Thomas C. Horne
Attorney General
Firm Bar No: 14000
Joy Hernbrode (020494)
Laurie A. Hachtel (015949)
Edwin Slade (029807)
Assistant Attorneys General
Natural Resources Section
1275 West Washington Street
Phoenix, Arizona 85007-2997
Phone No.: (602) 542-8342
Fax No.: (602) 542-4084

Email: NaturalResources@azag.gov Attorneys for the Arizona State Land Department

#### BEFORE THE ARIZONA NAVIGABLE STREAM ADJUDICATION COMMISSION

IN THE MATTER OF THE NAVIGABILITY OF THE GILA RIVER FROM THE NEW MEXICO BORDER TO THE CONFLUENCE WITH THE COLORADO RIVER, GREENLEE, GRAHAM, GILA, PINAL, MARICOPA AND YUMA COUNTIES, ARIZONA.

No. 03-007-NAV

ARIZONA STATE LAND DEPARTMENT'S NOTICE OF EIGHTH SUPPLEMENTAL SUBMISSION OF EVIDENCE REGARDING THE GILA RIVER

The Arizona State Land Department ("ASLD" or the "Department") hereby submits the following eighth supplemental evidence in the above-referenced matter. ASLD reserves the right to supplement its evidence through the close of evidence.

TAB NO.	DESCRIPTION
127	Additional Requested Citations for Jon Fuller PowerPoint Presentation (X020-79)
128	Amended Slides from Jon Fuller's June, 11, 2014 PowerPoint Presentation (X020-79)

DATED: August 20, 2014.

#### THOMAS C. HORNE Attorney General

/s/ Joy L. Hernbrode
Joy L. Hernbrode
Edwin Slade
Laurie A. Hachtel
Assistant Attorneys General
Attorneys for the Arizona State Land Department

ORIGINAL AND SIX COPIES of the foregoing hand-delivered for filing this 20th day of August, 2014, to:

Arizona Navigable Stream Adjudication Commission 1700 W. Washington Room B-54 Phoenix, AZ 85007

COPY of the foregoing mailed this 20th day of August, 2014, to:

Fred E. Breedlove III Squire Sanders 1 E. Washington St., Suite 2700 Phoenix, Arizona 85004 Attorney for Arizona Navigable Stream Adjudication Commission

John B. Weldon, Jr.
Mark A. McGinnis
Salmon, Lewis and Weldon, PLC
2850 East Camelback Rd., Ste. 200
Phoenix, AZ 85016-4316
Attorneys for the Salt River Project Agricultural Improvement and Power District and Salt River Valley Water Users' Association

Cynthia M. Chandley
Robert J. Pohlman
L. William Staudenmaier
Christopher W. Payne
Snell & Wilmer
400 East Van Buren
Phoenix, AZ 85004-2022
Attorneys for Freeport-McMoRan Copper & Gold Inc.

Sean Hood, Esq.
Fennemore Craig, P.C.
2394 East Camelback, Suite 600
Phoenix, AZ 85016-3429
Attorneys for Freeport-McMoRan Copper & Gold, Inc.

Joy Herr-Cardillo
AZ Center for Law in the Public Interest
2205 East Speedway Blvd.
Tucson, AZ 85719-0001
Attorneys for Defenders of Wildlife, Donald Steuter, Jerry Van Gasse and Jim Vaaler

Joe Sparks
John H. Ryley
The Sparks Law Firm, P.C.
7503 First Street
Scottsdale, AZ 85251-4201
Attorneys for San Carlos Apache Tribe

John Helm Sally Worthington Helm, Livesay & Worthington, Ltd. 1619 East Guadalupe, Suite One Tempe, AZ 85283-3970 Attorneys for Maricopa County

Steven L. Wene Moyes Sellers & Sims 1850 N Central Ave, #1100 Phoenix, AZ 85004 Attorneys for Board of Regents/Arizona State University Cynthia S. Campbell City of Phoenix 200 West Washington, #1300 Phoenix, AZ 85003-1611 Attorney for City of Phoenix

William H. Anger Engelman Berger, P.C. Security Title Plaza, Suite 700 3636 North Central Avenue Phoenix, Arizona 85012 Attorney for City of Mesa

Charles L. Cahoy Assistant City Attorney City of Tempe 21 East Sixth Street, Suite 201 Tempe, AZ 85281 Attorney for City of Tempe

Michael J. Pearce Maguire & Pearce PLLC 2999 N 44th St. Suite 630 Phoenix, AZ 85018-0001 Attorney for Home Builders Association of Central Arizona

Carla A. Consoli Lewis & Roca, LLP 40 North Central Avenue Phoenix, AZ 85004-4429 Attorney for CEMEX CEMENT, INC.

James T. Braselton Mariscal, Weeks, McIntyre & Friedlander 2901 North Central Avenue, #200 Phoenix, AZ 85012-2705 Attorney for Land Title Association of Arizona

Julie M. Lemmon 1095 W Rio Salado Parkway, Suite 102 Tempe, AZ 85281 Attorney for Flood District of Maricopa County Linus Everling
Thomas L. Murphy
Gila River Indian Community
P.O. Box 97
Sacaton, AZ 85247
Attorneys for Gila River Indian Community

Sandy Bahr 202 East McDowell Road, Ste. 277 Phoenix, AZ 85004 For the Sierra Club

David A. Brown Brown & Brown Law Offices 128 East Commercial P.O. Box 1890 St. Johns, AZ 85936

Susan B. Montgomery Robyn Interpreter Montgomery & Interpreter P.L.C. 4835 East Cactus Road, Suite 210 Scottsdale, AZ 85254 Attorneys for Yavapai-Apache Nation

#### /s/ Paula Brewer\_

Paula Brewer 4114076

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## **Historical Photographs**



Gila River near Wellton Crossing, 1910

From: Littlefield, 2014

## Gila River Rating Curves

- Comparison to Other Experts' Estimates (Burtell)
  - Segment 1: < 1.7-1.8 ft (hydraulic depth) Virden</p>
  - Segment 1: < 1.6 ft (hydraulic depth) York</p>
  - Segment 2: < 2.0 (hydraulic depth) Clifton</li>
  - Segment 2: 1.1-2.5 ft (hydraulic depth) Bonita Ck
  - Segment 3: < 2.0 ft (hydraulic depth) Solomonville</li>
  - Segment 3: < 2.0 (hydraulic depth) Ashurst</li>
  - Segment 3: < 1.8 ft (hydraulic depth) Calva</p>
  - Segment 4: < 1.8 ft (hydraulic depth) Coolidge Dam</li>

### Gila River Rating Curves

- Comparison to Other Experts' Estimates (Gookin)
  - Based on Modeling Cross Section from Historical Topo
    - Potential Issues with Cross Section/Model

<ul><li>Results</li></ul>	Kelvin	Above Salt River
<ul><li>Mean</li></ul>	0.70 ft (1.7 ft)	o.98 ft
<ul><li>Median</li></ul>	0.55 ft (1.4 ft)	0.74 ft
Low Flow	0.44 ft (1.1 ft)	0.24 ft

## 

Additional Requested Citations for Fuller Powerpoint

1. 298; 1085-7. Streamboats up to Dome

Littlefield Report, 1998 (Exhibit 1, part 19)

Littlefield Testimony, 2005, Transcript @ p. 154:6

Littlefield Report, 2005 (Exhibit 12, p. 120)

Newspaper accounts. AZ Sentinel 1-25-1879. "Uncle Sam" (Exhibit X004, part 15)

2. 330-1. Pattie description of Gila.

SLIDE 80 - James Ohio Pattie (1825, Jan-Mar)

- a. All Segments: "beautiful, running between banks with tall cottonwoods & willows...plenty of beaver" (Tellman, Arizona's Changing Rivers (Exhibit 1, part 18), citing Corle, The Gila, p. 116-119)
- b. Segment 7: "200 yds wide" (Man and Wildlife in Arizona, Goode P. Davis, Jr.,1982, p. 8, 19-20 (Exhibit X004, part 3))
- c. Segment 6: "too deep to ford"
  - i. Built a canoe to trap both sides of river (Exhibit X004, p. 21)
- 3. 331-2. Kearny Expedition quote.

Kearny Expedition (1846) – Mapping, Roads

Segment 7:

"80 yds wide...3 ft deep...rapid" (Exhibit X004, Part3, 29)

Lt. Emory (1846): "Navigable as far as Pima Villages (Segment 6)...possibly with small boats at all stages" (Littlefield, 2004, Exhibit 12, p. 108)

Lt. Emory (1853): "Not navigable...a never failing stream...large volume of flow...large fish" (Exhibit 12, p. 108)

Turner: "100-150 yds wide...average depth of 4 ft...deep enough for a steamboat" (Exhibit X004, part 3, p. 29; Exhibit 12, p. 107)

Segment 1:

Johnson: "30 ft wide, 1 ft. deep on the shallows, pebbly bed, fringed with trees." (Exhibit X004, part 3, p. 27)

4. 332. Source for quote on SLIDE 83.

**Forty-Niners** 

Segment 6:

"deep, narrow & rapid stream" (Exhibit 1, part 18, p. 99)

"whole stream drawn off for irrigation" (Exhibit X004, part 3, p 44)

August, 1849 "deep, narrow, rapid, muddy, tall cottonwoods" (Exhibit X004, part 3, p 48)

Segment 1:

"12 yds wide, 1.5 ft deep...abounds in trout" (Exhibit X004, part 3, p 47)

- 5. 334-5. Source for Gila River in Duncan Valley in SLIDE 91 (ASLD Report for Upper Gila River, Exhibit 2, p. B-17; AZ Pioneers Historical Society, Tucson, #59101)
- 6. 486. Escalante description. SLIDE 79

de Escalante (Nov, 1697)

Segment 6

River too deep to ford, crossed by swimming (ASLD Report for Gila River, 2005, Exhibit 4, p. IV-1) de Anza (1775)

Segment 6, 7 & 8

"dry...half way up legs...reaching horses' shoulders...very deep...flowing slowly" (ASLD Report for Gila River, 2005, Exhibit 4, p. IV-1)