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BEFORE THE ARIZONA NAVIGABLE STREAM ADJUDICATION COMMISSION

In re Determination of Navigability of the Gila River	No. 03-007-NAV **SALT RIVER PROJECT'S CLOSING BRIEF**

Pursuant to the Chairman's order dated August 22, 2014, the Salt River Project Agricultural Improvement and Power District and Salt River Valley Water Users' Association (collectively, "SRP") submit their closing brief in this matter regarding the Gila River ("Gila"). Based upon the evidence in the record and application of the appropriate legal test, the Commission should again find that the Gila is not navigable. The Commission need not address "segmentation" issues in detail because no significant portion of the Gila is navigable.

A table of contents begins on page ii. For purposes of this brief, exhibits from the hearings before 2014 are referred as "EI __." Supplemental exhibits from the 2014 hearings are referred to as "X __." Citations to the reporter's transcript of proceedings at the hearings appear as "Tr. at [DATE]:[PAGE] (WITNESS)." For ease of reading, the date and witness designations have been eliminated from certain citations to the transcript where such information is otherwise obvious from the context.

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I. Introduction and Summary of Argument

On January 27, 2009, after a full evidentiary hearing, this Commission found:

> . . . Clearly, the preponderance of evidence supports a finding that the Gila River was not navigable on February 14, 1912, and further, was not susceptible of navigability in its ordinary and natural condition. Put another way, the proponents of navigability did not meet their burden by showing with a preponderance of evidence that the Gila River, or any part of it, was navigable or susceptible to navigability in its ordinary and natural condition on the date of statehood, February 14, 1912.[1]

The Commission's determination was appealed to the Superior Court, and that appeal was stayed pending a decision by the Court of Appeals on the Lower Salt River. The Commission's Lower Salt decision, which had been issued in 2005 (four years prior to its 2009 Gila decision), was vacated by the appellate court in 2010.[2] The Court of Appeals found that, with respect to the Lower Salt, the Commission had failed to properly view the river in its "ordinary and natural condition" because it had failed to consider diversions of water prior to construction of Roosevelt Dam. *State v. ANSAC*, 224 Ariz. at 241-42, 229 P.3d at 253-54.

In addition, while the Gila River case was pending in the Superior Court, the U.S. Supreme Court issued its opinion in *PPL Montana, LLC v. Montana*, 132 S. Ct. 1215 (2012), the first significant navigability case decided by that Court in several years. Although the flaws that the Arizona appellate court found in the Commission's 2005 Lower Salt decision

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[1] ANSAC, Report, Findings and Determination Regarding the Navigability of the Gila River from the New Mexico Border to the Confluence with the Gila River, at 87 (January 27, 2009) ("2009 Decision").

[2] *See State v. Arizona Navigable Stream Adjudication Comm'n*, 224 Ariz. 230, 229 P.3d 242 (App. 2010) ("*State v. ANSAC*"). By the time the Commission issued its Gila River report in January 2009, the Superior Court already had ruled on the Lower Salt appeal, the appellate briefs had been filed in that case, and oral argument at the Court of Appeals had occurred. *See* Ruling Minute Entry, *State v. ANSAC*, Maricopa County Superior Court No. LC2006-000413-001DT (August 6, 2007); Salt River Project's Answering Brief, *State v. ANSAC*, Arizona Court of Appeals, Division One, Case No. 1 CA-CV 07-0704 (December 21, 2007); Notice of Oral Argument for September 9, 2008, *State v. ANSAC*, Arizona Court of Appeals, Division One, Case No. 1 CA-CV 07-0704 (August 1, 2008).

were not present in its 2009 decision on the Gila,[3] the parties agreed to remand the Gila River appeal (along with those for the Lower Salt and four other watercourses) to ANSAC, in order to give the Commission the opportunity to consider the evidence in light of the *State v. ANSAC* and *PPL Montana* holdings.

On remand, the Commission held an additional nine days of hearing and reviewed several thousand pages of supplemental exhibits. This additional fact-finding, if anything, further emphasized the correctness of the Commission's 2009 decision. The Gila is not and never has been a navigable watercourse that could be used as a "highway for commerce." The Commission should again find the Gila non-navigable.

II. Evidence in the Record

The Commission has, over more than a decade, continued to receive and review evidence regarding whether the Gila was navigable on February 14, 1912. *See* A.R.S. §§ 37-1101 to -1156. The Commission held nine hearings between 2003 and 2014. Despite these nine hearings, the proponents of navigability have been unable to show that the Gila is or ever was navigable.

A. History of the Gila

1. The prehistoric Gila

"It is known that the Gila River played a major role in the human settlement patterns and occupational successes of prehistoric development within the study area."[4] "[M]ost of the prehistoric habitations in the study area were close to the river." SLD/Upper, at 3; *see*

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[3] In the Gila decision, for instance, the Commission specifically found that the river "was not navigable or susceptible of navigability in 1860 and before, when white settlers first began to divert water for irrigation . . . ." 2009 Decision, at 79.

[4] Fuller, et al., *Arizona Stream Navigability Study for the Upper Gila River, Safford to the State Boundary, and San Francisco River, Gila River Confluence to the State Boundary*, at 2-3 (June 2003) [EI 2] ("SLD/Upper"); *see also id.* at 5, 8-4. To distinguish between the two 2003 reports submitted by the State Land Department ("SLD") for the Gila, this brief refers to the report on the Upper Gila as "SLD/Upper" and to the report on the Lower Gila as "SLD/Lower." *See* Fuller, et al., *Arizona Stream Navigability Study for the Gila River: Colorado River Confluence to the Town of Safford* (June 2003) [EI 4] ("SLD/Lower"). The SLD submitted no updated reports for the 2014 hearings. The only updates to the 2003 reports were in the form of Mr. Fuller's Power Point presentations [X013].

also id. at 2-18, 2-19. Yet, despite the concentration of prehistoric population on the banks of the river, "[a]rchaeological research has not documented any use of the river for commercial trade and travel or any regular flotation of logs" on the river. *Id.* at 3, 2-23, 8-2. In fact, no evidence was presented to the Commission during the hearings leading to the 2009 Decision to support the existence of any prehistoric use of boats on the river or any flotation of logs.

The Commission found that "[t]he archaeological evidence indicates that the Gila River and its tributaries have been a reliable source of water for a large portion of central and southern Arizona for as long as humans have been in the western hemisphere." 2009 Decision, at 23. The Commission determined that "[t]here is no evidence in the archaeological record that would indicate that any of the prehistoric cultures located in the study area along the Gila River used the Gila River as a means of transportation by boat or other watercraft and there has been no documented use of the river for commercial trade or travel or for regular flotation of loads." *Id.* at 29.

Despite having an additional nine days of hearing in 2014, and despite having submitted thousands of pages of supplemental exhibits, the proponents of navigability failed to present any credible evidence that would alter this 2009 finding. Mr. Fuller, the SLD's expert, testified on direct examination that there is "limited information" in the archaeological records about Native American use of boats.[5] On cross-examination, however, he could not recall any evidence of the use of the Gila by indigenous peoples for trade or commerce. *See* Tr. at 06/17/14:304-05 (Fuller). Mr. Farmer, the SLD's only other witness, testified that he was unaware of any Hohokam use of boats on the Gila. *Id.* at 06/18/14:618 (Farmer).

Allen Gookin, a hydrologist testifying on behalf of the Gila River Indian Community, stated in his 2014 report that, "[i]f the Gila River had been navigable, you would have expected the Hohokam would have traveled down the Gila River to the Colorado River, then followed the Colorado, which we know to have been navigable, to the Gulf of California

[5] *See* Tr. at 06/16/14:166 (Fuller); Fuller, *Presentation to ANSAC: Gila River Navigability*, at 3, 72 (June 16, 2014) [X013] ("Fuller/Gila").

region. The Hohokam, for example, had a route that did just that (Figure IV-1). It followed the Gila but they walked."[6]

2. Historic Indian use of the Gila

Although the Native American inhabitants of the region made use of water from the Gila for irrigation, they did not use the river for navigation during recorded history.[7] Mr. Gookin stated in 2005 that he was aware of no evidence that any Indians residing in the area ever used canoes or other watercraft on the river. *See* Gookin 2005, at 3. "[T]he Pimas lived on both sides of the river for extensive distances." *Id.* They engaged in trade with various groups of Indians and non-Indians located all along the river. *Id.* Their mode of transportation was to run on foot beside the river. *Id.* If the river had been navigable, it surely would have been easier, faster, and more efficient for the Pimas to use boats to travel rather than to run these long distances.

None of the other evidence during the 2005 hearing detracted from Mr. Gookin's testimony. The SLD's consultants, for instance, noted that the Chiricahua Apaches "were known to construct boats made of bull hides stretched over wooden frame for crossing streams," but no evidence exists that they ever used such boats on the Gila. SLD/Upper, at 5; *see also* Tr. at 11/16/05:67-68 (Gilpin).

During the 2014 hearing, Mr. Fuller testified that there is a "relatively limited record of boating" by Arizona Indian tribes prior to statehood.[8] In an effort to explain this "relatively limited record," Mr. Fuller suggested that Native Americans might not have boated down the Gila because they found "alternative modes more suitable." *See* Tr. at 06/16/14:59 (Fuller). Mr. Fuller opined that, for the Native Arizona tribes prior to statehood, "[t]he business of the

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[6] *See* Gookin, *Report on the Navigability of the Gila River Prepared for the Gila River Indian Community*, at IV:3-4 (May 19, 2014) [X009] ("Gookin 2014").

[7] *See* Gookin, *Presentation to Arizona Stream and Navigability Commission*, at 3 (November 16, 2005) [EI 15] ("Gookin 2005"); Tr. at 11/16/05:227 (Gookin).

[8] *See* Tr. at 06/16/14:48 (Fuller); Fuller, *Boating in Arizona ca. 1912*, at 4, 57-58 (June 16, 2014) [part of X020] ("Fuller/Boating").

river was to take it out and farm it and drink it," as opposed to using it for transportation. *Id.* at 51.

Mr. Fuller testified that he was unaware of any cultural beliefs about rivers that the Apache, the Akimel O'odham, or the Pee-Posh might have had that would have precluded them from boating the Gila. *See* Tr. at 06/17/14:463 (Fuller). In his 2014 report, Mr. Gookin stated that "[n]o irrigation facilities were mentioned in any of Father Kino's travels in the late 1690s." Gookin 2014, at IV:6. Even if such Native American irrigation facilities existed, Mr. Gookin stated that "the net impact on river flows by the Pimas would have been minimal. Yet, the Pimas did not trade by water." *Id.* at IV:10.

3. Early non-Indian exploration of the area

Evidence of the time when early explorers ventured into the area is perhaps "the best evidence of the River's natural condition." *State v. ANSAC*, 224 Ariz. at 242, 229 P.3d at 254. With respect to the Gila, the evidence is that early forms of such transportation along the river were limited to horses, mule trains, wagons, and stagecoaches. *See* SLD/Upper, at 3-1, 3-25; SLD/Lower, at IV-64. No evidence was introduced in 2005 that any of the early explorers who ventured into the Gila River Valley ever used the Gila as a regular means of transportation or commerce. Instead, they traveled on horseback or on foot. *See* SLD/Upper, at 4; Tr. at 11/16/05:68-69 (Gilpin). This is true despite the fact that many of these same explorers are known to have used canoes, rafts, and other watercraft when they reached the navigable Colorado on these same expeditions. *See* SLD/Upper, at 4, 3-1, 8-2.

The Commission's 2009 Decision discussed evidence of early explorers and trappers along the Gila. The Commission found that "[t]hese mountainmen generally rode horseback or walked through the southwest and did not use canoes, rafts or other types of boats on any of the Arizona rivers except the Colorado." 2009 Decision, at 32.

During the 2014 hearing, Mr. Fuller agreed that the early trappers along the Gila traveled primarily on horseback or on foot, even though they used canoes and rafts when they reached the Colorado. *See* Tr. at 06/17/14:324-25 (Fuller). As he did with regard to the lack

of accounts of pre-historic and Native American boating, however, Mr. Fuller spent much of his testimony trying to come up with reasons why no significant amount of boating occurred on the Gila. For example, Mr. Fuller testified that Arizona does not have a lot of wood "good for building dugouts or wood canoes" suitable for navigating the Gila. *Id.* at 06/16/14:52.

Contrary to all of the testimony during the 2005 hearing, Mr. Fuller testified during the 2014 hearing that one set of trappers built and used canoes on the Gila. *See* Tr. at 06/16/14:169-70 (Fuller). He stated that that, according to one graduate student's master's thesis, James Ohio Pattie traveled by canoe from Safford to Yuma on several occasions. *Id.* at 177, 190, 264. On cross-examination, however, he admitted that the same master's thesis indicated that the canoes were used to navigate the Colorado, but not the Gila. *Id.* at 327-28.

Mr. Fuller's opinions regarding Pattie's alleged use of canoes on the Gila vacillated during his testimony. At one point, he conceded that his account of the Pattie descriptions of the Gila were taken from a draft document prepared by the Arizona Attorney General's Office rather than his own evaluation. *See* Tr. at 06/17/14:330 (Fuller). Later, he testified that he was not familiar enough with the Pattie memoirs to show where in those memoirs Pattie stated that he canoed from Safford to Yuma "several times," but indicated that this statement was attributed to prior testimony by Barbara Tellman, who testified for the SLD during the 2005 hearing but was not present for the 2014 hearing.[9] Still later in the hearing, he generalized his testimony to the statement that "some historians" have reported that Pattie took several trips between Safford and Yuma in the 1820s. *See* Tr. at 06/18/14:730 (Fuller).

Mr. Farmer did not testify regarding Pattie, but he did acknowledge that Father Kino and the Spaniards never boated the Gila. *See* Tr. at 06/18/14:593. Mr. Fuller admitted that one of his prior reports[10] concluded that early Spanish explorers navigated the Colorado, but

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[9] *See* Tr. at 06/17/14:335-36 (Fuller); Fuller/Gila, at 101; *see also* Tellman evidence (November 6,1995) [EI 6].

[10] *See* Fuller, et al., *Criteria for Assessing Characteristics of Navigability for Small Watercourses in Arizona*, at 21 (September 1998) [X016-FMI_X008].

that "[t]he Spaniards are not known to have used boats on other Arizona rivers as their exploration inland was on horseback and on foot." *See* Tr. at 06/17/14:339.

Evidence of any use of boats on the Gila by early trappers and other explorers is sketchy, at best. What is at least equally important is that such evidence, even if it does exist, relates to only one account out of the many trappers and early explorers who were in the vicinity of the Gila. Except for the ambiguous Pattie account, no other evidence exists that any of these individuals ever boated or even tried to boat the Gila.

4. Federal land surveys and patents

Dr. Douglas Littlefield, an expert on the history of the West, testified during the proceedings leading to the Commission's 2009 Decision. *See* 2009 Decision, at 45. Dr. Littlefield's testimony focused primarily upon an analysis of federal land surveys, federal and state land patents, government reports, and other historical documents. *Id.* at 45-49. With respect to Dr. Littlefield's survey work, the Commission stated: "The instructions to surveyors in these manuals uniformly held that navigable rivers and lakes were to be meandered by the federal surveyor, although the manuals did not specify the definition of navigability, but left it to the discretion and opinion of the individual surveyor." *Id.* at 45. The Commission found that "[n]ine surveyors mapped the lands lying along the Gila River between the Salt River and the Gila's confluence with the Colorado River from 1867 to 1912. All found the Gila River to be non-navigable." *Id.* at 46. "While the surveyors' opinions as shown by their action and reports are not determinative of the issue of navigability, their actions and opinions are probative and support the position that the watercourses were not navigable." *Id.*

Dr. Littlefield testified again in 2014. Dr. Littlefield stated that the U.S. General Land Office ("USGLO") surveys are evidence of non-navigability because they are the "perspective historical party who was specifically told to look for navigability at the time that he carried out his work and these were professionals . . . ." Tr. at 08/18/14:1317. The surveys are particularly relevant to determining navigability in the Gila's "ordinary and natural"

condition because most of them were performed at a relatively early date. *Id.* at 1315. Dr. Littlefield examined all of the plats and field notes covering the Gila from its confluence with the Salt to the confluence of the Colorado and concluded that "none of them indicated that the river was navigable by having meanders done on both banks." *Id.* at 1335-36.

Dr. Littlefield testified that state, federal, and homestead patents also "shed considerable light on the navigability or nonnavigability." Tr. at 08/18/14:1337. He examined "every single federal and state patent that in any way touched the Gila River." *Id.* at 1337-38. The state land patents represent approximately sixty separate instances where State officials as well as the parties purchasing the land found the Gila not to be navigable. *Id.* at 1360. Dr. Littlefield examined over one hundred federal patents, and in not one instance did he find a patent suggesting that the Gila was navigable. *Id.* Dr. Littlefield testified: "[T]here are approximately 150 federal and state patents issued by different federal and state authorities to multitudes of people and entities where all of these parties made judgments that in their opinion the Gila River was not navigable." *Id.* at 1361.

5. Attempts to boat the river prior to and around statehood

The Commission in 2009 also considered evidence of individuals who had attempted to float boats on the Gila. The Commission's decision, for instance, discussed the efforts by Lt. George Stoneman to build rafts out of wagons and float them down the river in the 1840s. *See* 2009 Decision, at 33. "The rafts did not work and were constantly running aground and had to be pushed by the soldiers to keep them going. Lt. Stoneman was ultimately forced to jettison a portion of the cargo and proceed on by horseback and mule." *Id.* The Commission also considered evidence of scattered attempts to float boats by Forty-Niners, the Howard party, and others. *Id.* at 33, 39-40, 43, 54, 57-59. The Commission determined that these sporadic efforts did not show that the Gila was navigable. *Id.* at 59.

The proponents of navigability submitted evidence of a few additional boating attempts during the 2014 hearings, but none of that evidence was any more persuasive than

that which had been previously submitted. Even Mr. Fuller acknowledged that the accounts consisted of "low draft" boats used for "downstream travel." *See* Tr. at 06/16/14:60.

In yet another effort to explain the paucity of boating accounts prior to statehood, Mr. Fuller suggested that the reason "there might not have been more historical accounts [of] boating" is because boating was so common that boating trips were not "noteworthy." Tr. at 06/16/14:51. Mr. Fuller also speculated, for example, that, because Arizona developed in a way that population centers and forts were not located along rivers, alternative modes of transportation were required to get in and out of Arizona. *Id.* at 52-54.

Mr. Fuller's explanations for the lack of boating accounts on the Gila, however, ignored the most plausible explanation for that fact—that the Gila was not navigable, even in its "ordinary and natural" condition in the mid-1800s. After his travels in Arizona in the 1840s, for example, William H. Emory described the shifting channel of the Gila west of the Salt confluence. *See* Littlefield 2013, at 96-97. Emory stated in 1853 that the Gila "is not navigable, but is a never failing stream, discharging a large volume of water." *Id.* In an 1857 report, Emory further described the Gila's shifting channel: "The Gila does not always run in the same bed; whenever it changes the boundary must change, and no survey nor anything else can keep it from changing."[11] Even Mr. Fuller conceded that Lt. Emory described the Gila as "non-navigable." *See* Tr. at 06/16/14:178; Fuller/Gila, at 81.

Authoring a chapter in Emory's 1857 report, Lt. Nathaniel Michler also concluded that the Gila was not navigable while indicating that the Colorado was the only navigable river in the area:

> . . . The Gila becomes so low that a sand-bar forms at its mouth during the summer, and at no time does it supply much water. The Colorado on the contrary, is navigable for small steamers, drawing two and two and a half feet water, as high up as Fort Yuma. . . . This [navigation] is a great saving, as the cost of transportation of stores by trains across the desert is enormous. . . .

Littlefield 2013, at 97-98.

[11] *See* Littlefield 2013, at 97 (citing Emory, *Report on the United States and Mexican Boundary Survey Made under the Direction of the Secretary of the Interior* (1857)).

Another expedition of note is that of the Mormon Battalion in October 1846. *See* Littlefield 2013, at 94-95. Col. Phillip St. George Cooke described his failed attempt to travel down the Gila by wagons converted into boats during that expedition. *Id.* Col. Cooke stated: "The experiment signally failed, owing to the shallowness of the water on the bars; the river was very low. In consequence of the difficulty of approaching the river, orders mistaken &c., the flour only was saved from the loading, and the pontoons were floated empty to the crossing of the Rio Colorado, where they were used as a ferry boat." *Id.*

Mr. Fuller acknowledged that Col. Cooke described the Mormon Battalion's attempts to boat the Gila as a "complete failure." *See* Tr. at 06/16/14:192. Mr. Fuller, however, disagreed with Col. Cooke, stating that (in Mr. Fuller's opinion) the trip was a success because the boat arrived in Yuma. *See* Tr. at 06/17/14:410-11, 416. Mr. Fuller emphasized: "Nobody died. Nobody was injured. That seems like successful boating." *Id.* at 410-11, 418-19.

Testimony during the 2014 hearing also addressed the "Howard" trip in 1849. In 1885, a newspaper included a story of the use of a ferry to float a family down the Gila in 1849. *See* Littlefield 2013, at 131-32. The article stated that military officials at Fort Yuma were alarmed when they heard of the trip because of the dangerous nature of the river. *Id.* With regard to this trip, Mr. Fuller acknowledged that the newspaper described the family as "reckless voyagers." *See* Tr. at 06/16/14:195; Fuller/Gila, at 103. He further admitted that Charles Edward Pancoast's account includes the following statements by the crew of the Howard family trip: "The Crew told us afterwards that they found the River shallow and full of Bars, and the Current very rapid; they frequently found themselves aground and had much difficulty in getting off."[12]

Another report of attempted boating is the "Yuma or Bust" trip in 1881. The *Arizona Gazette* reported about an exploration of the Salt and Gila, stating: "'Yuma or Bust' party

[12] *See* Tr. at 06/17/14:424 (Fuller); Hannum, *A Quaker Forty-Niner: The Adventures of Charles Edward Pancoast on the American Frontier*, at 248 (1930) [X004_ASLD 47].

which left Phoenix recently for the purpose of exploring the Salt and Gila rivers were seen yesterday, only twelve miles from here, all waiding [sic] in mud and water up to their knees, pulling the boat, and apparently as happy (?) as mudturtles." Littlefield 2013, at 128. Four days later, the *Gazette* contained another story, stating that "the boat reached Gila Bend and 'busted.' . . . [The crew] endured great hardships, being compelled to wade in the water the greater portion of the time and push the craft ahead of them." *Id.* With regard to the "Yuma or Bust" expedition, Mr. Fuller acknowledged that they had "[a] good deal of trouble getting through some sandbars" and were seen "pushing their boat." *See* Tr. at 06/16/14:196-97; Fuller/Gila, at 107.

As a basis for his opinion that the Gila was navigable in its "ordinary and natural condition," Mr. Fuller also relied upon a reported trip by Stanley Sykes and Charlie McLean from Phoenix to Yuma in the 1890s. *See* Tr. at 06/16/14:197 (Fuller); Fuller/Gila, at 108. On cross-examination, however, Mr. Fuller admitted that, during the 2005 hearing, Ms. Tellman (another witness for the SLD) testified that the Sykes trip was "quite unsuccessful": "Only one person could be in the boat at the time because the other one would weigh it down too much. So one person would walk along and pull the boat while the other one sat in it, or sometimes they both would pull the boat." Tr. at 06/17/14:336-37 (Fuller); *id.* at 11/15/05:106 (Tellman); Fuller/Gila, at 115. Mr. Fuller opined that, although only one person could be in the boat at a time while the other person was walking along the river, the trip was still "successful for one person." *See* Tr. at 06/17/14:498-99; Fuller/Boating, at 108.

With regard to the reported Adams & Evans trip from Clifton to Sacaton and Tempe to Yuma in 1895, Mr. Fuller testified that the boaters reported "81 mile[s] of rough rapids and falls" and that they had difficulty in one segment because of a blind corner, which resulted in them damaging their boat while attempting to line it. *See* Tr. at 06/16/14:200. Mr. Fuller relied upon this account in arriving at his opinion of navigability, however. *Id.*

With respect to the lower stretch of the Gila below Dome (the SLD's Segment 8), Mr. Fuller testified that, in 1897, people had been bringing wood down the Gila on a raft. *See* Tr.

at 06/16/14:201 (Fuller); Fuller/Gila, at 113. On cross-examination, however, he admitted that he did not know how long the logs were floated, and he acknowledged that it could have been as short as half a mile. *See* Tr. at 06/17/14:427 (Fuller). He testified that this was the only documented instance of floating logs on the Gila. *Id.*

Mr. Fuller's Power Point presentation implied that steamboats traveled up to Gila City, on the Lower Gila. *See* Fuller/Gila, at 99. At the hearing, however, he could not testify as to where Gila City was located or how many miles up the river it was. *See* Tr. at 06/17/14:410 (Fuller). Dr. Littlefield later testified that he has never seen a primary source stating that a steamboat traveled up the Gila to Gila City or Dome. *Id.* at 08/18/14:1394 (Littlefield).

6. Published historical descriptions of the Gila

The historical evidence also includes descriptions of the river by those who were present in the area at an early date. For instance, Richard C. McCormick, who served as Arizona Territory's delegate to Congress from 1869 to 1870, testified before Congress on April 1, 1870, regarding a possible railroad route through Arizona. *See* Littlefield 2013, at 121. Regarding the Gila, he stated: "For half or two-thirds of the year it is a larger river, and the other part a comparatively small one. It is not navigated." *Id.*

On July 12, 1884, the *Arizona Champion* published an article detailing the advantages of living in Arizona, described the Gila as a "large stream," but concluded: "The territory has but one navigable river, the Great Colorado." *See* Littlefield 2013, at 130.

In 1891, the *Twelfth Annual Report of the U.S. Geological Survey* ("USGS") included a description of the Gila stating that "[t]hese streams fluctuate greatly, being at times subject to sudden floods, especially during summer rains, when they often sweep out bridges, dams, and canal head works, while at other times they may diminish until the water almost disappears." *See* Littlefield 2013, at 101.

Similarly, the USGS *Report of Progress of Stream Measurements for the Calendar Year 1905, Part XI. Colorado River Drainage Above Yuma* stated:

> [t]he river now (1905) flows in a channel fully 1 mile north of the original channel. . . . At every flood the channel shifts. The valley at its narrowest is half a mile wide and the waters may occupy any part or all of it. . . . [The river contains] an enormous amount of mud and sand. At times the waves of sand traveling along the bed of the stream are so large, the current is so swift, and the stream so shallow, that the water is broken into a uniform succession of waves 2 feet high and over.

Littlefield 2013, at 101-02. This document also included a table recording discharge at "Gila City." On February 8, 1905, the discharge was 82,000 cubic feet per second ("cfs"), but just eight days later (February 16), no discharge was recorded at all. *See id.*

In 1906, U.S. Geological Survey Water Supply Paper No. 162 entitled *Destructive Floods in the United States in 1905, with a Discussion of Flood Discharge and Frequency and an Index of Flood Literature* described the Gila's spring floods: "[The Gila's bed] not only scours out during a flood and fills in after it, but [the] channel changes from one side of the bottom to the other. . . . This continual changing of the river bed has made it exceedingly difficult to secure reliable estimates of the rate of flow, and some of the estimates may be largely in error." Littlefield 2013, at 102-03.

B. <u>Hydrology and geomorphology of the Gila</u>

1. Hydrologic evidence

The Gila is and always has been "susceptible to wide seasonal and annual variations in discharge rates." SLD/Upper, at 8. In its 2009 Decision, the Commission found that, "[p]rior to statehood, especially in the 1860's and before, the Gila River was described as a perennial stream and was thought to flow year round, although the flow varied from very low, sometimes less than 100 cubic feet per second, to annual floods estimated as high as 20,000 cubic feet per second." 2009 Decision, at 62. The Commission noted that "the river has been described as extremely erratic, unstable, and unpredictable in its disposition." *Id.*

Several of the witnesses in 2014 compared the characteristics of the Gila to those of the Colorado. Mr. Fuller, for instance, testified that because the Colorado (some of which has been deemed navigable) has floods, droughts, large seasonal fluctuations, rapids, shifting

channels, sandbars and islands, these characteristics "are not definitive evidence of nonnavigability." Tr. at 06/16/14:262-63. Mr. Fuller acknowledged, however, that he did not know the median flow of the Colorado River in its ordinary and natural condition. *See* Tr. at 06/17/14:432. Upon further examination, Mr. Fuller admitted that the Gila is likely to have a lower median flow rate than the Colorado. *Id.* at 06/18/14:747.[13]

From a historical perspective, Dr. Littlefield testified that, in 1866, the *Arizona Miner* included a description of the Gila, stating that it "is at some seasons dry twenty-five miles above its junction with the Colorado." Littlefield 2013, at 120. Thus, the additional hydrologic evidence introduced during the 2014 hearings further supports the Commission's 2009 conclusion that, prior to statehood, including in the 1860's and before, the flow of the Gila was not sufficient to support navigation. *See* 2009 Decision, at 62.

2. Geomorphic evidence

The Commission's 2009 Decision also discussed the geomorphology of the river. *See* 2009 Decision, at 67-72. With regard to the Upper Gila, for example, the Commission noted that, "[i]n the pioneer period, there was, during a good deal of the time, a single channel stream with moderate flow in the upper Gila Valley. The large floods in the 1890's and early 20th Century changed the river significantly, such that afterwards it showed a wide sandy flood plain with several branching channels." *Id.* at 67-68. Likewise, in the area around Florence, "the floods of the 1890's and early 1900's caused a great deal of channel and bank cutting and transformed the Gila River into a wide, braided channel with very little depth when it did flow." *Id.* at 68. Similarly, the Commission found that, "[i]n the lower Gila River below Gila Bend, the river was described as shifting its channel position significantly." *Id.*

The Commission's 2009 findings regarding geomorphology were based, in part, upon the testimony by Dr. Stanley Schumm. Dr. Schumm submitted a report in 2004 and testified during the 2005 hearings. *See* Schumm, *Geomorphic Character of the Lower Gila River*

[13] Mr. Farmer, the SLD's other witness, testified that he would not check the USGS flows for the Grand Canyon if he intended to boat it, but that he would check the USGS flows if he intended to boat the Gila. *See* Tr. at 06/18/14:618.

(June 2004) [EI 6] ("Schumm"). Dr. Schumm testified that substantial portions of the river prior to statehood, especially in the lower portions of the river below the Salt confluence, consisted of a braided channel. *Id.* at 3. Such channels are associated with sand bars and other impediments to navigation. *Id.* In his report, Dr. Schumm stated that "[t[he Gila River is characterized by inherent instability and frequent and destructive channel migration." *Id.* Dr. Schumm concluded that, in part due to the large floods that occurred in 1905 and 1906, the "[g]eomorphic and hydrologic evidence demonstrates that on February 14, 1912 the lower Gila River was not navigable." *Id.* at 16; *see also* Tr. at 11/17/05:17.

Dr. Gary Huckleberry of the Arizona Geological Survey, who prepared the "Historical Geomorphology" section of the SLD consultants' 2003 report on the Lower Gila, stated:

> The Gila River is a classic example of a dryland river that seldom seeks equilibrium form. Unlike rivers in humid regions that have more stable channels adjusted for more continuous streamflow with less variance in discharge, the dryland rivers are inherently more unstable and more prone to changes in channel configuration. . . . [A] basic premise of this study is that the Gila River responds to secular climatic variability by radical changes in channel configuration, and that periods of increased, large flood frequency correlate with unstable, braided channel conditions.

SLD/Lower, at VII-10. Large periodic floods continued on the river before and after statehood. *See* Section V(B)(2), *infra*. Those floods are part of the "natural" condition of the river, and their impacts on the watercourse are part of its "ordinary and natural" condition. *Id.*

The Commission in 2009 found that the Gila "was not navigable or susceptible of navigability in 1860 and before, when white settlers began to divert water for irrigation, but even if it had been, the great floods of the 1890's and early 1900's so changed the character of the river that it was clearly not navigable or susceptible to navigability on the day of statehood." 2009 Decision, at 79. The geomorphology of the Gila, in its ordinary and natural condition, simply was not conducive to navigation.

Although much of nine additional days of hearing in 2014 focused on the geomorphology of the river in its "ordinary and natural condition," none of that evidence

changes the conclusion that the Commission reached in 2009. Mr. Fuller, for instance, testified that the "character of the river valley is rewritten" during large flood events, and he stated that these flood events can move the low flow channel from the left side of the river to the right. *See* Tr. at 06/16/14:117.

Dr. Schumm passed away in the interim between the 2005 and 2014 hearings, and his colleague, Dr. Robert Mussetter, continued his work on the Gila.[14] Dr. Mussetter testified that the geomorphology of the river (i.e., the "channel pattern") "has a lot to do with whether a river is navigable." *See* Tr. at 08/19/14:1649, 1675-76. He stated that, "historically, the characteristics of the Gila River are very strongly impacted by floods that occur in the river." *Id.* at 1678-79. "This river has undoubtedly always been very dynamic. It has experienced large floods." *Id.* at 1679. Regarding the Gila and similar rivers, Dr. Mussetter testified:

> They basically work by a big flood comes along, it blows the river out, you get a wide, braided condition, you tear up the banks, you shift the sandbars around and so on. And then over the next period of time the flood recedes and the river kind of settles down, and it's been described as sort of recovering back towards a more stable and less dynamic system. And then another flood comes along and you start the process all over again.

Id. at 1879-80. Dr. Mussetter acknowledged that portions of the Gila might have had a single channel in the mid-1800s and perhaps at other times over the prior hundreds of years, but he said that those periods were naturally followed by large floods that would turn the river back into a wide, braided channel. *Id.* at 1693, 1965, 1697-1700.

At certain points in history, certain portions of the river might have had a single, relatively stable channel. At other times, however, especially for extended periods following floods and during other wet cycles, the Gila appeared as much of it appears today—a wide, unstable, braided watercourse with multiple and shifting channels. *See, e.g.*, Tr. at 06/16/14:135 (Fuller); Fuller/Gila, at 37.

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[14] *See* Mussetter, Declaration Regarding Navigability of the Gila River Between the Arizona-New Mexico State Line and the Confluence with the Gila River (January 8, 2014) [X003] ("Mussetter"); Tr. at 08/19/14:1658-60 (Mussetter).

As every witness testified, the dynamic and shifting nature of the Gila is an "ordinary and natural condition." For instance, Mr. Farmer testified that the Gila is a "dynamic river." *See* Tr. at 06/18/14:639. Mr. Gookin stated that "[t]he reason that no single condition can be used is simply that a river is variable." Gookin 2014, at III:2. Dr. Littlefield testified: "The historical record illustrates that the Gila River was erratic, subject to unpredictable flooding, prone to channel changes and blocked by natural obstacles such as rock outcroppings and sandbars." Tr. at 08/18/14:1450.

Several witnesses addressed the presence of beaver dams on certain portions of the Gila. *See, e.g.,* Tr. at 06/16/14:75-76 (Fuller); Fuller/Boating, at 96. The witnesses discussed whether the beaver dams would have been an impediment to navigation. Mr. Gookin opined that "beaver dams would have forced considerable amounts of portage in the natural state." Gookin 2014, at III:9; *see also id.* at IV:11. With regard to going over a beaver dam in a canoe, Mr. Farmer testified: "The bottom of the boat is going to scrape over the top of the beaver dam. The front of the boat is probably going to hit the bottom on the reentry. The back of the boat is probably going to drag the beaver dam all the way down." Tr. at 06/18/14:626. On examination by the SLD's counsel, Dr. Mussetter described his experience when he encountered beaver dams on rivers while he was boating: "Well, I got out of the canoe and carried it around and got back in the canoe." *Id.* at 08/19/14:1761. In other words, he portaged. *See* Tr. at 06/16/14:79 (Fuller) (definition of "portaging"). Upon further examination by counsel for Maricopa County, Dr. Mussetter testified that, if he had five days' worth of camping gear or 500 pounds of beaver pelts with him, he would have had to unload that cargo from the canoe prior to carrying it around the beaver dam. *Id.* at 08/20/14:1853-54.

Mr. Fuller was asked about other natural physical impediments to navigation on the Gila. He acknowledged, for example, that sandbars exist on the river. *See* Tr. at 06/16/14:77. He also stated that "strainers" (trees that grow into and over the river) exist. *Id.* at 79. He conceded that strainers can cause particular difficulty to inexperienced boaters. *Id.* Mr.

Farmer testified that boaters will encounter contact with rocks "[m]ost of the time" because of lack of visibility. *See* Tr. at 06/18/14:573.

Mr. Fuller testified that, in order to get past obstacles without portaging, a boater must find a deeper channel, get out of the boat and tow it with a rope, use body weight to propel the boat over the obstacle, or get out of your boat and drag it. *See* Tr. at 06/16/14:79-80; Fuller/Boating, at 104. Mr. Farmer stated that he has encountered rapids on the SLD Segments 2, 4, and 5. *See* Tr. at 06/18/14:564. He testified that the rapids on the Gila "could pose some danger" to a beginner boater. *Id.* at 565. He noted that there are places on the Gila where a novice boater "should get out and scout the rapid and plan his descent through it." *Id.* at 565.

Mr. Gookin also addressed other obstacles to navigation that existed under natural conditions but are no longer present. He discussed marshes that occurred on the Gila, referred to as "sh-shon" by the Pimas. *See* Gookin 2014, at V:17. Mr. Gookin stated: "The U.S.G.S. in its modeling of the predevelopment condition of the Gila River Indian Reservation found that in 1870 the western 1/3 of the Reservation had 'large marshy areas' due to groundwater coming to the surface. As late as 1915, the area still contained swamps." *Id.* at V:18.

III. The Proponents of Navigability Bear the Burden of Proving that the Gila is Navigable.

The Arizona courts have long held that the proponents of navigability bear the burden of proving that a river is navigable.[15] The Arizona statutes further support this allocation of the burden. In order for the Commission to determine that a particular watercourse or segment thereof is "navigable," the proponents of navigability must establish that fact by a "preponderance of the evidence." *See* A.R.S. § 37-1128(A). If sufficient evidence is not

[15] *See Land Dep't v. O'Toole*, 154 Ariz. 43, 46 n.2, 739 P.2d 1360, 1363 n.2 (App. 1987); *Arizona Ctr. for Law in the Public Interest v. Hassell*, 172 Ariz. 356, 363 n.10, 837 P.2d 158, 165 n.10 (App. 1991); *Defenders of Wildlife v. Hull*, 199 Ariz. 411, 420, 18 P.2d 722, 731 (App. 2001); *State v. ANSAC*, 224 Ariz. at 238, 229 P.3d at 250.

presented to show navigability for a particular watercourse or segment, the Commission must find that watercourse or segment non-navigable. *Id.*

IV. The U.S. Supreme Court's Decision in *PPL Montana* is Instructive with Regard to the Gila.

Although the additional nine days of hearing in 2014 and the thousands of pages of supplemental evidence perhaps did not shed much additional light on the navigability of the Gila, the U.S. Supreme Court's *PPL Montana* decision is particularly persuasive on the issue. The Court's opinion in that case is consistent with and strongly supports this Commission's conclusions in its 2009 Decision.

Proponents of navigability often have referred to the *PPL Montana* opinion as a "segmentation" case, in an apparent effort to downplay the importance of that Court's decision on other issues. The Court's decision in that case did address "segmentation" issues, but it also did a lot more.

For instance, the U.S. Supreme Court in *PPL Montana* rejected the "liberal" interpretation of the federal test of navigability that had been adopted by the Montana Supreme Court, an interpretation that has been advocated by the proponents of navigability in this and other Arizona cases. The Montana Supreme Court had stated: "Broadly speaking, the District Court perceived the navigability for title test as somewhat 'fluid.' . . . Our independent review of the caselaw in this area establishes unequivocally that the District Court's understanding of the navigability for title test was correct. The concept of navigability for title purposes is very liberally construed by the United States Supreme Court. . . ." *PPL Montana v. State*, 355 Mont. 402, 229 P.3d 421, 446 (2010), *rev'd,* 132 S. Ct. 1215 (2012). The Montana Supreme Court had applied that "very liberal" interpretation of the navigability test and also had adopted a similarly broad definition of "commerce": "Additionally, the term 'commerce' in the navigability for title context is very broadly construed. . . . Because navigability is based upon a broad definition of commerce combined with an 'actual' or 'susceptible of use' standard, present-day usage of a river may be

probative of its status as a navigable river at the time of statehood. . . ." *Id.* at 446-47 (citations omitted).

The U.S. Supreme Court reversed the Montana Supreme Court's decision and soundly rejected its reasoning. 132 S. Ct. at 1215. In reaching its decision, the Court took the opportunity to clarify and restate the law of navigability from its prior decisions and to rein in the more "liberal" and expansive constructions of that law proffered by some state courts and lower federal courts in recent years, including:

1. Reaffirming that the navigability for title test is applied as of the date of statehood. 132 S. Ct. at 1227-28. "Upon statehood, the State gains title within its borders to the beds of watercourses then navigable. . . ." *Id.*

2. Reiterating that the basis for a determination of navigability is use or susceptibility for use of the watercourse as highway for commerce. 132 S. Ct. at 1230. "By contrast, segments that are nonnavigable at the time of statehood are those over which commerce could not then occur. Thus, there is no reason that these segments also should be deemed owned by the State under the equal-footing doctrine." *Id.*

3. Confirming its prior pronouncements that the test relates to use or susceptibility to use for commerce as of the date of statehood. 132 S. Ct. at 1233. "Navigability must be assessed as of the time of statehood, and it concerns the river's usefulness for 'trade and travel,' rather than for other purposes." *Id.* "Mere use by initial explorers or trappers who may have dragged their boats in or alongside the river despite its nonnavigability in order to avoid getting lost, or to provide water for their horses or themselves, is not enough." *Id.*

4. Clarifying that post-statehood use of the river can be considered only if that use involves the same river conditions and the same types of boats that existed at statehood. 132 S. Ct. at 1233. The party seeking to prove navigability must show that " the watercraft are meaningfully similar to those in customary use for trade and travel at the time of statehood." *Id.* "If modern watercraft permit navigability where the historical watercraft would not, . . .

then the evidence of present-day use has limited or no bearing on navigability at statehood." *Id.* at 1233-34.

5. Reiterating and clarifying its prior opinions regarding seasonal use and its ability to prove navigability. 132 S. Ct. at 1234. Focusing on the commercial aspects of the transportation, the Court stated: "While the Montana court was correct that a river need not be susceptible of navigation at every point during the year, neither can that susceptibility be so brief that it is not a commercial reality." *Id.*

The proponents of navigability in the present case have continued to try to downplay the natural obstructions and other impediments to navigation on the Gila, contending that, under the liberal interpretation of the federal test, the river was navigable in its "ordinary and natural condition." In his 2014 testimony, Mr. Fuller attempted to distinguish between "obstacles" and "obstructions," arguing that features such as beaver dams, sand bars, and rapids were "obstacles" that make the river more "fun" and not "obstructions" that impede commercial travel. *See* Fuller/Gila, at 21 ("Obstruction ≠ Obstacle, Challenge"). The *PPL Montana* opinion makes clear, however, that natural obstructions to navigation that would require portages can and often do make the river nonnavigable:

> . . . Even if portage were to take travelers only one day, its significance is the same; it demonstrates the need to bypass the river segment, all because that part of the river is nonnavigable. Thus, the Montana Supreme Court was wrong to state, with respect to the Great Falls reach and other stretches of the rivers in question, that portages "are not sufficient to defeat a finding of navigability." 355 Mont., at 438, 229 P.3d, at 446. In most cases, they are, because they require transportation over land rather than over the water. . . .

132 S. Ct. at 1231.

V. Based upon the Evidence in the Record, the Gila is Not "Navigable."

A watercourse can meet the test for "navigability" under the Arizona statute and the case law if it satisfies either of two elements: (1) If it was actually used as a "highway for commerce," or (2) if it was "susceptible to being used" as a "highway for commerce." *See* A.R.S.§ 37-1101(5). In making such determinations, "all evidence should be examined

during navigability determinations and no relevant facts should be excluded." *Defenders of Wildlife*, 199 Ariz. at 425, 18 P.2d at 736 (App. 2001). "[A] river is navigable in law when it is navigable in fact." *Muckleshoot Indian Tribe v. FERC*, 993 F.2d 1428, 1431 (9th Cir. 1993). Thus, the Commission must consider all of the evidence in the record before it. When the Commission reviews the evidence, it should determine that the Gila never has been used or susceptible to being used as a "highway for commerce."

A. The Gila has never actually been used as a "highway for commerce."

No evidence exists of any prehistoric boating or flotation of logs on the Gila. *See* Section II, *supra*. Likewise, no credible evidence exists that the early explorers or soldiers ever used the river—for "commerce" or otherwise. *Id.*[16] The evidence of the isolated accounts of attempted boating does not establish that the river was used for any type of trade or travel. *Id.* Insufficient evidence exists to show that the Gila ever was actually navigated.

For instance, Dr. Richard E. Lingenfelter, a recognized expert on navigation in the West who has published more than twenty books and studied this issue since 1957, submitted an affidavit regarding navigation on the Gila.[17] Dr. Lingenfelter stated, among other things, that there is "no historical record of any commercial navigation on the Gila River," and "the Colorado River was Arizona's only navigable stream." Lingenfelter, ¶ 12, at 3. This lack of navigation occurred "despite a continuing demand from developing mines for cheaper transportation." *Id.* ¶ 30, at 10.

Mr. Fuller was the only expert who testified that the Gila was navigable. The primary areas of disagreement between Mr. Fuller and all the other experts centered on (1) whether it was possible to float a canoe or other small boat over any meaningful distance of the Gila in

[16] *See also Lykes Bros., Inc. v. Corps of Eng'rs*, 821 F. Supp. 1457, 1459 (M.D. Fla. 1993), *aff'd*, 64 F.3d 630 (11th Cir. 1995) (had river been navigable, it would seem obvious that military and settlers would have used the river to transport men and supplies rather than carrying them overland).

[17] *See* Affidavit of Richard E. Lingenfelter and curriculum vitae attached thereto (May 16, 2004) [X008] ("Lingenfelter").

its "ordinary and natural condition" and (2) whether that activity, even if it could have occurred, was sufficient to make the river "navigable."

B. The Gila has never been "susceptible to being used" as a "highway for commerce."

Because the river was never actually used as a "highway for commerce," the only way it can be considered navigable is if it was "susceptible" to such use. Insufficient evidence exists in the record to show that the river, in any condition at any time, was capable of acting as "a corridor or conduit within which the exchange of goods, commodities or property or the transportation of persons may be conducted." A.R.S § 37-1101(3) (defining "highway for commerce").

1. The federal test for navigability requires more than a finding that Jon Fuller could float a canoe down the river and not die.

As stated above, much of the disagreement among the experts related to the extremely liberal standard Mr. Fuller applied for navigability. Mr. Fuller used the terms "navigable" and "boatable" synonymously. *See* Tr. at 06/17/14:370-71. He testified that a river is navigable if "you can float a canoe down a stream." *Id.* at 280; *see also id.* at 455.

When pressed, Mr. Fuller opined that a river is navigable if he (Jon Fuller) could float a canoe down a particular segment, reach his designation, and **nobody died.** *See, e.g.,* Tr. at 06/17/14:371, 505. He defines a successful boating trip as one where "the boat, the passengers, and the cargo arrive[s]." *Id.* at 06/16/14:209. He defines a failed boating trip as a trip where "there was a death or serious injury, the cargo was completely lost and not recovered, the boat was destroyed and not repairable, and the trip was not completed." *Id.* According to Mr. Fuller, a boating trip is not a failure when there is "a difficulty or problem that was resolved during the trip," such as flipping a small boat, a necessary line or portage, an obstacle, or the boat required adjustments to navigate the stream. *Id.* at 209-10; *see also id.* at 06/17/14:390-92 (Fuller). "[T]he occasional flipping [of] a boat, the occasional bumping into a rock, [and] the occasional hitting a sandbar is not that unusual." *Id.* at

06/16/14:207 (Fuller). A newspaper describing a trip as "daring or adventurous or any other adjective that sounds scary" does not make it a failure. *Id.* at 210 (Fuller).

Applying this standard, Mr. Fuller concluded that the historical accounts of boating on the Gila were successful if there were no deaths or injuries and the travelers reached their destination. *See* Tr. at 06/16/14:210. Even while acknowledging, for example, that Col. Cooke described the Mormon Battalion trip as a "complete failure," Mr. Fuller (more than 150 years later) considered it a success because the boat arrived and, as he states: "Nobody died. Nobody was injured. That seems like successful boating." *Id.* at 06/17/14:410-11, 418-19.

Mr. Fuller applied his "nobody died" standard in a manner personal to the boater (himself). He stated that you "can't underscore the importance of experience" that is necessary to survive when piloting whitewater rivers. Tr. at 06/16/14:70. Mr. Fuller testified that the skill of a boater is a factor in determining whether a river is navigable. *Id.*at 06/17/14:361-62; *see also id.* at 06/16/14:52 (It "takes special skills to get down a river right-side up.").

Mr. Fuller testified that his "personal experience sitting in a boat" helps him determine what part of a river is boatable and what is not. *See* Tr. at 06/17/14:360. Mr. Fuller also testified that, because he could canoe the Gila, he believes "that the river is navigable." *Id.* Mr. Fuller acknowledged that, given his experience, there are rivers that he could navigate that less experienced boaters could not. *Id.* at 360-61.

Despite his lack of formal legal training, *see* Tr. at 06/17/14:359, Mr. Fuller acknowledged that his "nobody died" standard is of his own making. He formulated his own definitions of success and failure of a boating trip. *Id.* at 502-03.

Mr. Fuller's "nobody died" standard is contrary to the "commercial reality" test applied by the U.S. Supreme Court in *PPL Montana* and virtually every other portion of that opinion. *See* Section IV, *supra*. SRP's research has revealed not a single federal or state

court that has applied Mr. Fuller's "nobody died" test, and neither Mr. Fuller nor the SLD has submitted any case law to support his standard. It is his own test, and it is wrong.

Mr. Fuller's "nobody died" standard also is inconsistent with the specific findings of prior federal and state court decisions regarding the navigability of particular streams. For instance, Mr. Fuller has gone down the San Juan River in his canoe and apparently survived. *See* Fuller Photos, at 21-23 [X037]. The Special Master appointed by the U.S. Supreme Court found the San Juan non-navigable, however. *See* Report of the Special Master, at 185 (October 15, 1930) [X016-FMI_X009]; *United States v. Utah*, 283 U.S. 64, 74, 89 (1931) (affirming Special Master's findings). Likewise, based upon the flow rates, many other watercourses deemed non-navigable by federal and state courts likely would be navigable under Mr. Fuller's "nobody died" test. *See generally, e.g.,* Information Regarding Navigability of Selected U.S. Watercourses (April 2003) [EI 28].

Mr. Fuller's standard proves too much. The SLD itself, for instance, declined to assert navigability for the San Pedro, even though that river arguably might satisfy Mr. Fuller's "nobody died" test. Mr. Fuller himself testified that he personally concluded that the San Pedro was **not** navigable and that he consulted with the SLD when it made the decision to not take a position on navigability of the San Pedro. *See* Tr. at 06/17/14:282. Mr. Fuller testified that it was his recommendation to the SLD that it not "pursue a finding of navigability" for the San Pedro or Santa Cruz Rivers. *Id.* at 365-66.

That Mr. Fuller used himself in a canoe as his standard also is troublesome. The SLD's only other witness, Mr. Farmer, testified that canoes "are by far the most complex craft to navigate, but they are the epitome of being at one with the river, and canoes have a dynamic that you can get a canoe into places that you can't get other types of craft at certain water flows." Tr. at 06/18/14:548. Mr. Fuller's "nobody died" standard is not the proper standard for determining navigability under the federal test or the Arizona statute.[18]

[18] *See also* Tr. at 08/19/14:1663 (Mussetter) ("[J]ust because I can take some kind of modern craft down a river doesn't necessarily mean at the date of statehood that the river was navigable.").

2. Periodic large floods are a part of the "natural" condition of the Gila, and the resulting impacts of those floods on the river are part of its "ordinary and natural" condition.

Much of the testimony during the 2014 hearing related to whether the periodic large floods that occur on the Gila and change the nature and shape of the channel were "ordinary and natural." The evidence showed that such flood and channel changes had occurred throughout history, even before modern development, and thus were part of the river's "ordinary and natural condition."

For example, Francisco Garces explored Arizona between 1775 and 1776 and stated that the Gila ran over the land with such "lack of restraint" that it appeared "to shift their channels, forming wash-outs, and dividing into branches, according as the force of the current bears more or less to this side or to that." Littlefield 2013, at 93.

Mr. Fuller testified that he does not care about the flood channel and that "[f]loods are not part of the ordinary and natural condition" of the river. Tr. at 06/16/14:103. He stated that a river altering its course does not matter to him as a boater. *Id.* at 115-16.

Despite his testimony that the transformation of the channel during large flood events and the resulting condition after such floods simply does not matter, Mr. Fuller at other times was equivocal on those same points. For example, he testified that the braiding of the channel in the Upper Gila was the result of floods and that the braided flood channel "is a natural condition of the river." Tr. at 06/17/14:350-51; *see also id.* at 476-77. He also stated that, by comparing the maps between 1912 and 1948, the location of the channel shifted by approximately a half mile. *Id.* at 06/16/14:154-55. He opined that, in certain circumstances, "floods have more of an impact on the channel than [] diversions." *Id.* at 06/17/14:351.

That changes in the channel as a result of floods are part of the Gila's "ordinary and natural condition" was supported by testimony from all the other experts. For example, in Mr. Gookin's report, he concluded that three groups of major floods (1890-91, 1905-06, and 1915-1916) "were the floods that turned the Gila River from being a primarily single channel

river into a primarily braided stream." Gookin 2014, at II:13. Mr. Gookin opined that "a major flood often creates major changes in the channel configuration." *Id.* at V:11. "[S]ome reaches of the Gila River were braided in the early 1870s. After the major floods of the 1890-91 and 1905-06, many portions of the Gila River were braided." *Id.* at V:18.

Dr. Mussetter specifically opined regarding whether the impact of floods was part of the "ordinary and natural condition" of the river: "The specific time when the high water is there during a flood probably fits outside the definition of ordinary; but the impact of that, that persist[s] sometimes for many years or even decades after the flood, is an ordinary condition of the river." Tr. at 08/19/14:1701. Dr. Mussetter testified that the floods on the Gila were the primary driver of the braiding and that such floods occurred throughout history. *Id.* at 1679, 1852. Dr. Mussetter's 2014 testimony regarding the geomorphology of the Gila was consistent with the testimony by all the experts during the 2005 hearings (including Mr. Fuller's prior testimony and that of Mr. Huckleberry), and it was consistent with the Commission's 2009 Decision based upon that testimony. *Id.* at 08/20/14:1868-81 (Mussetter).

3. If the Gila had been "susceptible" to navigation, people would have navigated it.

Although the Gila existed in close proximity to much of the exploration and settlement in early Arizona, it was never used for any type of regular trade or travel. In order for the Commission to determine that the river was "susceptible to being used . . . as a highway for commerce," it must find that the prehistoric inhabitants, the early explorers, the Pima-Maricopas and Chiricahua Apaches, and thousands of citizens who resided along the river and in the general area prior to statehood simply failed to comprehend the potential usefulness of the river as an avenue for navigation. Insufficient evidence exists to support such a finding.

In an attempt to counter the argument that the lack of boating attempts throughout history on the Gila weighed in favor of a finding of non-navigability, Mr. Fuller opined that boating a particular river is an "evolutionary process that takes some time" to develop the

boats and experience required to navigate a river. *See* Tr. at 06/16/14:24. He suggested that some of the reasons as to why people did not navigate Arizona rivers were flow depth, cost, speed of travel, skills, and location. *See* Fuller/Boating, at 68. He admitted, however, that the middle and lower Gila were accessible. *See* Tr. at 06/17/14:450. He speculated that the Gila might not have been used because of the risk of capsizing. *Id.* at 06/16/14:58. He testified that there were less than 10,000 people in Arizona in 1870. *Id.* at 167. He never could explain why no substantial portion of those 10,000 people ever put a boat on the Gila, however, especially at a time before railroads, automobiles, and other forms of transportation existed.

It might be theoretically possible that, on one or more occasions in particular years, it would have been feasible for a person to float a boat down some portion of the river. Occasional use in exceptional times does not, however, support a finding of navigability. "The mere fact that a river will occasionally float logs, poles, and rafts downstream in times of high water does not make the river navigable." *United States v. Crow, Pope & Land Ents., Inc.*, 340 F. Supp. 25, 32 (N.D. Ga. 1972) (citing *United States v. Rio Grande Dam & Irr. Co.*, 174 U.S. 690 (1989)). "The waterway must be susceptible for use as a channel of useful commerce and not merely capable of exceptional transportation during periods of high water." *Id.* (citing *Brewer-Elliott Oil & Gas Co. v. United States*, 260 U.S. 77 (1922)).

No government agency, including federal land surveyors, ever indicated that the Gila was navigable. *See generally* Section II(A)(4), *supra*; *see also United States v. Oregon*, 295 U.S. at 23 (courts should consider government's treatment of watercourse as non-navigable in their analysis of navigability); *see also Washington Water Power Co. v. Federal Energy Regulatory Comm'n*, 775 F.2d 305, 332 (D.C. Cir. 1985) (government's, including Army Corps of Engineers', description and treatment of river is relevant to determination of river navigability). Likewise, no federal or state land patent indicated that the Gila was navigable. *See id.; see also Lykes Bros.*, 821 F. Supp. at 1460 (court found actions by State show that, for many years, it considered river non-navigable, e.g., land bordering river had been deeded to

private ownership and owners paid taxes); *Koch v. Department of Interior*, 47 F.3d 1015, 1019 (10th Cir. 1995) (because Federal Government did not express intent to retain island in non-navigable river, title to island passed to patent holder). People did not navigate the Gila because it was not navigable.

4. The sporadic evidence of modern-day recreational boating on the Gila does not satisfy the *PPL Montana* criteria for indicia of "navigability" for title.

The U.S. Supreme Court in *PPL Montana* specifically found that post-statehood use of the river can be considered in determining navigability for title only if that use involves the same river conditions and the same types of boats that existed at statehood. 132 S. Ct. at 1233; Section IV, *supra*. As part of the evidence Mr. Fuller used to determine that the Gila was navigable, he relied heavily upon his opinion that the river is still navigable. *See* Tr. at 06/16/14:121. He even went so far as to extend his consulting work for the State of Arizona into a series of recreational canoe trips not long prior to the June 2014 hearing. *Id.*

To support his evidence of 2014 canoeing, Mr. Fuller testified that there is no difference in the draft between prehistoric canoes, canoes at the time of statehood, and Kevlar or plastic canoes. *See* Tr. at 06/16/14:37. He acknowledged, however, that "durability has improved significantly," which means that it requires less skill to safely pilot a boat down the river. *Id.* at 86-87. According to Mr. Fuller, the differences between modern-day boats and boats available in 1860 and 1912 are construction materials and durability. *Id.* at 06/17/14:365-69.

Mr. Farmer testified that "historic boats were generally made out of wood, [] sometimes they would use skins, [and] [s]ometimes they would use fabric in later years," and modern boats are made of plastic. *See* Tr. at 06/18/14:549. He was unaware of anyone making plastic recreational canoes in 1912. *Id.* at 592. He testified that the material the boats he currently owns are made of was not available at the time of statehood. *Id.* at 620-21. Those new products undergo "different manufacturing techniques completely." *Id.*

Mr. Gookin, an engineer, discussed the difference between boat-making materials used in the 1800s and early 1900s and those used today. Mr. Gookin stated: "In 1912, small water craft were built of wood. Now they are made of strong material such as fiberglass. Fiberglass is much stronger than wood. . . . [F]iberglass' strength is 30,000 psi. If the load is parallel to the grain, cedar can handle 1990 psi to 6310 psi depending on what type of cedar. If the load is perpendicular to the grain, which is the most likely scenario cedar can handle from 240 psi to 920 psi." Gookin 2014, at V:14.

Dr. Mussetter, also an engineer, addressed the issue of modern-day boats and testified that, based upon Archimedes Principle, an object that is put in water will displace an equivalent weight of water. *See* Tr. at 08/19/14:1705. A modern boat that has the same design as an historic boat, but is made out of lighter weight modern materials, will have a smaller draft than the heavier historic boat. *Id.* at 1705-06. Modern-day boats might have a similar overall design as boats that were available around 1900, but their ability to navigate shallow watercourses with sandbars, rapids, strainers, beaver dams, and other obstructions will be different from those of the earlier boats. *See id.*

VI. Summary and Requested Action

The Commission was right in 2009. Even after nine more days of hearing and thousands of pages of more evidence, the record does not support a finding that the Gila ever was used or susceptible to being used as a "highway for commerce," in its "ordinary and natural condition" or otherwise. [19] The Commission should find the river "non-navigable."

[19] In *State v. ANSAC*, the Arizona Court of Appeals held that the Commission must consider the watercourse in its "ordinary and natural condition." *See* Section I, *supra*. The Arizona Supreme Court has not yet addressed the test of navigability for any watercourse, however, so the ruling by the Court of Appeals remains subject to review by the Supreme Court following the conclusion of these proceedings on remand. SRP contends that the Gila was not navigable, in its "ordinary and natural condition" or in any other condition. In making the arguments presented in this brief, however, SRP does not waive its right to contend before the courts reviewing the Commission's decision that the extensive federal involvement in pre-statehood activities on the Salt River created special circumstances that should be considered in applying the navigability test with respect to the portion of the Gila downstream from the Salt/Gila confluence. *See, e.g.*, Act of June 17, 1902, c. 1093, 32 Stat. 388, *codified as amended at* 43 U.S.C. §§ 371 to 600e; Act of June 20, 1910, c. 310, § 20 ("Seventh"), 36 Stat. 557; *see also id.* § 28.

DATED this 14th day of November, 2014.

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