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8				
9	BEFORE THE ARIZONA NAVIGABLE STREAM			
10	ADJUDICATIO	ON COMMISSION		
11	In re Determination of Navigability of	No. 03-009-NAV		
12	the Verde River	SALT RIVER PROJECT'S CLOSING BRIEF		
13		CLOSING BRIEF		
14				
15	Pursuant to the Chairman's Order, the	Salt River Project Agricultural Improvement		
16	and Power District and Salt River Valley Wat	ter Users' Association (collectively, "SRP")		
17	submit their closing brief in this matter regard	ling the Verde River ("Verde"). Based upon the		
18	evidence in the record and application of the	appropriate legal test, the Commission should		
19	again find that the Verde is not navigable. The	e Commission need not address "segmentation"		
20	issues in detail because no significant portion of the Verde is navigable. <sup>2</sup>			
21	A table of contents begins on page ii. For purposes of this brief, exhibits from the			
22	hearings before 2014 are referred as "EI"	Supplemental exhibits from the 2014/15		
23	hearings are referred to as "X" Citations to	to the reporter's transcript of proceedings at the		
24	hearings appear as "Tr. at [DATE]:[PAGE] (V	WITNESS)."		
25				
26	<sup>1</sup> First Amended Order Consolidating Cases, Setti Dates and Guidelines for Future Hearings and Me	ing Deadlines for Evidence Submissions, Setting settings (May 20, 2015).		
27	<sup>2</sup> For purposes of this brief, SRP accepts the "segnature of the segnature of the segnatur	ments" developed by the Arizona State Land n that none of those segments is or was navigable.		

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#### I. <u>Introduction and Summary of Argument</u>

On March 24, 2008, after a full evidentiary hearing, this Commission found: "[T]he Verde River from its headwaters at Sullivan Lake to its confluence with the Salt River was not used or susceptible of use as a highway for commerce over which trade and travel was or may be conducted in the ordinary modes of travel on water as of February 14, 1912."

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 (three years prior to its 2008 Verde decision), was vacated by the appellate court in 2010.<sup>4</sup> 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 Verde case was pending in the Superior Court, the United States 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 were not present in its 2008 decision on the Verde,<sup>5</sup> the parties agreed to remand the Verde

<sup>&</sup>lt;sup>3</sup> ANSAC, Report, Findings and Determination Regarding the Navigability of the Verde River from Its Headwaters to the Confluence with the Salt River, at 53-54 (March 24, 2008) ("2008 Decision").

<sup>&</sup>lt;sup>4</sup> 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 Verde decision in March 2008, the Superior Court already had ruled on the Lower Salt appeal, and the appellate briefs had been filed in that case. 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).

<sup>&</sup>lt;sup>5</sup> In the Verde decision, for instance, the Commission specifically stated that it considered the river in its "ordinary and natural condition as of the date of statehood." 2008 Decision, at 49. With respect to Bartlett and Horseshoe Dam, "[t]he Commission considered the Verde River streambed as it existed on February 14, 1912, in its ordinary and natural course under Bartlett and Horseshoe Reservoir and found that the watercourse was not navigable." *Id.* at 51.

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 sixteen days of hearings<sup>6</sup> and reviewed several thousand pages of supplemental exhibits. This additional fact-finding, if anything, further emphasized the correctness of the Commission's 2008 Decision. The Verde is not and never has been a navigable watercourse that was or could have been used as a "highway for commerce." The Commission should again find the Verde non-navigable.

#### II. Evidence in the Record

The Commission has, over more than a decade, continued to receive and review evidence regarding whether the Verde was navigable in its "ordinary and natural condition" on February 14, 1912. *See* A.R.S. §§ 37-1101 to -1156. The Commission held nineteen days of hearings between 2005 and 2015. Despite these hearings, the proponents of navigability have been unable to show that the Verde is or ever was navigable.

#### A. <u>History of the Verde</u>

#### 1. Historic and prehistoric Indian use

Prehistoric evidence in the Verde River Valley reveals that the river provided an accessible route to water, but the river was used primarily for canal irrigation. Despite the proximity to the river, there was no documented evidence of any prehistoric boating. *See* Fuller 2003, at 2-14 [EI 31]. As Mr. Fuller, witness for the ASLD, concluded at the January 18, 2006 hearing: "We found no evidence in the archaeological record of any use of boats on the Verde River." *See* Tr. at 1/18/06:10 (Fuller); *see also* Fuller 2003, at 3-1 [EI 31].

In its 2008 Decision, the Commission found that "[t]here is no evidence in the archaeological record that would indicate that any of the prehistoric cultures located in the

<sup>&</sup>lt;sup>6</sup> Those additional hearing days are referred to herein as the "2014/15 Hearings."

<sup>&</sup>lt;sup>7</sup> See Fuller, et al., "Arizona Stream Navigability Study for the Verde River: Salt River Confluence to the Sullivan Lake," at 2-14 (June 2003) [EI 31] ("Fuller 2003").

study area used the Verde River as a means for transportation by boat or other water craft and there has been no documented use of the river as a highway for commerce for commercial trade and travel or regular floatation of logs. All travel in the study area during this period was by foot." 2008 Decision, at 23.

During the 2014/15 Hearings, Mr. Fuller testified that "[w]hen it comes to archaeology, there's not a lot to be said in terms of navigability." *See* Tr. at 12/15/14:118 (Fuller). He made it clear that "we have no accounts of boats or boating from the archaeological period. We have no preserved records that say the Native Americans were using boats. So I'll say it again. Native Americans, we have no evidence that they were using boats." *Id.* at 12/15/14:119 (Fuller).

#### 2. Spanish explorers

In the 1500s, Spanish explorers are known to have traveled in central Arizona in search of mines. *See* Fuller 2003, at 3-8 [EI 31]; Tr. at 2/24/15:2336-37 (August). Although the Spanish were very experienced boaters, *see* Tr. at 2/24/15:2337-38 (August), no evidence exists that these explorers ever used boats on the Verde. *Id.* at 2/24/15:2336-37 (August); Fuller 2003, at 3-8 [EI 31]. The Spanish explorers who encountered the Verde "came through on foot and on horseback." *See* Tr. at 12/15/14:120 (Fuller).

#### 3. American trappers and mountain men

Beginning in 1826, American trappers, such as James Ohio Pattie and Ewing Young, trapped in the vicinity of the Verde. Ewing Young trapped along the Verde, from its confluence with the Salt River to its headwaters, but there is no evidence in the record that Young's party ever traveled by water on the Verde itself. *See* Fuller 2003, at 3-2 [EI 31]

<sup>&</sup>lt;sup>8</sup> See also Tr. at 12/15/14:118, 12/17/14:657 (Fuller); *id.* at 2/24/15:2318-19, 2328 (August); *id.* at 2/20/15:1785-87 (Randall); Burtell, "Declaration of Rich Burtell on the Non-Navigability of the Verde River at and Prior to Statehood," at 4 (September 2014) [X009] ("Burtell 2014"); Affidavit of Vincent E. Randall, ¶¶ 33-36 (February 11, 2015) [X055-YAN 1] ("Randall 2015").

<sup>&</sup>lt;sup>9</sup> See Fuller 2003, at 3-8 [EI 31]; Tr. at 1/18/06:11 (Fuller); "Declaration of Jack L. August, Jr., Ph.D. on the Non-Navigability of the Verde River at and Prior to Arizona Statehood, February 14, 1912," at 9 (February 17, 2015) [X067] ("August 2015").

(noting that, in 1829, Young's trapping party "traveled along the Verde River"). In its 2008 Decision, the Commission determined that "[t]hese mountainmen generally rode horseback or walked through the southwest and did not use canoes, rafts or other types of boats on the Verde River or other Arizona rivers, except for the Colorado." 2008 Decision, at 24.

The 2014/15 Hearings revealed no additional evidence of waterborne transportation by these trappers and mountain men. Mr. Fuller testified that there are no mentions of boats on the Verde by these early adventurers. They were aware of and capable of building and piloting boats customarily used elsewhere for trapping in the Southwest, but there is no evidence they used such boats on the Verde. *See* Tr. at 2/25/15:2375-77 (August).

#### 4. Military expeditions

Later in the nineteenth century, military expeditions conducted surveys of railroad routes in the area of the Verde. *See* Fuller 2003, at 3-9 [EI 31]. There is no recorded history of boat travel by these military parties. *Id.* at 3-9 to 3-10. The Commission in 2008 discussed the presence of military expeditions and posts in the area but found that "[e]arly transportation in the middle Verde River Valley was by horseback, mule train, wagon and stage." 2008 Decision, at 26.

The 2014/15 Hearings involved a significant amount of evidence regarding the early military activities in the Verde Valley but no credible evidence of use of the Verde as a means of transportation by the military. "By the mid to late 1860s, four military camps were established on or near the Verde River, farming settlements had begun in the Verde Valley, and Prescott had been named the capital of the territory." *See* Burtell 2014, at 9 [X009] (citation omitted). "With this level of early development, it is difficult to explain how military personnel, farmers, and townspeople all failed to use the Verde River as a highway for commerce if it were susceptible to commercial navigation." *Id.* 

<sup>&</sup>lt;sup>10</sup> See Tr. at 12/15/14:120-21 (Fuller); Fuller, "Presentation to ANSAC: Verde River Navigability (Revised)," Slide 80 (December 8, 2014) [X035, ASLD 167] ("Fuller Power Point").

The 2014/15 evidence showed that efficiency and ease of transportation was a "constant[]" concern for the military, but they did not use the Verde. *See* Tr. at 2/25/15:2389-90 (August). "They instead used 'cumbersome' wagons, horses, and pack animals." *Id.* For instance, the military even cut the Stoneman Road, which "was not easy," instead of using the Verde. *See* Tr. at 2/25/15:2391-92, 2409-10 (August); *id.* at 3/30/15:2630 (Burtell). With regard to the Stoneman Road, Mr. Burtell testified: "I can't believe that if the Verde River was navigable, everybody would have ignored it because a road was so much easier. They were expensive to build. They were expensive to maintain." *Id.* at 3/30/15:2633 (Burtell).

#### 5. Settlers

Following the discovery of gold in Arizona, permanent settlement was established in central Arizona. *See* Fuller 2003, at 3-9 [EI 31]. Early settlers commented on the Verde, revealing its variable nature and indicating that it was impeded by beaver dams and had extensive marshes in the floodplains. *Id.* at 3-13 to 3-14. These early residents along the Verde used water from the river for farming, mining, and hydroelectric power. *Id.* at 3-15 to -17. Farmers in the middle Verde River Valley constructed irrigation ditches. *Id.* at 3-15. Ranchers and farmers raised products and crops that were transported overland to the military forts. *Id.* Yet, despite substantial usage of the waters of the Verde, there is no evidence that the river itself was used for the transportation of any goods or people. *Id.* 

Early transportation in the Verde River Valley was primarily limited to horseback, mule trains, wagons, and railroad. *See* Fuller 2003, at 3-19 [EI 31]. "Mining and farming began back in the 1860s, and particularly with the farming began the diversions." *See* Tr. at 12/15/14:121 (Fuller). There is no evidence, however, that miners and farmers along the Verde in the 1860s used boats on the Verde. *Id.* at 12/17/14:657 (Fuller).

Like the military, these early settlers also had a significant need for practical and reliable transportation near the river. A stage line that carried passengers and mail between Prescott and Maricopa Wells had begun in August 1868. *See* Burtell 2014, at 11 [X009].

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direct a route between the two towns as passing overland by stage through Wickenburg." Id.

"[H]ad the Verde, Salt, and Gila rivers been navigable, these streams would have offered as

#### Federal land surveys

Another group of individuals who were present along the Verde at a relatively early date were the federal land surveyors who were responsible for conducting the rectangular survey in the new territory. Dr. Douglas Littlefield testified, both at the 2006 hearing and again in 2015, regarding surveys on the Verde. 11 Each of these surveyors was under specific instructions to distinguish between navigable and non-navigable streams. See Note 11, supra. None of these Government representatives ever indicated that the Verde was navigable. See Littlefield 2005, at 73 [EI 32].

The Commission discussed the federal land surveys in its 2008 Decision. At that time, the Commission stated that "[t]he surveyors' opinions, as shown by their action and reports, are not determinative of the issue of navigability, but their actions and opinions are probative and support the position that the watercourse was not navigable." 2008 Decision, at 32 (citing, among other cases, Lykes Bros., Inc. v. United States Army Corps of Engineers, 64 F.3d 630 (11th Cir. 1995)).

In his 2014 report, Dr. Littlefield stated: "Since surveyors were required to 'meander' all navigable bodies of water (follow the sinuosities of the banks) and to keep detailed notes of those meanders, survey documents are vital to understanding what the Verde was like at the time of survey." See Littlefield 2014, at 7 [X002]. "Federal government surveyors were specifically charged with the task of identifying navigable streams as part of their surveying duties, and the manuals and instructions under which they carried out their work were very precise about how navigable bodies of water were to be distinguished from non-navigable streams." Id. at 49. "As part of the U.S. Government's surveying efforts, the areas along

See Littlefield, "Assessment of the Verde River's Navigability Prior to and on the Date of Arizona's Statehood, February 14, 1912," at 11-13, 37-45 (July 7, 2005) [EI 32] ("Littlefield 2005"); Tr. at 1/18/06:68-69 (Littlefield); Littlefield, "Revised and Updated Report: Assessment of the Navigability of the Verde River Prior to and on the Date of Arizona's Statehood, February 14, 1912," at 13-50 (April 3, 2014) [X002] ("Littlefield 2014").

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parts of the Verde River were surveyed and resurveyed many times in the years before 1912." *Id.* at 49-50. "Significantly, while those surveys were done at varying times of year, in different years, and by at least eight individuals, all of the descriptions and plats that resulted from this work consistently portrayed the Verde River as a non-navigable stream." *Id.* at 50.

Dr. Littlefield examined all of the survey notes and plats "for the entire Verde River, from its headwaters near Paulden, Arizona to the Verde's confluence with the Salt River, except for those surveys that were done long after statehood." *See* Tr. at 2/18/15:1465 (Littlefield). "Most federal surveyors along the Verde River did not meander the stream, thus indicating a lack of navigability in their viewpoints." *Id.* at 2/18/15:1473 (Littlefield). "In those few instances where the surveyors did meander the Verde, all of those instances are attributable to instructions in different surveying manuals for meanders of nonnavigable bodies of water under certain special circumstances." *Id.* at 2/18/15:1473-74. "Thus, there were eight different federal surveyors, who were specifically charged with recording navigable bodies of water, and who undertook surveys along the Verde in different years, that indicated the Verde River, in their view, was not navigable." *Id.* at 2/18/15:1474; *see also* Littlefield Power Point, at 16 [X024]. "[N]ot one of the surveyors recorded information about the Verde River that would be consistent with a determination of navigability." *See* Littlefield 2014, at 26 [X002].

#### 7. Federal and state land patents

The federal and state land patents issued along the Verde also are persuasive evidence of non-navigability. For example, the Federal Government granted over one hundred separate patents that touched or overlay the Verde to private individuals. *See* Littlefield 2005, at 110 [EI 32]; Tr. at 1/18/06:71 (Littlefield). In not one case did any of those patents (or the supporting patent files) indicate that acreage was being withheld because the Verde was navigable. *See* Littlefield 2005, at 110 [EI 32]; Tr. at 1/18/06:71 (Littlefield).

Dr. Littlefield obtained all of the patent files that either overlay or touch the Verde and reviewed all of those patent files. *See* Tr. at 2/18/15:1476 (Littlefield). "[T]here are over 100

of them . . . that the Verde River came in contact with." *Id.* "In not one instance did the U.S. government, in granting any type of patent along the Verde River, indicate a belief that the stream was navigable by withholding acreage for the bed of the river." *Id.* at 2/19/15:1517. (Littlefield). In fact, if you go through the homestead patent files, which Dr. Littlefield did, "many of the patent applicants and their witnesses specifically noted that their patent claims included the bed of the river." *Id.* "[N]one of the federal patents that overlay the Verde River (regardless of their respective dates) contain any provisions for reserving the bed of the river to Arizona." Littlefield 2014, at 62 [X002].

#### 8. Boating attempts

Additional evidence in support of a finding of non-navigability comes from the accounts of the Verde in the decades prior to statehood, including the early accounts of attempts by an ambitious few to actually float boats on the river. The evidence shows a sparse record of a handful of individuals who actually did attempt to navigate the Verde in the late 1800s.

As Mr. Fuller and his colleagues concluded when they were serving as impartial fact witnesses in 2003 (before Mr. Fuller took on the role of an advocate for navigability): "Historical accounts of boating on the Verde River do exist, though the vast majority of transportation in the region [was] by horses, mule trains, wagons, and railroad." *See* Fuller 2003, at 3-22 [EI 31]. As discussed in detail in Section V(A) below, the few historic accounts of attempted navigation on the Verde do not show that the river was actually used as a "highway for commerce."

#### 9. Other historical descriptions of the river

Other historical accounts of the Verde also support a finding of non-navigability. Perhaps the best example is a statement by the Arizona Territorial Legislature (which stood to gain title to the streambed upon statehood if the Verde had been navigable) in 1865 (when the river clearly was in its "ordinary and natural condition"). On December 28, 1865, the legislators passed a "Memorial Asking Congress for an Appropriation to Improve the

Navigation of the Colorado River," seeking \$150,000 to remove obstacles such as sand bars, snags, boulders, and other obstructions in the bed of the Colorado River. *See* Littlefield 2014, at 95 [X002]; *see also* Tr. at 2/19/15:1535 (Littlefield). That memorial declared that "the Colorado River is the only navigable water in this Territory." *See* Littlefield 2014, at 95 [X002] (emphasis added).

Mr. Burtell summarized the pre-statehood contemporaneous descriptions of the Verde as follows in his 2014 declaration: "Prior to development and under ordinary conditions, travelers along the river observed a relatively shallow stream characterized by both rapids and wide lagoons." *See* Burtell 2014, at 2 [X009]. For example, an article published in 1892 noted that "[t]he Rio Verde, like all Western streams, is quite copious during the spring months from the periodical rains and melted snow, but during the summer and autumn it is only a creek of 500 inches." *See* Littlefield 2014, at 99 [X002]. Mary Boyer's recollection of the Verde at Segment 2 in 1874 was that the river was "about the size of Woods ditch." *See* Tr. at 12/15/14:131 (Fuller); Fuller Power Point, Slide 92 [X035, ASLD 167]. Dan Huntington described the Verde in Segment 5 in 1880 as "full of beaver dams." *See* Tr. at 12/15/14:136 (Fuller); Fuller Power Point, Slide 96 [X035, ASLD 167].

#### B. Hydrology of the Verde

The hydrology evidence shows that the Verde was not susceptible to being used as "highway for commerce." The Verde watershed "is smaller in watershed area than the Gila." *See* Tr. at 12/15/14:130 (Fuller); Fuller Power Point, Slide 89 [X035, ASLD 167]. As the ASLD's own witnesses testified, the flows in the river are extremely variable. *See* Tr. at 12/16/14:418, 448 (Farmer). The Verde "is a dynamic river. It changes constantly." *Id.* at 12/17/14:561 (Farmer). Mr. Farmer testified that the Verde "is dynamic. The water comes up, it shifts the rock and the sand and the gravel around. It can topple trees. It can move objects. It's got that much power." *Id.* at 12/16/14:451 (Farmer). Mr. Lynch, the owner of an outdoor recreation company who testified for the ASLD, stated that flash floods can make boating the Verde "very dangerous." *Id.* at 12/16/14:296 (Lynch).

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When asked how shallow the river can get, Mr. Lynch testified: "It gets pretty skinny. I mean in terms of cubic feet per second, the Camp Verde stretch has been down into the 17, 18 cubic feet per second, and which isn't a lot of water; but, again, it all stays in the channel. We're out there moving rocks. We're helping to keep the water in channels so that it is boatable in different sections." See Tr. at 12/16/14:311-14 (Lynch) (emphasis added). Mr. Lynch, whose recreation company uses rubber "duckies" on the river, has a whole staff of people who move rocks, downed trees, and other obstacles from the river so that his customers can maneuver their "duckies" down a sort stretch of the river. Id.

The Verde is prone to long periods of low water. Mr. Burtell analyzed predevelopment flows on the river and estimated that, "for 75% of the time, undepleted streamflows along the Verde River remained (a) below 100 cfs in Segment 1 and the upper reach of Segment 2; (b) below 500 cfs in Segment 3 and the lower reach of Segment 2; and, (c) below 600 cfs in Segments 4 and 5." *See* Burtell 2014, at 15, 20 [X009]. Mr. Burtell "found that undepleted flows in the Verde River typically had a mean depth of less than 2.0 feet during 75% of the year." *See* Burtell 2014, at 20 [X009].

Mr. Hjalmarson attempted to reconstruct predevelopment flows on the Verde, but his methodology was not sound. As discussed in Section V(B)(3) below, his testimony does not support a finding that the Verde was "susceptible" to navigation in its "ordinary and natural condition."

In its 2008 Decision, this Commission found that "the area is subject to great variation in flow due to extremes in precipitation." 2008 Decision, at 44. "The river will have a very low flow during dry months and whenever there is a drought and then have annual high waters during the water and monsoon seasons. . . ." *Id.* The Commission found that the Verde, "while a perennial stream and flowed year round prior to statehood, was a very erratic, unstable and unpredictable stream because the flow varies from the very low, sometimes less than 200 cfs [cubic-feet per second], to annual floods estimated between 13,000 and 20,000

cfs with periodic floods exceeding 100,000 cfs." *Id.* at 52. The hydrology evidence introduced during the 2014/15 Hearings was consistent with those prior findings.

#### C. Geomorphology and Impediments to Navigation

The Commission also received a substantial amount of evidence regarding the geomorphology of the Verde and natural impediments to navigation. In conjunction with the prior hearing, geomorphologist Dr. Stanley Schumm presented a written report in 2004 regarding the geomorphology of the Verde. Dr. Schumm stated that substantial portions of the Verde have a braided channel along with bedrock controls and geologic structures and that the channel of the Verde changed historically, with channel erosion and channel widening largely as a result of floods in the early 20th century. *See* Schumm 2004, at 2, 8, 14 [EI 30]. Dr. Schumm concluded that "the numerous rapids and bedrock impact on the river prevent navigation, but even more important are the very steep gradients ranging from 12 to 25 ft/mile" that would make navigation "impossible." *See* Schumm 2004, at 2, 14 [EI 30].

Those conclusions regarding the variable nature and overall extremely steep slope of the Verde were consistent with the geomorphic information presented by the ASLD's consultants at the 2006 hearing.<sup>13</sup> The ASLD's 2003 report stated: "The bed forms of the low-flow channels are characterized by a repeating sequences of pools (deeper water areas) and riffles or rapids (shallow water areas typically dominated by cobbles and small boulders)." *See* Fuller 2003, at 5-6 [EI 31].

The Commission examined the geomorphology evidence in depth in its 2008 Decision. For instance, with respect to the canyon reaches of the Verde, the Commission found:

In the area above Bartlett Dam, excluding the Verde Valley, the Verde River flows through some of the most rugged country in Arizona. In these mountain canyons, the flood plain is limited in extent and the potential change

<sup>&</sup>lt;sup>12</sup> See Schumm, "Geomorphic Character of the Verde River" (December 2004) [EI 30] ("Schumm 2004").

<sup>&</sup>lt;sup>13</sup> See Tr. at 01/18/06:18-19, 26-27 (Pearthree) ("I hammered home the point the Verde is a variable floodplain, valley morphology changes a lot up and down the river."); Fuller 2003, at 5-26 [EI 31] (noting that the width of the flood channels varies substantially).

in channel position is also limited. The riverbank in these canyons is steep, making it difficult for people to reach the river. The river flows fast and contains rapids, waterfalls and other obstacles. The gradients range from 12 to 25 feet per mile, with the rapids, waterfalls and other obstacles in these narrow canyons and the steep gradient, navigation would be impossible . . . .

2008 Decision, at 42-43 (citing Dr. Schumm's testimony). With regard to the more alluvial reaches, the Commission determined:

In the Verde Valley and the reach below Bartlett Dam, the river spreads out over a larger flood plain and had braided characteristics with shifting sand bars and sand islands, which would make it impossible to be considered as navigable or susceptible to navigation.

Id. at 52.

During the 2014/15 Hearings, additional evidence was presented regarding physical characteristics of the Verde that make it not suitable for navigation. For instance, the evidence showed that the channel of the Verde is not confined and shifts over time, especially during floods and other high flow events. <sup>14</sup> "During floods, the flows are so powerful that they can rapidly and significantly alter the channel and adjacent overbanks." *See* Mussetter 2014, at 6 [X016]. The Verde is a "flood dominated" stream. *See* Tr. at 12/15/14:30 (Fuller). Mr. Lynch testified that

whenever we get the big flash flooding, of course, everything changes. . . . And then when we have the big flood events it cleans the whole corridor out. There's no more trees. Because once we get into low water times, the entire river corridor becomes — is overgrown with trees and brushes and all kinds of vegetation, and when we have our big flood events, bam, I mean it's just cleared out.

*Id.* at 12/16/14:302-03 (Lynch). "Sometimes after the big floods it just rechannelizes everything." *Id.* at 12/16/14:332 (Lynch). Large floods can shift the channel over the "entire reach" of the river. *Id.* at 2/18/15:1333 (Hjalmarson).

<sup>&</sup>lt;sup>14</sup> See Mussetter, "Declaration: Navigability of the Verde River," at 6 (October 10, 2014) [X016] ("Mussetter 2014").

Also, certain portions of the Verde (especially in Segments 2 and 5) have a braided channel, which is not conducive to navigation. *See* Mussetter 2014, at 24 [X016]. Mr. Fuller testified, for instance, that a photograph of Segment 2 from 1800 shows a braided portion of the river. <sup>15</sup> Mr. Hjalmarson admitted that a number of the photographs included in his report depict braiding. *See* Tr. at 2/18/15:1350-52 (Hjalmarson). Mr. Farmer stated that "[w]hen you get out of the low flow channel and you get out into the braided channels that now are watered, yes, you have severe hazards of trees." *Id.* at 12/16/14:450 (Farmer). Dr. Mussetter testified about significant braiding in Segment 5. <sup>16</sup>

The steep slope of the Verde also acts as an impediment to navigation. For example, "[t]he approximately 17-mile segment of the Verde River between Beasley Flat and Verde Hot Spring is relatively steep (~19 feet/mile)." *See* Mussetter 2014, at 11 [X016]. Mr. Fuller "didn't do any particular analyses, mathematical analyses, of slope" of the Verde, but he agreed that generally, as the slope of the river increases, it becomes less navigable. *See* Tr. at 12/17/14:636-37 (Fuller).

The existence of marshy areas on the Verde in predevelopment times also would have impaired navigation. *See* Tr. at 12/17/14:657-58 (Fuller). These conditions were most prevalent in the Camp Verde area, but such conditions existed in other parts of the Verde. *Id.* at 12/17/14:660-61 (Fuller); Tr. at 12/18/14:990 (Hjalmarson). In the 1870s, Segment 5 was a "source of malaria." *Id.* at 12/15/14:130 (Fuller); Fuller Power Point, Slide 90 [X035, ASLD 167]. Also in the 1870s, Segment 2 "was so marshy that the Yavapais were able to farm only 20 of the 125 acres available on the floodplain." *See* Tr. at 12/15/14:131 (Fuller). <sup>17</sup>

<sup>&</sup>lt;sup>15</sup> See Tr. at 12/15/14:149 (Fuller); Fuller Power Point, Slide 118 [X035, ASLD 167]; see also, e.g., Tr. at 12/15/14:115, 12/17/14:609 (Fuller) (discussing "highly braided" reaches of other segments).

<sup>&</sup>lt;sup>16</sup> See Tr. at 2/20/15:1883, 2/23/15:1944-45 (Mussetter); see also Mussetter, "Verde River Navigability," at 53 (February 2015) [X060] ("Mussetter Power Point").

<sup>&</sup>lt;sup>17</sup> See also Fuller Power Point, Slide 91 [X035, ASLD 167]; Tr. at 12/15/14:132 (Fuller); Fuller Power Point, Slide 93 [X035, ASLD 167]. In its 2008 Decision, the Commission found: "In the middle Verde area, there were marshes that served as breeding grounds for mosquitoes causing malaria, and this was the subject of a report by the Surgeon General of the Army in 1879." 2008 Decision, at 29.

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The presence of large boulders in the stream also limits navigation on the Verde. Mr. Hjalmarson's 2014 report states that "[t]here is also evidence of large boulders that rolled in and along the river channel and floodplain from adjacent steep slopes." When asked whether there are times when the flow is too low to run a guided tour, Mr. Lynch testified: "But the river – and we've done a lot of work to it. When the water gets low, we've gone out there, we have to move rock around." *See* Tr. at 12/16/14:293 (Lynch). When asked whether he could still boat the Verde if his company did not move rocks, Mr. Lynch testified: "You would be getting out of your boat a lot" on "all" sections of the river. *Id.* at 12/16/14:293 (Lynch).

Perhaps the most significant impediment to navigation on the Verde (other than shallow water depths) is the presence of numerous rapids, especially in Segment 3. Mr. Lynch, for instance, testified that he would not operate even his "duckie" operation below Beasley Flats. *See* Tr. at 12/16/14:334 (Lynch). Mr. Fuller agreed with Jim Slingluff's previous testimony that there are "probably 130 rapids or riffles on the river and that probably only 30 of them are large enough to have names." *Id.* at 12/17/14:722-23 (Fuller); *see also id.* at 12/15/14:64 (Fuller). Mr. Hjalmarson testified that "physical features of the channel itself, the number of, say, riffles or a major waterfall" affect navigability. *See* Tr. at 2/18/15:1264-65 (Hjalmarson). The largest of these features is Verde Falls. *Id.* at 2/23/15:1897-98 (Mussetter); Mussetter Power Point, at 18 [X060]. Even Mr. Farmer, a self-acknowledged "mountain man," warns people to use extreme caution when approaching Verde Falls. *See* Tr. at 12/16/14:457, 500 (Farmer). Despite his extensive time spent canoeing the Verde, Mr. Farmer has never run Verde Falls in a canoe. *Id.* at 12/16/14:457

<sup>&</sup>lt;sup>18</sup> See Hjalmarson, "Navigability Along the Natural Channel of the Verde River, AZ, Detailed Analysis from Sullivan Lake to the USGS Gage Near Clarkdale and General Analysis from Clarkdale Gage to Mouth," Appendix G, at 78 (October 4, 2014) [X015] ("Hjalmarson 2014").

<sup>&</sup>lt;sup>19</sup> "Williams (1996, pp.iii through 119) identified over 100 rapids along the Verde River from its headwaters to Horseshoe Reservoir." *See* Burtell 2014, at 13 [X009].

(Farmer). In fact, Mr. Farmer has never seen a person run Verde Falls in a fully loaded canoe. *Id.* at 12/16/14:458 (Farmer).

Another category of impediments to navigation which occur mostly on the upper reaches of the Verde is beaver dams. As noted in the "Verde River Blue Trail Guide" that Mr. Hjalmarson included with his report: "Numerous and prolific, beavers are the engineers of the Verde! In the stretches from the headwaters downstream to Perkinsville they have built dam after dam, creating habitat for plants, fish and mammals." *See* Hjalmarson 2014, Appendix I, at 13 [X015]. In the late 1800s, beaver dams were common along Segments 1, 2, and 5 of the river. *See* Burtell 2014, at 13 [X009]. Beaver dams are "part of the ordinary and natural condition of the river." *See* Tr. at 12/15/14:186 (Fuller).

"Strainers" also can make navigation more difficult and dangerous. The "Verde River Blue Trail Guide," for instance, warns: "Be aware of wildlife and river hazards such as strainers (fallen trees or debris) that are partially submerged in the water. They allow water to rush through but can pin a boat or body underwater." *See* Hjalmarson 2014, Appendix I, at 2 [X015]. Mr. Fuller, Mr. Lynch, and Mr. Farmer testified about strainers in Segments 1, 2, and 4. *See* Tr. at 12/15/14:71, 108 (Fuller); *id.* at 12/16/14:332 (Lynch); *id.* at 12/16/14:403 (Farmer). When asked if he thought other portions of the Verde River were navigable other than the portions where he operates his tours, Mr. Lynch replied:

They're tougher because there's a lot — you know, since nobody's out there maintaining them on a regular basis, there's a lot more tree growth, strainers, trees that have fallen. What we do on the stretches that we commercially boat all the time, we're out there **constantly** cutting back the bushes, the trees. When things fall into the river, we go out there **with our chainsaws**, because we've got to get all that stuff out of the river or people — it's just not safe. You can't get around it. So when you go into stretches of the river that we don't boat commercially, that can get relatively **overgrown with all kinds of strange things**."

Tr. at 12/16/14:309 (Lynch) (emphasis added). Mr. Farmer testified: "You don't want to get washed into a strainer. It can cause all kinds of problems. They're pretty much probably the

most dangerous part of the river if you would get swept into one." See Tr. at 12/16/14:404 (Farmer); see also id. at 12/16/14:450-51 (Farmer).

#### D. Boating

One of Arizona's premier white water boaters, Mr. Jim Slingluff, testified in 2006 regarding some of the boating trips he has taken on the Verde. *See* Tr. at 1/18/06:101-31 (Slingluff). His stories indicated that, at various points along its course, the river has natural impediments that would have prevented navigation at statehood and continue to do so. His slides depicted canoes and other modern craft hung up on boulders, trapped in rocky areas, and overturned after encountering falls or rapids.<sup>20</sup> Mr. Slingluff readily acknowledged that many stretches of the river are hazardous—even with modern equipment and his substantial expertise. *See* Tr. at 1/18/06:112-13 (Slingluff).

Two authors, Mr. Jim Byrkit and Mr. Bob Munson, who have written extensively on the history of the Verde, stated that the river is not navigable, even though they were aware of recreational boating on the river. *See* Fuller 2003, at 4-2 [EI 31]. Mr. Byrkit noted that such boating is normally possible only in February and March, and that in other months, "the Verde River cannot be run because it dries up or because it is dangerous, and that a lot of people have died in the Verde River because they enter the river during flooding." *Id.* 

Most, if not all, of the modern-day boating on the Verde is recreational. People take boats on the Verde for fun, not for transportation or to move goods. In his 2015 testimony, for example, Mr. Fuller agreed that recreational boaters "may choose to take the shallower channel because it's a, quote, more fun ride." *See* Tr. at 12/15/14:23 (Fuller). "The purpose of [modern boating on the Verde] was (and continues to be) recreational." *See* Burtell 2014, at 5 [X009].

The boats that people try to use on the Verde (now and in the past) are small. Every witness who was asked went out of his way to make it clear that barges cannot navigate the

<sup>&</sup>lt;sup>20</sup> See Tr. at 1/18/06:106-13 (Slingluff); see Slingluff, Power Point Presentation, Slides 21, 27, and 35 (boulders), 8, 19, and 38 (rapids), 40 (canoe pinned in boulder) (January 18, 2006) [EI 34].

Verde. *See* Tr. at 12/15/14:39 (Fuller); *id.* at 12/16/14:355 (Lynch); *id.* at 12/19/14:1084-85 (Hjalmarson). As Mr. Fuller testified:

[T]he boats that were being used are small boats. So I'm not here to say that you could take a steamboat down the Verde River. I think the rapids that are there, albeit they're mostly Class II, are enough to prevent that kind of use; nor even haul ore. Hopefully we can just dispel that whole argument and not have to come back to that. The river depths, the kinds of boats that you can get down this river are not sufficient that you're going to be hauling vast quantities of ore, certainly not the economic operations of the mines at Jerome. You needed to take that heavy stuff different places.

Tr. at 12/15/14:180 (Fuller).

It is also clear from the evidence in the record that the types of boats that people are using recreationally on the Verde today are far different from any boats available or used in Arizona in 1912. Canoes are "more durable than they were before." *See* Tr. at 12/15/14:57-58 (Fuller). Mr. Fuller testified that modern boats compared to historical boats have "improved durability, no doubt about that." *Id.* at 12/15/14:250 (Fuller). The primary difference between a modern plastic boat and a wooden boat of 1912 is that the plastic boat can take more abuse ("maybe even a lot more abuse, depending on the design of the boat"). *Id.* at 12/15/14:227 (Fuller). Every ASLD witness testified that modern boats are more durable than older boats. <sup>21</sup> Durability "is one of the important characteristics" for boating on a river that has rocks and rapids. *Id.* at 12/17/14:588 (Fuller).

Modern-day recreational boaters also have the benefit of technology that was not available in 1912. Mr. Lynch uses stream gage data from the U.S. Geological Survey and weather radar when operating his tours. *See* Tr. at 12/16/14:339 (Lynch). Mr. Lynch testified that "[p]retty much everybody" checks the internet for conditions before boating the Verde. *Id.* at 12/16/14:366 (Lynch). As Mr. Dimmock explained, 21st century watertight containers are exponentially more effective than anything that was available in 1912. *Id.* at 3/31/15:2841

<sup>&</sup>lt;sup>21</sup> See Tr. at 12/17/14:588 (Fuller); *id.* at 3/31/15:2841, 2869, 2888 (Dimmock); *id.* at 12/16/14:483 (Farmer); *id.* at 12/16/14:314 (Lynch).

(Dimmock). This technology combines with more than one hundred years of skill development by boaters to make modern boaters able to traverse rivers at more shallow depths and over more significant obstructions than could have occurred in 1912.<sup>22</sup>

Despite a century of advances in equipment and techniques, modern-day recreational boating on the Verde is not without its dangers. Mr. Farmer, for instance, has had "near misses" on the Verde and has "wrecked" his canoe "completely." *See* Tr. at 12/16/14:409-10, 446 (Farmer). Mr. Farmer has swamped his canoe "many times" on the Verde, and he has seen wrecked canoes and boats in Segment 3. *Id.* at 12/16/14:467-68, 505 (Farmer). He testified: "There's some places where you might be caught out in an inappropriate craft or in an inappropriate spot, and you're going to have to bivouac until the water goes down a little bit." *Id.* at 12/16/14:441 (Farmer).

The proponents of navigability also rely upon use by the so-called "ELFers," a subset of boaters who enjoy boating in extreme low flow conditions. *See* Tr. at 12/16/14:497-98 (Farmer). Mr. Fuller, the ASLD's primary witness, is an admitted ELFer himself:

You know, my own personal experience has been that, you know, you see the low month being July there. You know, there's some stuff that's written in the guides that say, hey, you don't want to go out there in low water season because it's, you know, too rocky and difficult. And I kind of like those conditions. I like being on the river when it's hot. And so lately I've gone down rivers at low flows and I've found them to be extremely boatable, in contrast to what's written in the guide. So my own personal experience is they're a lot more boatable and are very enjoyable at low water.

*Id.* at 12/15/14:249 (Fuller). ELFers do not set the standard of navigability for title, though. The fact that someone enjoys being in a boat on a river specifically when nobody else is there because the flows are low and the depths are shallow is the antithesis of that watercourse

<sup>&</sup>lt;sup>22</sup> "And so what are some of the skills that have developed over the last hundred years that are so critical to what – you know, you said we can run anything now. We've got the knowledge. We've got the background. We've learned from our predecessors and built upon that." *See* Tr. at 3/31/15:2940-41 (Dimmock).

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being a "highway for commerce" over which trade and travel could occur "in the customary modes of trade and travel on water." See A.R.S. § 37-1101(5) (definition of "navigable").

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

The Arizona courts have long held that the proponents of navigability bear the burden of proving that a river is navigable.<sup>23</sup> 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 presented to show navigability for a particular watercourse or segment, the Commission must find that watercourse or segment non-navigable. *Id.*; see also 2008 Decision, at 15-17.

#### IV. The United States Supreme Court's Decision in PPL Montana is Instructive with Regard to the Verde.

Although the additional sixteen days of hearings in 2014/15 and the thousands of pages of supplemental evidence perhaps did not shed much additional light on the navigability of the Verde, the United States Supreme Court's 2012 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 2008 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 United States Supreme Court in PPL Montana rejected the "liberal" interpretation of the federal test of navigability that had been adopted by the Montana

<sup>&</sup>lt;sup>23</sup> 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.

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 United States 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, <sup>24</sup> 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

<sup>&</sup>lt;sup>24</sup> See James L. Huffman, *PPL Montana v. Montana*: A Unanimous Smackdown of a State Land Grab, 11 Cato Sup. Ct. Rev. 167, 178 (2012) ("[T]he Court dismissed the Montana Supreme Court's analysis for what it is: a judicial amendment of the law of title to submerged lands resulting in an uncompensated expropriation of lands owned by the United States and private parties.")

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*.

#### V. Based upon the Evidence in the Record, the Verde 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. "[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 Verde never has been used or susceptible to being used as a "highway for commerce."

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

No evidence exists of any prehistoric boating or flotation of logs on the Verde. *See* Section II(A)(1), *supra*. Likewise, no credible evidence exists that the early explorers or soldiers ever used the river—for "commerce" or otherwise. *See* Section II(A)(2)-(8), *supra*. <sup>26</sup>

Mr. Fuller's evidence of the isolated accounts of attempted boating does not establish that the river was used for any type of sustained trade or travel. For example:

- 1. Mr. Fuller testified that, in 1868, troops at Fort McDowell attempted to build a raft to ferry across the river at high flow, but the raft capsized. *See* Tr. at 12/15/14:153 (Fuller); Fuller Power Point, Slide 127 [X035, ASLD 167].
- 2. Mr. Fuller testified that, in 1878, troops at Fort McDowell used a boat as a ferry, but this was only to cross the river and occurred "primarily during high flow." *See* Tr. at 12/15/14:153 (Fuller); Fuller Power Point, Slide 127 [X035, ASLD 167].
- 3. Mr. Fuller testified that, in 1887, the U.S. Army used a collapsible boat on Segment 2, but this was only to take couriers across the river during high flows. *See* Tr. at 12/15/14:155 (Fuller); Fuller Power Point, Slide 129 [X035, ASLD 167].
- 4. On his direct examination during the 2014/15 Hearings, Mr. Fuller showed a photograph of two soldiers in a boat that he speculated to be approximately ten miles from

<sup>&</sup>lt;sup>25</sup> The Court of Appeals' decision in *State v. ANSAC* remains subject to review by the Arizona Supreme Court following these proceedings on remand. In making the arguments presented in this brief, SRP does not waive its right to contend before the appellate courts that *State v. ANSAC* applied an incorrect legal standard.

<sup>&</sup>lt;sup>26</sup> 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).

Camp Verde to conclude that the soldiers had navigated the boat there from Camp Verde. *See* Tr. at 12/15/14:155-56 (Fuller); Fuller Power Point, Slide 129 [X035, ASLD 167]. Mr. Fuller admitted, however, that he had no evidence (other than his speculation based upon that photograph) that any soldiers at Fort Verde ever used boats to go up or down the river. *See* Tr. at 12/17/14:656-57 (Fuller). He also conceded that the he did not know whether the two soldiers in that photograph actually travelled downstream in that boat, as opposed to the equally plausible possibilities that (1) the boat was hauled to that location by wagon or (2) the boat was already in that location and the soldiers traveled there and then got in the boat. *Id.* at 12/18/14:896 (Fuller). He had no knowledge as to how that boat got to the location of the photograph. *Id.* at 12/17/14:674 (Fuller). His testimony about the photograph was based entirely on speculation and conjecture. With regard to this same photograph introduced during the 2005 hearing, the Commission found: "It would appear that this boat was used more as a ferry to cross the river than to travel up or down the river." 2008 Decision, at 36.

- 5. Mr. Fuller testified that, in December 1888, two soldiers traveled from Fort McDowell to Mesa Dam in a canoe, but one of the soldiers (Major Spaulding) died from an accidental gunshot discharge during a portage. *See* Tr. at 12/15/14:156 (Fuller); Fuller Power Point, Slide 130 [X035, ASLD 167].
- 6. Mr. Fuller testified that, in 1891, T. Carrigan attempted to boat Segment 1 in a raft built of railroad ties, but the raft fell apart trying to cross the river. *See* Tr. at 12/15/14:157 (Fuller); Fuller Power Point, Slide 131 [X035, ASLD 167].
- 7. Based on a single newspaper article from 1892, Mr. Fuller testified that JK & George Day traveled from Camp Verde to Yuma on a trapping expedition and that one of the two brothers made that trip five separate times. See Tr. at 12/15/14:158 (Fuller); Fuller Power Point, Slide 132 [X035, ASLD 167]. Mr. Fuller could not offer any example of trappers using boats on the Verde other than that one account. See Tr. at 12/17/14:655-56 (Fuller). Significant discrepancy existed between the distance (800 miles) the newspaper reported the brothers as having traveled and the actual distance from Camp Verde to Yuma. See Tr. at

2/25/15:2420-21, 2/25/15:2426-27 (August); *id.* at 3/30/15:2595 (Burtell). The actual distance is closer to 260 river miles. *Id.* at 3/30/15:2595, 2600 (Burtell). Despite the several inconsistencies in this one newspaper article, Mr. Fuller, in his zeal to act as an advocate for navigability, counted this one article as evidence of five different boat trips on the Verde.

- 8. Mr. Fuller testified that, in April 1905, Hooker, Cox, Smith, and Miller attempted to use iron boats to travel from Jerome to Phoenix, but they gave up and went back to Jerome by wagon. *See* Tr. at 12/15/14:164-65 (Fuller); Fuller Power Point, Slide 136 [X035, ASLD 167]. Even Mr. Fuller described this trip as a "failed boating account." *See* Tr. at 12/15/14:164-65 (Fuller).
- 9. Mr. Fuller testified that, in August 1910, four men attempted to travel from "Verde country" to Mesa until their boat wrecked and they lost their gear and had to walk to Mesa. *See* Tr. at 12/15/14:166-67 (Fuller); Fuller Power Point, Slide 137 [X035, ASLD 167]. Mr. Fuller testified that this August 1910 trip was a failure. *See* Tr. at 12/15/14:168 (Fuller); Fuller Power Point, Slide 137 [X035, ASLD 167].
- 10. Mr. Fuller testified that, in the spring of 1917, Stevens and Webber attempted to boat the Verde, but decided that they could not navigate the Verde Falls. *See* Tr. at 12/15/14:169-70 (Fuller); Fuller Power Point, Slide 138 [X035, ASLD 167].

Evidence of use of boats or crude rafts to cross a river during floods or other high water (e.g., Accounts Nos. 1, 2, and 3 above) is not sufficient to show that the river was actually used as a "highway for commerce." A photograph of two soldiers in a boat (Account No. 4) and speculation about where they were and how they got there likewise does not satisfy the proponents' burden of proving that the river was actually navigated. Evidence that people thought about going down the river in a boat and either decided against it or started and then changed their mind (Accounts Nos. 6, 8, 9, and 10) also does not help meet that burden. The story about the Day brothers (Account No. 7), if it is true, is perhaps evidence that could support the proponents' position, but that story is so full of holes that it cannot hold water.

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During the 2014/15 Hearings, Mr. Fuller reprised his standard articulated in prior hearings on other watercourses that a boating trip was successful if the passengers and cargo reached their destination and nobody died. *See* Tr. at 12/15/14:173 (Fuller); Fuller Power Point, Slide 141 [X035]. The December 1888 story about Major Spaulding (Account No. 7 above) does not even satisfy that flimsy standard.

The proponents of navigability still have submitted insufficient evidence to show that the Verde ever was actually navigated. As the Commission correctly held in 2008: "A survey of the historical account[s] of boating supports the proposition that the river was not suitable for navigation and that there was never any sustained, successful use of a watercraft on the river or use by the river for floating logs or otherwise as a highway for commerce." 2008 Decision, at 51.

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

Because the river was not 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. If the Verde had been "susceptible" to navigation, people would have navigated it.

Although the Verde 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 Spanish explorers, the American trappers and mountain men, the military personnel in the area, and the 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. No evidence exists to support such a finding. Efficiency and ease of transportation was a "constant" concern, both for the military personnel and for early settlers, but still they did not use the Verde as a "highway for commerce." *See* Tr. at 2/25/15:2389-90 (August); *see also* Sections II(A)(4), (5), *supra*.

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 the federal land surveyors, ever indicated that the Verde was navigable.<sup>27</sup> No federal or state land patent indicated that the Verde was navigable.<sup>28</sup> The early descriptions of the river by those who were present at the time describe a river that was erratic in its flow; was full of sand bars, rapids, marshes, and beaver dams; and was not conducive to navigation. *See* Section II(A), *supra*. People did not navigate the Verde because it was not navigable.

<sup>&</sup>lt;sup>27</sup> See generally Section II(A)(6), supra; see also United States v. Oregon, 295 U.S. 1, 23 (1935) (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).

<sup>&</sup>lt;sup>28</sup> See Section II(A)(7), supra; 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).

# 2. Evidence of modern-day recreational boating on the Verde does not satisfy the *PPL Montana* criteria for indicia of "navigability" for title.

The United States 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 Verde was navigable, he relied heavily upon his opinion that the river is still navigable.<sup>29</sup> The modern-day recreational boating on the Verde is not evidence of navigability for title under the *PPL Montana* standard, however, for several reasons.

First, the current boating on the river is recreational. *See* Section II(D), *supra*. It is done for "fun," not for transportation or to move goods. Many of the same characteristics that make the river more challenging and enjoyable for 21st century urban dwellers looking for entertainment are the same characteristics that would have made the river not suitable as a "highway for commerce" in 1912 or earlier. As Mr. Fuller readily acknowledged, modernday recreational boaters are looking for an adventure and "may choose to take the shallower channel because it's a, quote, more fun ride." *See* Tr. at 12/15/14:23 (Fuller). Under *PPL Montana* and the federal test of navigability for title, a river is not a "highway for commerce" just because it is so difficult to navigate that people enjoy testing their skills against its various obstacles.

Second, the record is clear that modern boats made of plastic and other synthetic materials are much more durable that any boats that were available in 1912. See Section II(D), supra. A modern plastic boat can take more abuse ("maybe even a lot more abuse") than a 1912 boat. See Tr. at 12/15/14:227 (Fuller). Although the proponents of navigability went to great lengths to argue that "a boat is a boat," the indisputable evidence shows that durability "is one of the important characteristics" for boating on a river (like the Verde) that

<sup>&</sup>lt;sup>29</sup> "The exact amount of the more flow is almost irrelevant to me at this point, because I know that if I go out there in the conditions as they exist now, it's boatable." Tr. at 12/15/14:192 (Fuller).

has rocks and rapids, *id.* at 12/17/14:588 (Fuller), and the durability of boats is much better today than it was in 1912. Comparing historical wooden dories at the time of statehood to modern rubber rafts, Mr. Dimmock testified:

Durability, I will say modern rafts take a beating for a lot longer than a wood boat, but modern rafts are designed to be used over and over and over and over and over and over again; whereas the wood boats in those days were maybe going to do one trip, because there's nobody there in their car to drive them back to the putin. They would probably build another boat. So in terms of durability, **they would last a trip or two**, no problem.

Tr. at 3/31/15:2841 (Dimmock) (emphasis added). Mr. Slingluff, who previously testified on behalf of the ASLD, in an article written for *The Southwestern Sportsman National Magazine* wrote:

Shallow creeks and rivers are boatable in many different canoes, but aluminum, canvas, and wood boats are easily damaged and difficult to repair. Plastic canoes are durable, slide easily over rocks, slip quietly through the water, and do not conduct heat or cold. Plastic canoes can open areas to sportsmen that are otherwise only a wish.

Slingluff, *Shallow Streams: Liquid Paths Into Wilderness*, The Southwestern Sportsman National Magazine, at 16 (Winter 1990-91) [EI 34-1] (emphasis added).

Third, modern boating has the benefit of advances in technology other than simply boat materials and design, as well as a century of experimentation with boating techniques. *See* Section I(D), *supra*. The availability of internet gage data, weather radar, cell phones and satellite phones for communication, and watertight containers makes boating the Verde a much easier and safer proposition today than it would have been in 1860, 1880, or 1912. *Id.* 

Fourth, even the recreational boating that takes place on part of the Verde today does not necessarily meet the standard of boating on a "highway for commerce." *See* Section II(D), *supra*. The evidence introduced in the 2014/15 Hearings shows that modern boating on the Verde comes with "near misses," wrecks, swampings, and situations where the boater might need to "bivouac" or hike to safety. *Id.* These events can hardly be said to qualify the

Verde as a "highway for commerce" over which trade and travel occurs "in the customary modes of trade and travel on water." See A.R.S. § 37-1101(5).

# 3. Mr. Hjalmarson's flawed attempts to reproduce predevelopment flows do not support a finding of "susceptibility" to navigation.

Mr. Hjalmarson attempted to reconstruct predevelopment flows by estimating the amount of land that was irrigated in the upper reaches of the Verde and its tributaries when the stream gages were first installed and then adding the presumed amount of water diverted to irrigate those lands to the gage readings to arrive at a reconstructed higher flow number. See Tr. at 12/18/14:983 (Hjalmarson). Mr. Hjlarmarson's methodology was severely flawed, in several respects. First, his assumptions about the number of acres historically irrigated in the Verde headwaters areas changed throughout the hearing. He initially opined that there were 8,095 cultivated acres in the upper Verde watershed. *Id.* at 12/18/14:1073 (Hjalmarson). He later reduced that estimate to 7,000 acres. *Id.* at 2/18/15:1268, 2/18/15:1271-72 (Hjalmarson). Mr. Hjalmarson agreed that, if his cultivated acreage number was overstated, the impacts on base flow that he calculated also would be overstated. *Id.* at 12/19/14:1114 (Hjalmarson).

Second, Mr. Hjalmarson assumed a per-acre consumptive use factor of 3.15 acre-feet per year ("af/yr"). *See* Tr. at 2/18/15:1284-85, 2/18/15:1286-87 (Hjalmarson). That figure, however, was taken from an Arizona Department of Water Resources ("ADWR") report that was for a different region and for different crops.<sup>30</sup> On cross-examination, Mr. Hjalmarson ultimately conceded that his 3.15 af/year consumptive use factor was used for an area that includes lands with different elevation and precipitation levels. *See* Tr. at 2/18/15:1281-82 (Hjalmarson). Mr. Hjalmarson admitted that he never even looked at the underlying ADWR source document. *Id.* at 2/18/15:1289-90 (Hjalmarson)

<sup>&</sup>lt;sup>30</sup> See D.R. Pool, et. al., *United States Geological Survey, Regional Groundwater-Flow model of the Redwall-Muav, Coconino, and Alluvial Basin Aquifer Systems of Northern and Central Arizona, Scientific Investigations Report 2-10-5180, v. 1.1*, at 37 (2011) [X037, Freeport 32].

Third, Mr. Hjalmarson ignored the presence of dryland farming (farming without irrigation) and deficit irrigation (farming using less than optimal amounts of irrigation water) in these high elevation areas. *See* Tr. at 2/18/15:1274-76, 12/19/14:1123-25, 1199 (Hjalmarson); *see also id.* at 3/30/15:2736 (Burtell). If and to the extent that these early farmers practiced dryland farming or deficit irrigation, Mr. Hjalmarson's estimates of the amount of water diverted for irrigation would be overstated and his resulting recreated river flows also would be too high.<sup>31</sup>

Fourth, Mr. Hjalmarson's analysis pieced together disparate data from multiple years, so he had no basis upon which to opine that all those acres were irrigated in any one year. *See* Tr. at 2/18/15:1269-70 (Hjalmarson). To the extent that certain acres were irrigated in one year and other acres were irrigated in different years, Mr. Hjalmarson's total number of acres was never irrigated in any one year and, thus, his annual depletions of river flows were significantly overstated. He ignored the impacts of crop rotation and thus wrongly assumed that every farmer irrigated every acre in every year. *See* Tr. at 2/18/15:1269-71 (Hjalmarson).

Mr. Hjalmarson's work on this case, although perhaps laudable for the amount of effort he expended, contains so many methodological flaws that his results cannot provide an evidentiary basis upon which the Commission could determine that the Verde was navigable in its "ordinary and natural condition."

#### VI. Summary and Requested Action

The Commission was right in 2008. Even after sixteen more hearing days and thousands of pages of more evidence, the record still does not support a finding that the Verde is or ever was navigable.

<sup>&</sup>lt;sup>31</sup> The record is replete with evidence that dryland farming did occur in the Verde headwaters areas. See Tr. at 3/30/15:2737 (Burtell); Arizona Miner (February 1, 1868) [X037, part of Freeport 8]; Weekly Arizona Miner (September 23, 1871) [X037, part of Freeport 8]; F. H. Newell, Report on Agriculture by irrigation in the Western Part of the United States at the Eleventh Census: 1890, at 81 (1894) [X037, Freeport 10]; The Resources of Arizona, Its Mineral, Farming, and Grazing Lands, Towns and Mining Camps, at 85 (1881) [X037, Freeport 11].

DATED this 28th day of September, 2015.

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