino/Yavapai	21.09	T18.0N,R1.0E,S20	No	No	No	Yes	No	No	1
50	161	Begashibito Wash	18	Coconino/Navajo	47.80	,,S88	Yes	No	No	No	No	No	1
51	238	Blacktail Canyon Creek	1	Coconino	2.95	T33.0N,R2.0W,S13	No	No	No	Yes	No	No	1
52	265	Bonita Creek - Coconino	1	Coconino	3.19	T34.0N,R2.0W,S02	No	No	No	No	Yes	No	1
53	380	Canyon Diablo	37	Coconino	81.02	T20.0N,R12.5E,S34	No	No	No	No	No	Yes	1
54	382	Carbon Creek	1	Coconino	1.71	,,S88	No	No	No	Yes	No	No	1
55	383	Cardenas Creek	1	Coconino	2.79	,,S88	No	No	No	Yes	No	No	1
56	415	Cedar Wash - Coconino	35	Coconino	49.88	T28.0N,R8.0E,S35	Yes	No	No	No	No	No	1
57	429	Chaiyahi Creek	6	Coconino	12.07	,,S86	Yes	No	No	No	No	No	1
58	485	Clear Creek 2	8	Coconino	10.66	T31.0N,R3.0E,S01	No	No	No	Yes	No	No	1
59	489	Clover Creek - Coconino	9	Coconino	9.93	T14.0N,R8.0E,S33	Yes	No	No	No	No	No	1
60	660	Diamond Creek 1	22	Coconino/Mohave	25.38	T27.5N,R10.0W,S32	No	No	No	Yes	No	No	1
61	678	Dragon Creek	4	Coconino	6.27	T32.0N,R2.0E,S08	Yes	No	No	No	No	No	1
62	685	Dry Beaver Creek	33	Coconino/Yavapai	28.84	T16.0N,R5.0E,S36	No	No	No	Yes	No	No	1
63	737	Elghimiln Crnnk	9	Coconino/Yavapai	15.32	T21.0N,R3.0W,S15	No	No	No	No	No	Yes	1
64	26654	Foster Creek	1	Coconino/Yavapai	2.85	T16.0N,R7.0E,S24	No	No	No	No	Yes	No	1
65	1043	H01_0218	3	Coconino	5.74	T21.0N,R2.0W,S03	No	No	No	No	No	Yes	1
66	1359	H01_0552	4	Coconino/Yavapai	6.97	T22.0N,R5.0W,S09	No	No	No	No	No	No	1
67	4845	H10_0396	1	Coconino	0.17	T42.0N,R5.0E,S33	Yes	No	No	No	No	No	1
68	4841	H12_0397	3	Coconino	3.66	,,S88	Yes	No	No	No	No	No	1
69	4842	H12_0398	1	Coconino	0.16	,,S88	Yes	No	No	No	No	No	1
70	4895	H12_0460	4	Coconino	1.65	,,S88	Yes	No	No	No	No	No	1
71	4901	H12_0468	2	Coconino	3.07	,,S88	Yes	No	No	No	No	No	1
72	4944	H12_0510	3	Coconino	1.82	,,S88	Yes	No	No	No	No	No	1
73	5009	H12_0580	4	Coconino	7.86	T40.0N,R8.0E,S27	Yes	No	No	No	No	No	1
74	5207	H14_0181	1	Coconino	0.33	,,S88	Yes	No	No	No	No	No	1
75	5346	H14_0323	4	Coconino	2.34	T39.0N,R6.0E,S28	Yes	No	No	No	No	No	1
76	5417	H14_0469	1	Coconino	0.23	,,S88	Yes	No	No	No	No	No	1
77	5418	H14_0469	1	Coconino	0.15	,,S88	Yes	No	No	No	No	No	1
78	5419	H14_0472	1	Coconino	0.42	,,S88	Yes	No	No	No	No	No	1
79	5883	H16_0099	1	Coconino	0.02	T33.0N,R2.0W,S03	Yes	No	No	No	No	No	1
80	5888	H16_0104	1	Coconino	0.00	T33.0N,R2.0W,S03	Yes	No	No	No	No	No	1
81	8433	H16_0725	3	Coconino	2.20	T35.0N,R1.0W,S32	Yes	No	No	No	No	No	1
82	6501	H16_0799	1	Coconino	0.27	T34.0N,R1.0W,S24	Yes	No	No	No	No	No	1
83	11903	H30_0056	1	Coconino	1.71	T21.0N,R8.0E,S18	No	No	No	No	No	Yes	1
84	12068	H30_0284	4	Coconino	4.17	T17.0N,R11.0E,S05	No	No	No	No	No	Yes	1
85	22910	H57_0437	1	Coconino	5.91	T41.0N,R2.0W,S28	No	No	No	No	No	No	1
86	23143	H58_0081	1	Coconino	0.07	T32.0N,R11.0E,S88	Yes	No	No	No	No	No	1
87	23144	H58_0082	2	Coconino	2.46	T32.0N,R11.0E,S88	Yes	No	No	No	No	No	1
88	23205	H58_0154	1	Coconino	2.06	T32.0N,R11.0E,S88	Yes	No	No	No	No	No	1
89	24566	H62_0216	1	Coconino	2.77	T28.0N,R5.0E,S04	No	No	No	No	No	Yes	1
90	24781	H62_0442	3	Coconino	4.80	T26.0N,R2.0W,S20	No	No	No	No	No	Yes	1

NOTES: The column headings are defined as follows:
W_ID: Unique ID number given to the watercourse
W_NAME: Name of the watercourse.
SEGCOUNT: Number of segments merged together to comprise the watercourse.
W_COUNTIES: County(ies) where the watercourse is located.
W_MILES: Length of the watercourse in miles.
W_ADDRESS: Township, Range and Section of the mouth of the watercourse. [S88 = No designated Township, Range and Section].
W_PER: Stream classification-perennial or not.
W_MBOAT: With modern boating or not.
W_HBOAT: With historical boating or not.
W_FISH: With fish or not.
W_DIMP: Impacted by dam or not.
W_SSTATUS: With special status designation or not.
HITS: Number of affirmative hits based on the six attribute data.

Table A-1B
Watercourses In Coconino County Not Rejected at Level 1

No. (1)	W_ID (2)	W_NAME (3)	SEGCOUNT (4)	W_COUNTIES (5)	W_MILES (6)	W_ADDRESS (7)	W_PER (8)	W_MBOAT (9)	W_HBOAT (10)	W_FISH (11)	W_SSTATUS (12)	W_DIMP (13)	HITS (14)
91	25509	H63_0256	1	Coconino	0.20	T16.0N,R11.0E,S07	Yes	No	No	No	No	No	1
92	25513	H63_0262	1	Coconino	0.29	T16.0N,R11.0E,S18	No	No	No	No	No	Yes	1
93	25523	H63_0286	1	Coconino	1.53	T15.0N,R10.0E,S26	No	No	No	No	No	Yes	1
94	25526	H63_0295	1	Coconino	1.31	T15.0N,R10.0E,S36	No	No	No	No	No	Yes	1
95	25838	H63_0439	6	Coconino	8.77	T16.0N,R11.0E,S32	Yes	No	No	No	No	No	1
96	25731	H63_0538	2	Coconino	7.36	T13.0N,R11.0E,S22	Yes	No	No	No	No	No	1
97	25748	H63_0556	5	Coconino	6.35	T13.0N,R12.0E,S17	No	No	No	No	No	Yes	1
98	25775	H63_0504	2	Coconino	3.98	T12.0N,R13.0E,S05	No	No	No	No	No	Yes	1
99	26763	H65_0408	4	Coconino	4.12	T16.0N,R7.0E,S29	No	No	No	No	No	Yes	1
100	26969	H65_0617	1	Coconino	2.63	T20.0N,R4.0E,S16	No	No	No	No	No	No	1
101	28561	H69_0506	5	Coconino	2.19	T12.0N,R9.0E,S14	Yes	No	No	No	No	No	1
102	28726	H69_0683	5	Coconino	7.76	T14.0N,R9.0E,S14	Yes	No	No	No	No	No	1
103	28737	H69_0694	1	Coconino	1.78	T14.0N,R9.0E,S01	No	No	No	No	No	Yes	1
104	28738	H69_0695	1	Coconino	3.23	T15.0N,R9.0E,S24	No	No	No	No	No	Yes	1
105	37736	J D Dam Wash	6	Coconino	7.05	T19.0N,R3.0E,S13	Yes	No	No	No	No	No	1
106	37744	Jacks Canyon 2	30	Coconino/Navajo	67.42	T19.0N,R16.0E,S33	No	No	No	Yes	No	No	1
107	37775	Kalbito Creek	30	Coconino	69.68	,,S88	Yes	No	No	No	No	No	1
108	37830	Leonard Canyon	9	Coconino	18.58	T14.0N,R12.0E,S11	No	No	No	Yes	No	No	1
109	37935	Malkatamiba Creek	10	Coconino	8.41	T34.0N,R4.0W,S13	No	No	No	Yes	No	No	1
110	38007	Moenkopi Wash	81	Coconino/Navajo	129.34	T29.0N,R9.0E,S88	No	No	No	No	No	Yes	1
111	38016	Monument Creek	2	Coconino	3.48	T31.0N,R2.0E,S04	Yes	No	No	No	No	No	1
112	38043	Mule Creek	2	Coconino/Gila	5.01	T10.5N,R15.0E,S22	No	No	No	Yes	No	No	1
113	38051	Nankoweap Creek	9	Coconino	9.02	,,S88	No	No	No	No	No	No	1
114	38057	Navajo Creek	36	Coconino	49.86	,,S88	Yes	No	No	No	No	No	1
115	38077	North Canyon Wash	26	Coconino	32.06	T37.0N,R6.0E,S04	Yes	No	No	No	No	Yes	1
116	38149	Padre Canyon	6	Coconino	28.62	T21.0N,R11.0E,S14	No	No	No	No	No	Yes	1
117	38179	Pasture Wash	20	Coconino	19.49	T32.0N,R3.0W,S28	No	No	No	Yes	No	No	1
118	38235	Pipe Creek	2	Coconino	3.77	T31.0N,R3.0E,S06	No	No	No	No	No	No	1
119	38284	Pumphouse Wash	11	Coconino	7.91	T19.0N,R6.0E,S01	Yes	No	No	No	No	No	1
120	38321	Red Lake Wash	11	Coconino	33.68	T23.0N,R2.0E,S36	No	No	No	No	No	Yes	1
121	38377	Royal Arch Creek	6	Coconino	5.10	T32.0N,R2.0W,S01	No	No	No	Yes	No	No	1
122	38469	Seventyfive Mile	3	Coconino	5.83	,,S88	Yes	No	No	No	No	No	1
123	38533	Soap Creek - Coconino	9	Coconino	6.24	T39.0N,R7.0E,S31	Yes	No	No	No	No	No	1
124	38801	Unkar Creek	4	Coconino	7.23	,,S88	No	No	No	Yes	No	No	1
125	38827	Walnut Creek - Coconino	26	Coconino	51.74	T20.0N,R7.0E,S01	No	No	No	No	No	Yes	1
126	38878	West Webber Creek	3	Coconino/Gila	2.98	T12.0N,R9.0E,S23	Yes	No	No	No	No	No	1
127	38897	White Creek	7	Coconino	6.59	T33.0N,R1.0E,S18	Yes	No	No	No	No	No	1
128	38918	Willow Creek - Coconino	18	Coconino	31.51	T14.0N,R13.0E,S06	No	No	No	Yes	No	No	1
129	38953	Yaeger Canyon	8	Coconino	23.40	T19.0N,R12.0E,S12	No	No	No	Yes	No	No	1

NOTES: The column headings are defined as follows:
W_ID: Unique ID number given to the watercourse
W_NAME: Name of the watercourse.
SEGCOUNT: Number of segments merged together to comprise the watercourse.
W_COUNTIES: County(ies) where the watercourse is located.
W_MILES: Length of the watercourse in miles.
W_ADDRESS: Township, Range and Section of the mouth of the watercourse. [S88 = No designated Township, Range and Section]
W_PER: Stream classification-perennial or not.
W_MBOAT: With modern boating or not.
W_HBOAT: With historical boating or not.
W_FISH: With fish or not.
W_DIMP: Impacted by dam or not.
W_SSTATUS: With special status designation or not.
HITS: Number of affirmative hits based on the six attribute data.

EXHIBIT H

Figure 1. Oak Creek Location Map

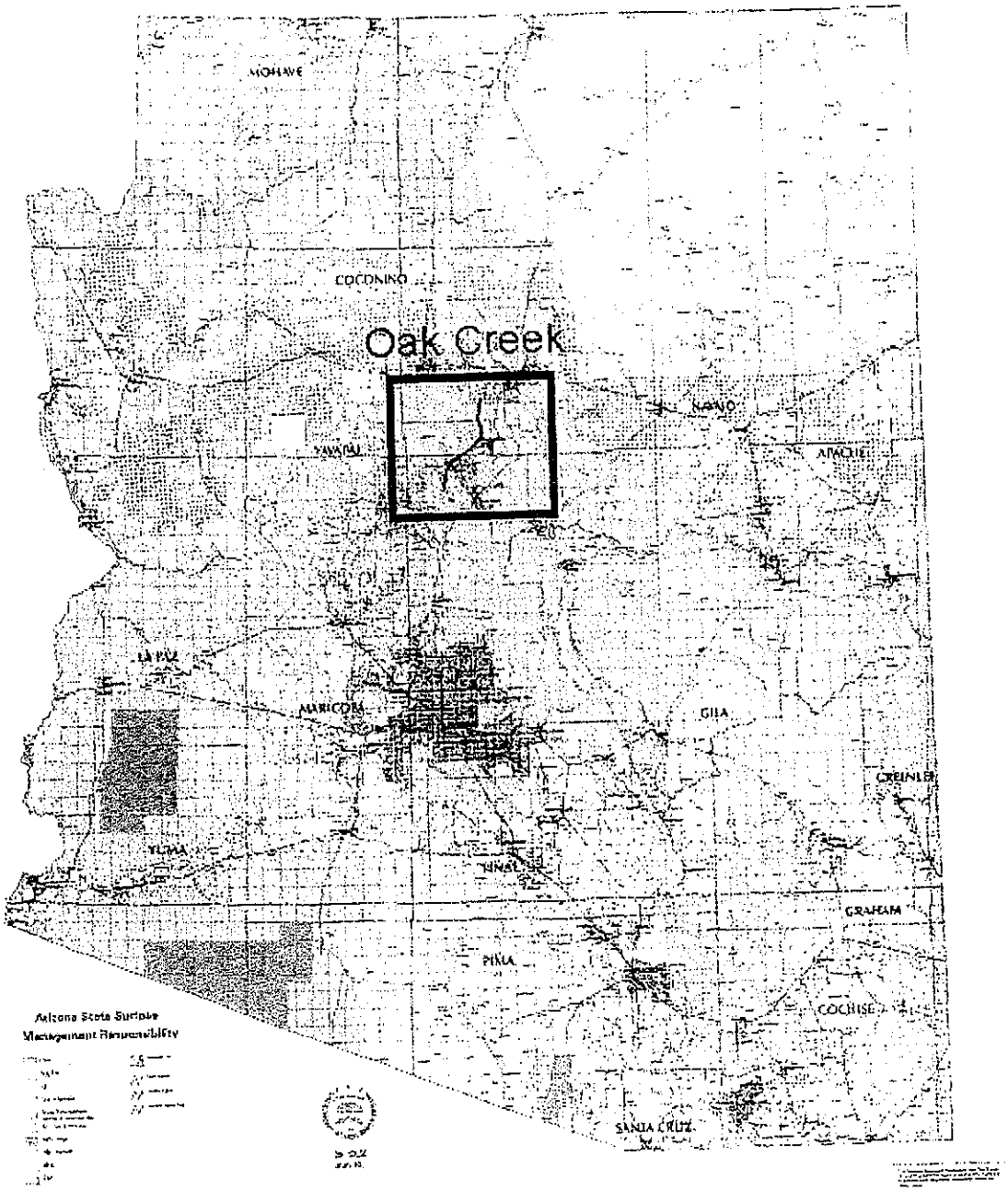
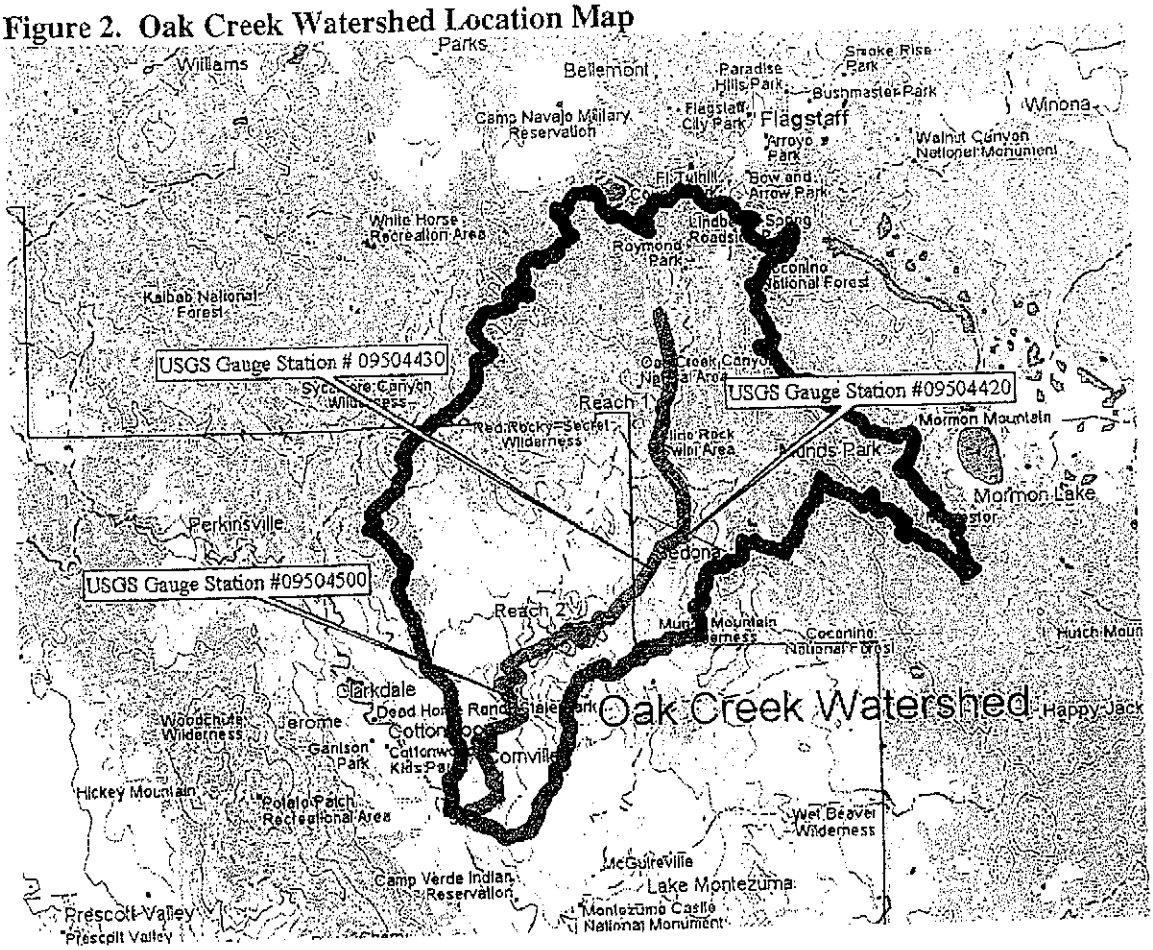


Figure 2. Oak Creek Watershed Location Map

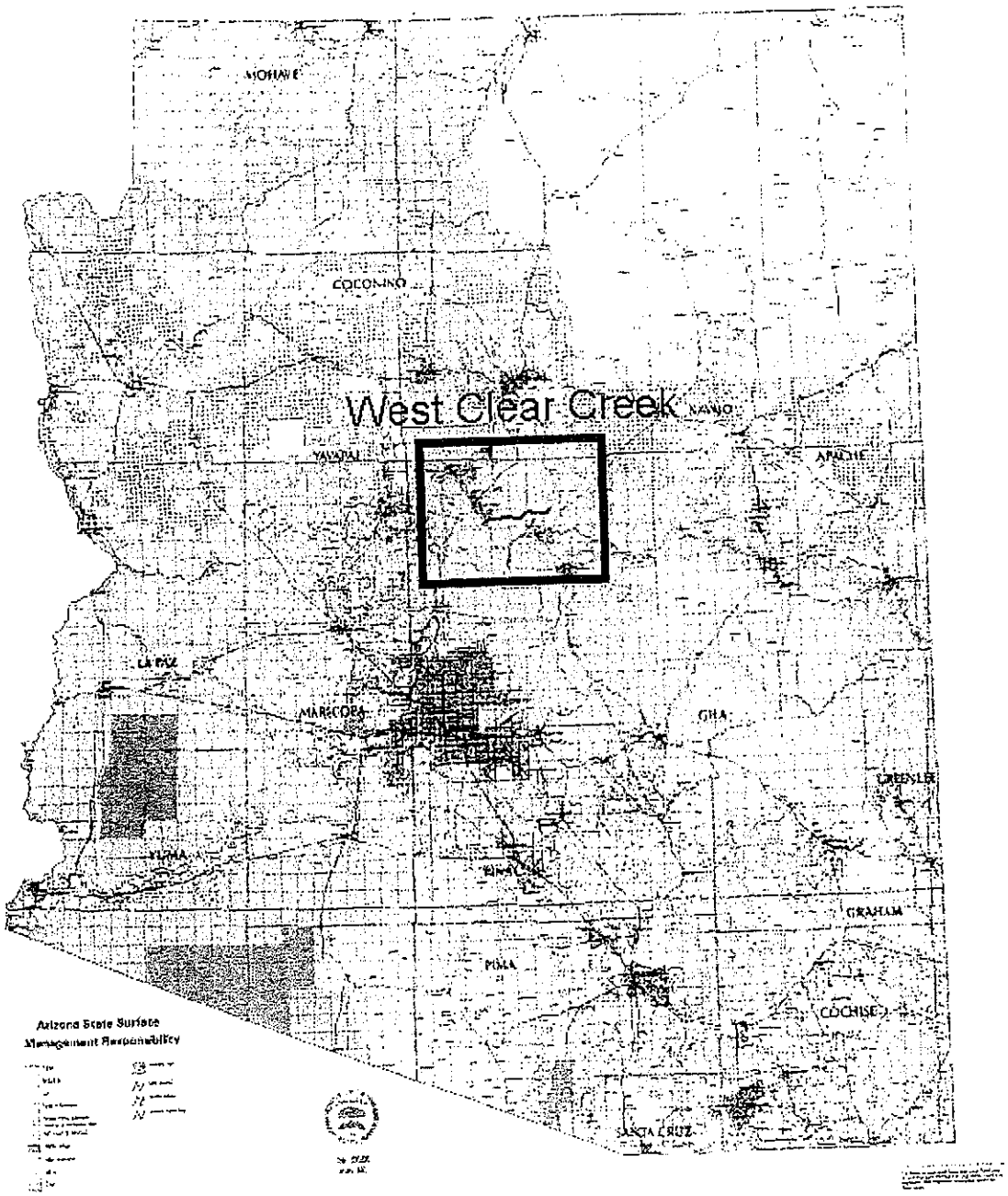


at the Bureau of Land Management Records (BLM) office in Phoenix included notes from three separate surveys conducted before the time of statehood that covered the Oak Creek study reach. GLO surveys established the Township-Range-Section boundaries in Arizona. GLO surveyors often included brief descriptions of the stream depths, flow widths, or bank vegetation where the survey alignments crossed the stream bed. In some instances, GLO surveyors established "meander lines" within river corridors known to contain navigable streams. The earliest GLO surveys for Oak Creek were performed in 1886 (Smith, 1886; Powers, 1886). The most recent GLO survey was performed in 1902 (Secor, 1902). Unfortunately, no surveys were performed in February 1912 from which stream conditions on the date of Arizona statehood could be interpreted.

Oak Creek crosses a total of 43 section line boundaries. The GLO survey notes made mention of Oak Creek at only nine of these 43 section line crossings. In some surveys dating before the time of statehood, certain section lines were not surveyed in the field. In the nine instances where Oak Creek is mentioned in the survey notes, there are no references to running water or dry stream beds, so no conclusions concerning flow conditions in Oak Creek before the time of statehood can be drawn from the GLO records.

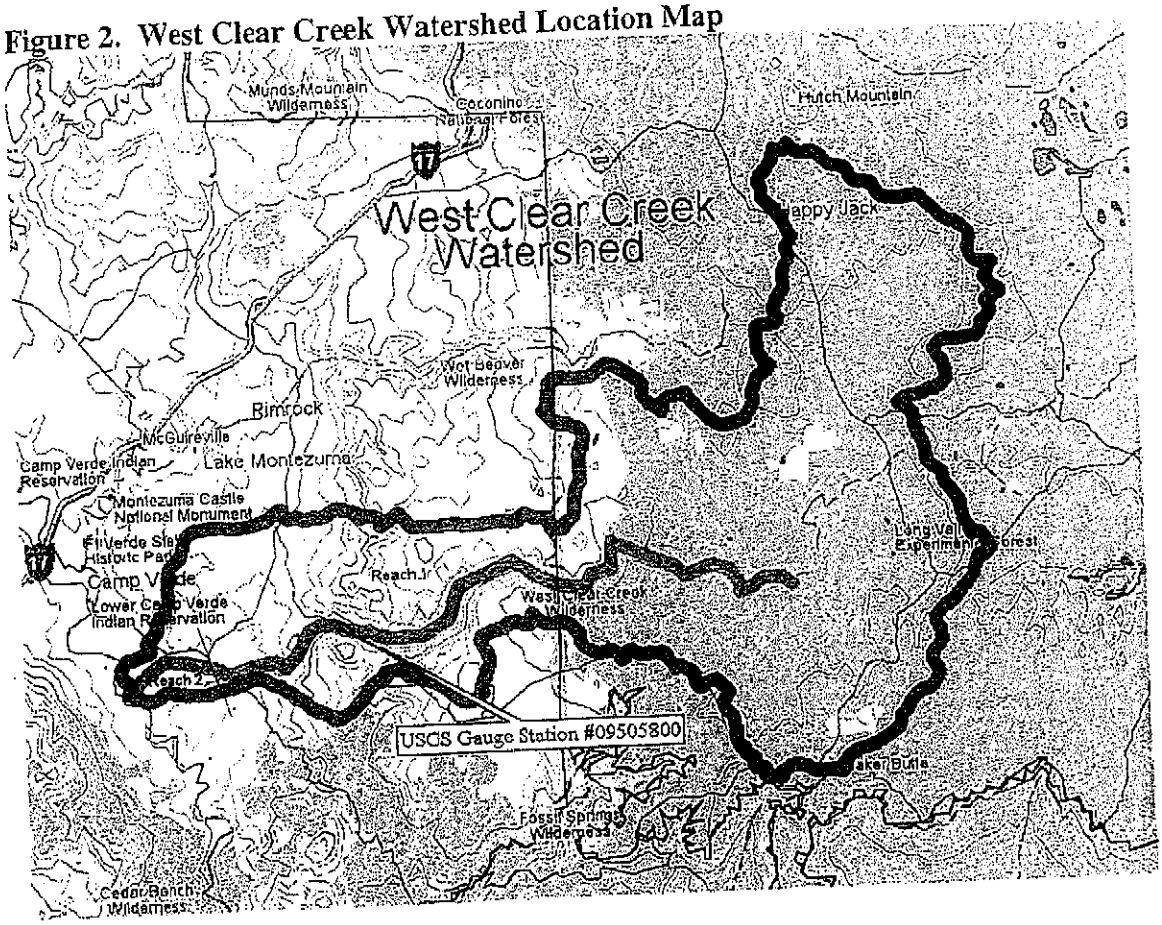
EXHIBIT I

Figure ES-1. West Clear Creek Location Map



Hydrologic/hydraulic data are the primary source of information regarding susceptibility to navigation. These data include estimates of flow depth, width, velocity, and average flow conditions as of the time of statehood, based on the available modern records for natural stream conditions as of the time of statehood, as well as for existing stream conditions. Existing state land ownership data were compiled into a Geographic Information System (GIS) database that identified the location of public vs. private land along the stream. The results of the data collection are summarized in the following paragraphs.

Figure 2. West Clear Creek Watershed Location Map

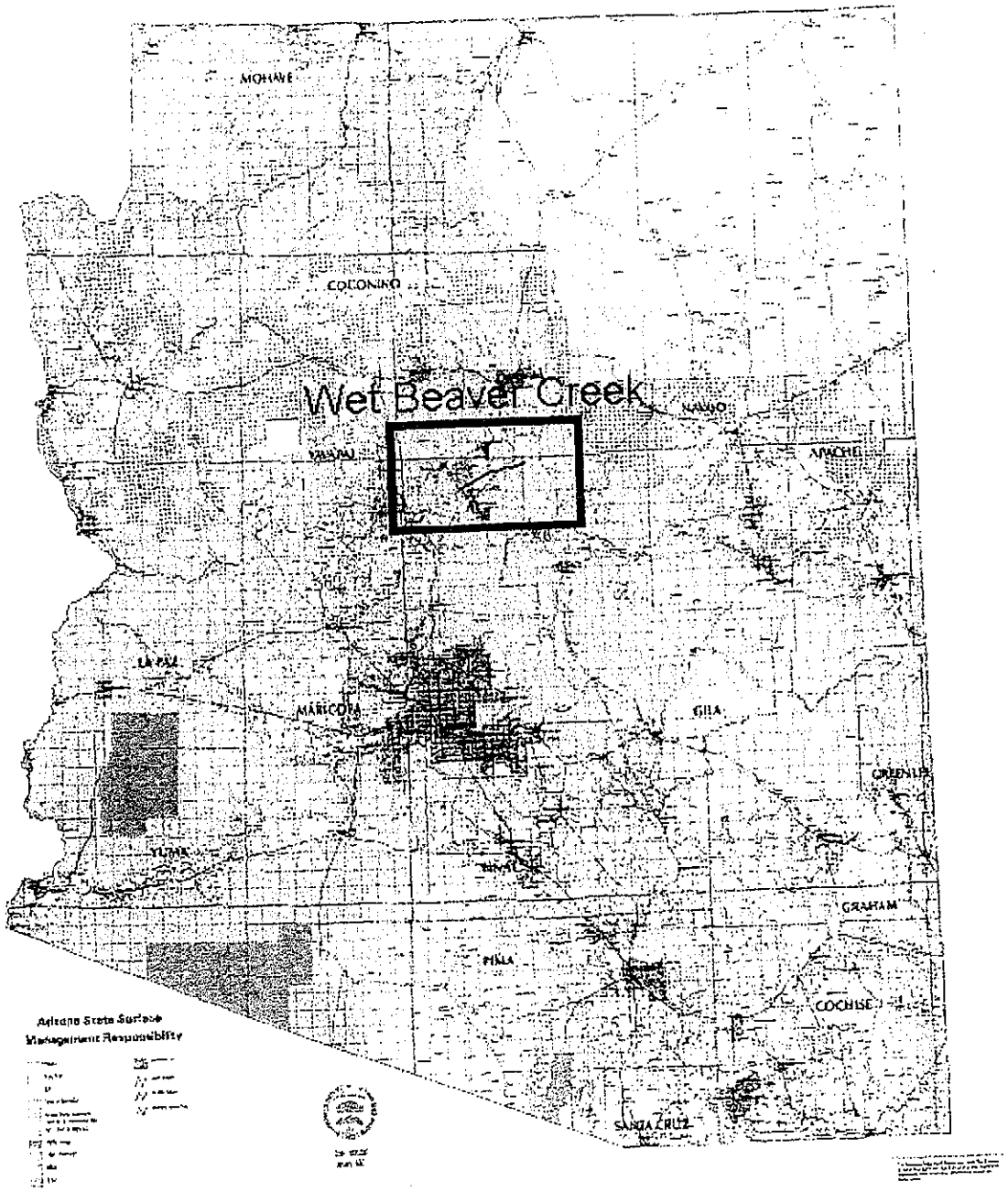


is not easily accessible and was not surveyed in the time before statehood. GLO surveys established the Township-Range-Section boundaries in Arizona. GLO surveyors often included brief descriptions of the stream depths, flow widths, or bank vegetation where the survey alignments crossed the stream bed. In some instances, GLO surveyors established "meander lines" within river corridors known to contain navigable streams. The single survey was dated in 1873 (Foster, 1873). Unfortunately, no surveys were performed in February 1912 from which stream conditions on the date of Arizona statehood could be interpreted.

West Clear Creek crosses a total of 18 Township and Range section line boundaries within the limits of the 1873 survey. The GLO survey notes mention West Clear Creek at only three of the 18 section line traverses, but running water is mentioned all three times. Notes from the section 13-14 boundary survey report a "flow with shallow stream and gentle current" in Township 13 North Range 5 East. The other two notations describe West Clear Creek as having a "gentle current" (Foster, 1873). No meander line was established for West Clear Creek by the GLO surveyors. In general, flow depths described by GLO surveyors were consistent with the conditions observed during recent field visits by the study team.

EXHIBIT J

Figure ES-1. Wet Beaver Creek Location Map



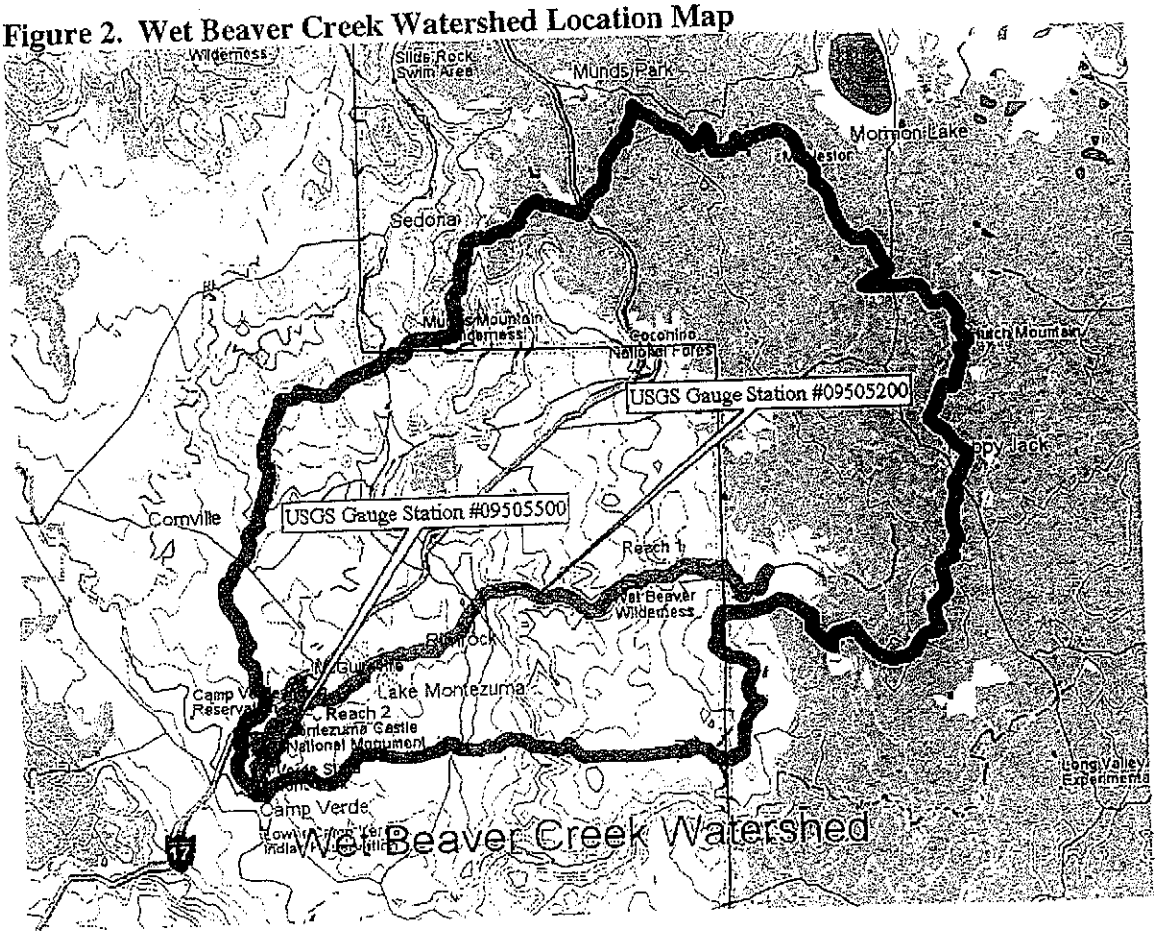
uses of the stream and the adjacent river valley in historic times, with special emphasis on the establishment, growth, and development of towns, irrigation systems, and commercial activities where applicable.

Hydrologic/hydraulic data are the primary sources of information regarding susceptibility to navigation. These data include estimates of flow depth, width, velocity, and average

Data Sources

Hydrologic data for Wet Beaver Creek are available from two USGS gauges. The Wet Beaver Creek near Rimrock station (#09505200), which is still actively monitored, is located approximately two miles upstream of the Forest Service Wet Beaver Picnic Area and Beaver Creek Ranger Station. The Wet Beaver Creek at Camp Verde station (#09505500), which was abandoned in 1920, was located immediately upstream of the Verde River/Wet Beaver Creek confluence. The gauge locations are shown on Figure 2. The USGS report that "there is no known diversion or regulation" upstream of the gauge Near Rimrock, AZ (Pope et. al, 1998), although several ditches exist downstream of the gauge. Additional hydrologic data were collected during the field investigation, and from records and anecdotal information available in the literature.

Figure 2. Wet Beaver Creek Watershed Location Map

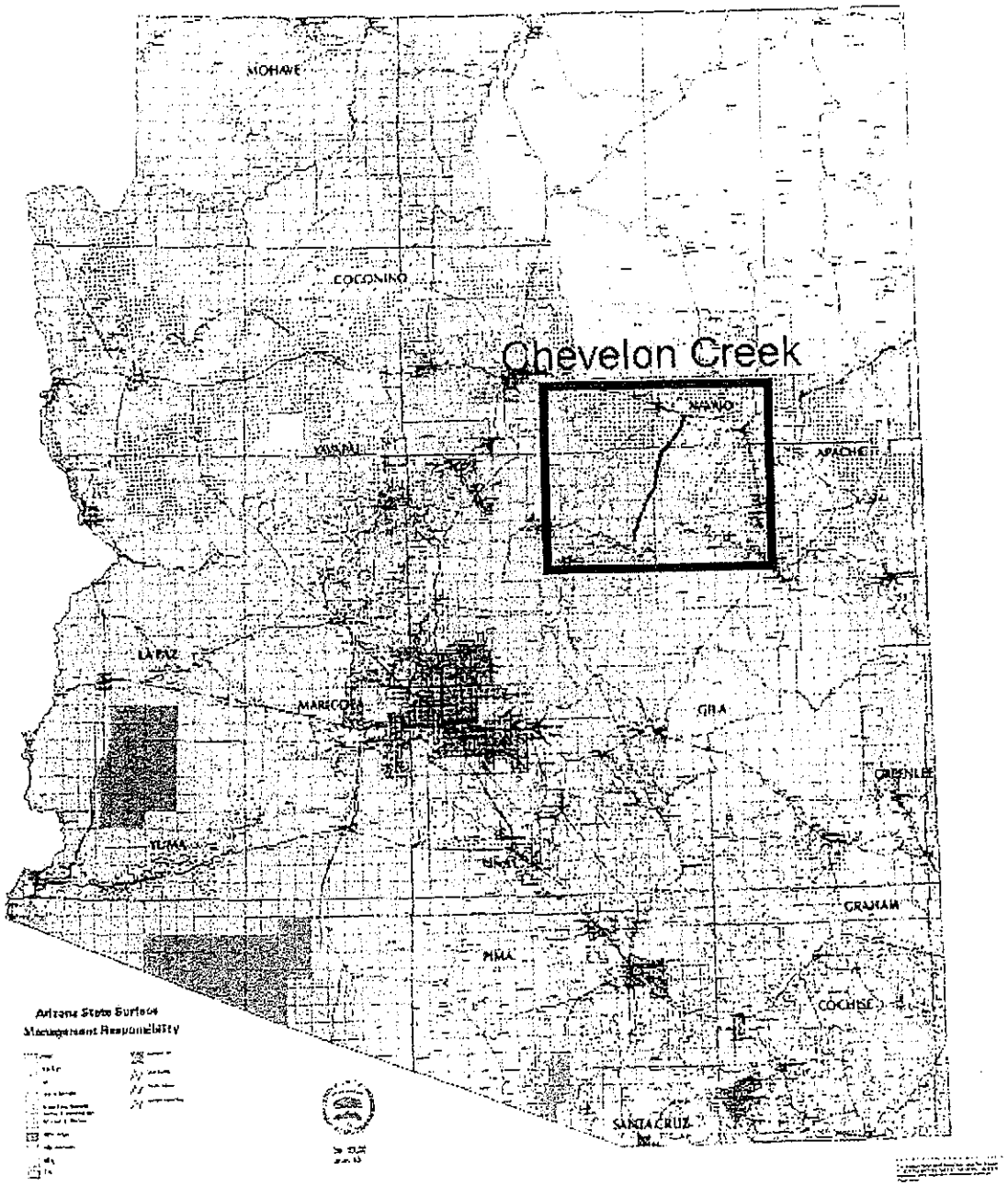


Statehood Hydrology

No hydrologic records from the year of statehood (February 14, 1912) were found during the course of this study. Hydrologic data from the time of statehood are limited to historical accounts, anecdotal data, and secondary reports such as the survey notes of the Government Land Office (GLO) surveyors. GLO surveys established the Township-Range-Section boundaries in Arizona. GLO surveyors often included brief descriptions

EXHIBIT K

Figure ES-1. Chevelon Creek Location Map



Hydrologic/hydraulic data are the primary source of information regarding susceptibility to navigation. These data include estimates of flow depth, width, velocity, and average flow conditions as of the time of statehood, based on the available modern records for natural stream conditions as of the time of statehood, as well as for existing stream conditions. Existing state land ownership data were compiled into a GIS database that identified the location of public vs. private land along the stream. The results of the data collection are summarized in the following paragraphs.

Figure 2. Chevelon Creek Watershed Location Map

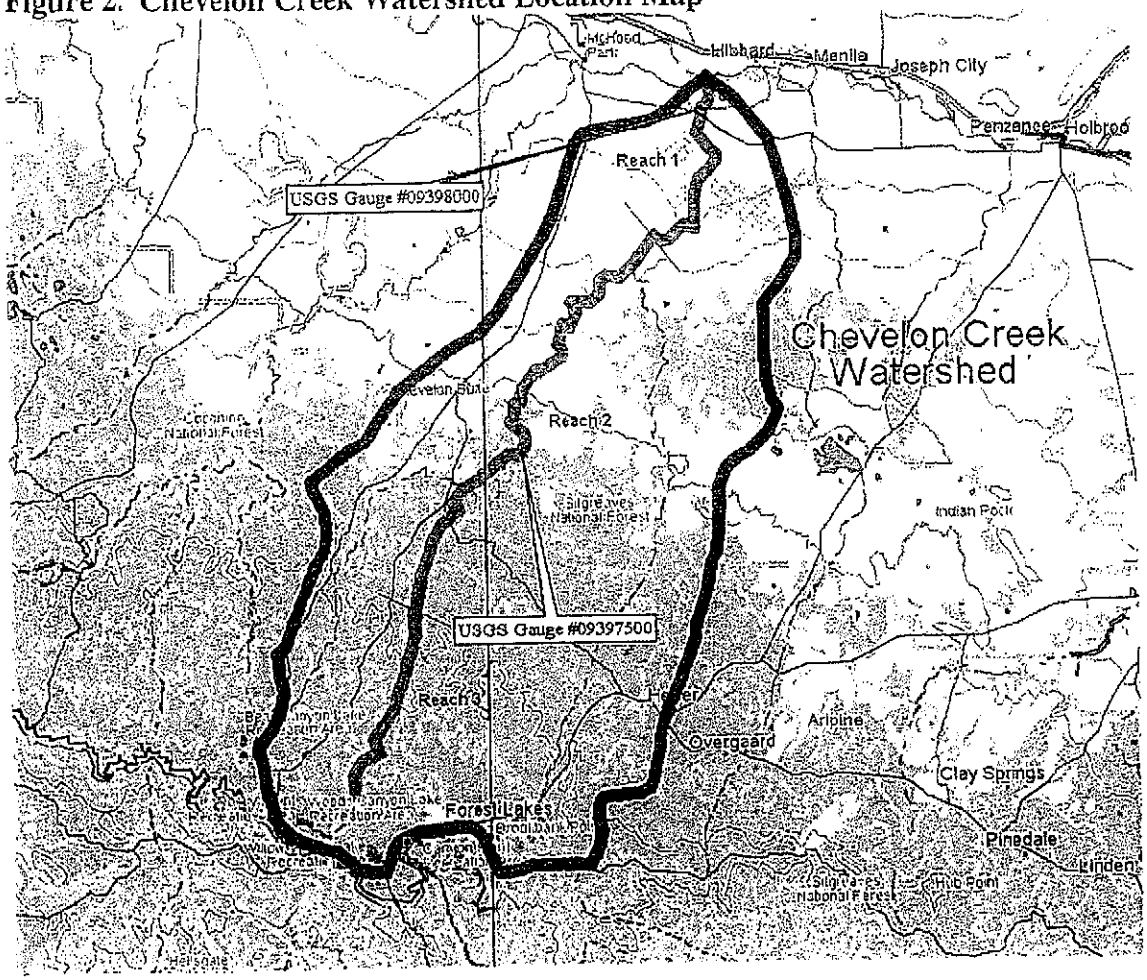


Table 1. Chevelon Creek Navigability Study Stream Characteristics for Gauges on Chevelon Creek		
Watershed Characteristic	USGS Station Number	
	Chevelon Creek below Wildcat Canyon, near Winslow (#09397500)	Chevelon Creek near Winslow (#09398000)
Stream length	39.2 mi.	77.1 mi.
Main channel slope	54.4 ft./mi.	27.7 ft./mi.
Mean basin elevation	7,030 ft.	6,440 ft.
Mean annual precipitation	24.0 in.	18.4 in.
Drainage area	271 $mi.^2$	785 $mi.^2$
Period of record	1947-1970, 1979, 1982-1996	1916-1920, 1929-1979