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IN THE SUPERIOR COURT OF THE STATE OF ARIZONA IN AND FOR THE COUNTY OF MARICOPA

IN THE MATTER OF THE NAVIGABILITY OF THE SALT RIVER FROM THE CONFLUENCE OF THE WHITE AND BLACK RIVERS TO THE GILA RIVER CONFLUENCE, MARICOPA COUNTY, ARIZONA

Nos. 03-005-NAV and 04-008-NAV (Consolidated) (Salt)

ARIZONA STATE LAND DEPARTMENT'S RESPONSE TO POST-HEARING BRIEFS

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I. The River Was Navigable In Its Ordinary and Natural Condition Around 1865; Subsequent Dams And Diversion Did Not Divest the State of Title to the River's Bedlands.

The reason the State is here is simple: Arizona was vested at statehood with title to riverbeds that are beneath its navigable rivers. Ariz. Ctr. for Law in the Pub. Interest v. Hassell, 172 Ariz. 356, 364, 837 P.2d 158, 166 (App. 1991). Rather than the vicious land grab that Opponents attempt to portray, or the false claim that the State is merely protecting access for recreational purposes, the State's assertion of title is based simply on the facts and law as required under *The Daniel Ball* test: the Salt River is navigable, although navigability was severely diminished by subsequent dams and diversions. See Cities Brief, at 2; GRIC Brief, at 11.

To assure that each new state received the bedlands of navigable waterways pursuant to the equal footing doctrine, the federal government held title to these beds and banks in trust for future states. Idaho v. Coeur d'Alene Tribe of Idaho, 521 U.S. 261, 284 (1997). Under the equal footing doctrine, a strong presumption exists against defeat of a state's title. Montana v. United States, 450 U.S. 544, 552 (1981); see Utah Div. of State Lands v. United States, 482 U.S. 193, 197-198 (1987); see also, Defenders of Wildlife v. Hull, 199 Ariz. 411, 426, 18 P.3d 731, 737 (App. 2001) (citing Coeur d'Alene Tribe, 521 U.S. at 284) ("the equal footing doctrine is co-existent with a strong presumption of state ownership."). Only an express statement of congressional intent can operate to divest future states of their sovereign, public trust land. Montana, 450 U.S. at 551-552. purposes for which such divestiture has been found to be proper are: (1) to perform international obligations; (2) to improve the land for commerce with foreign nations and other states; or (3) to carry out public purposes for which the United States held the territory. Id.

There has been no such express divesture of title for the Salt River. The federal government funded the construction of Roosevelt Dam and other reclamation projects pursuant to the 1902 Reclamation Act, 32 Stat. 388, 43 U.S.C. § 371; the Act contains no

language suggesting that the federal government intended to divest Arizona of its public trust interests, or to convey title or interest in the beds and banks of the Salt River to the beneficiaries or operators of these reclamation projects. In *Utah Div. of State Lands*, the Court stated that Congress may create a reservoir, but may nevertheless intend that the state obtain title to the land underneath the reservoir at statehood. 482 U.S. at 202. Without a clear expression of Congressional intent to defeat Arizona's title to the bedlands of the Salt River, the construction of artificial dams and diversions on an otherwise navigable river cannot defeat the State's clear title to the bedlands. *See Defenders*, 199 Ariz. at 426, 18 P.3d at 737 ("determinations regarding the title to beds of navigable watercourses in equal footing cases must begin with a strong presumption against defeat of state's title.").

Moreover, the fact that the Salt River's flows are utilized for irrigation and consumption rather than navigation does not preclude sovereign ownership. Cities Brief, at 2. In *Defenders*, the Court of Appeals noted that "[w]e see no inherent conflict in Arizona's laws regarding water use under Arizona's prior appropriation system and land ownership under the equal footing doctrine." 199 Ariz. at 417 n.4, 18 P.3d at 728 n.4. Moreover, the *Defenders* Court struck down a statutory exemption that water that was appropriated for beneficial uses prior to statehood would not be considered part of the ordinary and natural condition of the watercourse. *Defenders*, 199 Ariz. at 425, 18 P.3d at 736.

Regardless of opinions that diverting the River's flows represented the "highest and best" use, diverting the water prevented the River from being used for boating. If the River was navigable in 1865, as the State has demonstrated, it remained navigable in spite of depletions and damming. See State v. Bonelli Cattle Co., 107 Ariz. 465, 467-468, 489 P.2d 699, 701-702 (1971), supplemented, 108 Ariz. 258, 495 P.2d 1312 (1972), rev'd on other grounds, 414 U.S. 313 (1973), overruled by Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co., 429 U.S. 363 (1977) (watercourse does not lose its character because it was channeled, artificially controlled, dammed, or diverted). The fact that the decision was made

regarding the River's highest and best use does nothing to change the River's navigability in law. See, Tr. 3/10/16, at 3788 (Littlefield) (diversion dams and irrigation canals affected boating on the River); Tr. 1/26/16, at 14 (August) (highest and best use was irrigation), 2039 (more important to use the water to exist rather than boat); Tr. 3/31/16 at 4369-4370 (Newell) (dams were typically a feature that would prevent navigation). Title to the Salt River passed to the State at the date of statehood because the River was navigable in its ordinary and natural condition.

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The Commission should consider the Colorado River: damming and diverting that river certainly did not preclude sovereign ownership of the bedlands of the Colorado River. After being unable to comprehend how a watercourse's use for irrigation under any federal act could create a presumption of non-navigability, the *Defenders* Court soundly rejected that presumption, as it was contained in A.R.S. § 37-1128(D)(4). 199 Ariz. at 423, 18 P.3d at 734.

Based on the *Winkleman* Court's clear direction, the Commission must now determine "the River's ordinary and natural condition in light of the numerous dams, canals, and other diversions" *State ex rel. Winkleman v. Arizona Navigable Stream Adjudication Comm'n*, 224 Ariz. 230, 240, 229 P.3d 242, 252 (App. 2010). No one disputes that the River was already over-appropriated by the time construction was started on Roosevelt Dam. *See* L030

^[1] The Salt River is just one example of several Arizona rivers in which agricultural, power, and domestic uses of the rivers' waters trumped reserving the water for navigation uses. For instance, the Colorado River Compact acknowledged that if the Colorado River's flows were used for navigation as opposed to other uses it would impede the development of the Colorado River Basin, so navigation uses were subservient to domestic, agricultural, and power uses. Colorado River Compact, 45 Stat. 1057-1064, Article IV (1928). The pervasive thought was that Arizona's future growth and welfare depended upon reclamation of its navigable rivers. See Arizona v. California, 283 U.S. 423, 458-459 (1931); Arizona v. California, 373 U.S. 546, 552 (1963) (basin through which the Colorado River flows largely dependent on managed use of flows to make basin productive and inhabitable). Like the Colorado River, early settlers along the Salt River longed for water storage systems to capture the River's variable, seasonal flows. Arizona v. California, 373 U.S. 546, 553-554 (1963); Tr. 4/7/03, at 229-231 (Roberts). Further, it was noted that the impoundment and diversion of the Colorado River's flows "would not improve, but destroy, its navigable capacity." Arizona v. California, 283 U.S. 423, 455 (1931). In fact, that is exactly what happened on the Salt River. The Daniel Ball test is sufficiently flexible to take into consideration the fact that like many of Arizona's rivers, the Salt River's waters have traditionally been used for irrigation.

1 (ASLD Report), at 7-6 ("during ordinary seasons all of the water of Salt River is diverted, 2 3 4 5 6 7 8 9

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and at the present time there is a shortage in the summer months"), 7-11 (Table 7-8 showing Salt River irrigation canals construction dates), 7-8 (Table 7-4 showing discharges from irrigation canals in June 1899); Tr. 10/20/15, at 164-167 (Fuller); C030-364, at 117,118 (Fuller PPT); C001, at 158-159 (Littlefield Report) (listing of canals that took virtually all of the water from the River). In fact, the Eleventh Census reported that total irrigated acres in Maricopa County in 1889 were 35,212. Water was claimed, however, for 151,360 acres. C018-161, at 7 (Thomsen and Porcello, 1991). More water was being pulled away from the River in canals than was even needed for irrigation. The Commission must consider all of these relevant facts under The Daniel Ball test.

No one disputes that the River's dependable and sufficient flows were altered by dams and diversions. Yet, Opponents confusingly disregard this fact, and then complain that there was not a plethora of sustained boating accounts in the River's increasingly diverted flows. Cities Brief, at 3; see Tr. 1/26/16, at 2021-22 (August) (lack of historical record for boating means River is not navigable); Tr. 3/30/2016, at 4290 (Newell) (absence of evidence of boat use on the Salt River equates to its lack of use or ability to be used for susceptibility purposes), Tr. 3/31/16 at 4369-70 (Newell) (dams were typically a feature that would prevent navigation); but see, United States v. Appalachian Elec. Power Co., 311 U.S. 377, 416 (1940) ("[u]se of a stream long abandoned by water commerce is difficult to prove by abundant evidence.").

Opponents have disingenuously twisted the record to suit their needs. They point out that people of the Salt River Valley decided to use the River for irrigation and not navigation, and then they cite to the lack of historical boating accounts as evidence of nonnavigability while pretending the decision to use the River for irrigation had no impact on historical boating. Historical descriptions of the River before Euro-Americans began diverting the River demonstrate the River's physical conditions certainly could sustain small boat use for

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descriptions stating River is "two to three feet deep" and at "low water . . . an average . . . depth of two feet or more."). In fact, one of the earliest boating accounts described the River as "navigable for small craft" after just navigating with five tons of wheat in a flat boat. C002-5. The account occurred in 1873, and already makes note of the Swilling canal. After 1873, it is undisputed that the River became increasingly more diverted and less navigable. This early evidence must be recognized by the Commission, consistent with Winkleman, as evidence of the natural River's susceptibility for use as a highway for commerce. 9 The State provided reliable, historical evidence of actual boating on the River before

purposes of a highway for commerce. See State's Opening Brief, at 35-36 (historical

statehood in the River's increasingly depleted flows. CO53-385 Salt River Navigability Rebuttal PPT (May 2016) at 43-46. In fact, evidence of boating in depleted conditions is relevant and compelling evidence. Winkleman, 224 Ariz. at 243, 229 P.3d at 255 ("even if evidence of the River's condition after man-made diversions is not dispositive, it may nonetheless be informative and relevant."). It actually may be the best evidence to determine the navigability of the River since very little actual historical information exists about the River in its natural condition. Winkleman, 224 Ariz. at 242, 229 P.3d at 254.

Again, navigability-for-title is not a "one size fits all" test. It is a question of fact with respect to each individual river (Hassell, 172 Ariz. at 363 n.10, 837 P.2d at 165 n.10 (1991)), which must be evaluated as of the river's natural condition. Winkleman, 224 Ariz. at 241, 229 P.3d at 253. See Appalachian, 311 U.S. at 404 (stating that there is no "formula which fits every type of stream under all circumstances and at all times" and that "[o]ur past decisions have taken due account of the changes and complexities in the circumstances of a river."). It is not only appropriate, but also absolutely necessary that the Commission examine this special circumstance in determining the Salt River's navigability at statehood. United States v. Utah, 283 U.S. 64, 82 (1931) (stating that where conditions of exploration and settlement explain the infrequency or limited nature of commercial use, the

susceptibility to use as highway for commerce may be still satisfactorily proved).

For the Salt River, there is a clear and obvious reason for the absence of a plethora of historical evidence of use of the River: the River was deprived of vast opportunities for navigation and commerce as its reliable flows were diverted and dammed. Thus, evidence of decreasing opportunities by the time of Arizona's statehood is certainly no cause for surprise, and Opponents' attempts to characterize this absence as evidence of non-navigability is illogical.

II. The Salt River Meets the Highway For Commerce Element of the Daniel Ball Test And Opponents' Own Experts Agree.

Evidence that a river was used, or susceptible to being used as a highway for commerce is one of the essential elements of *The Daniel Ball* test. *Arizona Ctr. for Law in the Pub. Interest v. Hassell*, 172 Ariz. 356, 363, 837 P.2d 158, 165 (App. 1991). Opponents' erroneous interpretation of the highway for commerce element conflicts with *The Daniel Ball* test. *See, e.g.*, SRP Brief, at 28-35.

A. The Daniel Ball's "Highway for Commerce" Requirement Encompasses Uses on the Salt River.

The "highway for commerce" element of *The Daniel* Ball test requires that navigable rivers be used "as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water." *The Daniel Ball*, 77 U.S. (10 Wall.), 557, 563 (1870). Arizona Revised Statutes Annotated, Section 37-1101(3) defines "highway for commerce" as "a corridor or conduit within which the exchange of goods, commodities or property or the transportation of persons may be conducted." *The Daniel Ball* test does not require actual commercial use or navigation of a river; all that is required is proof that the river in its ordinary and natural condition could have been used as a highway for commerce at the time of statehood. *See PPL Montana v. Montana*, 132 S.Ct. 1215, 1233 (2012); *United States v. Utah*, 283 U.S. at 82 (stating that crucial question is

susceptibility of the river in its ordinary condition, not actual use). The State proved that not only was the River actually navigated, in increasingly depleted flows, but also it was susceptible to use as a highway for commerce. State's Opening Brief, at 2-17.

A river's use need not be broadly commercial. Thus, use that is "limited in the sense of serving only a few people" is sufficient to find that a water body served as a navigable highway. *Utah v. United States*, 403 U.S. 9, 11 (1971). The United States Supreme Court rejected the contention that proof that a few owners of small boats who had used their boats to shuttle supplies and cattle to their ranching operations on an island in the Great Salt Lake was insufficient to establish that the lake constituted a highway for commerce. *Utah v. United States*, 403 U.S. at 11-12. The Court found it an "irrelevant detail" that the cattle were transported for ranching purposes and not as water-borne freight. *Id.* The Court stated:

The hauling apparently was done by the owners of the livestock, not by a carrier for the purpose of making money. Hence it is suggested that this was not use of the lake as a navigable highway in the customary sense of the word . . . We think that is an irrelevant detail. The lake was used as a highway and that is the gist of the federal test.

Id. at 11. The "vital and essential point is whether the natural navigation of the river is such that it affords a channel for useful commerce." United States v. Utah, 283 U.S. at 86; see also Alaska v. United States, 754 F.2d 851, 854 (9th Cir. 1985) (stating that the "central theme remains the movement of people or goods from point to point on the water").

Here, the State provided ample evidence of the actual and potential uses of the River. *See PPL v. Montana*, 132 S.Ct. at 1233 ("evidence must be confined to that which shows the river could sustain the kinds of commercial use that, as realistic matter, might have occurred at the time of statehood."). Boats were used to transport agricultural products (C030-364 (Fuller PPT), at 158, 204; C053-385 (Fuller Rebuttal PPT), at 5, 43), to transport people and/or commodities (C030-364 (Fuller PPT), at 161-165, 167-170, 174-175, 178-183, 187, 189-193, 195-196, 201, 204-207; C053-385 (Fuller Rebuttal PPT) at, 36, 39, 40, 43-46),

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and to trap, hunt, and fish (C030-364 (Fuller PPT), at 159, 171, 176, 186; C053-385 (Fuller Rebuttal PPT) at 28, 32, 42, 44). Navigability is not confined to large boats that could haul mining products. See The Montello, 87 U.S. (20 Wall.) 420, 441-442 (1874) ("It would be a narrow rule to hold that in this country, unless a river was capable of being navigated by steam or sail vessels, it could not be treated as a public highway."). It was not, as Freeport supposes (Freeport Brief, at 12-13), a realistic commercial use to utilize the Salt River to haul vast quantities of ore or military battalions. C053-385 (Fuller Rebuttal PPT) at 7; Tr. 5/17/16, at 4523-24 (Fuller); Tr. 1/26/16, at 2069 (August) (no mines located on the Salt); Tr. 3/11/16, at 3876 (Littlefield) (market for mining products was not along the Salt River); see PPL Montana, 132 S.Ct. at 1233 (modern boating evidence must show the river "could sustain the kinds of commercial use that, as a realistic mater, might have occurred at the time of statehood."); see also Appalachian, 311 U.S. at 416 (the "personal or private use by boats" may demonstrate "the availability of the stream for the simpler types of commercial navigation."); United States v. Holt State Bank, 270 U.S. 49, 56 (1926) ("navigability does not depend on the particular mode in which such use is or may be had – whether by steamboats, sailing vessels or flatboats."). The Supreme Court held in *Utah v. United States*, 403 U.S. at 11, that the Great Salt Lake was navigable even though the use was not by a carrier for the purpose of making money, or as water-borne freight. If the River was capable in its ordinary and natural condition of being used for commerce, no matter in what mode the commerce was carried on, the River is navigable in fact, and therefore is navigable in law. See Econ. Light & Power Co. v. United States, 256 U.S. 113, 122-123 (1921).

B. Opponents' Own Experts Agree That Small Boats Can Be Used As a Highway For Commerce.

Opponent SRP attempts to dismiss small boats like canoes as a type of craft that were not customary modes of trade or travel at statehood, but testimony from Opponents' own expert witnesses does not support their conclusion. SRP Brief, at 24. Dr. Newell testified that

1 canoes were used to transport loads of furs as "economically viable cargo." Tr. 3/30/16, at 2 4197. He testified that in the early colonial period, canoes were a very important type of boat 3 for commercial endeavors, including the fur trade. Tr. 3/30/16, at 4262-64. The canoe was "a 4 5 6 7 8 10 11 12 13 14 15

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could be a viable craft.").

very well-utilized craft for carrying small loads up and down rivers." Id. He assumes, mistakenly or conveniently, however, that by Arizona's statehood, canoes carrying cargo like furs were not a viable commercial cargo. Tr. 3/30/16, at 4197, 4266. Dr. Newell's assumption is based on the settlement history of the East, although he admits that Arizona was settled later than the East. Tr. 3/30/16, at 4264. The record for Arizona, not the East, indicates that the fur trade was alive and well in the late 1800s. Two detailed newspaper accounts from the 1890s talk about different groups of trappers using boats to transport furs, and each article specifically notes that trapping is a very profitable enterprise. C002-8 (Day Brothers); C053-383 (Phoenix Trappers). The Day Brothers were using a "small boat" and the Phoenix trappers were using a "canoe." Id. Unfortunately, at the time Dr. Newell made his assumption, he was not aware of the Phoenix Trappers account, but he admitted that he would reexamine his opinion if new reports came to light. Tr. 3/30/16, at 4271. Other experts also explicitly stated that small boats like canoes could be used to show a river is a highway for commerce. Cities' expert, Dr. August, an Arizona historian, admitted that "[s]mall boats could be used as a highway for commerce, yes, small boats." Tr. 1/26/16, at 2021. He also admitted that canoes were available in Arizona around statehood. *Id.* at 2022.

19 20 Freeport expert, Mr. Burtell, has repeatedly stated that canoes can be used for a commercial 21 purposes and he admits canoes were used in Arizona. C062-420, at 3157-61 (Verde Tr. 22 4/1/15); Tr. 2/23/16, at 2903-05. Dr. Mussetter, SRP's expert, also admitted that canoes can be 23 used as a commercial craft. Tr. 1/28/16, at 2505-06, 2508 ("I could understand that a canoe 24

GRIC's expert, Mr. Gookin, did not think that small boats like canoes could be used for navigability, but he based his conclusion on his own economic analysis which incorrectly

assumed that a canoe had to be bought and shipped from a Sears catalog and was only used once in a downstream direction. Tr. 2/26/16, at 3432. Of course, the record reveals these assumptions to be false. The Phoenix Trappers were seen making their canoe on the side of the Salt River (C053-383), the Day Brothers took a train back up to the Verde Valley at the conclusion of their trip and could have easily taken their boat with them (C002-8), and there are many other examples of boats being built and used in Arizona, C053-385, at 43-46. Mr. Fuller did a thorough deconstruction of Mr. Gookin's flawed economic analysis in his rebuttal presentation. C053-385, at 30-32; Tr. 5/17/16, at 4598-4609 (Fuller).

C. Opponents' Own Experts Agree That Small Boats Could Be Used On The Salt River.

Opponents' experts also agree that those same small boats that they found can be used for a highway of commerce could have also been used on the Salt River. Based on the historical record, when asked if the Salt could sustain a loaded canoe being used on the River, Dr. Newell testified in the affirmative: "There are reports of canoes being used on the river, so obviously, yes, in certain areas." Tr. 3/30/16, at 4264-66. Although Dr. Mussetter did no specific analysis of the draw of a loaded historical canoe (or any boat) to understand if boats could be used on the River, Tr. 1/28/16, at 2510, he still candidly admitted that based on the available information at least moderately loaded canoes could be used even on the minimal depths of the Salt River. Tr. 1/28/16, at 2517, 2513. Mr. Gookin did no analysis to determine if canoes and small boats could be used on the natural depths of the Salt River. 2/26/16, at 3521-22 (Gookin). When asked if a small boat could navigate on a certain depth, Mr. Gookin replied, "What's a small boat?". Tr. 2/26/16, at 3521 (Gookin). Mr. Burtell did no evaluation of the depths needed for a small boats, including canoes, and whether depths on the Upper Salt River are sufficient. 2/24/16, at 3074-76 (Burtell).

It seems the willful ignorance of Opponents' experts enabled them to say the River is non-navigable. They believed small boats can be used to show a river's use as a highway for 1
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 commerce, but for the most part, they chose not to do an assessment to determine if the River's physical characteristics, like depth, can support those boats. Their assessment is deliberately inadequate.

The State's experts, by contrast, did the necessary assessment of the requirements for loaded small boats, and then compared those requirements to the physical characteristics of the River. C053-385, at 101-05 (Fuller Rebuttal PPT); Tr. 5/18/16, at 4778-4806 (Fuller); see also, State's Brief, at 7-8. Compare, C030-364, at 282 (Utah Special Master boat draws), with C055-400, at 18 (Recommended Median Daily and High-Flow Boating Season Depths). The State ultimately tested any theories by putting boats on the water, including a loaded historical small boat, the Edith. Id. Finally, the State compared those tests to historical descriptions and historical boating accounts. Id. The result: small boats, including canoes, flat boats, and rowboats, can be used on the Salt River in its natural and ordinary condition. Id.

D. Opponents' Experts' Strategically Narrow Interpretation of "Highway for Commerce" Is Contrary to *The Daniel Ball* Test.

Despite agreeing that small boats can be used as a highway for commerce and that small boats could have been used on the Salt, Opponents' experts somehow manage to conclude the Salt is non-navigable. They do that, in part, because their interpretation of "highway for commerce" is flawed and contrary to *The Daniel Ball* test.

Opponents' experts' conclude that the River cannot be considered a "highway for commerce" because there was no sustained, regular use of the River, but navigability for title does not require regular, sustained use. *Defenders*, 199 Ariz. at 422, ¶ 30, 18 P.3d at 733, ¶ 30 (citing *Econ. Light & Power*, 256 U.S. at 122); Tr. 2/23/16, at 2890 (Burtell) (regular, sustained use of the river is required for commerce).

Opponents' experts' opinions regarding the boat types and required loads in order to qualify as commerce have no reasonable basis in the law. See Tr. 2/23/16, at 2887-88 (Burtell) (criteria boats for navigability include steamboats, barges used on the Colorado and

boats mentioned by Special Master in *United States v. Utah*, motorboats and various types of rowboats).

Opponents' experts' attempt to read a profitability requirement into the test is directly contrary to established precedent. See Tr. 3/31/16, at 4301 (Newell) (standard for commerce requires a profit); Tr. 2/25/16, at 3245 (Burtell) (his guideline is "can this be used for someone's livelihood"); Tr. 2/26/16, at 3457 (Gookin) ("if it's going to be commerce, you have to look at the economics."). In fact, Mr. Gookin's tortured economic analysis that supports his opinion that canoes could not be used commercially misses the point. Tr. 11/19/15, at 1654-55 (Gookin) (canoes could not be used commercially because their load is too small to cover the cost of transportation so not economical); Tr. 2/26/16, at 3447 (Gookin) (no finding of regular, commercial use of canoes so Mr. Gookin did not consider canoes part of navigability test); but see C053-385 (Fuller Rebuttal PPT) at 30-32 (weaknesses in Gookin economic analysis). Although Mr. Gookin's theoretical calculations proved to him that small boats could not be used, there were in fact small boats used commercially on the Salt. See, e.g., C053-385, at 28, 42 (Fuller Rebuttal PPT) (Day brothers used small boats for trapping "large quantity of furs" and other trappers were using a canoe they were building themselves).

Whether or not canoes or other small boats were used for commercial purposes on the River is not the "crucial question." *Utah v. United States*, 403 U.S. at 11. The crucial question is whether they *could* have been used.

Likewise, the Special Master who looked at rivers in Utah in 1930 stated: [t]he mere fact that any particular act of commerce shown by the evidence in this case has not turned out to be profitable or permanent does not constitute proof that the [r]iver is not susceptible of profitable or permanent commerce. Profit or permanence of any particular act of commerce may be due to many causes other than non-navigability of the [r]iver.

CO18-213, *United States v. Utah*, Report of the Special Master (Oct. 15, 1930) at 111. The Special Master rejected an overly restrictive interpretation of commerce proposed by non-

navigability proponent, the United States. C018-213, *United States v. Utah*, Report of the Special Master (Oct. 15, 1930) at 106 (rejecting government's definition of commerce as "too restricted."). The Special Master's reasoning was ultimately adopted by the United States Supreme Court in *Utah v. United States*, 403 U.S. at 11. Navigability does not turn on profitability. In fact, the *Defenders* Court rejected the presumption of non-navigability that trade or travel must be from a "profitable commercial enterprise." 199 Ariz. at 422, 18 P.3d at 733.

Further, the Special Master recognized that tourism is a form of commerce in finding that "the transportation of passengers or tourists for hire is clearly a form of commerce of which these Rivers were in 1896, and are, susceptible." CO18-213, *United States v. Utah*, Report of the Special Master (Oct. 15, 1930) at 110, 117 (Special Master anticipated the growth of the tourism industry foreseeing "the use of these Rivers for the transportation of tourists for hire, to view the natural scenic wonders and explore the archeological features of these regions."). The State has presented ample evidence of the thriving, tourism business on the Salt River. State's Opening Brief, at 14-17, 22-23, 26, 31-32.

Commercial recreational tourism using boats existed at statehood as well. In 1909, Julius Stone hired Nathaniel Galloway to guide four boats down the Colorado. Tr. 10/22/15, at 541-42 (Dimock). Mr. Dimock, an Arizona boating historian, characterized the trip as recreational with a paid guide. *Id*.

The Commission should disregard Opponents' experts' overly restrictive opinions of "highway for commerce" that hinge on their erroneous standards of navigability. Their conclusions based on the standards must likewise be rejected, as any reviewing court will similarly reject them based on the law.

III. Hydrology and Depths.

A. Criticisms of Mr. Fuller's Hydrologic and Depth Analysis Are a Smoke Screen to Distract the Commission from Facts in the Record that Overwhelmingly Support Navigability.

Opponents strategically attack Mr. Fuller's hydrologic and depth analysis in order to distract the Commission from the clear and convincing evidence that the River's flows are more than sufficient to provide depths suitable for the use of historical small boats with loads, a fact that even Opponents' own experts admit is true or they have not concluded otherwise. SRP Brief, at 35-40; SRPMIC Brief, at 21. Mr. Fuller's work stands on its own as credible and thorough, and the record of his work is clarified below. Opponents fixate on a few, select, confusing elements in Mr. Fuller's direct testimony that he later clarified and updated in his rebuttal work. Their fixation is quite peculiar. Instead of focusing on the clarified facts, they steer the Commission to non-issues, and they never address Mr. Fuller's rebuttal testimony. SRP Brief, at 35-40. Further, Opponents decline to acknowledge that their expert's own hydrology work supports navigability by small boats.

B. Mr. Fuller Presented Consensus Hydrology and Depths In His Rebuttal Reports and Testimony that Opponents Have Not Disputed.

Following his direct testimony, and after hearing testimony and criticisms from Opponents' experts, Mr. Fuller submitted substantial rebuttal reports on both hydrology and rating curves (depths), and a substantial rebuttal PowerPoint. C053-396 (Salt River Rebuttal: Hydrology); C055-399 (corrected page 20 to C053-396); C053-397 (Salt River Rebuttal: Rating Curves); C055-400 (corrected pages 4 and 18 to C053-397); C053-385 (Salt River Rebuttal PPT); C055-398 (corrected pages to C053-385). Mr. Fuller's rebuttal work was done with the intention of providing "a decent consensus position" that the Commission can refer to, and it incorporated criticisms of his work as well as work done by other experts. Tr. 5/18/16, at 4750-56 (Fuller).

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For example, Opponent expert Dr. Mussetter recommended that the Commission use updated USGS data that incorporated the additional most recent 20 years that were not available when Mr. Fuller originally prepared the ASLD reports. Tr. 5/18/16, at 4750-53 (Fuller). Mr. Fuller accepted that criticism and utilized the most recent USGS data in his rebuttal work. *Id.* In addition, Freeport expert, Mr. Burtell, calculated man-made depletions to the River and Mr. Fuller incorporated those depletions into his rebuttal work. Tr. 5/18/16, at 4753-57 (Fuller). Although Mr. Fuller does not believe Mr. Burtell's depletions were as conservative as Mr. Burtell depicted – and indeed even Freeport admits one time period Mr. Burtell used was slightly drier than the average, while also incorrectly characterizing Mr. Fuller's words as agreeing with Mr. Burtell's calculations (Freeport Brief, at 19 n. 53) – Mr. Fuller was willing to concede to using Mr. Burtell's reconstructed depletions in order to present consensus numbers. Tr. 5/17/16, at 4730-36 (Fuller).

One more example of Mr. Fuller's consensus position is his use of SRP's expert, Dr. Mussetter's limiting cross-sections to calculate depths using Mr. Fuller's recommended flow. Tr. 5/18/16, at 4798-4800. Dr. Mussetter utilized the six cross-sections from the original ASLD reports and then added his own four additional cross-sections that were the most limiting he could find at any point in Segment 6. *Id.* at 2627-28; C038-1, at 150 (Mussetter PPT). In other words, after Mr. Fuller calculated consensus hydrology, he utilized consensus cross-sections in order to determine likely depths that would have occurred on the River.

SRP never addresses Mr. Fuller's consensus facts in its brief, presumably because they are difficult to dispute since they utilize Opponents' experts' own information, and because they clearly show flows and corresponding depths that support navigability by small boats. None of the criticisms that SRP states in its brief about Mr. Fuller's work relate to the work that he did on rebuttal after making adjustments and clarifications based on criticism and data from other experts. Mr. Fuller's rebuttal hydrology reports and testimony is undisputed; no brief addresses it.

C. SRP Distracts the Commission by Focusing on Issues Mr. Fuller Later Clarified and Corrected Instead of Focusing on the Facts of the River.

Instead of addressing the facts, SRP focuses on a few confusing aspects of Mr. Fuller's direct testimony, and one acknowledged and corrected mistake to serve as a smoke screen to Mr. Fuller's otherwise undisputed numbers.

SRP devotes five pages to a part of Mr. Fuller's testimony where he presented mean data in one segment in a way that appeared to represent median data. SRP Brief, at 35-39. On rebuttal, Mr. Fuller admitted that the way he presented the data made an "apples to oranges comparison" and he adjusted his data to fix that problem in his rebuttal work. Tr. 5/18/16, at 4762 (Fuller). He stated, "I think that's a legitimate complaint that we've corrected." *Id.* His rebuttal consensus and clarified hydrology summation can be found at C053-396, at 8. The entire five pages of SRP's brief are moot and should be disregarded; none of the criticisms SRP had with Mr. Fuller's direct testimony hold any water with regard to his rebuttal work. For example, multiple times SRP cites to a previous figure of 992 cfs for the Segment 5 median. SRP Brief, at 35-39. The rebuttal consensus hydrology, however, has a median of greater than 405 cfs for Segment 5. C053-396, at 8. The Commission is encouraged to compare the numbers in Mr. Fuller's rebuttal hydrology summation to SRP's moot criticisms to see that the numbers SRP criticizes are no longer an issue.

Mr. Fuller then adapted the rating curve (depth) analysis to match the consensus rebuttal hydrology analysis; the summation of the depths found on all of the segments at various flow rates can be found at C055-400, at 18 (corrected page of C053-397, at 18). None of SRP's criticism of Mr. Fuller's depths are relevant to his rebuttal hydrology analysis, and thus should be disregarded. As an example, SRP claims that Mr. Fuller did not use the cross sections that are most limiting to navigation. SRP Brief, at 39. As was discussed above, however, in Mr. Fuller's rebuttal rating curves analysis, he specifically adopted Dr. Mussetter's additional limiting cross sections. SRP is presenting old and inaccurate information that has been subsequently updated.

D. SRP Compares Mr. Fuller's Work to Dr. Mussetter's Work Incorrectly Because Dr. Mussetter Did Not Calculate Ordinary and Natural Flow or Depth.

After incorrectly focusing on moot issues, SRP then mistakenly compares outdated data to Dr. Mussetter's work. SRP Brief, at 39-40. Dr. Mussetter never reconstructed the ordinary and natural flow of the River in any segment; he did no analysis of how much more flow should be added to the River based on human diversions. Tr. 1/29/16, at 2598-2603 (Mussetter). Therefore, the depths that Dr. Mussetter calculated are similarly, and admittedly, not based on the ordinary and natural condition of the River. Tr. 1/29/16, at 2624 (Mussetter). If the Commission relies upon any of Dr. Mussetter's flows or depths, it will be using evidence that is contrary to the direction from the Court of Appeals in *Winkleman*. 224 Ariz. at 241-42, 229 P.3d at 253-254 (ANSAC failed to apply the proper legal standard and assess the River in its natural condition, absent man-made diversions.).

For example, SRP states that Dr. Mussetter used a median flow rate of 554 cfs for Segment 6 to determine a maximum depth of 1.9 feet. SRP Brief, at 39. Dr. Mussetter admitted that if Opponent expert, Mr. Gookin's natural reconstructed median flow rate was used instead, the depth would be 2.4 feet. Tr. 1/29/16, at 2624 (Mussetter). A depth of 2.4 feet is entirely sufficient for loaded small boats. *See*, C030-364, at 262 (Utah Special Master's boat draws). Dr. Mussetter's work regarding hydrology and associated depths is not meaningful for the purposes of understanding the natural River.

E. Mr. Gookin Admittedly Cannot Explain His Hydrology Numbers and He Used Only One Cross Section to Assess an Entire River Non-navigable.

GRIC cites to Mr. Gookin for support that 581 cfs was the natural median flow through Segment 6b where GRIC has a land interest, and it then uses 581 cfs to calculate depth at one single cross-section. GRIC Brief, at 34. GRIC's information is flawed. First, Mr. Gookin found that 791 cfs was the median for the top of Segment 6, he then concludes that by the time the River makes it to his client's land interest, which is within Mr. Gookin's

designated 6b, the River has lost 210 cfs and now only has a median of 581 cfs. C022-1, at 99, 107 (Gookin Report); Tr. 2/26/16, at 3497, 3501, 3516 (Gookin). Mr. Gookin's first median of 791 cfs is fairly similar to the 819 cfs that Mr. Fuller calculated. C053-396, at 8. The glaring problem is that Mr. Gookin's second median of 581 has no support in the record, as he admitted. Tr. 2/26/16, at 3516 (Gookin). There is no evidence that the Salt would have lost 210 cfs from the beginning of Segment 6 to the Gila River Indian Community. Whether Mr. Gookin simply needed to match his Salt numbers to his previous Gila calculations is unclear, but what is clear is that 581 cfs is not a median that should be adopted by the Commission for Segment 6. See Tr. 2/26/16, at 3498 (Gookin) (Salt numbers based on Gila report numbers). Therefore, the depth based on a median of 581 cfs is incorrect as well. GRIC Brief, at 34; C022-1, at 107 (Gookin Report). Mr. Gookin did not present a rating curve that can be used to calculate the depth at his cross-section when 791 cfs is used instead of 581 cfs; he only presents his depth data in a chart for three specific flows. C022-1, at 107 (Gookin Report). Therefore, the only conclusion is that the depth of the boating channel or thalweg (maximum depth) based on 791 cfs would be greater than 1.5 feet and less than 2.39 feet. Again, this range of depths is sufficient for many, if not all, of the boats considered by the Utah Special Master, and certainly sufficient for canoes that draw six inches. C030-364, at 282; C018-149, at 116.

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IV. Opponents Disregard What the Experts Said Regarding Meaningfully Similar Boats.

There are only two experts in this case who did a complete and specific analysis of whether modern boats used on the River today are meaningfully similar to historical boats: Mr. Jon Fuller and Mr. Brad Dimock. Both concluded that boats used on the Salt today, like canoes, kayaks, and rowboats, are meaningfully similar to boats used at statehood. See State's Brief at 9-11. Recall that this is a necessary analysis in order to understand that modern boating on the River demonstrates the susceptibility of the River to boating by historical craft.

See PPL Montana, 132 S.Ct. at 1233. None of the Opponent experts did such an analysis and their hollow conclusions cannot be relied upon by the Commission.

SRP cites to their expert, Dr. Newell, for information regarding meaningfully similar boats. SRP Brief at 31. Dr. Newell did not compare specific factors of modern and historical boats. Tr. 3/31/16, at 4347 (Newell). Admittedly, he did a cursory evaluation that considered whether a boat like a rubber raft existed at statehood. *Id.* He did not compare the weights of modern canoes to historical canoes. *Id.* He did not analyze the type of canoes used on the River and therefore was unable to determine whether the drafts of modern canoes are equal to, less than, or greater than, the drafts of historical canoes. *Id.* at 4347-49. He did not study the design or construction methods of modern boats compared to historical boats. *Id.* at 4349. He did not study the materials of modern boats used on the River. *Id.* He attempted to claim that modern canoes are more durable, but then realized he had already stated historical canoes were traditionally used on rocky, shallow rivers, so he had to backtrack and state that historical canoes had sufficient durability as long as there was enough water. *Id.* at 4350-51. His analysis is woefully insufficient. His experience is also limited to rivers on the east coast. Tr. 3/30/16, at 4290. He was unfamiliar with even a basic understanding of Arizona, like where the Grand Canyon is located. Tr. 3/31/16, at 4353-54.

Even more astonishing, Dr. Newell had no knowledge of the fact that when he saw the River in February, it was shut off and he was looking at a River that had little resemblance to the ordinary and natural Salt River. Tr. 3/30/16, at 4279-82 (Newell). Apparently Dr. Newell's client, SRP forgot to tell him that dams capture almost all of the Salt's water in the winter months. Dr. Mussetter also only saw the River at 8 cfs (Tr. 1/28/16, at 2496 [Mussetter]). It is much easier to testify for a client who supports non-navigability if you have never seen the River with water in it. That is the sad truth. Fortunately, the Commission has heard from real boaters, all of whom have testified that historical boats could have been used on the River. See State's Brief at 14-17. The Commission should reject Dr. Newell's east

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coast standards, and should not accept testimony from experts so unfamiliar with the Salt River.

V. The August 31, 2015, Edith Trip on the Lower Salt Confirmed the River's Susceptibility for Navigation.

The Edith replica trip provides the Commission with remarkable insight into the conditions that a commercial boater would have experienced on the River in historical times, and, together with the evidence of actual historical boating, provides reliable evidence of the River's historical susceptibility to navigation. SRP unsuccessfully attempts to malign and undercut the trip's importance. SRP Brief, at 34-35. The Edith trip strongly demonstrates navigability.

The Edith trip on August 31, 2015, occurred at a flow rate of 653 cfs in Segment 5 and 746 in Segment 6 just below the Verde confluence. C030-364, at 288. Mr. Dimock successfully navigated his 1911 replica boat down Segment 5 and part of 6 with over 1000 pounds of weight to simulate a historical commercial load. Tr. 10/22/15, at 539, 628 (Fuller); see also, State's Brief, at 12-13. Only one expert, Mr. Fuller, calculated the natural reconstructed median flow for Segment 5, and he found that the flow would have been greater than 405 cfs. C053-396, at 8. Mr. Fuller based this calculation on the undisputed fact that data from the USGS gages in Segment 3 do not account for the significant contributing drainage area between the end of Segment 3 and the beginning of Segment 5; several perennial streams and numerous springs enter the River in Segment 4. Tr. 5/19/16, at 5105-6 (Fuller). In order not to appear biased, Mr. Fuller presented numbers that were conservatively low and reported only that Segment 5 would have more water than Segment 4. He estimates, however, that the flow could be as much as 20 percent more (C053-396, at 8), and if that were the case Segment 5 would have a natural reconstructed median flow of roughly 485 cfs.

It is true that the Edith's trip in Segment 5 probably occurred above the natural median flow. However, SRP fails to present the full picture. Because the River's flow is

controlled by dams that release a greater amount of water during the summer irrigation season than the natural median, and then shut down the River during the winter months, it would have been nearly impossible to conduct the Edith trip on anything less than 653 cfs. The modern release schedule shows there is an extremely small window, if any, when today's flow is at or below the natural median. C053-396, at 118. Essentially, once the releases start in March or April, the flow volume quickly reaches above median levels and maintains those levels until releases are stopped in October. *Id.*

The Edith trip actually occurred on one of the lowest possible flows on today's altered River. In other words, far from staging a trip on flows above the median, the State was fortunate to be able to put the Edith on the River in the least amount of water possible given today's restrictions. The trip occurred on August 31st, and a quick look at the modern release schedule shows that the end of August typically has releases above 1300 cfs (C053-396, at 118), but the releases that day were unseasonably low, at 653 cfs, which allowed the Edith to travel a River that had a flow volume much more similar to its natural median flow of 485 cfs.

Mr. Dimock was asked what the trip would have been like had it occurred at 400 cfs and he responded: "I probably would have – Well, if I bailed it out, it would be hard to say. I probably would have had to drag it in a spot or two." Tr. 10/22/15, at 553 (Dimock). The Edith leaked water into one of its hatches because the boat did not have enough time to swell in the water before the trip. Tr. 10/22/15, at 536-37 (Dimock). Also, this was Mr. Dimock's first descent of the River in this location in any boat, and his half-ton loaded boat, even with its leak, ran aground for only 50 to 100 feet after he took the wrong line. *Id.* at 538, 631. He simply got out, walked the boat down a little bit and got back in without unloading any of the cargo. *Id.* at 535-36. No portage of any kind was involved. Notably, in the same area where Mr. Dimock got out of his boat, a much heavier and bigger boat went through just after him without any problem because the boater took a better line. Tr. 10/22/15, at 631 (Fuller).

As even SRP's expert, Dr. Newell, has testified, encountering obstacles and occasionally getting stuck on navigable rivers like the Savannah River that he boated, is not uncommon. Tr. 3/30/16, at 4283-85 (Newell). That's precisely why the highest Court has consistently held from the early onset of navigability case law that occasional obstacles do not defeat navigability. United States v. Utah, 283 U.S. at 86-87 (citing The Montello, 87 U.S. at 443) ("Indeed, there are but few of our fresh-water rivers which did not originally present serious obstructions to an uninterrupted navigation. . . . [T]he vital and essential point is whether the natural navigation of the river is such that it affords a channel for useful commerce."). Of the 10 miles of Segment 5 and the first mile of Segment 6 that are still in their natural condition and which the Edith boated, 50 to 100 feet of a temporary obstacle does not make a River non-navigable. No case law exists to support such an interpretation of the evidence. On the contrary, rowing half a ton of cargo in a replica of a historical wooden boat down the River, as Mr. Dimock did, certainly demonstrates the River's capacity for as a highway for commerce. See Oklahoma v. Texas, 258 U.S. 574, 588 (1922) (use of field work examination in a loaded flat boat is evidence to be considered for navigability); United States v. Utah, 283 at 83 (the capacity of a river for navigation can be shown by experimentation).

In Segment 6, the Edith trip occurred in a flow rate that is *below* the natural reconstructed median, even by an Opponent's expert's evaluation. Two experts calculated a very similar natural reconstructed median for the area where the Edith trip occurred in this Segment. Opponent expert, Mr. Gookin, calculated that below the Verde and Salt confluence the median flow would be 791 cfs. C022-1, at 99. Mr. Fuller found it would be 819 cfs. C053-396, at 8. Both estimates are above the 746 cfs flow rate that occurred in Segment 6 during the Edith trip. Contrary to SRP's claim (SRP Brief, at 34), the first mile of Segment 6 and the entire Segment 5 are in their natural condition. Tr. 10/22/15, at 598-600 (Fuller); Tr. 5/18/16, at 4848-49 (Fuller); C053-385, at 117-130 (Fuller Rebuttal PPT).

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The success of the Edith trip in Segment 6 that occurred in below median flow levels is crucial information for the Commission to consider, especially when one considers how often the natural River would have had 746 cfs or greater. In Segment 6, for at least 8 months of the year, the flow rate would have been at or above what the Edith encountered in Segment 6. C053-396, at 14. Mr. Dimock had no trouble at all in Segment 6 at 746 cfs, specifically in the first mile which is still the ordinary and natural condition of the River. Tr. 10/22/15, at 633-35 (Fuller). Mr. Dimock testified that having more water in the River would have only made the trip easier. Tr. 10/22/15, at 538 (Dimock). In other words, the successful boating of the loaded replica would have been as easy or easier for at least 8 months of the year. That is not to say the trip could not have been done at lower flow rates in either segment, as Mr. Fuller, who was present on the trip, believes the trip could have been made in much lower flows. Tr. 10/22/15, at 637 (Fuller).

Lastly, SRP claims that the Edith is not a boat designed for regular trade and transportation on a river. SRP Brief, at 34. This assertion is simply false. Mr. Dimock, the builder of the replica Edith and a historian of Arizona boats, testified that Nathaniel Galloway was a trapper who designed his boat the Edith to haul cargo. C018-146, at 2955. Moreover, the dimensions, weight, draw, purpose, durability, and design of the Edith are similar to other historic boats found on the Salt River at statehood. C018-149 (Boating in Arizona). Most importantly, the Edith was available and used at statehood. State's Brief, at 12.

Using the Edith's trip on the Lower Salt to support a determination of navigability not only makes common sense given the parameters discussed above — including the fact that the Edith is an exact replica of a boat actually used to haul cargo in Arizona at statehood — but also such experiments have been used for other navigability determinations. For the Red River of Oklahoma, discussed below, the field examination took place in a loaded flat bottom bateau that drew five and half inches. *Oklahoma v. Texas*, 258 U.S. at 588. Based in part on the boat having to be dragged often over sand bars from 300 to 1,000 feet long, that river was

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VI. Early Newspapers Are Relevant and Credible Sources for Navigability Evidence.

Not surprisingly, Opponents continuously attack historical newspaper articles and their reliability. SRP Brief, at 8-10; Cemex Brief, at 2-3; SRPMIC Brief, at 17. Although Opponents' experts complain about the potential boosterism, they too searched newspapers for information and admitted that the underlying facts of the articles may be true, and in some cases, did no research to determine the veracity of the articles before dismissing them. See Tr. 3/11/16 at 3879-81 (Littlefield), 3/10/16, at 3776 (conducted variable term searches on historical newspapers); Tr. 1/27/16, at 2197-98 (August) (concluded boating accounts contained in evidence were "outliers" but did no work to determine if there was a good factual basis for the account), 2011-14 (would agree in some instances that there can be reliable facts in newspaper articles that may contain more descriptive or flowery language but did not do additional research to determine the articles' underlying veracity).

deemed non-navigable. Id. On the Mosquito Fork River of Alaska, where SRP's expert, Dr.

Mussetter, was one of the experts in this case, the State of Alaska and the United States both

conducted experimental trips with rafts carrying about 1,000 pounds each. Motion for

Summary Judgment for the State of Alaska at 12-16, State of Alaska v. United States of

America, et al., 2015 WL 1948801, ECF No. 65; Tr. 1/28/16, at 2498, 2501

(Mussetter). Although the boats needed to be dragged occasionally, and one trip had an

average of nine drags per mile, far more than on the Edith's trip, these trips were deemed

successful overall. Id. at 13. Ultimately, the United States, Dr. Mussetter's client, disclaimed

title to the disputed reach, thereby ceding navigability and ownership of the bed to the State

of Alaska. C043-374, -375 (United States' Disclaimer and District Court Order); Tr. 1/28/16,

at 2500-01 (Mussetter). So, in a case where SRP's expert was involved, experimental boating

was used, and that river proved navigable. The Edith trip was a valid and compelling

demonstration proving that the River was susceptible to navigation in its natural condition.

Early newspapers are an important part of the recorded history of Arizona. In fact, newspaper clippings were part of the evidence that the *Hassell* Court examined, and found "substantial evidence from which a factfinder might conclude that portions of rivers and streams other than the Colorado met the applicable standard of navigability." *Hassell*, 172 Ariz. at 363, 837 P.2d at 165. The *PPL Montana* Court's decision refers to historical sources including newspaper articles in examining the history of Montana's rivers. *PPL Montana*, 132 S.Ct. at 1222 (Sioux City Register (Mar. 28, 1868)). The Montana Supreme Court decision that was reviewed in *PPL Montana* also relied on newspapers:

[W]e agree with the State that reliance upon historical works, including newspaper accounts, is well-accepted and proper when applying the navigability for title test. Courts applying this test are often required to arrive at factual determinations regarding matters outside the recall of any living witnesses, thus requiring a higher degree of reliance upon historical material than in the run of the mill civil dispute.

PPL Montana v. Montana, 229 P.3d 421, 446 (Mont. 2010), (overruled on other grounds by PPL Montana, LLC v. Montana, 132 S.Ct. 1215 (2012) (citing and quoting Montana Power Co. v. Fed. Power Comm'n, 185 F.2d 491, 498 (D.C. Cir. 1950)) ("[I]t is settled that historical works generally considered authentic are admissible in evidence, especially in cases such as this one which must delve into the relatively ancient and obscure origins of commerce on the nation's rivers."); see also, Nw. Steelheaders Ass'n, Inc. v. Simantel, 112 P.3d 383, 392-393 n. 15 (Or. App. 2005) (Oregon Court of Appeals relied on newspaper article on attempted log drive on the John Day River).

The first newspaper in the Salt River Valley – The Salt River Herald – was not published until January of 1878. C043-368. That means that many of the early accounts of boating that are in the record could not be reported by a local newspaper, nor could any repeated or subsequent trips. That also means that by the time the Salt River Herald was published in 1878, the River was already significantly dammed and diverted, and it would be expected that the reported accounts would become minimal.

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Nonetheless, the record of boating accounts found in newspapers continues to grow with each hearing as searching technology improves. There are more than eighteen additional accounts of boating than were first reported to the Commission. Some of these show commercial use of the River. C053-385, at 43-48 (Fuller Rebuttal PPT). The Commission should consider the accounts that are in the record as representative of what could have occurred and not merely what actually occurred. Indeed, the *Daniel Ball* test *requires* an assessment of the susceptibility of the River for navigation.

VII. Opponents' Reliance on the 1865 Declaration of the Colorado's Navigability to Prove Non-navigability of the Salt Is Misplaced and the Commission Should Not Give It Weight.

Opponents rely on a declaration by the Arizona Territorial Legislature on the Colorado's navigability to bolster their non-navigability claim for the Salt. Freeport Brief, at 14; Cities Brief, at 4, 24, 30; SRP Brief, at 11; SRPMIC Brief, at 17. First, to the extent it even existed in 1865, the population of the Salt River Valley was sparse. Tr. 3/10/16 at 3790 (Littlefield); Tr. 1/26/16 at 2034-35 (August) (by 1860, virtually no people in Salt River Valley, not until 1867); L030, at 3-1, 3-6–3-7. Thus, it should not surprise anyone that there was no one advocating for the navigability of the Salt River at that time. More importantly, the 1865 declaration by the Arizona Territorial Legislature was to request funding by the federal government to clear obstructions on the Colorado River. Tr. 3/10/16 at 3566-67 (Littlefield). It is not clear that funding under the Rivers and Harbors Act was ever granted. Tr. 10/22/15, at 637 (Fuller) (Colorado not listed in Rivers and Harbors Act). Regardless, any mention of the navigability of the Colorado River certainly did not involve or implicate that a title for navigability determination was made for the Salt River.

Arizona courts have recognized the State's late, but important role in asserting its rights under the equal footing doctrine. *See Hassell*, 172 Ariz. at 366 n.14, 837 P.2d at 168 n. 14 (App. 1991); *Defenders*, 199 Ariz. at 415, 18 P.3d at 726 ("Although lying dormant for some 73 years, the state's claims were an assertion of Arizona's rights under the common-law

'equal footing' doctrine, which vests in the sovereign title to all lands affected by the ebb and flow of tides."). [2] As the *Defenders* Court appropriately recognized "[t]his dormancy does not affect the validity of the claims as '[n]either doctrines of laches nor statutes of limitations of actions can be allowed to defeat the state's sovereign title to trust lands." 199 Ariz. at 415 n.1, 18 P.3d at 726 n.1 (quoting *State of North Dakota ex rel. Bd. of Univ. and Sch. Lands v. Andrus*, 506 F.Supp. 619, 625 (D.N.D. 1981) (reversed on other grounds, Block v. North Dakota ex rel. Bd. of Univ. and Sch. Lands, 461 U.S. 273 (1983)). Use of the Arizona Territorial's 1865 Declaration in this proceeding is a red herring that the Commission should accord no weight.

VIII. Surveys and Patents Should Not Be Used as Evidence of Non-navigability.

A. Surveys.

In discussing the government surveys conducted following the Mexican-American war, SRP claims (Brief, at 6-7) that its expert, Dr. Littlefield, found that the surveying manuals, pursuant to which government surveyors were to operate, "were very precise about how navigable bodies of water were to be distinguished from non-navigable waters" and that Dr. Littlefield had examined the surveyors' notes concerning the River and found no indicia of navigability. The State disagrees with Dr. Littlefield's conclusions.^[3]

Early manuals instructed surveyors to meander, on both banks, only navigable bodies of water. C018-165, p. 24 [441], ¶ 2; C018-166, p. 13 [464], ¶ 2 (*Instructions to the Surveyors General* 1851). The 1864 manual instructed surveyors to meander on one bank non-navigable bodies of water and rivers that are "well-defined natural arteries of internal communication and have a uniform width." C018-167, p. 9 [504] (*Instructions to the*

^[2] The Arizona Court of Appeals obviously believed that Arizona streams and rivers other than the Colorado could be found navigable for title purposes. *Hassell*, 172 Ariz. at 363, 837 P.2d at 165.

Government reports and documents that Opponents rely on to support non-navigability are not persuasive. Those officials' opinions were based on a highly diverted river and their focus was primarily on reclamation efforts. SRPMIC Brief, at 16; Tr. 3/11/2016 at 3857, 3892-3893 (Littlefield); see Tr. 3/10/2016 at 3770-3771 (Littlefield) (federal government was concerned with pending litigation that could have affected the amount of water impounded behind the massive, expensive reservoir).

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 Surveyors General, 1864). The 1864 manual (which would have been used by the Ingalls brothers) also carried forward the earlier instruction for "Insuperable Objects on Line," providing that if the surveyor encountered an impassable obstacle, he should use the triangulation method. C028-165, p. 10, [438], ¶ 8 (Instructions to Surveyors General, 1851). An insuperable object could mean a river that was too deep and wide to cross. Tr. 3/10/16, pp. 3795-96, 3806 (Littlefield).

Although Dr. Littlefield believes that the government manuals were "very precise," application of the instructions was anything but precise. In fact, instructions to surveyors regarding the meandering process were "pretty sketchy" - perhaps to be assumed as part of surveyors' skills. C018-174, p. 15, ¶ 1-52 (*River and Lake Boundaries*). Dr. Littlefield himself has asserted that surveyors determined navigability based on their judgment and experience; they were not given instructions on how to determine navigability: "whether a river was navigable or not was left to the judgment of the surveyor." Tr. 3/11/16, pp. 3831-32 (Littlefield). Moreover, although the manuals contained meandering instructions relevant to navigable bodies of water, neither the instructions nor the applicable federal statute (43 U.S.C. § 931) defined "navigable."

Practical difficulties in early surveys were apparently not uncommon. For example, there were wide variations between different surveyors' treatment of meanders in the 1800s when surveyors often bid on a township to survey without having seen the land and might not even know a river was there: "We will probably never know what conditions influenced the surveyor's decision to meander or not meander where the instructions were silent." C018-174, p. 18, ¶ 1-54 (*River and Lake Boundaries*); C018-175, pp. 48-49, ¶ 2-29 (*River and Lake Boundaries*).

William Pearce conducted a partial survey of land near the River in 1867 (C018-26, pp. 249-51 ["Journal of Arizona History," Autumn 1988]), and the Ingalls brothers surveyed the lower River in 1868 from the Salt/Gila confluence upstream about 42 miles. Tr.

10/20/15, pp. 41-43, 180 (Fuller); C030-364, PPT 35, 36, 130 (Fuller Nav.); Tr. 3/11/16, pp. 3942, 3990 (Littlefield); C028-328 through -346 (Ingalls field notes). The brothers did not meander the River, but they employed triangulation the majority of the time during their 1868 surveys for T1-2N, R1-6E where they crossed the River. Tr. 10/20/15, p. 43 (Fuller); C028-346 (ASLD Excel Spread Sheet); Ingalls' field notes and plat maps from T1N, R1E (C028-328, -336); T1N, R2E (C028-329, -336, -345); T1N, R3E (C028-330, -336, -339); T1N, R4E (C028-331, -336, -340); T1N, R5E (C028-332, -336, -342); T2N, R5E (C028-333, -336, -342); T2N, R6E (C028-334, -343). *See also* C001, p. 29 (Littlefield Report, 2014: "[Wilfred Ingalls] employed triangulation to measure across the stream" in T1N, R1E). They sometimes noted that when the River was shallow they could measure the width on line and did not use the triangulation method: "not too deep to prevent measuring across it on line." T1N, R2E (C028-329, -335, -346; T2N, R6E (C028-334, 343, 346). Nowhere do the notes state that the River is non-navigable.

The fact that the 1868 surveyors utilized triangulation the majority of time instead of crossing the River on line indicates that the River had substantial flow and depth such that the surveyors did not want to cross. Those physical characteristics support susceptibility for small boat navigation and are consistent with historical descriptions of a River that is two feet deep or more at low flow. C030-364, at 129. The physical characteristics were already beginning to be altered, however, as Ingalls noted on his survey plat maps two irrigation ditches originating from the River in T1N, R4E and supplying water to fields in T1N, R3E. C018-339, -340.

As careful as these surveys appear to be, Professor Troy Pewe, an internationally renowned geologist, noted that Ingalls' and Pierce's surveys placed the River outside the floodplain in at least twelve places, although they applied the most accurate methods of the day. C026-E, p. 4 (Pewe, "Morphology of the Salt River"). In one location, the survey erroneously placed the River atop bedrock in the Usery Mountains. *Id.* As Dr. Littlefield said

himself, "unquestionably, [surveyors] could and did [make mistakes]." Tr. 3/30/16, p. 4151 (Littlefield). Resurveys of the River were conducted in 1888, 1899, and in 1910-11. In general, resurveys were performed either because the original survey may not have been done properly or to add clarity. Tr. 2/25/16, p. 3315 (Littlefield). The federal government relied on the abovementioned surveyors' notes and plats, as approved by the Surveyor General, for its determination of navigability. Tr. 3/11/16, pp. 3835-36 (Littlefield). This practice seems unwise in light of the many errors evident in surveyors' actions.

Mistakes aside, it is well established that inferences of navigability drawn from actions of surveyors are of little significance in the final determination, because surveying officers are not clothed with the power to settle questions of navigability [for title]. Oklahoma v. Texas, 258 U.S. 574, 585 (1922); see also Harrison v. Fite, 148 F. 781, 784 (8th Cir. 1906) (surveyors' actions were not conclusive on the question of navigability, because "surveyors are invested with no power to foreclose inquiry into the true character of the water."). The Oklahoma decision is now embedded in the Manual of Surveying Instructions of 1973. C018-175, p. 49, ¶ 2-31 (River and Lake Boundaries). Dr. Littlefield relied heavily on surveyors' lack of meandering for his opinion that the River was not navigable but he failed to address the significance of consistent and frequent triangulation of the River by surveys, a fact that clearly speaks to the susceptibility of the River for small boats.

SRP cites (Brief, at 30, n. 43) *U.S. v. Oregon*, 295 U.S. 1 (1935) and *Washington Water Power Co. v. FERC*, 775 F.2d 305 (D.C. Cir. 1985) for the proposition that courts should consider the government's treatment of watercourses in their determinations of navigability. However, in the Oregon case, the Court merely noted that "[i]t is not without significance that the disputed area has been treated as nonnavigable both by the Secretary of the Interior and the Oregon courts." It is understandable that Lake Malheur had been treated as non-navigable because it was "little more than a swamp or marsh" (295 U.S. at 23-24),

whereas the Salt River in its natural condition was perennial with substantial flow that at its lowest was still 300 cfs in Segment 6. U032, at 6 (Kibbey Decree). The *Washington Water Power* case, did not involve a determination of navigability.

The Cities (Brief, at 31), citing Douglas Kupel, et al., contend that the 1894 Army Corps of Engineers "determined" that the River was not navigable when it responded to a question of whether constructing dams would impede the River's navigability. The U.S. Supreme Court has soundly rejected that argument. *Oklahoma v. Texas*, 258 U.S. 574, 585-86 (1921) (stating that fact that Congress permitted bridges to be constructed over the Red River so long as the bridges not interfere with navigation, was merely "precautionary and not intended as an affirmation of navigable capacity").

Finally, considering the context in which the federal surveyors were in the field (surveying the federal government's acquisition), it is likely that they considered the term "navigable" in federal terms, that is related to interstate waterways. *See The Daniel Ball*, 77 U.S. 557, 563 (1870), (describing "navigable waters of the United States" as waterways that form a highway for commerce among other States or foreign countries, in contradistinction from navigable waters of the individual States). The surveyors of federal land in the 1860s were not conducting a particularized assessment of the River's navigability.

B. Patents.

SRP states (Brief, at 7-8) that neither the 200-plus federal patents that included riverbed land nor the patent files indicate that governmental officials believed the River was navigable. SRP further states that patents that the State issued similarly reflect that state officials also did not believe that the River was navigable. The Cities also argue this point (Brief, at 31). Neither SRP nor the Cities cite case law for this proposition, relying instead on SRP's expert, Dr. Littlefield.

The State disagrees with their contention, relying instead on the U.S. Supreme Court which held long ago that a patent will not convey navigable land underneath a river unless the

federal government definitely declares its intention to convey such land in the conveyancing document or otherwise makes its intention "very plain." *United States v. Holt State Bank*, 270 U.S. 49, 55 (1926); *Morgan v. Colorado River Indian Tribe*, 103 Ariz. 425, 427, 443 P.2d 421, 423 (1968) (executive order creating tribal reservation lacked a "clear intention" to reserve beds and waters of Colorado River to the Indian tribe, therefore the State holds title to land underlying the Colorado River). The patents that Dr. Littlefield addresses (at C020, ¶¶ 31-39), that were presumably issued by low-level government employees in the performance of their day-to-day duties, did not contain any intention to convey riverbed land. *See* Littlefield 2015 Report, C001, at 75-116. Furthermore, neither the personnel who prepared the patents nor the patents themselves included a reasoned evaluation of the River's navigability, which is necessary before a disposition of sovereign bedlands can occur. *Defenders*, 199 Ariz. at 418, ¶ 12, 18 P.3d at 729, ¶ 12. In *Oregon v. Riverfront Protection Assoc.* 672 F.2d 792 (1982), the Ninth Circuit reversed the district's court finding of non-navigability of the McKenzie River, thereby defeating the federal patentees' successors-in-interest's title to the bedlands.

Finally, by the time that almost all of the patents that Dr. Littlefield lists were issued, the River had been diverted and would have appeared non-navigable to a casual observer. *See* Tr. 3/10/2016, at 3843-3844 (most all patents were issued post-diversion), 3891-3892 (state patents were all issued after statehood and post-diversion) (Littlefield). Diversions and canals were built beginning in 1867, as the government surveyors noted in 1868. Tr. 10/20/15, at 164 (Fuller); L030, p. 7-11, Table 7-8 (ASLD Report); C028-330, Book 2, pp. 212-13; C028-333, Book 1, p. 494; C018-339, -340. The earliest patent that Dr. Littlefield lists for the Lower Salt (C001, p. 74-75) was issued in 1891, but by 1892 Judge Kibbey noted that the River had been entirely appropriated. U032, at 46-47, 51 (Kibbey Decree); Tr. 3/10/2016, at 3838-40 (Littlefield). ANSAC should not be

persuaded that the federal and state patents are convincing evidence of the River's non-navigability.

IX. A Reasonable Person Could Conclude That Native Americans Used Boats on the River.

Opponents misstate and overlook what the record states regarding Native American use of the River. A more detailed examination of the record leads to a different conclusion than what is offered by Opponents. SRP claims there is clear evidence of Native American navigation on the Colorado, and therefore makes the incorrect assumption that both the prehistoric Hohokam and the historic Pima and Maricopa did not use boats on the Salt. SRP Brief, at 2-3. First, the evidence that SRP cites of Native American use of boats on the Colorado is not from the Hohokam period, but rather from the later Spanish exploration period. C018-22, at 2. The Hohokam civilization had died out by the time the Spanish exploration encountered the Salt or Colorado rivers. See C028-313, at 4, 6 (Hohokam period and occupation ceased by the 15th and 16th centuries); C040-A, at 9 (August Report) (Two generations after the disappearance of the Hohokam, the first European traversed what is now Arizona in 1527). It is incorrect, therefore, to state that the record shows any civilization during or prior to the Hohokam period used boats on the Colorado.

Second, GRIC claims there is no credible evidence of boating on the Salt, but chooses to attack Mr. Fuller's understanding of the record rather than the record itself. GRIC Brief, at 16-17. It is undeniable that professionals have concluded the Maricopa did not live on the Salt because of the Apache threat but lived nearby on the Gila; the Maricopa used boats for fishing in rivers; the Maricopa fished on the Salt; and the Maricopa were not living on the Colorado when they used boats for fishing. See State's Opening Brief, at 33-34. A reasonable person, such as Mr. Fuller, who understands the physical characteristics of the Salt River, and who has reviewed the historical record that contains descriptions of the River, could conclude that there is a possibility that boats may have been used on the Salt River. Mr. Fuller and the

Commission would not be alone in making this reasonable conclusion. See Nw. Steelheaders, 112 P.3d at 394-95 (Oregon Court of Appeals recognizing direct evidence is not always available and stating: "[T]hat absence of direct – as opposed to circumstantial and inferential – proof is hardly dispositive . . . we hesitate to ascribe much weight to the absence of references in their writings to Native American canoe use on the John Day. . . our assessment of actual use reduces to whether plaintiff's circumstantial evidence of such use is persuasive, notwithstanding the absence of any direct corroboration.").

X. Dicta in PPL MONTANA Does Not Change the Navigability of the Salt River.

Opponents criticize the State for raising the title navigability issue years after statehood and then urge the Commission to rely on that fact as evidence of non-navigability based on dicta in *PPL Montana*. Cities Brief, at 2, 4; SRPMIC Brief, at 8-9, 24. Although the *PPL Montana* Court's holdings are applicable to the Commission's determination, this statement in *PPL Montana* is not. 132 S.Ct. at 1235. Evidence that the State waited to assert its claim of title is not controlling on the issue of navigability, and the *PPL Montana* Court recognized the importance of the State's role in actively representing current citizens and future generations when it stated that "it may be that by virtue of the State's sovereignty, neither laches nor estoppel could apply in a strict sense to bar the State's much belated claim." 132 S.Ct. at 1235.

Furthermore, the *Hassell* Court appropriately noted "[t]he United States Supreme Court has recognized that there is no unfairness or immorality in a state's pursuit of ownership claims based on the equal footing doctrine, even claims that have lain dormant for decades." 172 Ariz. at 369, 837 P.2d at 171 (citing *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 482 (1988)).

XI. The Facts Underlying Non-Navigability Findings for the Rio Grande, Red River, and San Juan Are Clearly Distinguishable from Facts Supporting a Navigability Finding for the Salt.

Opponents' attempts to compare the Salt to other Rivers that were designated non-

navigable should be disregarded. Opponents do not engage in a true apples-to-apples comparison of the facts of those Rivers to the facts of the Salt because it would weaken their arguments. For the benefit of the Commission, factually accurate comparisons of the Salt to various non-navigable and navigable rivers are discussed below. In the cases where courts have determined that a waterway is not navigable it was either because the Court was forced to make a decision with a dearth of evidence to the contrary, or the rivers had distinguishing physical features that are not found on the Salt. By contrast, several rivers that have been found navigable are remarkably similar to the Salt River.

Before distinguishing those cases, however, it is important to note that the United States Supreme Court has explicitly stated that determinations of the navigability or non-navigability are to be made by considering only the facts present for that particular waterway and not by comparing one river to another. *United States v. Utah*, 283 U.S. at 87. The Court even addressed faulty comparisons to the very rivers Opponents use to compare to the Salt:

The government invites a comparison with the conditions found to exist on the Rio Grande river in New Mexico, and the Red river and the Arkansas river, above the mouth of the Grand river, in Oklahoma, which were held to be nonnavigable, but the comparison does not aid the government's contention. Each determination as to navigability must stand on its own facts.

Id. (emphasis added). Rivers must be considered independently based on their locations and the circumstances of the exploration and settlement of the country through which they flow. *United States v. State of Utah*, 283 U.S. at 83.

A. RIO GRANDE: United States v. Rio Grande Dam & Irrigation Co., 174 U.S. 690 (1899).

Opponents cite to an 1899 case about the Rio Grande for support that the Salt is non-navigable, but they fail to explain the details of that case. Freeport Brief, at 3. A private company sought to place a dam across the Rio Grande in New Mexico when it was still a territory. 174 U.S. at 701. The federal government claimed that the River was navigable and

that it therefore owned the bed. The Supreme Court, however, agreed with the lower court's taking of judicial notice that, although the river is generally navigable, it is not navigable within New Mexico. *Id.* at 699. The government's evidence, submitted by affidavit, was apparently sparse, because the Court's only comment about the evidence was that "logs, poles, and rafts are floated down a stream occasionally and in times of high water" and the Court concluded that evidence was insufficient to show navigability. 174 U.S. at 698. The Court did not find the Rio Grande non-navigable, however, as Freeport states, because "it is a desert river with insufficient reliable flows." Freeport Brief, at 3. Seemingly, however, the Court was under the impression based on the information it received, that not even a canoe or skiff could float year-round on the Rio Grande. *See* 174 U.S. at 698-99, citing *The Montello*, 20 Wall. at 442. ("It is not . . . every small creek in which a fishing skiff or gunning canoe can be made to float at high water which is deemed navigable . . .").

These facts are easily distinguishable from those of the Salt. The Salt had actual boating accounts, for commercial purposes, repeated, in skiffs and canoes, and occurring during all times of the year, and some of them explicitly stated the Salt was navigable. *See* State's Opening Brief, at 2-4. In contrast to the evidence before the *Rio Grande* Court, the physical characteristics of the River support canoe use year-round in Segments 2 through 6. C053-385, at 98, 104-05 (Fuller Rebuttal PPT); Tr. 5/18/16, at 4778-4806 (Fuller). Where the River is still largely natural today, the fact that loaded canoes could have been used year-round, and other boats could be used at least seasonally, is undisputed by those that have boated the River. *See* State's Opening Brief, at 15, 20-21, 24 (Mr. Williams and Mr. Mickel confirming Mr. Fuller's assessment with their own assessments). The Commission also has the benefit of seeing how the Salt is used for commercial recreational purposes during modern times, as discussed below with regard to the Red River, and that supports a finding that the River was susceptible for use at statehood. At the time the Court reviewed the Rio Grande's navigability, there was just no evidence of boating in that record and the Court was

forced to make a decision with those facts. That is distinctly different from the record before this Commission.

B. RED RIVER: State of Oklahoma v. State of Texas, 258 U.S. 574 (1922).

Opponents San Carlos Apache Tribe and Freeport attempt to compare the Salt River to the Red River, but the comparison fails for several reasons. SCAT Brief, at 6-8; Freeport Brief, at 3-4. In an original suit in equity to determine ownership of oil and gas deposits in the bed of the Red River, in which Oklahoma sued Texas and in which the United States intervened, the Supreme Court found that the Red River was not navigable throughout Oklahoma. 258 U.S. at 578-79, 588, 591. The Court divided the River into two reaches, the western half and the eastern half. *Id.* at 587-89. Both reaches were found non-navigable because they were either dry much of the year or extremely shallow. *Id.*

The Court found that the western reach where the Red River originates "does not have a continuous or dependable volume of water. . . . and for long intervals the greater part of its extensive bed is dry sand interspersed with irregular ribbons of shallow water and occasional deeper pools." *Id.* at 587. Only for short intervals of one to seven days, and no more than 40 days a year, does the Red River have sufficient volume and depth to support even "very small boats." *Id.* A field work examination of the western reach found that the Denison gauge showed a depth between zero and one foot, and multiple places had a depth of only four tenths of a foot. The loaded flat bottom boat used in the examination drew five and a half inches when loaded and was frequently unloaded and dragged over sand bars from 300 to 1,000 feet. *Id.* at 588. The eastern reach of the Red River, while benefitting from additional tributaries and thus having more water, was still mercurial both in flow and channel stability. *Id.* at 589. The flow was not perennial but "practically continuous." *Id.* The channel was an "almost continuous succession of shifting and extensive sand bars" with "no permanent stable channel." *Id.* The ordinary depth of water over the sand bars was as low as six inches. *Id.*

In contrast, the Salt River is and always has been perennial in its ordinary and natural condition, with continuous and substantial flow year-round, throughout Segments 2 through 6. See U032, at 5 (Kibbey Decision of 1892 stating Salt had a minimum of 300 cfs); Tr. 10/20/15, at 131, 148 (Fuller) (stating all published material he has reviewed says Salt was perennial in all Segments); Tr. 2/26/16, at 3463 (Gookin) (stating Salt was perennial in Segment 6); Tr. 1/29/16, at 2607 (Mussetter) (stating he would expect the Salt to be perennial). There are no accounts in the record of the Salt ever being dry or even "practically continuous" in its ordinary and natural condition. It had continuous flow.

Not only was the flow continuous but it was also of sufficient volume and depth to support small boats year-round, not just for 40 days a year like the Red River. Historical descriptions make it clear that even at low water the River was certainly deep enough for small boats. See, C053-393, at 240 (United States Commissioner John Bartlett visited the Lower Salt in July of 1854 and noted the River was "eighty to one hundred and twenty feed wide, from two to three feet deep, and both rapid and clear."); L030, at 3-15 (Hiram Hodge, author of a very early guidebook to Arizona in 1877, said the Salt, "At low water it is a clear, beautiful stream, having an average width of two hundred feet for a distance of one hundred miles above its junction with the Gila, and a depth of two feet or more."). In addition, unlike the Red River's eastern part which had a channel that was never permanent or stable, the main-flow or low-flow channel of the Salt has always been "well-defined" according to a study of data that spanned 112 years from 1868 to 1980. Compare 258 U.S. at 589 (Red River), with C042-366, at 127-28 (William Graf's Flood-Related Channel Change in an Arid-Region River [Salt]).

The examination boat used in the Red River case that drew five and half inches when loaded would clearly lack any problems in a river two to three feet deep. Indeed, the State confirmed this when it conducted its own experiment with a loaded historical flat boat. *See* State's Opening Brief, at 12. In contrast to the experiment on the Red River where each day

the boat had to be dragged "very often" over sand bars from 300 to 1,000 feet in length, the State encountered only one area on the lower Salt where the boat encountered shallow water for 50 to 100 feet, and that was due to the boater taking the wrong line on his first trip. *Compare* 258 U.S. at 588 (Red River), *with* Tr. 10/22/15, at 533-39, 631 (Dimock/Fuller) (State experiment on lower Salt with historical replica boat Edith).

The State has proven by reliable experimentation using a 1911 historical loaded flat boat (the "Edith") that the lower Salt River is navigable in Segments 5 and 6. See State's Brief, at 12-13. For the upper Salt segments, the Commission has the benefit of learning from not one but literally thousands of successful "experiments" where canoes and rafts and other boats have been used to carry cargo and people year after year. See State's Opening Brief, at 21-22, 26. All of the experts who truly know the River, including Mr. Mickel who has traveled it "hundreds of times" on guided commercial trips with rafts loaded with eight people and gear, and Mr. Williams whose life's work has been to boat and study rivers across the U.S., have candidly informed the Commission that the physical conditions of this River could have supported historical boats loaded with cargo. See State's Opening Brief, at 17, 20-21 (Segment 2), and 24 (Segment 3).

It is undisputed that where modern recreation takes place in Segments 2 and the upper half of 3, the River is still in its largely natural condition, although it has somewhat *less water* because of man-made depletions. *See* State's Opening Brief, at 19-20, 23. That means that the assessment of the physical conditions by the experts is essentially an assessment of the conditions that existed of the natural River. Even more, the State has comprehensively and properly proved that some of the modern boats used for recreation are meaningfully similar to historical boats available and used in Arizona at statehood. State's Opening Brief, at 9-11. So not only do the physical characteristics support navigability, but also the modern boat use supports navigability.

C. SAN JUAN: United States v. State of Utah, 283 U.S. 64 (1931) and Utah v. United States, 304 F.2d 23 (10th Cir. 1962).

Opponent Freeport misleads the Commission by claiming that the United States Supreme Court deemed the San Juan River non-navigable, and then attempts to compare it to the Salt without providing the Commission with all of the facts. Freeport Brief, at 21. It is incorrect as a matter of law to state the Supreme Court found the San Juan non-navigable. The Supreme Court never addressed the facts of the San Juan because the issue was not disputed before the Court. 283 U.S. at 74. "We conclude that the findings of the master, so far as they relate to the sections of the Green, the Grand, and the Colorado rivers, found by him to be navigable, are justified by the evidence and that the title to the beds of these sections of the rivers vested in Utah when that state was admitted to the Union." *Id.* at 89. What is true is that the Supreme Court decreed that the title to the bed of the San Juan was vested in the United States because the Special Master had found that river non-navigable, and for reasons unknown, the State of Utah did not appeal that finding. 283 U.S. at 90; C021-5, at 181 (1930 Special Master Report).

Opponents do not inform the Commission about the various reasons for the Special Master's finding of non-navigability for the San Juan — relying instead on a simplistic comparison of depth (Freeport Brief, at 21) — but facts of the San Juan show that that river had dangers to navigation not found on the Salt River. As part of his decision, the Special Master found that high velocities and sandwaves cause risks and dangers to navigation that are not present on the Green, Grand, or Colorado rivers, which he found navigable. C021-5, at 180-81. Those are also not dangers found on the Salt.

1. Velocity.

Velocity refers to how fast water is moving; higher velocities can push boats into rocks with greater force and cause more damage. Tr. 10/20/15, at 82 (Fuller). The Special Master found that on the San Juan River, at Goodridge Bridge, there were 308 days in the year in which the velocity exceeds 4 miles per hour (mph) and "such velocities . . .

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25 26 unquestionably make navigation a matter of hazard to boats and cargoes, even if not to life and limb," X017-92, at 181 (emphasis added). The Special Master found that the velocity of the San Juan River "differs greatly" from the Green and Grand rivers, which were found navigable by the Special Master. Id. at 171. The Green River had only 80 days and the Grand River 78 days in which the velocity was over 4 mph. *Id.*

The velocities on the Salt by comparison are far lower than even the Green or Grand rivers after the appropriate conversion to mph is made from the reported data of feet per second. L030, at 7-26 (Table 7-18) (ALSD Report). For example, on the lower Salt, even at a high velocity discharge of 1400 cfs, a discharge that is well above the natural reconstructed median for Segment 6, the velocity on the Salt would average only 1.5 mph. Id. The velocity would rarely if ever exceed 4 mph as it does on the Green and Grand Rivers. L030, at D-1— D-16 (ASLD Depth and Velocity calculations for six cross-sections). Likewise, on the upper Salt, even the velocities of the highest 10% of flows would only reach 3.4 mph. C030-364, at 236. That means that certainly there are no more than 36 days of the year when velocities would exceed 4 mph. Compared to the navigable Green and Grand rivers, the Salt is a calmer stream. Compared to the San Juan River, the Salt's velocities are far less, making it a much calmer and safer stream for navigation. Mr. Fuller stated that for the Salt "velocity is not all that important. Ordinary flow rates, velocities are not significant when it comes to whether you can navigate or not." Tr. 10/21/15, at 510 (Fuller). Opponent expert, Mr. Burtell, apparently found velocities insignificant for navigability purposes because he did not focus on velocities or include velocity data in his report. Tr. 2/24/16, at 3005-06 (Burtell).

The danger of high velocities was also pointed out for a different San Juan River case that focused on the portion of the River in eastern Utah, which Opponent GRIC cites as evidence the Commission should consider. GRIC Brief, at 34-35. In the Findings of Fact for that case, it was also noted that the San Juan had higher velocities than the Green and Colorado rivers, making its flows more dangerous than the Salt River. C041-9, at 6.

2. Sandwaves.

The Special Master had a detailed analysis of the hazards of sandwaves that are a "phenomenon peculiar to the San Juan and the Colorado Rivers and not found on other rivers." X017-92, at 176. With regard to the San Juan, the Special Master found that "rowing under such circumstances is precarious" and that "sandwaves on this River constitute a much greater danger and impediment to navigation than on the other Rivers and render it less practicable to navigate commercially." *Id.* at 178. There are no sandwaves on the Salt; that danger is not present. Tr. 2/24/16, at 3006-07 (Burtell).

3. Channel and Flow Volume.

Opponent GRIC attempts to compare the eastern part of the San Juan to the Salt, but the comparison fails because the two rivers are different. GRIC Brief, at 34-35. The eastern portion of the San Juan was described as having "two to many channels at the same time with such channels constantly shifting" and "[presenting] a continuing and insurmountable obstacle to navigation as none of the several channels presents an adequate or continuous channel for the passage of boats." C041-9, at 4. This is not the case on the Salt, where Dr. William Graf stated the flood channel "might be characterized as braided, but it lacks the numerous subchannels of nearly equal magnitude found in some braided streams" and within the flood channel is a "well-defined low-flow, invert or main-flow channel." C042-366, at 127. In other words, the boating channel or low-flow channel is well-defined. The record also reflects that where splits did occur on the Salt, such as within Segment 6, the splits were successfully navigated. See C030-364, at 158 (Fuller PPT) (figure showing location where flat boat traveled that carried five tons of wheat).

Opponent GRIC also attempts to compare flows on the Salt to those on the eastern portion of the San Juan. GRIC Brief, at 35. This simplistic comparison is not an accurate way to understand the physical characteristics of a river that support or do not support navigability. As hydrologist and geomorphologist Mr. Fuller stated, boating can be very

1 2 3 in the River^[4], yet they say it cannot be done based on theory. *Id.* 4 5 Tourism. 6 7 8 9 10 11 12 explore the archeological features of these regions. 13 14 15

different on rivers with similar discharges, and it is important to go to the river to understand its characteristics. Tr. 5/18/16, at 4781-82 (Fuller). Of course this simplistic comparison is consistent with what Opponent experts have done: none of the Opponents' experts put a boat

Finally, with regard to commercial tourism on the San Juan River, the Special Master noted that "[n]o tourists or other persons have been transported for hire or otherwise." X017-92, at 180. This undoubtedly factored into the Special Master finding the San Juan nonnavigable because he specifically recognized that commercial tourism is a form of commerce:

> The Government's assertion as to lack of commercial possibilities fails to recognize one source of commerce which in the future will undoubtedly develop to a considerable extent—the use of these Rivers for the transportation of tourists for hire, to view the natural scenic wonders and

Id. at 117. For the Green, Grand, and Colorado rivers, which he found to be navigable, the Special Master described commercial recreational trips. *Id.* at 60, 66-68, 71, 77, 128.

As was detailed in the State's Opening Brief, the Salt is being used extensively as a highway for commerce for commercial recreational boating, and that commerce not only supports the operators and its employees, but also the entities that depend on tourism. See State's Opening Brief, at 15-17, 21-23, 26, 31-32. Today's commerce is possible because the Salt is consistently used like a navigable river.

XII. The Commission Should Not Adopt Its Previous Determinations.

Some of the Opponents urge this Commission to readopt its erroneous 2005 Determination on the Lower Salt and its 2007 Determination on the Upper Salt.^[5] The Commission should not do so.

^[5]GRIC Brief, at 27 (Lower Salt); SRPMIC Brief, at 1-7 (Lower and Upper Salt); Freeport Brief, at 5-6 (Upper

Salt); Cities Brief, at 3, 29 (Lower Salt).

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^[4] Dr. Mussetter chose to put a packraft on the River at 8 cfs in Segment 5, when the River was shut off for the season. The natural reconstructed median is greater than 400 cfs for Segment 5 and the River still has substantial flows during much of the year that he could have observed. Tr. 1/28/16, at 2494-98 (Mussetter).

With respect to the Lower Salt, it is simply incomprehensible that GRIC and SRPMIC are requesting ANSAC to re-issue the same Determination that the Court of Appeals soundly rejected in *State ex. rel Winkleman v. ANSAC*, 224 Ariz. 230, 229 P.3d 242 (App. 2010). The Court of Appeals specifically found that "ANSAC itself has made contradictory findings as to the ultimate question of fact . . . albeit most recently while applying the incorrect standard for determination." *Winkleman*, 224 Ariz. at 242, 229 P.3d at 254.

With respect to the Upper Salt, the Commission issued its Determination ("Det.") without benefit of *Winkleman*'s guidance, and it thus made some clear errors. For example, ANSAC failed to consider the river in its natural condition by not accounting for prestatehood depletions (*see* Burtell Declaration, C021-21, Tables 7 and 8); failed to consider the riverbed under Roosevelt Lake as it had been in its natural condition, erroneously granting SRP's motion for lack of jurisdiction (Det., pp. 47-48); required actual commercial use of the river (Det., p 43); found that boating attempts were not for commercial trade and there was no upstream travel (Det. p. 40); and disregarded recreational use as proving susceptibility to navigation (Det., pp. 40-41).

In asking the Commission to re-issue its former Determinations, these Opponents are in effect asking ANSAC to disregard the Arizona Court of Appeals' holdings in *Defenders of Wildlife*, 199 Ariz. 411, 18 P.3d 722 (App. 2001), and *State ex. rel Winkleman v. Ariz. Navigable Stream Adjudication Comm'n*, 224 Ariz. 230, 229 P.3d 242 (App. 2010), both of which are wholly consistent with the landmark United States Supreme Court cases of *The Daniel Ball*, 77 U.S. (10 Wall.) 557, 19 L.Ed. 999 (1870) and its progeny. The more recent U.S. Supreme Court's decision in *PPL Montana*, *LLC v. Montana*, 132 S.Ct. 1215 (2012) did not modify the *Daniel Ball* test and therefore does not require that A.R.S. § 37-1101(5) be amended, nor are *Defenders* and *Winkleman* inconsistent with *PPL*. The holdings of *PPL* are twofold: 1) a river's navigability must be assessed on a segment by segment basis where stretches of a river are clearly navigable and others stretches may not be; and 2) "[e]vidence

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of present day use of a river may be considered to the extent it informs the historical determination whether the river segment was susceptible of use for commercial navigation at the time of statehood." 132 S.Ct. at 1229, 1233.

In complying with each of these requirements in the recent round of hearings, the State has produced new evidence to demonstrate that the River, from Segment 2 through Segment 6, was navigable or susceptible to navigation when it was in its natural condition. First, the State clearly distinguished Segment 1 from the other segments, including testimony by Alex Mickel, an experienced boater, that Segment 2 is "absolutely" different from Segment 1. Tr. 10/21/15, at 392-93 (Mickel).

Nevertheless, in addition to the Logan trip through all Segments, the State presented new boating information: James Logan published his detailed account of the Burch trip of 1885, providing vital information to ANSAC regarding the natural state of the riverbed before it was inundated by the several dams in addition to Roosevelt Dam. Mr. Logan reported that their beginning provided easy going. Tr. 10/20/15, at 224-26; Tr. 5/17/16, at 4581-82 (Fuller); C018-196. Further new information includes the following: the Globe Power Company had a boat built in 1906 for use on the River near the mouth of Cherry Creek in connection with the construction of hydroelectric works (C053-384); the Hudson Reservoir and Irrigation Company boated in Segment 3 in 1893 (C019-60); a ferry at Roosevelt was probably used during dam construction in 1905 (C018-243; C002-7; C018-27); freight was sometimes hauled upriver to the Dam (C018-249); Ensign and Scott canoed from just above the Dam to Phoenix in 1919 (C018-62); in October 1880, the newspaper announced that James Stewart would launch his boat "today" (C018-75); a wedding party boated down the River in 1884 (C018-126); during the winter in the early 1890s, Sykes and McLean built a canvas-over-wood frame boat and boated from Five Points in Phoenix to the Gila (C018-18); McCoy and Brown were to leave "next Monday" for the Colorado by boat (C062-413); the Day brothers left Camp Verde in September 1891 and trapped down the Verde, Salt, and

Gila, to Yuma, on their fifth trip (C002-8); two brothers were building a boat in 1894 for trapping down the River from six miles above Phoenix and they reported that they found trapping profitable (C053-383); in 1895, Adams and Evans boated in a homemade wooden flatboat from Phoenix to Yuma (C029-360, -361, —362, -363); Tom Rains's boat was stolen and boated a few miles down the River in 1909 (C018-73); Louis Selly was reportedly "turning out to be a master boat builder" in 1909 (C018-61); a party of men was being gathered for a foray to the Gulf of California in October 1909 (C018-15, -76); many items on the use of ferries in addition to those contained in the ASLD Reports. These boating events occurred on a continuously depleted River.

The State also presented to the Commission evidence of probable Native-American boating despite evidence that there were no Native American settlements on the Lower Salt. *See* State's Opening Brief at 33-34. *See also*, C028-276, p. G15 (the Maricopa, who moved into and shared territory with the Pima, fished in the rivers from boats, using nets and traps).

The State produced new evidence of modern boating and of the types of boats available at statehood, which evidence complies with the dictates of *PPL Montana*. The evidence included detailed information demonstrating that modern boats are meaningfully similar to those earlier boats. *See* State's Opening Brief, at 9-11. In addition, to demonstrate that a historical boat could navigate the present-day River, in August 2015, Mr. Dimock took his replica Edith, a boat he had built to the exact specifications of an early 20th-century Edith used on the Colorado and which he had loaded with 850 lbs of sandbags and jugs of water, to the River just below Stewart Mountain Dam in Segment 5, and he successfully boated about twelve miles downstream to Granite Reef Dam in Segment 6. Tr. 10/22/15, at 532-39 (Dimock); Tr. 5/17/16, at 4703-04 (Fuller); C053-385, at 64 (photos of Edith in Grand Canyon and in Segment 5).

The State also introduced testimony from experienced boaters, Mr. Mickel and Mr. Williams. They testified that Segment 2, 3, 5, and 6 all were navigable by historical loaded

boats: Segment 2 could have been boated historically by wooden flatboats loaded with goods (Tr. 10/21/15, at 288, 329-30 [Williams]); a historic wooden boat could have been boated at 100 cfs to 3,000 cfs and a historic flatboat could have been boated at between 400 and 4,000 cfs (Tr. 10/21/15, at 397-98; 475-76 [Mickel]); Segment 3 could have been boated by historic wooden flatboats (Tr. 10/21/15, at 397-98, 475-76 [Mickel]); Segment 5 and 6 could have been boated historically by flatboat or canoe loaded with goods (Tr. 10/21/15, at 294-95 [Williams]).

It is notable that the Opponents have never, in twenty years, produced any boating witness to testify that small boats cannot be used on the River. The absence of data is often more telling than the presence of data. The Commission can learn a lot from this continued absence.

The Commission had none of this new information available to it for its Determinations of 2005 and 2007, and with the exception of Commissioner Henness, its current members are newly appointed and did not receive the prior evidence or hear the prior testimony. It can now make a fully-informed decision on the River's navigability.

For the reasons stated in the State's Opening Brief and in this Brief, the Commission should find Segments 2 through 6 of the Salt River navigable in its ordinary and natural condition.

DATED: August 17, 2016.

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1	The foregoing, along with seven copies and a CD With this document in pdf form was mailed for
2	filing this 17th day of August, 2016, to:
3	Nav.Streams@ansac.az.gov Arizona Navigable Stream Adjudication Commission
4	1700 W. Washington
5	Room B-54 Phoenix, AZ 85007
6	A COPY in pdf format of the foregoing e-mailed with delivery receipt this 17th
7	day of August, 2016, to each party listed on the ANSAC website, http://www.ansac.az.gov/parties.asp, with "SERVICE OF ANSAC DOCUMENT,
8	Nos. 03-005-NAV and 04-008-NAV (Consolidated) (Salt)" written in the subject line.
9	-Sbrewer
10	Paula Brewer 5264810
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