

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

ANALYSIS  
OF THE  
CRITERIA FOR  
NAVIGABILITY

VERDE RIVER

ORIGINAL

RECEIVED  
12-6-86



COCONINO NATIONAL FOREST  
PRESCOTT NATIONAL FOREST  
TONTON NATIONAL FOREST

006

## PROTECTION OF PUBLIC TRUST AND OTHER VALUES

The Verde River from Beasley Flat to the Ft. McDowell Indian Reservation has been held in trust for citizens of and visitors to this country since it was reserved from the public domain, a process which took place between 1898 and 1908. This reach of the river is now managed by the United States Department of Agriculture, Forest Service (USDA, FS) with portions under the jurisdiction of the Coconino, Prescott, and Tonto National Forests.

Forest Service management of this river is conducted according to Federal laws designed to protect public trust and other values. One such law is the Multiple Use-Sustained Yield Act of 1960 which requires "...management of all of the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American people...". Another is the National Forest Management Act of 1976 which requires that National Forest System lands be managed in accordance with a comprehensive Land and Resource Management Plan (LRMP) which provides for the multiple use and sustained yield of goods and services from each Forest in a way that maximizes long-term net public benefits in an environmentally sound manner.

After extensive public involvement, each of the three involved National Forests have prepared an LRMP addressing public trust and other values in the following categories:

Scenic River Management (Arizona's only Scenic River)

Wild River Management (Arizona's only Wild River)

Wilderness Protection

Soil, Air, and Water Quality

Wildlife and Fish Habitat

Riparian Vegetation Protection

Outdoor Recreation (including outfitting/guiding)

Range Management

Special Land Uses

Minerals Area Management

Law Enforcement

Within these categories, the Forest LRMP's specifically promote Public Trust Values as defined under Arizona Revised Statute (ARS) Title 37 (i.e., commerce, navigation, and fishing) by permitting commercial guides and outfitters to provide recreational navigation of the river for forest visitors. Non-commercial activities are also promoted by permitting or providing and maintaining marinas, boat ramps, and access points on the Verde and its reservoirs (Horseshoe and Bartlett Reservoirs). Additionally, fishing is enhanced and promoted by providing fishing access points to the river and reservoirs, as well as fisheries-habitat improvements for both native and non-native fish species.

Based on the above, it can be seen that management of the Verde River by the Forest Service has protected those Public Trust Values defined by ARS Title 37 (as well as many others) since well before Arizona statehood.

## PHOTO INDEX

### PHOTO NO. 1: Rafting the Upper Verde, March 1973

This photo is of the first Forest Service river-running trip down the Verde River. Note the inflatable raft imported from England, the wet-suits being worn for protection from the icy water, the hard hats, and the old fashioned personal flotation devices ("life vests").

### PHOTO NO. 2: Abandoned Kayaks, March 1975

These home-made kayaks were the first ones observed on this river. The bottoms had been severely damaged and they had been abandoned along the river.

### PHOTO NO. 3: Looking at Verde Falls, March 1983

The Verde Falls is located at River Mile 57 (57 miles upstream of the Horseshoe Reservoir Dam). There is a narrow chute which could be run on river-right, but the rocks can easily damage a boat. On river-left, there is a dangerous vertical drop with recirculating water below.

### PHOTO NO. 4: Higher Water at Verde Falls, April 1983

At this water level, the rocks at the Falls are less of a problem, but the current is very powerful and the rock in the middle of the river below the Falls becomes a serious hazard.

### PHOTO NO. 5: Destroyed Kayak, March 1986

The remains of this kayak were discovered buried in the sand along the river. Its owner is unknown.

### PHOTO NO. 6: Running Verde Falls, March 1986

Skilled boatmen with modern-day equipment can run Verde Falls at appropriate water levels - often successfully!

PHOTO NO. 7: Abandoned Canoe, March 1987

This damaged canoe was found abandoned in a very hazardous spot where trees were growing in the river. The pressure of the current prevented pulling the boat off the limbs.

PHOTO NO. 8: Destroyed Canoe, March 1987

The remains of a Coleman Canoe (advertised as "indestructible") were discovered along the river. Note the large red air-bag in the canoe being used; this air-bag will keep that canoe from totally sinking when it fills with water in the rapids.

PHOTO NO. 9: Destroyed Canoe, April 1992

The remains of a large aluminum canoe were found well back from the river. Perhaps someone planned to recycle it at a later date.



United States  
Department of  
Agriculture

Forest  
Service

Tonto  
National  
Forest

2324 E. McDowell Road  
Phoenix, AZ 85006  
602 225-5200

File Code: 2710

Date: December 3, 1996

Navigable Stream Adjudication Commission  
1700 W. Washington  
Room 404  
Phoenix, Arizona 85007

Dear Commissioners:

We appreciate the opportunity to provide input concerning the navigability of the Verde River; needless-to-say we are deeply concerned about these deliberations since this river passes through the Coconino, Prescott, and Tonto National Forests. Despite the fact that the lands under this river were withdrawn from the Public Domain prior to the date of statehood, we believe the Forest Service can provide valuable information concerning the issue of navigability. If a question of land ownership developed, that would naturally have to be decided by a Federal Court.

Within the three involved National Forests, the Forest Service has managed some 100 miles of this river (and its river-bed) since 1908. During this time, we have attempted to protect a broad range of public trust and other values. Two of the people on my staff (Rich Martin and Pete Weinel) have personal knowledge of portions of this river for a combined period of over 50 years. Mr. Martin is our Forest Hydrologist and Mr. Weinel is a very experienced river-runner. We believe their knowledge could be of great assistance in reaching any conclusions concerning navigability of the Verde River.

Our comments will primarily be addressed to that portion of the Verde River downstream from the Camp Verde Valley and upstream from the lower portion of the river above the Fort McDowell Indian Reservation, Bartlett Reservoir, and Horseshoe Reservoir (see attached map). Very little information is available about this 50-mile stretch of river for good reason: it is in an isolated part of the State in very rough country where the river has a very steep gradient with many rapids.

Section 37-1128 of the State Claims to Streambeds Act states that your Commission shall find and recommend that a watercourse was nonnavigable (unless there is clear and convincing evidence otherwise) if any of nine specific criteria applied. Our analysis finds that not only does one of the criteria apply, but instead at least four of the criteria clearly show this watercourse to be nonnavigable.





Again we appreciate the opportunity to provide input concerning this matter. We are confident you will concur the Verde River is definitely not a navigable river through the National Forest System lands addressed in the enclosed report.

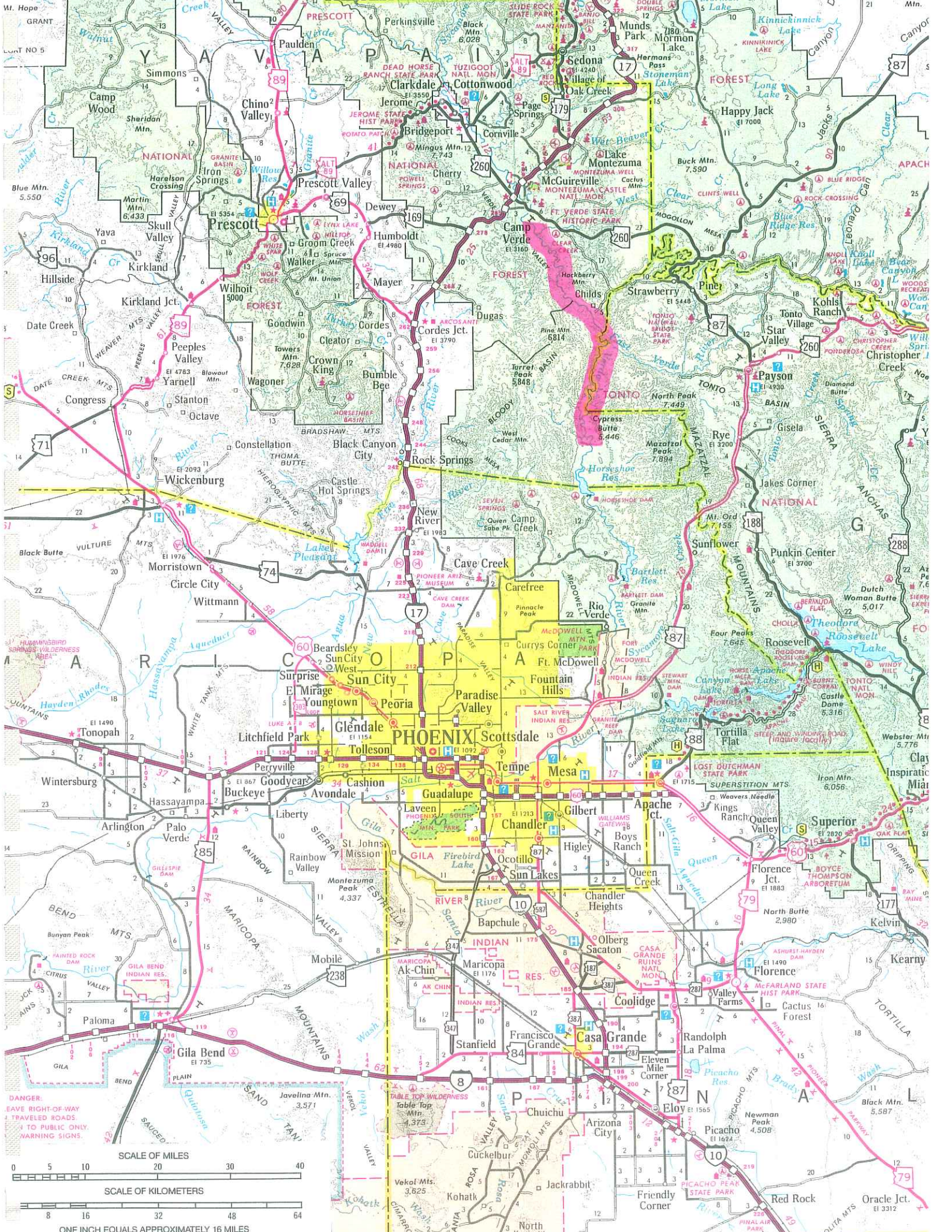
Sincerely,

  
CHARLES R. BAZAN  
Forest Supervisor

Enclosure

cc: (w/encl.)  
Cave Creek RD  
Payson RD  
Prescott N.F.  
Coconino N.F.





SCALE OF MILES  
0 5 10 20 30 40

SCALE OF KILOMETERS  
0 8 16 32 48 64

ONE INCH EQUALS APPROXIMATELY 16 MILES

DANGER:  
LEAVE RIGHT-OF-WAY  
ON TRAVELED ROADS  
TO PUBLIC ONLY.  
WARNING SIGNS.



ANALYSIS OF THE CRITERIA  
FOR NAVIGABILITY

VERDE RIVER

December, 1996

Coconino National Forest  
Prescott National Forest  
Tonto National Forest

Southwestern Region  
Forest Service, U.S.D.A.

## CRITERIA D.1.

### Criteria

Unless there is clear and convincing evidence that a watercourse was navigable, it is presumed, and the Commission shall find and recommend, that the watercourse was nonnavigable if (with respect to the watercourse as of February 14, 1912) the following applied:

NO SUSTAINED TRADE AND TRAVEL OCCURRED BOTH UPSTREAM  
AND DOWNSTREAM IN THE WATERCOURSE. Section 37 - 1128.D.1.

### Analysis

#### SUSTAINED DOWNSTREAM TRADE AND TRAVEL

Evidence<sup>1</sup> indicates that in 1912 there was apparently sporadic commercial boating for a few miles in the Camp Verde Valley on the quiet waters that occur there. Very limited evidence<sup>1</sup> also shows there may have been a few trips from Fort McDowell downstream for approximately seven (7) easy miles to the confluence with the Salt River.

This documented commercial use totally excludes the 50 miles of white-water river downstream from Beasley Flat (at the lower end of Camp Verde Valley). There is no indication that any commercial use occurred over this part of the river; it certainly could never have involved sustained trade and travel due to the nature of the river. This lack of navigability is due to:

- 1) The steep gradient of the river (see Item #1, page 7, and Photo #1),
- 2) The lack of runoff, which would have allowed sustained trade and travel ( see Item #2, page 7),

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<sup>1</sup> Arizona Stream Navigability Study, prepared by CH2M-Hill

- 3) The trees blocking passage in the riverbed (see Item #3, page 8, and Photo #7), and,
- 4) The presence of Verde Falls (see Item #4, page 8, and Photos #3, 4 and 6).

#### **SUSTAINED UPSTREAM TRADE AND TRAVEL**

There is no evidence, whatsoever, that upstream sustained trade and travel occurred anywhere on this river. It would have been physically impossible to bring vessels customarily used for commerce in 1912 up the section of white-water river for the 50 miles below Beasley Flat. The cliffs at water's edge, the swift current and the numerous rapids would even preclude pulling a vessel of that type back upstream with human and/or horse power.

## CRITERIA D.3.

### Criteria

Unless there is clear and convincing evidence that a watercourse was navigable, it is presumed, and the Commission shall find and recommend, that the watercourse was nonnavigable if (with respect to the watercourse as of February 14, 1912) the following applied:

VESSEL CUSTOMARILY USED FOR COMMERCE ON NAVIGABLE WATERCOURSES IN 1912, SUCH AS KEELBOATS, STEAMBOATS OR POWERED BARGES, WERE NOT USED ON THE WATERCOURSE.

Section 37 - 1128.D.3.

### Analysis

#### USE OF WATERCRAFT CUSTOMARILY FOUND ON NAVIGABLE WATERCOURSES

It would have been physically impossible for vessels such as keelboats, steamboats or powered barges to have traveled up and/or downstream on the 50-mile section of river from Beasley Flat to the confluence of Tangle Creek for commerce or any other purpose in February 1912.

The steep gradient of the stream, the fact that the USGS gaging station near Camp Verde indicated an average flow of only 200 cubic feet per second (c.f.s.) during the month of February 1912<sup>1</sup>, plus the trees growing in the riverbed, and the presence of Verde Falls all would have precluded the use of these types of vessels or any other vessel customarily used in 1912 for commerce on navigable rivers. See discussion under Criteria D.5. for additional details concerning these barriers to navigation.

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<sup>1</sup> Arizona Stream Navigability Study, prepared by CH2M-Hill

## COMPARABILITY WITH TODAY'S BOATS AND BOATERS

Although the 50-mile section of river from Beasley Flat down to the confluence with Tangle Creek has been regularly recreationally-boated for the past 25 years using modern-day inflatable rafts/kayaks as well as plastic/fiberglass canoes and kayaks, even these boats fall victim to the river (see Photos #2, 5, 7, 8 and 9). River-runners today, with their high-tech equipment and improved techniques, simply cannot be compared with the situation in 1912; to do so would be like comparing a delicate apple with a thick-skinned, practically indestructible orange. Proof that boaters have run this river in the recent past is not directly relevant to the criteria for navigability established by State law.

## CRITERIA D.5.

### Criteria

Unless there is clear and convincing evidence that a watercourse was navigable, it is presumed, and the Commission shall find and recommend, that the watercourse was nonnavigable if (with respect to the watercourse as of February 14, 1912) the following applied:

ANY BOATING OR FISHING WAS FOR RECREATIONAL AND NOT  
COMMERCIAL PURPOSES. Section 37 - 1128.D.5.

### Analysis

#### USE FOR COMMERCIAL BOATING OR FISHING PURPOSES

Evidence<sup>1</sup> indicates that in 1912 there was apparently sporadic commercial boating for a few miles in the Camp Verde Valley on the quiet waters which occur there. Evidence also shows there were a few trips from Fort McDowell downstream for approximately seven (7) easy miles to the confluence with the Salt River. There were also very likely some fish caught and sold to the military in that location. This extremely limited commercial use in no way indicates that any substantial segment of the Verde River was navigable or susceptible to being navigable in February 1912. The 50-mile stretch of river between Beasley Flat (at the lower end of the Camp Verde Valley) and the river's confluence with Tangle Creek is a far different story.

Based on our in-depth knowledge of the above-referenced stretch of the Verde River (and the lack of any evidence whatsoever to the contrary), it is our position that any incidental boating which may have occurred on this 50 miles of river between Beasley Flat and the confluence with Tangle Creek would have been for recreational (adventure) purposes

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<sup>1</sup> Arizona Stream Navigability Study, prepared by CH2M-Hill

rather than commerce. Although fishing along the bank undoubtedly occurred, it would have been impractical and physically impossible to travel up and/or down this river for any commercial purposes. The basis for this statement is:

1) Steep Gradient

Even if a few hardy souls had attempted to run this 50-mile stretch of white-water river for "pleasure" using wooden boats in 1912, they would have been taking their life in their hands. The river drops an average of nearly 18 feet per mile over this portion of the river. In comparison, the Colorado River through the Grand Canyon drops an average of less than eight (8) feet per mile. See Photos #1, 3, and 7 for an indication of the gradients involved.

2) Water Levels

The Salt River Project's stream-flow gages show that this river can go from a few hundred c.f.s. to over 100,000 c.f.s. in a few short hours. To be caught on the river making a multi-day trip, attempting to use it as a highway of commerce, would be disastrous.

On the other hand, there are only a relatively small number of days in a year when the water level would have been sufficient to allow any canvas, metal, or wooden boat to attempt to run this river (and three years out of ten, no such levels are obtained). While lightly loaded wooden canoes could have usually found a way to get down easy parts of this river at as little as 50 c.f.s. (and can even float in a deep pool at 15 c.f.s.), we have found that several hundred c.f.s. are needed to attempt to run this stretch of the river in an open wooden boat. An optimum level could occur in almost any month of the year, but is impossible to predict ahead of time and thus impossible to plan ahead for. A significant number of years have no flows what-so-ever at those optimum levels.

3) Trees in the Riverbed

A unique hazard blocking passage down this river are its trees. Because the flow is so low for so much of the year, willow and other riparian species become established in the riverbed. These trees can later become a deadly trap for anyone attempting to navigate this river (see Photo #7).

4) Verde Falls

In addition to its huge fluctuations in flow, long periods with very low water-levels, steep gradient, and trees growing in the river, there is one particular feature that would have made down-stream travel extremely perilous, and upstream travel impossible -- the Verde Falls. Although not particularly high, these falls create a major barrier across the river (see Photo #3). As the water rises, the rocks (which would easily destroy a wooden boat) disappear, but the river hydraulics become more powerful and more dangerous to a craft of that type (see Photos #4 and 6).

In summary, our analysis clearly shows that using this 50 miles of the Verde River for commerce at the time of statehood would have been impractical and physically impossible due to the inherent characteristics of the river itself.

Lack of Documented Commercial Use

There is evidence that shows very limited and sporadic commercial boating on non-National Forest System lands in the Camp Verde Valley; even less evidence indicates possible commercial use on non-National Forest System lands below Fort McDowell.

There is no evidence known to us which shows any commercial use of the Verde River on National Forest System lands.

The 36 Code of Federal Regulations prohibits doing business on a National Forest without a Special-Use Permit. Based on our records, the first legal use of this river as a highway of commerce occurred in 1985 when the Forest Service began allowing river guides to



take customers on trips down this river using inflatable rafts. We know of no earlier legal commercial use up and down this river.

## CRITERIA D.9.

### Criteria

Unless there is clear and convincing evidence that a watercourse was navigable, it is presumed, and the Commission shall find and recommend, that the watercourse was nonnavigable if (with respect to the watercourse as of February 14, 1912) the following applied:

THE UNITED STATES DID NOT REGULATE THE WATERCOURSE  
UNDER THE RIVER AND HARBORS ACT OF 1899 (33 UNITED STATES  
CODE SECTIONS 401 THROUGH 467e). Section 37 - 1128.D.9.

### Analysis

The United States did not regulate this river under the River and Harbors Act of 1899 during February 1912, nor has it done so in the ensuing 84 years. The United States has, however, regulated the portions of this river flowing over National Forest System Lands as per provisions of the Organic Administration Act of 1897, the Multiple Use-Sustained Yield Act of 1960, the Wilderness Act of 1964, the Wild & Scenic Rivers Act of 1968, the National Forest Management Act of 1976, the Federal Land Policy and Management Act of 1976, and many other laws designed to protect this river and the land under it, while providing for appropriate uses of both.

The Forest Service is the principal Federal agency responsible for the protection and management of those portions of the Verde River flowing through the Coconino, Prescott, and Tonto National Forests. In addition, a variety of other State and Federal agencies share in this task, while the Salt River Valley Water Users' Association (SRP) controls the rights for consumptive use of the water.



Photo #1: Rafting the Upper Verde, March 1973



Photo #2: Abandoned Kayaks, March 1975



Photo #3: Looking at Verde Falls, March 1983



Photo #4: Higher Water at Verde Falls, March 1983

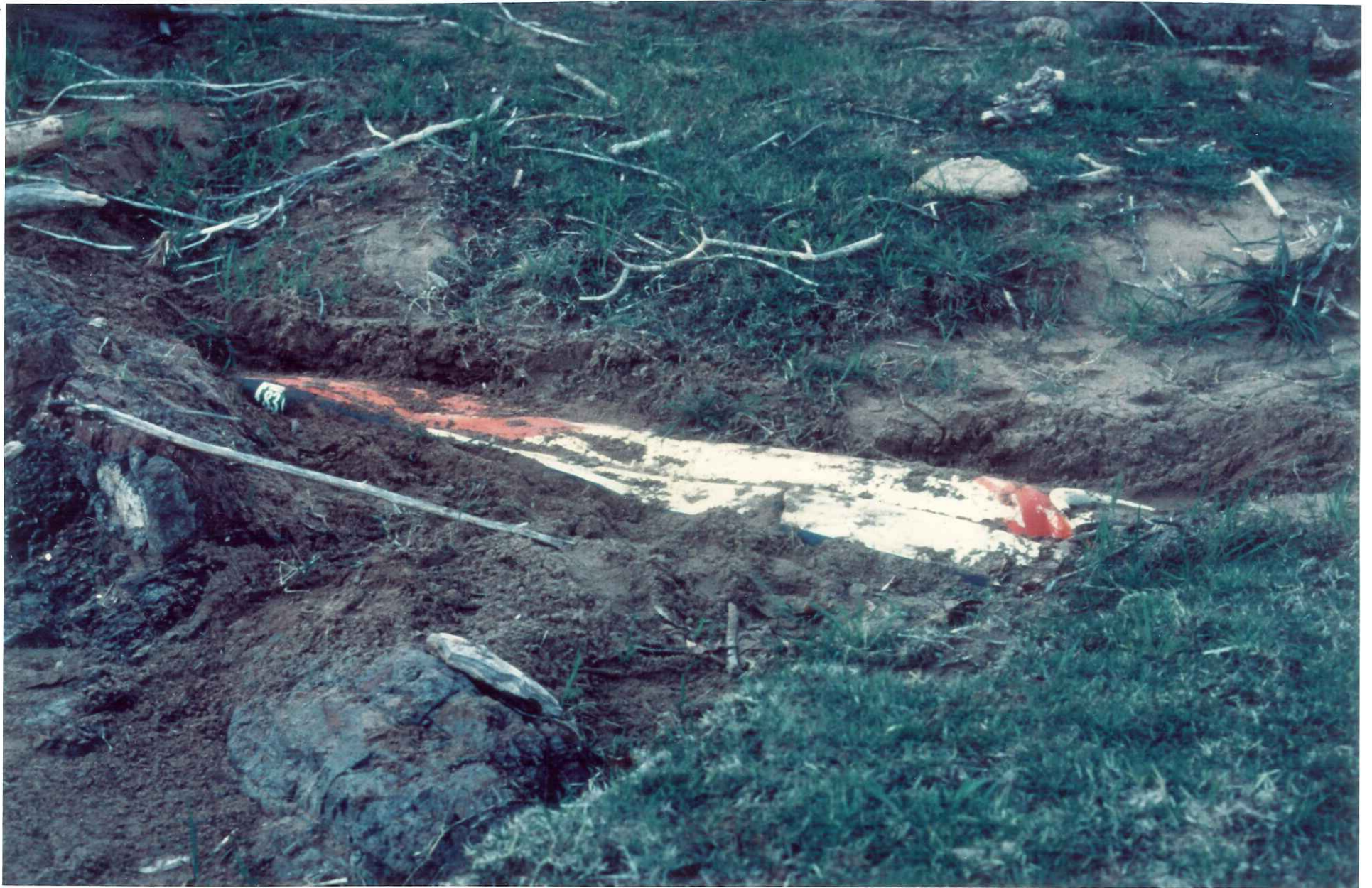


Photo #5: Destroyed Kayak, March 1986



Photo #6: Running Verde Falls, March 1986





Photo #7: Abandoned Canoe, March 1987



Photo #8: Destroyed Canoe, March 1987



Photo #9: Destroyed Canoe, April 1992