



The river, which drains a total of 15,000 square miles, has its headwaters at the confluence of White and Black Rivers. *Id.* The watershed ranges in elevation from about 12,633 feet at Humphrey’s Peak to 930 feet at the Salt-Gila confluence. *Id.* The upper Salt River watershed is bounded by the Mogollon Rim to the north, the Mazatzal Mountains to the west, the Superstition Mountains and the Gila River watershed to the south, and the White Mountains to the east. *Id.* Major perennial tributaries to the upper watershed include the White, Black, and Tonto Creek and the Verde River. The lower part of the Salt is formed almost entirely in alluvial fill eroded from the surrounding mountain ranges and extends from a gap between the Utery and McDowell Mountains, through the southern extension of the Phoenix Mountains at Tempe Butte to Monument Hill, the northernmost extension of the Sierra Estrella at the Gila River confluence. *Id.* Historically, only two sizable drainages, both ephemeral, join the Lower Salt: Indian Bend Wash and Cave Creek. *Id.*

For purposes of determining navigability of the Salt River, the State Land Department has divided the river into six segments. Transcript (“Tr.”) 10/20/2015 at p. 52: The segment designations were based upon differences in hydrology, geology, and channel characteristics of the river in its ordinary and natural condition. *Id.* at p. 52:13 – 53:24. They are as follows:

Segment	Description of Boundaries and Characteristics of Segment	Source
1	White/Black River confluence to Apache Falls <ul style="list-style-type: none"> <li>• Perennial flow</li> <li>• Channel: pool &amp; riffle, sinuous to straight, narrow canyon</li> <li>• Many rapids-69 significant rapids in 33 miles</li> <li>• Major tributaries White/Black Rivers, Carrizo Creek, Sawmill Canyon</li> </ul>	EIN C030, pt. 364 “Fuller PPT,” slides 52-57.
2	Apache Falls to Sleeper Rapid <ul style="list-style-type: none"> <li>• Perennial flow;</li> <li>• Channel: pool &amp; riffle; sinuous to straight; bedrock canyons, Gleason flat</li> <li>• Rapids –45 rapids in 33 miles</li> <li>• Major tributaries Cibecue Creek, Canyon Creek</li> </ul>	<i>Id.</i> at slides 58-64

Segment	Description of Boundaries and Characteristics of Segment	Source
3	<p>Sleeper Rapid to Roosevelt Dam</p> <ul style="list-style-type: none"> <li>• Perennial flow,</li> <li>• Channel: pool &amp; riffle; sinuous to straight; bedrock canyons and flats (Horseshoe, Redman, Tonto)</li> <li>• No major rapids – 5 rapids in 40 miles</li> <li>• Major tributaries Cherry, Pinal, Pinto and Tonto Creeks</li> </ul>	<i>Id.</i> at slides 65-73
4	<p>Roosevelt Dam to Stewart Mountain Dam</p> <ul style="list-style-type: none"> <li>• Perennial flow</li> <li>• Channel: pool &amp; riffle; sinuous to straight, bedrock canyons, small flats</li> <li>• Rapids inferred from geology, canyon—likely Class II</li> <li>• Tributaries Fish Creek, Tortilla Canyon/La Barge Canyon, Cottonwood Creek</li> </ul>	<i>Id.</i> at slides 74-86
5	<p>Stewart Mountain Dam to Verde River</p> <ul style="list-style-type: none"> <li>• Perennial flow</li> <li>• Channel: pool &amp; riffle; sinuous to straight; narrow alluvial valley, some local bedrock control</li> <li>• Rapids—One class II rapid; less than 1% of segment length; no class III, IV, or V rapids</li> <li>• No major tributaries</li> </ul>	<i>Id.</i> at slides 87-96
6	<p>Verde River to Gila River</p> <ul style="list-style-type: none"> <li>• Historically perennial</li> <li>• Channel: pool &amp; riffle; sinuous to straight, local braiding, compound channel; broad alluvial valley</li> <li>• No rapids</li> <li>• Major tributaries Verde River, Indian Bend Wash.</li> </ul>	<i>Id.</i> at slides 97-06

## **B. Human Impacts on the Salt River.**

The Salt River is, and has been, the lifeblood of the Phoenix Metropolitan Area, for more than 1000 years. See, e.g., L. Salt Rpt. at iii, 2-1 and E 036 at 29; Tr. 10/20/15 at 153:3 – 21; Fuller PPT slide 108: The river has not only sustained the economy of central Arizona, it has allowed the area to grow. It is believed that the Salt River Valley has been inhabited for the past 1,000 years primarily because the Salt River had a “reliable flow.” L. Salt Rpt. at 2-1; Tr. 10/20/15 at 153:22-154: 3.

The practice of diverting water from the river extends back to prehistoric times. The Salt River Valley contained one of the most extensive irrigation systems in prehistoric North

American. Tr. 10/20/15 at 153:3 - 21. More modern diversion began in the mid-1860s when Euro-American settlement started along the Salt River, particularly in the Phoenix area. Tr. 10/20/15 at 157:15-20. Swilling's Ditch was built around 1867 or 1868 and by the early 1890s there were approximately ten canals on the Salt River. Tr. 10/20/15 at 164:7-17. See also Fuller PPT, slide 117. By the 1880s, the canals were significant enough that they were able to dry up the river in periods of low flow. Tr. 10/20/15 at 164:20-166:18. See also L. Salt Rpt. at 7-6, Table 7-4.

The year that Arizona became a state, in addition to the many diversion canals, there were two major dams affecting the natural flow of the Salt River. L. Salt Rpt. at 7-10, 7-11. The largest dam, and reservoir, was (and still is) Roosevelt Dam, completed in 1910. *Id.* at 7-15. Granite Reef Dam, a diversion dam completed two years earlier in 1908, had essentially replaced the Arizona Dam located not far upstream. *Id.* By 1911, more than 500,000 acre-feet of water was in storage in the Roosevelt Dam reservoir (Roosevelt Lake), water that would have continued to flow to the Salt River had that dam not been constructed. EIN 036 at 25. After statehood, three more reservoir dams were built. Located at Stewart Mountain, Horse Mesa, and Mormon Flat, they created Saguaro Lake, Apache Lake and Canyon Lake, respectively. Fuller PPT at Slide 119; L. Salt Rpt. at 7-15.

In addition to the dams and canals, groundwater pumping had a significant impact on the flow of the Salt River. L. Salt Rpt. at 7-16. And the introduction of cattle in the 1870s also impacted the upper reaches of the river significantly. See "Arizona Stream Navigability Study for the Salt River: Granite Reef Dam to the confluence of the White and Black Rivers" prepared by SFC Engineering Company et al, revised June 2003 by J E Fuller/Hydrology & Geomorphology, Inc., EIN 027 (04-008 Nav)("U. Salt Rpt."), p. 3-243-27-28. The loss of

vegetation due to widespread overgrazing caused floristic degradation and stream channel entrenchment. *Id.*

In sum, long before statehood, the Salt River had been significantly altered by humans and was no longer in its natural condition. Beginning in 1867 and continuing to the present day, the river's flow has been diverted from the riverbed and used for irrigation and consumption.

### **C. Historic Descriptions of the Salt River.**

There are numerous historic references to the Salt River that describe its various segments prior to and shortly after statehood. The descriptions, which are chronicled in the ASLD Reports and supplemented by the testimony of Jon Fuller, ASLD's expert witness, come from a variety of sources including military personnel, early settlers and explorers, and government surveyors. Some accounts are contemporaneous and others are based on memory. Some of the more significant descriptions introduced into evidence follow.

In the 1820s, beaver abounded on the River, and trappers, such as James Ohio Pattie and Ewing Young, traveled along the river as they trapped. L. Salt Rpt. at 3-6, 3-10. In February 1826, Pattie described the River at its confluence with the Verde as follows: "It affords as much water at this point as the Helay [Gila] . . . We found it to abound with beavers. It is a most beautiful stream, bounded on each side with high and rich bottoms." *Id.* at 3-14.

A few years later, in 1852, John R. Bartlett of the U.S. Boundary Commission conducted a reconnaissance of the river from its confluence with the Gila to present-day Mesa. *Id.* at 3-6. In July of that year, Bartlett described the river at a point twelve miles up-river from its confluence with the Gila (Segment 6) as follows:

The bottom, which we crossed diagonally, is from three to four miles wide. The river we found to be from eighty to one hundred and twenty feet wide, from two to three feet deep, and both rapid and clear. . . . The water is perfectly sweet, and neither brackish nor salty, as would be inferred from the name. We saw from the banks many fish in its clear waters, and caught several

of the same species as those taken in the Gila. The margin of the river on both sides, for a width of three hundred feet, consists of sand and gravel, brought down by freshets when the stream overflows its banks; and from the appearance of the drift-wood lodged in the trees and bushes, it must at times be much swollen, and run with great rapidity. . . . [A]long the immediate margin of the stream large cotton-wood trees grow.” [Ellipses and brackets in ASLD Report.]

*Id.* at 3-15.

By 1867, beaver were still abundant. *Id.* at 3-15. In December 1868, W.F. Ingalls (also a government surveyor and brother of G.P. Ingalls), who was conducting a cadastral survey of the area, described the river (Segment 6) as follows:

Salt River is at this season of the year at least a large stream . . . nor do I think it ever entirely dry. It has moreover a very heavy fall of I should think 12 to 15 feet to the mile which makes it especially valuable for irrigating. I consider this valley from 6 to 10 miles wide . . . as some of the best agricultural land I have yet seen in the Territory and should recommend that it be subdivided at an early day. [Ellipses in ASLD Report.]

*Id.* at 3-15. In 1877, Hiram Hodge described the river at low water as “a clear beautiful stream, having an average width of two hundred feet for a distance of one hundred miles above its junction with the Gila, and a depth of two feet or more. Tr. 10/20/15 at 180:8-17; Fuller PPT at Slide 129. Even as late as 1884, the river (Segment 6) was described by Wallace W. Elliot & Co. as a clear beautiful stream at low water, having an average width of 200 feet for a distance of 100 miles above its junction with the Gila, and a depth of two feet or more. L. Salt Rpt. at 3-8 (Table 3-1).

In 1875 the Indian Commissioner LE Dudley described forcing Native Americans to cross the Salt River somewhere near the Verde Confluence (Segment 5 or 6) in March of that year, and stated that the cold water was “about waist deep to a man...” Fuller PPT, Slide 135; Tr. 10/20/15 at 184:1-7.

Further upstream above Fish Creek (Segment 4) the river was described in ~1872 as very difficult to cross in the winter due to the high water from White River and Tonto Creek. Tr. 10/20/15 at 182:15-183:1; Fuller PPT, slide 133. Similarly, in 1874, Dr. William Corbusier described the water in Segment 3 as so high and turbulent he was unable to cross the river. A few years later, in 1883, Adolph Bandelier described Segment 3 as “a broad, blue rushing stream” and “the finest large river in the southwest and alive with trout.” Tr. 10/20/15 at 184:10-15. He described the river upstream from Tonto Creek as “belly deep.” *Id.* at 184:15-17.

From these historic accounts it is clear that prior to the diversions and dams, the Salt River, in its ordinary and natural condition, had perennial flow and sufficient depths to support navigation by the small watercraft that were customarily used at the time. Therefore, it is not surprising that, as discussed below, the record is replete with historic accounts of people actually boating on the Salt.

#### **D. Historical Photographs**

Information regarding the Salt River in a more natural condition is also available through historical photographs. Although the information that can be gleaned from the photographs regarding the river’s depth is limited, several photographs actually capture people boating on the Salt. Some of the more significant photographs (organized by segment and in date order) are as follows:

##### Segment 3:

Salt River at junction with Tonto Creek (Fuller PPT, slide 143): This photograph is from the Bureau of Reclamation archives and shows the Salt River, looking upstream, at 224 cfs in January 1904. This portion of the river is currently under Lake Roosevelt, so this photograph provides important insight into what the river looked like before Roosevelt Dam was built.

According to ASLD expert Jon Fuller, this photograph shows conditions similar to what he and others boated in Segment 3. Tr. 10/20/15 at 190:16-192:11.

Boating on Salt River (Fuller PPT, slide 140): This photograph, taken in 1910, shows three men in a shallow boat on the Salt River near the Roosevelt dam, which was under construction at the time. Tr. 10/20/15 at 187:22 – 188:23.

#### Segment 4:

Roosevelt Dam Site April 16, 1906 (Fuller PPT, slide 142): This photograph taken on April 16, 1906, is looking upstream from the dam site. The flow on the day it was taken was 10,000 cfs, so the flow is a little above normal but the river is not in a flood stage. The photograph shows a river with a single channel, no significant rapids, and a fairly placid river. Tr. 10/20/15 at 190:1 -15.

Salt River Near Mormon Flat (Fuller PPT, slide 150): This photograph taken in 1916 near Mormon Flat shows a river with a single channel, no rapids, no beaver dams, no braiding. What Mr. Fuller described as “a pretty boatable channel.” Tr. 10/20/15 at 196:12-18.

Salt River at Horse Mesa Dam Site (Fuller PPT, slide 149): This photograph from 1924 is one of the few of this area and is from the Library of Congress. It shows flow filling the canyon bottom. There are no rapids or braiding, and the water is calm. Again, Mr. Fuller described the river captured in the photograph as “boatable.” Tr. 10/20/15 at 195:17 – 24.

#### Segment 5:

Salt/Verde Confluence (Fuller PPT, slide 152): This photograph was published in 1908. It shows four people in a boat on the river during the summer. The river is approximately 100 feet wide, with no rapids, no braiding and no beaver dams; it is deep enough for a boat with four people. Tr. 10/20/15 at 197:7-20.



Sheep Bridge on Salt River (Fuller PPT, slide 151): This photograph from the ASU special collections was taken around 1910. Like the others, it shows a single channel river that is a hundred or more feet wide. Tr. 10/20/15 at 196:19 – 197:7.

Segment 6:

Arizona Canal Diversion Dam (Fuller PPT, slide 153): This photograph was taken in 1885 and is from the ASU Special Collections. It documents the construction of the Arizona Dam, and shows a flat boat on the river that was used in construction. Tr. 10/20/15 at 197:21-24.

Hayden's Ferry (Fuller PPT, slide 154): This photograph of Hayden's Ferry is from the ASU library, and is from the Herb and Dorothy McLaughlin photographs from the 1890s. It shows the ferry with a wagon on it and a boat with several people on it crossing the river. Tr. 10/20/15 at 198:3 - 9.

Salt River Ferry (Fuller PPT, slide 197): This photograph published in the Arizona Republic on February 19, 1912 (5 days after statehood) shows W. F. Brong ferrying his car across the Salt River. As Mr. Fuller testified, the flow records for February 1912 show that the river was unusually low that month. Tr. 10/21/15 at 257:1-20.

The Ole Swimmin' Hole" (Fuller PPT, slide 198): This photograph from the ASU Hayden Library, Special Collections, was taken in 1917 and shows a boy driving into the river in Segment 6. According to the caption, boys dove under banks to catch fish in their bare hands.

Swimming in the Salt River (Fuller PPT, slide 199): This photograph taken in 1923 in Tempe shows people swimming in the Salt River. The photograph includes people standing in water up to their waists, and a woman in the foreground in water that is up to her neck.

**E. Evidence of Navigation on the Salt River.**

**1. Historical Boating Accounts.**

There are more than 30 historical accounts of boating on the Salt River. *See generally*, Tr. 10/20/15 at 199:15-243:18; Fuller PPT slides 157-183; Tr. 5/17/16 at 4501:8-4665:15; EIN 053 pt. 385 (“Fuller Rebuttal PPT”) slides 3 – 51. As Mr. Fuller noted in his testimony, as more historic newspapers become digitized and available online, more accounts of boating on the Salt River have been discovered. For example, the 1993 Report included only 13 accounts. On remand, in Mr. Fuller’s initial testimony, the number of accounts had increased to 28. By the time of his rebuttal testimony, the State had discovered 31 accounts. Fuller Rebuttal PPT, slide 47. The more significant accounts that occurred prior to or around statehood include:

Prior to 1873 – Logan Canoe Trip (Fuller Rebuttal PPT, slide 39): This trip was the earliest documented trip introduced into evidence. Tr. 5/17/15 at 4577:13-17. The source of information about the trip is Carl Hayden’s book about his father, Charles Hayden. EIN 018, pt. 15. As Dr. Littlefield quoted in his Report on the Salt River, “[t]he difficulties of hauling lumber from Prescott encouraged Hayden to find a way to float logs to Hayden’s Ferry via the White and Salt rivers; *this river route had been previously navigated by Logan*, a Scottish carpenter, who determined this was certainly possible...” EIN C20 at p. 18 (emphasis added).

1873 – 5 Tons of Wheat on a Flat Boat (Fuller PPT, slide 158): The *Weekly Arizona Miner* reported this trip in May 1873 stating that the “Salt River is navigable for small craft as, last week, L. Vandemark and Wm. Kilgore brought five tons of wheat in a flat boat from Hayden Ferry down the river to the mouth of Swilling canal and thence down the canal to Helling & Co’s mill.” See also, L. Salt Rpt. at 3-18, 3-19 (Table 3-2); Tr. 10/20/15 at 199:22-202:7; Fuller Rebuttal PPT 5; Tr. 5/17/16 at 4509:6- 4517:24.

1873 – Hayden Log Floating Experiment (Fuller PPT, slide 159): There are numerous accounts that describe Charles Hayden’s attempt to float logs down the River in June 1873 (the River’s low-flow time) with the goal of establishing a lumber mill in Tempe. L. Salt Rpt. at 3-19 (Table 3-2). Descriptions of the trip suggest that it began on the White or Black River, where the party made a canoe from a log. They encountered problems either on the White River or in Segment 1 of the Salt River when the logs got caught up in the canyons. Tr. 5/21/16 at 4545:9-4546:8. Ultimately, the idea was abandoned for several reasons, including the fact that there was no way to catch the logs when they arrived in Tempe. Tr. 5/21/16 at 4549:11-15; Fuller Rebuttal PPT, slide 12.

1879 – Phoenix to Yuma Trip (Fuller PPT, slide 161): In January of 1879, the Arizona Sentinel reported a trip from Phoenix to Yuma taken by three men in a skiff that they built in Phoenix for \$10. According to the Sentinel, “[t]hey report the river perfectly practicable for navigation, except at one spot, about ten miles above Gila Bend; there the channel was obstructed by rocks, leaving a passage only some eight feet wide. This obstruction, they say, can be easily removed by a few small blasts. The river would then have easily floated down a flat-boat loaded with grain, pumpkins, or other fruits of the ‘Orchard of Arizona,’ and drawing two feet of water.” EIN C018, pt. 128.

1881 Cotton & Bingham (Fuller PPT, slide 163): In February 1881, two men - Cotton and Bingham - were reported to be preparing to travel from Phoenix to Yuma in an 18-foot, flat-bottomed skiff. L. Salt Rpt. at 3-19 (Table 3-2), 3-20.

1881-”Yuma or Bust (Fuller PPT, slide 164): In late November and early December 1881, Bucky O’Neill and two other men tried to boat from Phoenix to Yuma. L. Salt Rpt. at 3-

19 (Table 3-2). The men arrived in Yuma six days after leaving Phoenix, although they were forced to wade in the water, pulling their boat, about twelve miles below Phoenix. *Id.* at 3-20.

1883 – Willcox & Andrews (Fuller PPT, slide 165): In February 1883, the Arizona Gazette reported that North Willcox and Dr. G.E. Andrews, U.S.A., floated a canvas skiff from McDowell to Barnum’s pier on the Salt River Valley Canal and that the “Salt River is a navigable stream and should be included in the Rivers and Harbors appropriation.” L. Salt Rpt. at 3-19 (Table 3-2). The only discomfort the party experienced was that it rained during the night while they camped. *Id.* at 3-21.

1883 – Meadows Trip (Fuller PPT 167): In 1883, Jim Meadows and three other men floated the Salt River between Livingstone, near present-day Roosevelt Dam, and Tempe. L. Salt Rpt. at 3-19 (Table 3-2). The party encountered trouble in the upper canyons, but they completed the trip successfully. *Id.* at 3-20 through 3-21.

1885 – Burch Trip (Fuller PPT, slide 168): In June 1885 the Arizona Gazette reported that William Burch and four other men successfully boated the River in an 18 foot by 5 foot boat from four miles above the Tonto Creek confluence to Phoenix. L. Salt Rpt. at 3-19 (Table 3-2). The men’s purpose was to see whether logs could be floated down the River. Although the party encountered some difficulties in the upper canyons, “the undisputed conclusion is that such work [log floating] can be successfully carried on.” *Id.*

This trip is one of more detailed of the historic accounts because in addition to the articles in the Arizona Gazette, one of the men, James Logan, kept a diary that detailed each day of the trip and was published by the Daily Phoenix Herald on June 5, 1885. EIN CO18, Pt. 196. According to that account, on the first day, the group “sailed from Eddy’s ranch to the mouth of Tonto Creek.” They “passed safely over four or five smooth rapids and lands for the night.” *Id.*

The second day, they passed through canyons and described the river a “deep, smooth and placidly wind[ing]...on its onward course...” *Id.*

The third day they continued through the canyon and described the river there as more winding, with a more rapid current and with occasional large rocks in mid-channel. They described the sailing as “grand” although they needed to look out for rocks. Late in the day their boat got stuck on a mid-channel rock that they hadn’t seen and they ended up swimming ashore to sleep for the night. The next morning Mr. Meadows went downstream to cut poles which he brought back and they used to pry the boat off the rock. *Id.* Once they dislodged the boat, they “floated quietly and pleasantly along” until they arrived at Jones’s ranch above the mouth of the Verde. *Id.* The next day they continued down the river, lifting the boat over one dam and shooting over two others, until they reached the Tempe canal which they took to arrive near Tempe. *Id.*

According to the Arizona Gazette, which published several articles about the trip, it was “interesting and exciting.” EIN C018, pt. 133. And although the trip occurred during June, which is traditionally a low-flow time of year, the party described the river as being anywhere from 6 to 20 feet deep. *Id.* at pt. 134.

1888- Spaulding Trip (Fuller PPT, slide 171): In December 1888, the Phoenix Herald reported that Major E.J. Spaulding (commandant at Fort McDowell) and Capt. Charles A.J. Hatfield canoed from Fort McDowell on the Verde River to the Mesa Dam on the Salt River, where Major Spaulding accidentally shot and killed himself. L. Salt Rpt. at 3-19, 3-21.

1892 – Day Brothers (Fuller PPT, slide 176): On April 2, 1892, the Arizona Sentinel described a trip taken by JK and George Day from Camp Verde to Yuma (including Segment 6 of the Salt River) in 1892. According to the Sentinel, the brothers were trapping, and traveled

from their home in the Verde Valley all of the way down to Yuma to take their furs to market. The article describes them as being out on the river from September to April, and reports that they had a large quantity of furs with them. It also states that this was their fifth trip and that they planned to take the same trip again the following year. C02, pt. 8.

1893- Hudson River Reservoir & Irrigation Co. (Fuller PPT, slide 178): In 1893 the Arizona Republican reported on a commercial survey of the Salt River bed in Segment 4. The article referred to the surveyors using canvas boats. EIN C018, pt. 60.

1893 – Trip to Tiburon (Fuller PPT, slide 179): An article published in 1909 described a trip from Phoenix to Tiburon Island, via the Salt River and then the Colorado River. The article, which was reporting on an upcoming expedition, included an account of an earlier trip taken in 1893 by a Lieutenant Robinson. In the earlier trip, the party, three soldiers in a boat, traveled from Phoenix to Yuma via the Salt River, and then took the Colorado River down to Tiburon where they were attacked and killed by Seri Indians. The navigation aspect of the trip, however, was successful. EIN C018, pt. 76. D

1894 – Trappers on Salt (Fuller Rebuttal PPT, slide 42): On February 11, 1894, the Arizona Republican published a story about two brothers who, in January 1894, were building a boat that they intended to use to navigate the Salt and Gila Rivers to trap beaver. According to the article, the brothers were able to get \$8 to \$20 a piece for beaver skins. The article begins with the observation, “[f]ew people are aware that right here in the valley the business of trapping fur bearing animals is carried to a considerable extent and with good profit.” EIN C053, pt. 383.

1895- Adams & Evans (Fuller PPT 180): This trip was reported in multiple articles in multiple papers, and included at least one first-person account of the trip by Mr. Adams. EIN

CO29 at pt. 363. According to the accounts, the two men, Adams and Evans, traveled down the Gila River from Clifton to Sacaton in a homemade wooden flat boat that was 18 ft. x 3.5 ft. with a cabin. At Sacaton, they took the boat out of the water and hauled it to Phoenix, where they visited for a several days. They then boated from Phoenix to Yuma where they arrived safely. Tr. 10/20/2015 at 237:13- 238:20.

1905 – Hauling Freight to Roosevelt Dam Site (Fuller PPT, slide 183): In April 1905, the Arizona Republican reported that when the road to Roosevelt failed due to storms and flooding, goods were hauled up the Salt River by boat to the dam site. Tr. 10/20/15 at 241:1- 243:18.

1905- Reclamation Service Engineers (Fuller PPT, slide 187): In December 1905 the Arizona Republican reported that two engineers with the Reclamation Service decided to travel down the river from Arizona Dam to Consolidated Canal by boat. According to the account, the engineers ran into some problems on the trip, hitting a rock in a rapid and getting stuck on a sandbar, but they completed the trip. Tr. 10/20/15 at 245:8 – 246:8.

1909- Tom Rains, Boat Theft (Fuller PPT, slide 189): This account appeared in the Arizona Republican in April 1909. It reports an incident involving two children (10 and 8 years old) who stole a boat that a Mr. Rains kept on the river near 7<sup>th</sup> Avenue. According to the account, the children boated nine miles downstream (over two days) and left the boat tied up on the river bank where it was recovered. Tr. 10/20/15 at 246:16 – 247:20.

1867-1919 Ferries: (Fuller PPT, slides 194 – 197): Beginning in 1867 and continuing into the 1900s, numerous ferries operated on the Salt River. Most of the ferries were in Segment 6. Typically the ferries were flatboats that were heavily loaded and used to cross the river when fording was not an option. They tended to operate during high water, particularly in the later

years when the river became more depleted. The ferries were commercial operations and were used to transport mail. L. Salt Rpt. at 3-25 to 3-29.

As all of these accounts demonstrate, prior to statehood the Salt River was used for both commercial and recreational navigation. Even after the river's flow was depleted by irrigation diversions and groundwater pumping, people were still able to use it for trade and travel. And as discussed in the next section, despite the even greater depletion today, people continue to boat the river both recreationally and commercially.

## **2. Modern Boating.**

Evidence of modern boating on the Salt River is relevant for two reasons. First, as detailed by Jon Fuller the boats used by modern boaters are meaningfully similar to the boats customarily used at the time of statehood. Tr. 10/20/15 at 14:15-17:12; See also EIN C018, pt. 14 (Gila River Tr. 6/16/14) at p.85:6 -. 89:4. The same depths are needed for historical and modern boats. *Id.* at 85:10-86:6. The weight and design of modern canoes is essentially the same as a canoe from 1912. *Id.* See also, Fuller Powerpoint re Boating, EIN C018, pt. 149 ("Fuller Boating PPT") Slides 110-117.

Second, the river's flow has only been depleted since the time of statehood; therefore, with the exception of the reservoirs, the boat-ability of the modern-day Salt River is either substantially similar to what it was like at statehood or has declined. Fuller Rebuttal PPT, slide 80; Tr. 5/21/16 at 4736:16 – 4737:18; Consequently, if the river is boat-able during modern times, it follows that in its ordinary and natural condition, the river was navigable.

The Commission heard testimony from several witnesses about boating on the Salt River in modern times including the State's expert witness Jon Fuller. Specifically, they testified as follows:



Jon Fuller:

Mr. Fuller testified at length about modern boating on the Salt River both generally and based on his own extensive personal experience. His testimony is summarized by Segment.

Segment 2: According to Mr. Fuller, Segment 2 is a frequently boated whitewater reach. Tr. 10/21/15 at 61:17-25; 62:16-19. The modern commercial and recreational boating on this segment goes on throughout the year, even though the flow has been depleted to some degree due to diversions. *Id.* at 66:12-18. Mr. Fuller shared photographs and video footage of boating Segment 2 at 212 cfs, which is slightly below the modern day median flow. *Id.* at 70:1-17. Mr. Fuller also testified about his experience boating Segment 2 at 188 cfs, and provided photographs from that trip as well, which occurred in November 2014. Fuller PPT, slide 62; EIN C018, pt. 255. Tr. 10/21/15 at 87:22-91:6. See also video footage C018, pt. 262-68. Finally, Mr. Fuller testified about boating Segment 2 at 220 cfs in October 2015 and once again provided photographs of his trip. Tr. 10/21/15 at 91:13 -97:20; EIN C028, pt. 357.

Segment 3: According to Mr. Fuller, in its current condition, part of Segment 3 includes the river reach that runs through what is now Roosevelt Lake. Tr. 10/20/15 at 98:3 – 8. Therefore, that portion of the river is no longer in its natural condition and any modern boating on that portion of the river was not the basis for his opinion regarding its navigability in its natural condition. However, Mr. Fuller testified about his experience boating Segment 3 from the end of Segment 2 until the 188 bridge. *Id.* at 99:1-18. According to Mr. Fuller, he has boated portions of Segment 3 from 220 cfs to a little over 700 cfs in canoes and up to about 2,000 in rafts. Tr. 10/23/15 at 592:11-14.

Segment 5: Mr. Fuller testified that Segment 5 is by far the most commonly boated segment of the Salt River. Tr. 10/21/15 at 134:9-15. The boating is both recreational and

commercial recreational. *Id.* at 132:12 – 14. There are tubing and kayak rentals all along the reach as well as shuttle services. *Id.* at 133:1-134:1. Mr. Fuller testified that he has personally seen traditional canoes, kayaks, inflatable kayaks, inflatable canoes, 18-foot rafts, wooden boats, motor boats, small fishing boats, row boats, and catarafts boating Segment 5. *Id.* at 134:18-135:9. Because Segment 5 is about 45 minutes from his house, Mr. Fuller testified that he likes to go out there whenever he can. It is a good place for beginners and a few years ago he took some boy scouts out there to get their canoeing merit badge. *Id.* at 137:7-13. Mr. Fuller provided numerous photographs of boaters of all ages boating Segment 5 at 8 cfs (Fuller PPT, slide 92; C018, pt. 258) at 631 cfs (Fuller PPT, slide 91) and at 653 cfs (C018, pt. 259). Mr. Fuller estimated that the median flow in Segment 5 is 992. Tr. 10/20/15 at 146:1-3.

Segment 6: Although this segment is rarely boated in modern times because the natural flow has been diverted, Mr. Fuller did provide some photographs from a trip where he continued down from Segment 5 into the beginning of segment 6, just below the confluence with the Verde. Fuller PPT, slide 101.

Tyler Williams: The Commission also heard testimony from Tyler Williams, a resident of Flagstaff. Tr. 10/21/15 at 272:10-382:14. Mr. Tyler, is a professional boating guide and author. One of his seven books, “Paddling Arizona,” is a comprehensive paddling guide to the lakes, rivers, and creeks of Arizona, both flatwater and whitewater. Tr. 10/21/15 at 274-75; EIN C049-5. With respect to the Salt River, Mr. Williams testified that he has boated Segments 2 and 3 about twenty times, in flows ranging from 150 cfs to 25,000 cfs, and most often at about 500 cfs. Tr. 10/21/15, at 278-80. He has also paddled what are now the reservoirs on the Salt as well as the lower Salt River between Saguaro Lake and Granite Reef Dam, Segment 5 and 6. *Id.* at 279.

In Segment 2 he has seen many types of boats, including open canoes filled with people and enough gear for five days on the river. *Id.* at 281-82.

Mr. Williams described in detail his experience navigating rapids in Segments 2 and 3. *Id.* at 283. It was his opinion that under certain conditions, four Class IV rapids in that segment would need to be lined. *Id.* at 283-84. He also testified about his experience lining a raft through Quartzite Falls prior to it being dynamited, which took him a total of 30 minutes. *Id.* at 284. When asked if a historical wooden canoe or flatboat would have been able to line those rapids, Mr. Williams stated, “Absolutely. Yes.” Tr. 10/21/15, at 285. According to Mr. Williams, lining the rapids does not require expert experience; he first lined the rapids early in his boating career before he had the boating knowledge he does today. *Id.* at 285-86. Mr. Williams also testified that in his opinion there is no place in Segment 2 where a mandatory portage is required. *Id.* Moreover, based on his experiences on the river, Mr. Williams was of the opinion that a historical flatboat could successfully navigate Segments 2 and 3 more than 50% percent of the time and a historical canoe could navigate it about 90% of the time. Tr. 10/21/15, at 288-90.

Alex Mickel: Mr. Mickel is an experienced boater who has operated a commercial river rafting business offering white water rafting trips on Segments 2 and 3 of the Salt River since 1998. Tr. 10/21/15 at 383:15-481:17. He has personally boated the upper Salt “hundreds” of times. *Id.* at 396. During its operating season Mr. Mickel’s company, Mild to Wild, employs 20 to 25 people with 14 full-time employees. *Id.* at 386. While Mild to Wild is certainly one of the major operators, the United States Forest Service currently permits four commercial companies to operate on the Salt River

With respect to the Salt River, Mild to Wild generally operates from the end of February to early June, when a whitewater experience can be reliably provided by the spring snowmelt

runoff. *Id.* at 386-389. Commercial trips can operate between 220 cfs and 7500 cfs at the Chrysotile gage, although above 350 cfs is preferred for rafting purposes. *Id.* at 389-90, 476. At several points in his testimony, Mr. Mickel clarified that outside of the snowmelt period, the River is still boatable but won't provide the predictable splashes that his customers seek and may have a few shallow spots at lower flows. *Id.* at 420-21, 387-89, 468, 476-77. Mild to Wild uses rafts from 12 to 16 feet in length and inflatable kayaks because "they're the best boats available for what we're doing, transporting people down the river." *Id.* at 387-88. However, Mr. Mickel has regularly seen canoes and "all kinds of craft" come down the Salt. *Id.* at 398.

Mr. Mickel testified that if he were using a historical wooden flatboat or canoe to boat he would take caution at four or five rapids, all located in Segment 2. *Id.* at 393-95. At the natural median flow, however, Mr. Mickel did not believe that any of those rapids would require a mandatory portage. *Id.* at 394-96. With respect to Quartzite Falls, Mr. Mickel testified that before it was blown up, he had only encountered it in very high flows of 3000 and 7000 cfs. Consequently, the group deemed it safer to portage on river right; however, if the river was at a natural median flow, "I believe we would be lining, absolutely." *Id.* at 396. Regarding Segment 3, Mr. Mickel stated "it's much milder" *Id.* at 400.

Mr. Mickel testified that he has never seen beaver dams across the Salt and has never had difficulties due to split channels. *Id.* at 401-02. Over the roughly 52-mile length of Segments 2 and 3 where he commercially boats, he testified that there may be a half dozen shallow spots at the natural median flow level of 300 cfs. *Id.* at 477.

Brad Dimock: To demonstrate that historical boats could have navigated the river in its natural condition, the State had Mr. Brad Dimock navigate all of Segment 5 and the top portion of Segment 6 using a replica historic boat. Tr. 10/22/15, at 532-540. Mr. Dimock's boat was

built to the exact original specifications of “the Edith,” the boat used by the Kolb brothers in 1911 on the Colorado River. Like the Kolb’s boat, Mr. Dimock’s Edith is about 18 feet long by 4 feet wide, and has two cargo compartments. C018-146, at 2828-29. Mr. Dimock’s replica boat has been run through Grand Canyon and Cataract Canyon on the Colorado River and Lodore Canyon on the Green River, among other locations. C018-146, at 2832-33.

On August 31, 2015, Mr. Dimock placed the replica Edith in the Salt River at the beginning of Segment 5, just below Stewart Mountain dam and traveled 12 miles downstream to Granite Reef, which is a few miles into Segment 6. Tr. 10/22/15 at 533; C030-364, at 288-293. At the time, the replica craft held 850 pounds of sandbags and jugs of water as well as Mr. Dimock. *Id.* This was the first time that Mr. Dimock had boated this stretch of the Salt River and at one point, he ran aground on a rock. Tr. 10/22/15, at 535-39, 631. At that point, he discovered that water had leaked into the large hatch, which had the effect of adding about 500 pounds to his load and giving the boat a deeper draft. *Id.* at 536. The cause of the leakage was the fact that the boat had been out of the water in Flagstaff and did not have adequate time in the water before the trip to swell the planks and close any gaps due to dryness. *Id.* Once he discovered the problem, Mr. Dimock was able to drain the water. Mr. Dimock stated that if the boat had not taken on the water, he did not think he would have run aground in the first place. *Id.* at 536, 631.

Mr. Dimock considered the trip a success. *Id.* at 526, 539. He testified that in his opinion someone could have made that exact trip in historical times. *Id.* at 539. On the date of his trip, the flow rates in Segments 5 and 6 (below the Verde confluence) were 653 and 746 cfs respectively. C030-364, at 288. Both flow rates are well within the ordinary and natural condition of the River, with 653 cfs being somewhat above the reconstructed natural median for

Segment 5 and 746 cfs being somewhat below the reconstructed natural median for Segment 6. C053-396, at 8. (Fuller Rebuttal Hydrology).

## II. Legal Analysis

### A. Issue 1: In its Ordinary and Natural Condition, Was the Salt River Navigable at the Time of Statehood?

#### 1. *State ex rel. Winkleman v. ANSAC*

In determining whether the Salt River was navigable at the time statehood, it is appropriate to begin with a discussion regarding the Court of Appeals' decision regarding the Lower Salt River and how the directives set forth by the Court in that Opinion should inform the proceedings on remand. *State ex rel. Winkleman v. Ariz. Navigable Stream Adjudication Comm'n*, 224 Ariz. 230, 229 P.3d 242 (App. 2010). Significantly, in the case of the Lower Salt River, the Court remanded the matter back to ANSAC because it found that “although ANSAC considered a great deal of evidence concerning the condition of the River, and reviewed evidence from various times before statehood, ANSAC ultimately failed to apply the proper legal standard to the evidence presented.” *Id.* at 242 ¶28, 229 P.3d at 254. The Court held that “[b]ecause the proper legal test was not applied, we must vacate the superior court’s judgment and remand for ANSAC to consider whether the River would have been navigable had it been in its ordinary and natural condition on February 14, 1912.” *Id.* at ¶29.

In articulating the proper legal test, the Court instructed that ANSAC is “required to determine what the River would have looked like on February 14, 1912, in its ordinary (i.e. usual, absent major flooding or drought) and natural (i.e. without man-made dams, canals, or other diversions) condition.” *Id.* at 241 ¶28, 229 P. 3d at 253. The Court also provided specific guidance regarding what constituted the “best evidence” of the Lower Salt’s natural condition, and concluded that with respect to that watercourse, “the River could be considered to be in its

natural condition after many of the Hohokam’s diversions had ceased to affect the River, but before the commencement of modern-era settlement and farming in the Salt River Valley....”

*Id.* at 242 ¶30, 229 P. 3d at 254.

**2. A Navigability Determination Is Not Based Solely on Actual Navigation at the Time of Statehood; Navigability Can Be Found if the River Was *Susceptible* to Navigation in its Ordinary and Natural Condition.**

The definition of navigability does not require that the watercourse actually have been used for trade or travel at the time of statehood, but rather, requires only that it would have been susceptible to such a use in its ordinary and natural condition. “The question of ... susceptibility in the ordinary condition of the rivers, rather than of the mere manner or extent of actual use, is the crucial test ... The extent of existing commerce is not the test.” *U.S. v. Utah*, 283 U. S. 64, 82 (1931); *see also, Alaska v. Ahtna*, 891 F.2d 1401, 1404-1405 (9<sup>th</sup> Cir. 1989).

As the Oregon Court of Appeals explained in *Northwest Steelheaders Ass’n v. Simantel* 112 P.3d 383, 389 (Ore. 2005):

First, with respect to “actual use,” it is not necessary that the historic use made of the river have been either widespread or commercially profitable. “The extent of \* \* \* commerce is not the test.” . . . For example, the Court’s most recent application of the *The Daniel Ball* test upheld a determination of the navigability of Utah’s Great Salt Lake based on evidence that the Court described as “sufficient” but “not extensive.”

*Id.* (quoting *Utah v. U.S.*, 403 U.S. at 11.). Further, as the Oregon court observed, “qualifying travel and trade is not limited to large-scale commercial or multiple passenger vessels of the sort typically engaged in modern commerce.” *Id.* at 390. Indeed, the court in that case found portions of the John Day River navigable based, in part, upon the fact that the river could have been *susceptible* to navigation by Indian Canoes:

We further note that, as described in detail in our discussion of “actual use” below, at the time of statehood, various Native American tribes in the Columbia River basin used dugout canoes, which typically drafted six to eight inches, for

fishing, travel, and trade. . . . Persuasive evidence at trial established that modern boats of similar draft traverse the length of the John Day River today with little difficulty. From those facts, we conclude that, in its ordinary condition in 1859, the John Day River as it passes the defendants' properties *would have provided* ample capacity for travel and trade by means of dugout canoes.

*Id.* at 392 (emphasis added). This holding by the Oregon Court of Appeals, was consistent with other cases where navigation by small boats was recognized as evidence of navigability. *See, e.g. State of N.D. ex rel. Bd. of Univ., etc. v. Andrus*, 671 F.2d 271, 278 (8th Cir 1982)(“We must bear in mind that the issue is one of potential commercial use and hence navigability at the time of statehood, not in the present day \* \* \* Canoe travel at the time of North Dakota’s statehood represented a viable means of transporting persons and goods.”) *rev’d on other grounds sub nom, Block v. North Dakota*, 461 U.S. 273 (1983); *Puyallup Tribe of Indians v. Port of Tacoma*, 525 F. Supp. 65 (W.D. Wash 1981), *aff’d*, 717 F.2d 1251 (9th Cir 1983)(declaring navigability on the basis that “Indians navigated the river with their fishing boats and canoes”). *See also*

Similarly, courts have made it very clear that the lack of actual use at statehood as a “highway for commerce” does not defeat a finding of navigability. *See, e.g., U.S. v. Utah*, 283 U.S. at 83. As the United States Supreme Court noted in that case:

Utah ...is not to be denied title to the beds of such of its rivers...either because the location of the rivers and the circumstances of the exploration and settlement of the country through which they flowed had made recourse to navigation a late adventure, or because commercial utilization on a large scale awaits future demands. The question remains one of fact as to the capacity of the rivers in their ordinary condition to meet the needs of commerce as these may arise in connection with the growth of the population....And this capacity may be shown by physical characteristics and experimentation as well as by the uses to which the streams have been put.

*Id.*

More recently, the Oregon Court of Appeals reinforced the fact that there is no requirement that navigability proponents demonstrate that earlier inhabitants failed to



comprehend the potential usefulness of the river as an avenue for navigation. *Hardy v. State Land Board*, 274 Ore. App. 262, 360 P. 3d 647 (2015). In *Hardy*, the court explained:

We also reject petitioners’ suggestion (at oral argument) that the “susceptibility of use” standard is applicable only where the area in question was essentially uninhabited or only sparsely settled at the time of statehood. Although those may have been the extant circumstances in *United States v. Utah*, the Supreme Court did not then, and has not since, held that the susceptibility-of-use standard is so limited. Indeed, the Court, in *PPL Montana*, cited *United States v. Utah* for the proposition that a river’s “potential” for commercial use at the time of statehood is the “crucial” question. *PPL Montana*, 565 U.S. at \_\_\_, 132 S Ct at 1233 (“[E]xtensive and continued [historical] use for commercial purposes’ may be the ‘most persuasive’ form of evidence, but the ‘crucial question’ is the potential for such use at the time of statehood, rather than ‘the mere manner or extent of actual use.’” (Quoting *United States v. Utah*, 283 U.S. at 82-83 (brackets in *PPL Montana*)).). Notably, the Court did not circumscribe consideration of that “crucial” question to circumstances where only an absence of human habitation could explain the lack of evidence of actual use of the river for commercial purposes. Petitioners’ suggestion to the contrary is not well taken.

*Hardy*, 274 Ore. App. 279, 360 P. 3d at 658. Thus, while evidence of actual use is probative, it is not required if proponents are able to demonstrate that, in its natural condition, the river was susceptible to being used for trade and travel.

### **3. Actual Commerce, and Certainly Not “Successful Commercial Enterprise” is Not a Prerequisite for Finding Navigability.**

The term “highway for commerce” is first found in the definition of “navigable” or “navigable watercourse.” The Arizona statute (which codifies federal law) defines both as:

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

Ariz. Rev. Stat. §37-1101(5). The statute more specifically defines “highway for commerce” as “a corridor or conduit within which the exchange of goods, commodities or property *or the transportation of persons* may be conducted.” Ariz. Rev. Stat. §37-1101(3). Thus, the statutory

definition of “highway for commerce” does not require the transport of goods; the transportation of persons alone is sufficient to establish a “highway for commerce.”

Moreover, the term “highway for commerce” can be misleading; as the cases make clear, this requirement is satisfied by either trade or *travel* on the river, even if the travel is noncommercial. As the Arizona Court of Appeals explained in *Defenders*,

The federal test has been interpreted to neither require both trade and travel together nor that the travel or trade be commercial. *See Utah*, 403 U.S. at 11 (hauling of livestock across lake even though done by owners and “not by a carrier for the purpose of making money” was enough to support a finding of navigability because “the lake was used as a highway and that is the gist of the federal test”)

199 Ariz. at 416, 18 P.3d at 727 citing *Utah v. U.S.*, 403 U.S. 9 (1971). In *Defenders*, the court also rejected the arguments advanced by the Salt River Project and Phelps Dodge that the trade and travel must be both upstream and downstream, or that the travel must be for a profitable commercial enterprise. Rather, the court observed that, “nothing in the *Daniel Ball* test necessitates that the trade or travel sufficient to support a navigability finding need be from a ‘profitable commercial enterprise.’” *Id.* at 422, 18 P. 3d at 733. *See also United States v. Hill*, 248 U.S. 420, 423 (1919) (“commerce has been held to include the transportation of persons and property no less than the purchase, sale and exchange of commodities”) citing *Gibbons v. Ogden*, 9 Wheat 1, 188 (1824).

#### **4. Navigability Can Be Established by Modern Boating.**

Because navigability can be established by showing that a river in its natural condition was *susceptible* to navigation, navigability can be established by modern boating. In prior proceedings, navigability opponents have frequently cited to the *PPL Montana* case to argue that the Commission should not consider the ample evidence of modern boating on Arizona rivers when making navigability determinations. However, they deliberately misrepresent the Supreme

Court's holding in that case. In its discussion of the relevance of evidence of modern boating, the Supreme Court in *PPL Montana* did not depart from existing law and certainly did not preclude the consideration of such evidence. Indeed, in holding that the Montana court erred when it relied upon evidence of present day, primarily recreational, use of the Madison River, the Court was careful to note, "[e]rror is not inherent in a court's consideration of such evidence..." *PPL Montana*, 132 S. Ct. at 1233. Relying upon well-established case law, the Court explained:

Evidence of recreational use, depending on its nature, may bear upon susceptibility of commercial use at the time of statehood. See *Appalachian Elec. Power Co.*, 311 U.S., at 416, 61 S. Ct. 291, 85 L. Ed. 243 ("[P]ersonal or private use by boats demonstrates the availability of the stream for the simpler types of commercial navigation"); *Utah*, 283 U.S., at 82, 51 S. Ct. 438, 75 L. Ed. 844 (fact that actual use has "been more of a private nature than of a public, commercial sort . . . cannot be regarded as controlling"). Similarly, post statehood evidence, depending on its nature, may show susceptibility of use at the time of statehood. See *id.*, at 82-83, 51 S. Ct. 438, 75 L. Ed. 844 ("[E]xtensive and continued [historical] use for commercial purposes" may be the "most persuasive" form of evidence, but the "crucial question" is the potential for such use at the time of statehood, rather than "the mere manner or extent of actual use").

*Id.* As the Court further noted, "[f]or the susceptibility analysis, it must be determined whether trade and travel could have been conducted 'in the customary modes of trade and travel on water,' over the relevant river segments 'in [its] ordinary and natural condition. *Id.* Therefore the Court merely reinforced that a party seeking to use present day evidence to prove navigability for title must first establish that, "(1) the modern watercraft are meaningfully similar to those in customary use for trade and travel at the time of statehood; and (2) the river's post-statehood condition is not materially different from its physical condition at statehood." *Id.* The Court explained, "[i]f modern watercraft permit navigability where the historical watercraft would not, or if the river has changed in ways that substantially *improve* its navigability, then evidence of present-day use has little or no bearing on navigability at statehood." *Id.* (emphasis

added). The Montana Court was reversed only because it did not appear to have made the prerequisite findings.

Recently, the Oregon Court of Appeals addressed this very issue. *Hardy v. State Land Board*, 274 Ore. App. 262 (2015). In *Hardy*, in proceedings before the State Land Board regarding the navigability of a reach of the Rogue River, the State of Oregon sought to prove navigability based on modern recreational boating. Toward that end, the state had introduced evidence regarding the draft and flow requirements of modern watercraft and the draft and flow requirements of dugout canoes and other watercraft commonly used by Native Americans in the Oregon Territory at the time of statehood. According to the Court of Appeals, this evidence demonstrated that “watercraft in 1859 would permit navigability to the same or similar extent as modern watercraft.” *Id.* at 286-87.<sup>1</sup>

The court further found that the State had satisfied the second requirement that the river’s post-statehood condition not be “materially different” than its condition at statehood by showing:

[Through] cadastral maps, historical data from USGS survey gauges, and information drawn from [modeling], that the river’s flow [through the designated reach] was “most likely greater at the time of statehood \* \* \* than it is today” due to the construction of dams and the withdrawal of water from the river for irrigation and domestic and municipal use. Thus, the state’s evidence indicates that, if anything, navigation is likely *more* difficult today than it was at statehood.

*Id.* at 287-288 (emphasis in original). In light of this showing, the court concluded that, “the board’s analysis of the physical conditions of the river, as well as its comparative assessment of watercraft in use at statehood and today satisfies the requirements of *PPL Montana* and permits the conclusion that the upper portion of the river was capable--at statehood--of sustaining travel and trade by means of dugout canoes.” *Id.* at 288.

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<sup>1</sup> The court rejected the opponents’ argument that the state’s evidence failed because there was no evidence of Native American use of dugout-type canoes on the specific portion of the river under consideration. *Id.* at n. 21.

**5. When the Correct Law Is Applied to the Wealth of Evidence Before the Commission, the Conclusion that Segments 2 through 6 of the Salt River are Navigable is Inescapable.**

As the facts set out above demonstrate, in the case of the Salt River, there is ample evidence of navigability. First, although actual navigation is not required, there are numerous accounts of people navigating the river for both recreational and commercial purposes. As detailed above, prior to statehood, the river was navigated for travel, fishing, hunting, trapping, engineering and military purposes. And these uses of the river continued at least until the 1910s. These documented events demonstrate that the river was not only susceptible to use as a highway for commerce, but was actually used as one both before and around the time of statehood.

Moreover, Arizona citizens' use of the Salt River as a "highway for commerce" has only increased in modern times further establishing navigability. Although navigation of the river has shifted so that it is predominantly but not exclusively recreational, those recreational uses of the river simply represent a more modern type of commerce. But even if it weren't evidence as "commerce" per se, modern navigation of the river is also compelling evidence of the susceptibility of the river to navigation in its "ordinary and natural condition." Like the Rogue River, found navigable in *Hardy* based largely on modern use, had the Salt River been in its "natural condition" at the time of statehood, it would only have been more navigable.

The fact that segments 2 through 6 were regularly navigated prior to statehood, and segments 2, 3, 5 and a part of 6 are currently navigated by thousands of Arizonans, compels a finding that segments 2 through 6 in their ordinary and natural condition were navigable when Arizona entered the Union.

## **B. Issue 2: Segmentation.**

The United States Supreme Court held that a river's navigability must be determined on a segment-by-segment basis. *PPL Montana*, 132 S. Ct. at 1230. The Court recognized that “[p]hysical conditions that affect navigability often vary over the length of a river.” *Id.* In determining the navigability of the Salt River, the State has proposed that the Commission consider the river in six segments and presented evidence of navigability in that context. We urge the Commission to formally adopt the segmentation proposed by the State, and based on the evidence presented find that five of the segments, segments two through six, are navigable.

## **III. Conclusion.**

In the present case, there is ample relevant, persuasive evidence demonstrating that segments 2 through 6 of the Salt River meet the Arizona and federal standards of navigability. In summary, the evidence demonstrating navigability includes historic accounts of boating, a robust history of boating in modern times, information regarding the substantial flow of the river in its ordinary and natural condition as well as in its modern, depleted condition. When the objective evidence submitted is evaluated in light of the applicable law, it is clear that at the time of statehood the vast majority of the Salt River, in its ordinary and natural condition, was susceptible for use as a highway for commerce, over which trade and travel was conducted in the customary modes of trade and travel at that time. Therefore, we urge ANSAC to find segments two through six of the river navigable at statehood.

Respectfully submitted this 18th day of July, 2016.

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