

These slides replace pages in X035-167.

Arizona State Land Department
December 2014

Presentation to ANSAC: Verde River Navigability

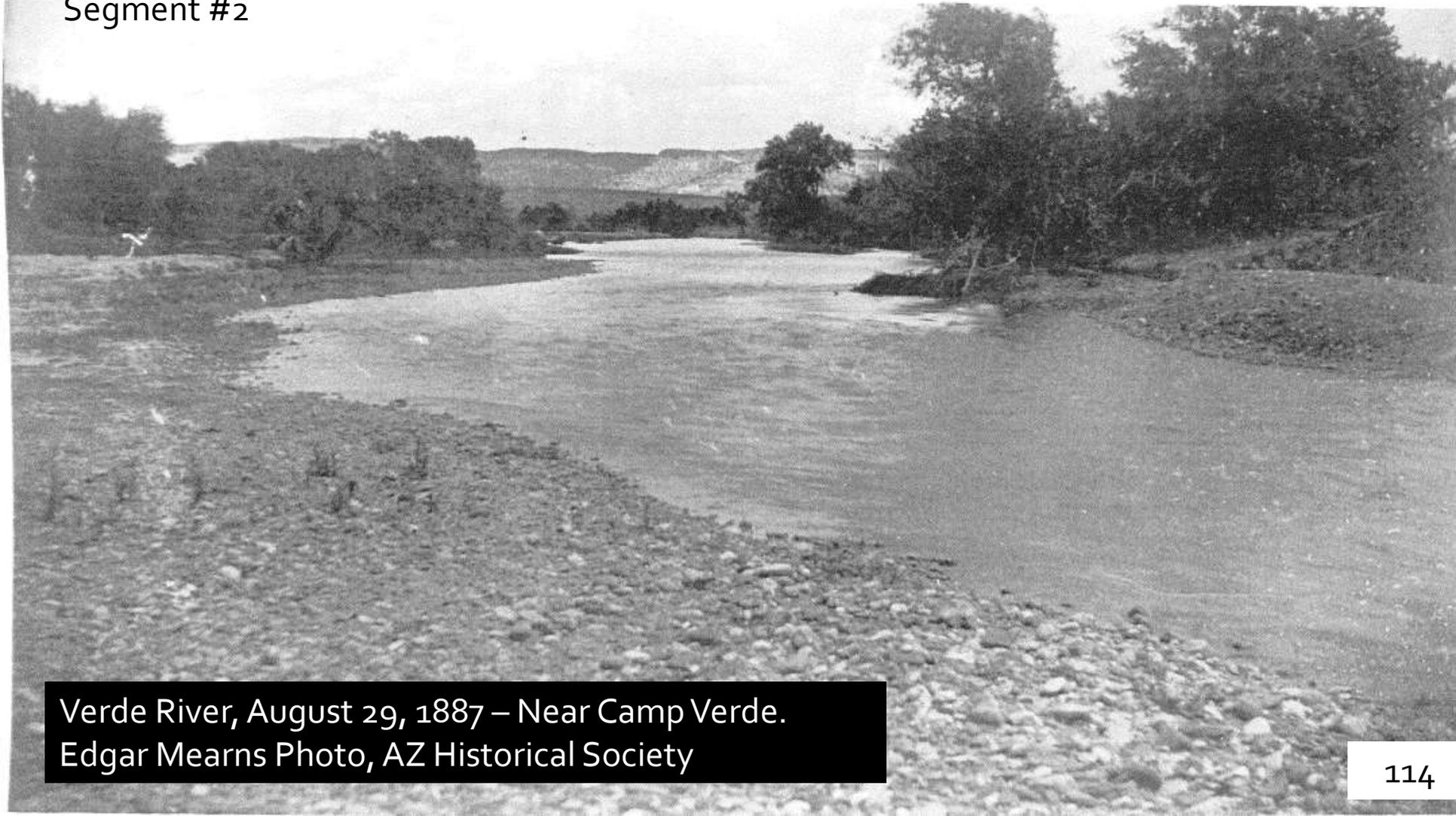
River Descriptions

Ft. McDowell – Segment 5 (1880's)

Dan Huntington: the river was "full of beaver dams with plenty of fish behind these dams." River was deep enough to swim cavalry horses... (Huntington 1957:7)

Historical Photographs

Segment #2



Verde River, August 29, 1887 – Near Camp Verde.
Edgar Mearns Photo, AZ Historical Society

Historical Boating Accounts

- Recollections of Boating
 - Jim Byrkit/Historian:
 - Segment 2: Floating logs to build lodge (1958)
 - Bob Munson/Historian:
 - Mountain men may have used canoes on Verde
 - 1880's collapsible boat used at Ft. Verde
 - Betty Tome/Historian:
 - Ft. Verde soldiers used fishing boat

Historical Boating Accounts

- Were Historical Boating Episodes Successful?
 - Most boats reached destination (13 of 17)
 - Several accounts indicate repeated boating
 - No accounts of any problems with portages or beaver dams, etc.
 - No single place that stopped all accounts
- Conclusion: Historical boating was generally successful.

Geology: Key Findings

- Channel Conditions
 - Continuous low flow channel (p. 5-15)
 - GLO Survey Notes 1873/1877 (Segment 2)
 - Depth: ~ 2 ft. (average of 3 ft.)
 - Width: 50-100 ft.
 - GLO Survey Notes 1911 (Segment 5)
 - Depth: 1-4 ft.
 - Width: 180-360 ft.

Hydrology: Key Findings

Long Term Flow Estimates Based on USGS Gauge
(Pope et. al., 1998)

Gage Station	Segment	Flow Rate (cfs) Avg Annual	Flow Rate (cfs) Median	Flow Rate (cfs) 90%	Gage Period
Paulden	0,1	42	26	22	1964-1996
Clarkdale	2	197	86	70	1916-1920 1966-1996
Camp Verde	3	465	188	82	1935-1945 1989-1996
Tangle Creek	4	591	240	123	1946-1996
McDowell	5	781	-	-	1889-1939

Note: All flow rates are for depleted flow conditions (not ordinary & natural condition)

Verde River Segment #0

- Summary (Segment o-B, downstream Granite Ck.)
 - Boatable by canoes: <90% of the time
 - Year Round (330 days/yr)
 - Boatable by flatboats: ~10% of the time
 - Seasonally (Winter, Monsoon) (36 days/yr)
 - Modern Boating
 - Very limited recreational use
 - Ordinary & Natural Condition
 - Similar to existing condition
 - Higher flow rate prior to Statehood