



United States  
Department of  
Agriculture

Forest  
Service

Southwestern  
Region



# Upper Verde River Eligibility Report Update for the National Wild and Scenic River System

## Prescott National Forest



December 2010

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Cover Photo: Jenny Fryxell, TEAMS

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## Summary

As part of Forest Plan Revision, the Prescott National Forest (PNF) is reviewing the eligibility of the Upper Verde River for designation as a national wild and scenic river segment. To evaluate its eligibility, the Upper Verde River was divided into four segments as summarized in Table S-1.

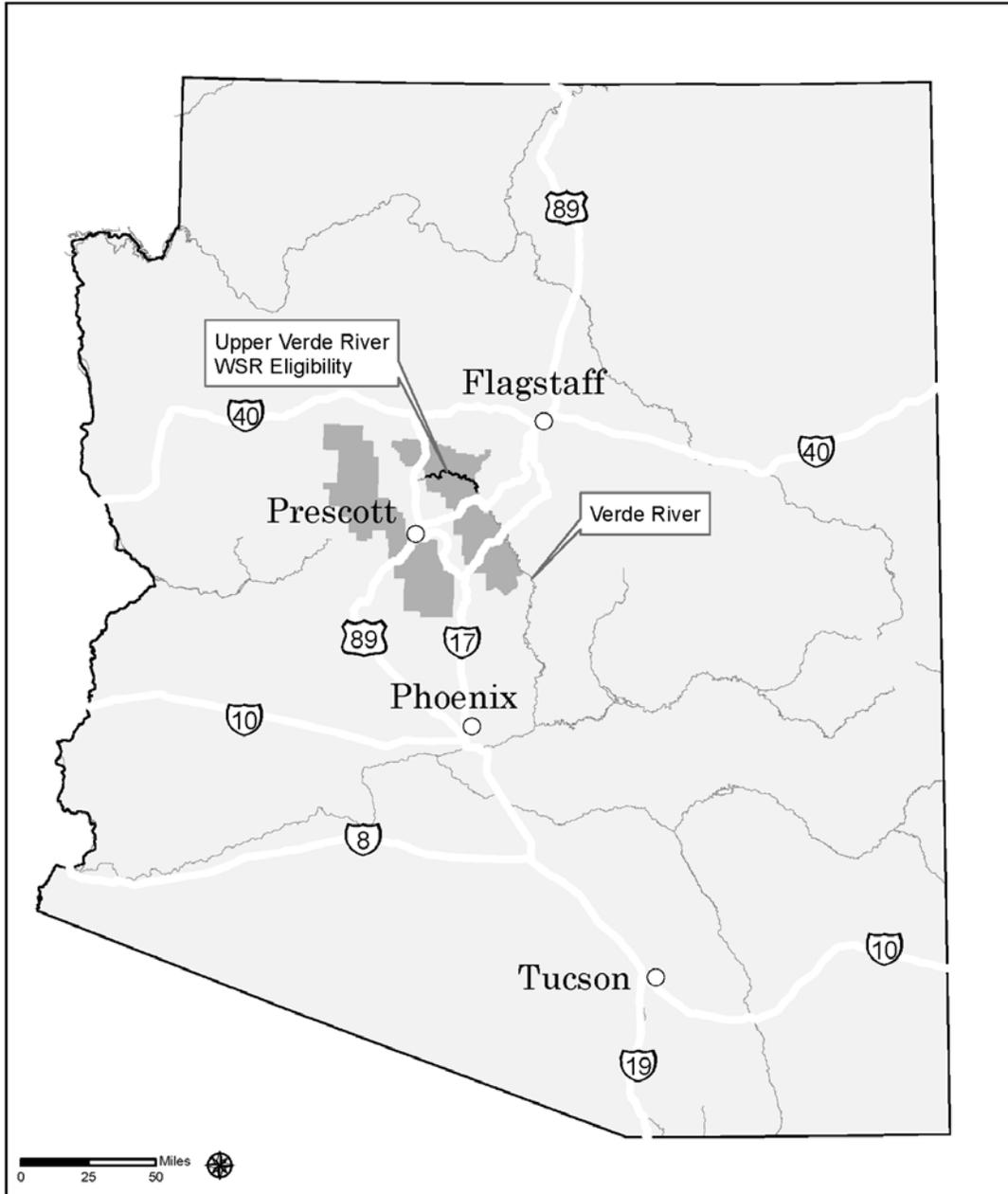
**Table S-1. Summary of Segments and their Eligibility Classification**

Segment	Length (miles)	Related Features (Start/End of Segment)	Eligibility Classification
1	5.9	From western FS boundary near Paulden, AZ to confluence of King Tributary and Verde River	Scenic
2	5.6	From confluence of King Tributary and Verde River to APS power line and West-wide Energy Corridor location	Wild
3	19.5	From APS power line and West-wide Energy Corridor to below confluence of Sycamore Canyon and Verde River	Scenic
4	6.7	From confluence of Sycamore Canyon and Verde River to Prescott National Forest boundary near Clarkdale, AZ	Recreation

Total 37.7 These four segments are bounded by an area that extends one-quarter mile from the high water mark on each side of the river.

This report represents the PNF's updated eligibility report for the Upper Verde River. The PNF is not completing a suitability analysis as part of the Forest Plan Revision process.

Figure S-1. Locator Map



## Introduction

In 1968 Congress passed the *Wild and Scenic Rivers Act* (P.L. 90-542). This Act was passed with the purpose of implementing a governmental program to study and protect free-flowing river segments. Protected segments would then be considered a part of the National Wild and Scenic River System.

*“Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.”*

The Act was intended to be a counter-balance to the authority for creating dams and other related hydrologic projects that alter a river’s free-flowing characteristics.

A three step process is used to consider potential rivers and streams for Wild and Scenic River Designation -

- **Eligibility:** An inventory of river conditions is conducted. A stream segment must be free-flowing and have at least one outstandingly remarkable value (ORV) to be eligible.
- **Classification:** River segments are classified as *wild*, *scenic*, or *recreational* based on the level of development and access along the river corridor.
- **Suitability:** If river segments are eligible for inclusion in the National Wild and Scenic River system, a suitability study is to be completed. The suitability study identifies characteristics that do or do not make the area a worthy addition to the system; the current status of land ownership and use in the area; the reasonably foreseeable potential uses of land and water which would be enhanced, foreclosed, or curtailed by inclusion in the system; the agency that would manage the river; and the costs of such administration.

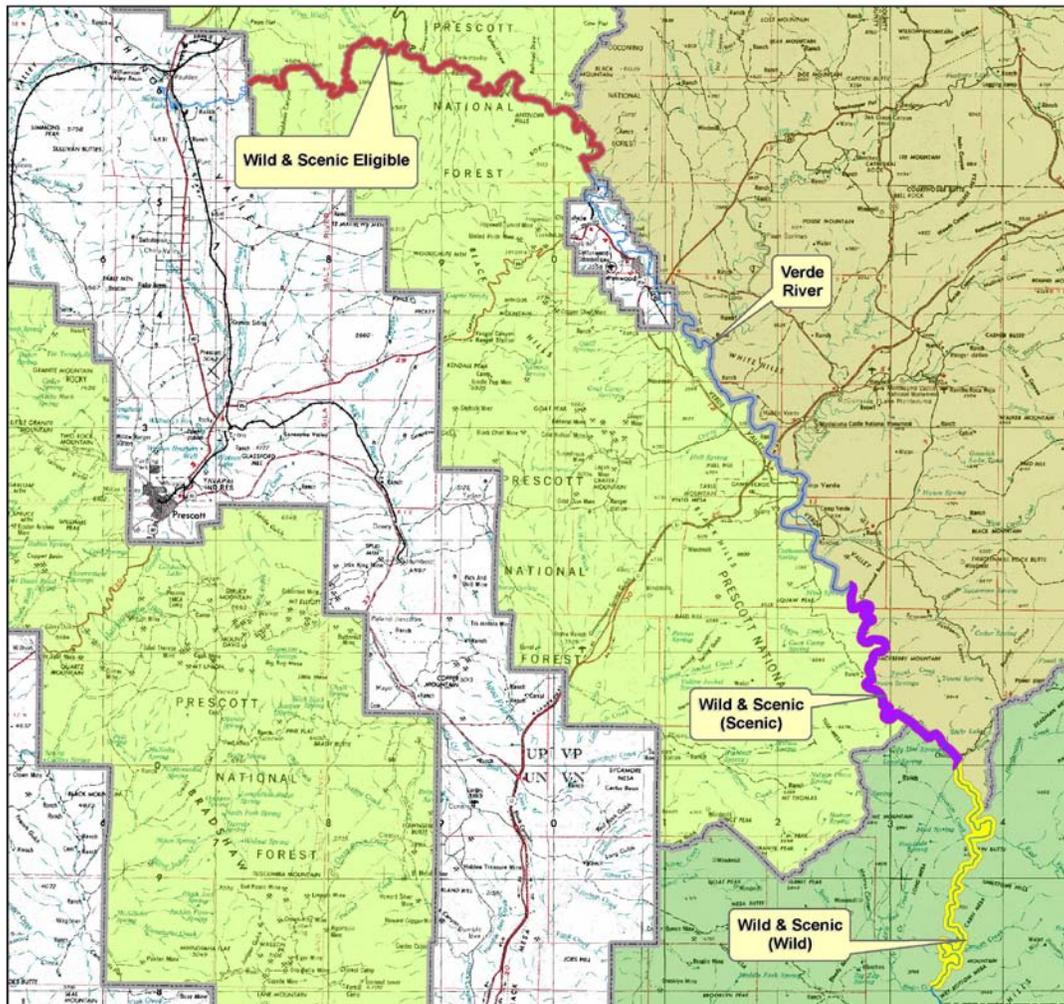
Once a segment passes the previous three steps it can be forwarded to the Secretary of Agriculture who can deliver it to Congress to consider for national designation.

In response to Congressional direction, the Southwest Region of the United States Forest Service (USFS) prepared the Verde River Wild and Scenic River Study Report and Environmental Impact Statement (Forest Service 1982). Congress designated a portion of the Verde River as a national wild and scenic river through the Arizona Wilderness Act of 1984 (P.L. 98-406). The Verde Wild and Scenic River is located within the administrative boundaries of the Coconino, Prescott, and Tonto National Forests, and its boundaries encompass an area generally one-quarter of a mile from each side of the high water mark and parallel to the Verde River.

The portion of the river with “scenic” classification begins on the Prescott National Forest (PNF) near Beasley Flat and continues downstream about 18.9 miles to the boundary of the Mazatzal Wilderness on the Coconino National Forest (CNF). The portion of the river with “wild” classification begins at the Mazatzal Wilderness boundary and continues

downstream about 22.2 miles to the confluence of Red Creek on the Tonto National Forest (Figure 1). The Upper Verde River was not designated in 1984, primarily due to the amount of private land and several proposals for flood control, water storage and hydroelectric dams (Forest Service 1982).

**Figure 1 – overview of Verde River (designated and eligible sections)**



A state-wide inventory of potentially eligible rivers for inclusion in the National Wild and Scenic Rivers System was completed and the preliminary analysis was published in January 1993 (Forest Service 1993). The report evaluated segments determined eligible by the Forest Service and segments proposed by the Arizona Rivers Coalition but determined not eligible. The Santa Maria , Upper Verde , and Hassayampa Rivers on the PNF were included in the report, and the Upper Verde River was the only segment found eligible.

In September 1993, the Southwest Region of the USFS published a “Resource Information Report” (Forest Service 1993a) that identified the Verde River as eligible under the “recreation” classification for 37 miles of its upper portion (Upper Verde River). In addition, approximately four miles of Sycamore Creek on the Coconino National Forest from Parson Springs to the confluence of the Verde River was identified as eligible under the “scenic” classification. A subsequent court decision in January 2005 (CBD v. Veneman 2005) ruled that the 1993 report was, in fact, an eligibility report.

The following changes have taken place along the Upper Verde River since the 1993 report:

- Land exchanges have reduced the amount of private land along the Upper Verde River.
- Immediately upstream from the PNF boundary, the headwaters of the Upper Verde River have been acquired by the Nature Conservancy and the Arizona Game and Fish Department.
- Pipeline carrying natural gas was constructed under the Upper Verde River by the Transwestern Pipeline Company.
- Roads have been decommissioned and closed along the Upper Verde River.
- Threatened and endangered fish populations have declined and populations of non-native aquatic species have increased.
- Unmanaged use of off-highway vehicles (OHVs) is an ongoing and increasing enforcement issue.

Forest Service Handbook 1909.12 section 81.2 states that the list of rivers eligible for wild, scenic, or recreational status should be reviewed during the forest plan revision process if circumstances have significantly changed or the Forest Service Responsible Officials decide to evaluate suitability for one or more eligible rivers in the planning process. This report addresses the former reason of changed circumstances.

The Upper Verde River was divided into four segments; the location, length and related landmarks for each segment are summarized below in Table 1. In addition to length, these four segments are bounded by an area that extends one-quarter of a mile from the high water mark on each side of the river.

**Table 1. Summary of Segments**

Segment	Segment Length (miles)	Related Features (Start/End of Segment)
1	5.9	From western FS boundary near Paulden, AZ to confluence of King Tributary and Verde River
2	5.6	From confluence of King Tributary and Verde River to APS power line and West-wide Energy Corridor
3	19.5	From APS power line and West-wide Energy Corridor to below confluence of Sycamore Canyon and Verde River
4	6.7	From confluence of Sycamore Canyon and Verde River to PNF Forest boundary near Clarkdale, AZ. Note: Segment 4 borders both the PNF and CNF but is administered under the PNF Forest Plan direction.
These four segments are bounded by an area that extends one-quarter mile from the high water mark on each side of the river.		

Figure 2 shows the location and related features for each segment. More detailed maps of each segment are in Appendix A.

Figure 2 – Upper Verde River Segments



## **Basis for Determination**

To be considered for eligibility a river segment must be “free-flowing within its immediate environment” and must be deemed to have one or more “outstandingly remarkable values.”

**The following three criteria are used to determine a river’s wild and scenic eligibility:**

- 1. Must be a RIVER which is defined as:** Flowing body of water, estuary, or section, portion, or tributary thereof, including: rivers, streams, creeks, runs, kills, rills, and small lakes
- 2. Must be FREE-FLOWING which is defined as:** Existing or flowing in a natural condition without:
  - impoundment, with exceptions (low dams, diversion works and other minor structures)
  - diversion
  - straightening
  - rip-rapping, or other modification of the waterway (channelization)And can:
  - be any size/length
  - lie between impoundments or major dams
  - be non-floatable/non-boatable
  - be intermittent/non-perennial
- 3. And must possess at least one OUTSTANDINGLY REMARKABLE VALUE:**
  - Cultural Values
  - Scenic Values
  - Fisheries Values
  - Wildlife Values

## **Free-Flowing**

The entire length of the Upper Verde River is free-flowing (Fryxell 2009). The upper 22 miles (18 miles on the PNF) of the river, from Granite Creek downstream to just above Perkinsville, has a stable base flow of 20-25 cfs (cubic feet per second) when measured at the Paulden Gauging Station (Blasch and others 2005). At least 80 percent of this base flow is from the Big Chino Valley aquifers which discharges groundwater via springs near the confluence of Granite Creek (Wirt and Hjalmarson 2000). The next 19 miles of the river has an average base flow of 80 cfs when measured at the Clarkdale Gauging Station. The majority of the Upper Verde River’s flow comes from the base flows of the Coconino Plateau and Verde Valley sub-basins (Blasch and other 2005).

## **Outstandingly Remarkable Values (ORVs)**

The determination that a river area contains ORVs is a professional judgment the interdisciplinary study team makes based on the best available science. In order to be assessed as outstandingly remarkable, a river-related value must be a unique, rare, or exemplary feature that is significant at a comparative regional or national scale. In this report, the region used for comparison was based on similar ecological characteristics and includes: (most of) Arizona, New Mexico, southern Utah, and southern Colorado.

## **Cultural Values**

### Criteria:

The river, or area within the river corridor, contains important evidence of occupation or use by humans. Sites may have national or regional importance for interpreting history or prehistory. Of particular significance are National Historic Landmarks or sites or features listed in, or eligible for inclusion in, the National Register of Historic Places (NRHP).

### Attributes:

**Significance (Historic)** – Consider sites that contain a site or feature associated with a historically significant event, person, or activity of the past.

**Significance (Pre-historic)** – Consider sites where a culture or cultural period was first identified or described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for sacred purpose, and may be eligible for the NRHP.

**Site Integrity (Historic or Pre-Historic)** – Consider the presence of exceptional examples of human interest from a significant period in history; sites that are unmodified and retain their original character; features that are exceptional examples within the Southwestern Region.

### Evaluation of Present Situation:

Segment 1 - Twelve (12) heritage resource sites have been formally recorded in segment 1 to date. Sites in this segment are represented by prehistoric residential occupation (7), artifact scatters consisting of ceramics, chipped stone, and groundstone (2), a prehistoric defensive (“fort”) location (1), and historic occupations (2). Contained within the totals above is one (1) site that consists of both a prehistoric and historic component. All twelve sites are likely eligible for the NRHP as either single property or under a thematic or multiple property nomination; however, further investigation is needed to confirm this.

Segment 2 - Twenty-one (21) heritage resource sites have been formally recorded in segment 2 to date. Sites in this segment are represented by prehistoric residential occupation (1), cliff dwellings (2), cave/rock shelters (6), forts (2), rock art (1), and ceramics, chipped stone, groundstone (9). All twenty-one sites are likely eligible for the NRHP as either single property or under a thematic or multiple property nomination; however, further investigation is needed to confirm this.

Segment 3 - Fourteen (14) heritage resource sites have been formally recorded in segment 3 to date. Sites in this segment are represented by prehistoric residential occupation (2), a fort (1), cave/rock shelters (5), ceramic, chipped stone, and groundstone (4), a mine and mining camp (2). All fourteen sites are likely eligible for the NRHP as either single property or

under a thematic or multiple property nomination; however, further investigation is needed to confirm this.

Segment 4 - Seven (7) heritage resource sites have been formally recorded in segment 4 to date. Sites in this segment consist of prehistoric residential occupation (2), cliff dwelling (1), cave/rock shelter (1), ceramic, chipped stone, groundstone (2), and a historic ditch (1). All seven sites are likely eligible for the NRHP as either single property or under a thematic or multiple property nomination; however, further investigation is needed to confirm this.

**Determination for Cultural ORV:**

Cultural values are an ORV for the entire stretch of the Upper Verde River. Prehistoric and historic sites along the Upper Verde remain an excellent resource for studying various themes including human adaptation of riverine environments, cultural boundaries, population dynamics, trade and exchange, and several others over the last several thousand years.

All river segments contain regionally, and perhaps nationally, important prehistoric and historic resources. Most of the known 54 sites along the Upper Verde are eligible for the NRHP, yet the majority have been vandalized or impacted by off-highway vehicle use. The current level of impact does not necessarily change their eligibility for the NRHP, but continued impacts could have an effect.

Despite the fact that the PNF has recorded information about 54 sites, our knowledge about the full extent of the types and quantity of archaeological and historic properties along the Upper Verde is meager, at best. While this is true for all river segments, it is especially obvious in segment 4 where we have virtually no formal archaeological inventories (McKie 2009).

<b>CULTURAL SUMMARY</b>	Presence of ORV (Yes/No)	Scale of Importance (Local/Regional/National)
Segment		
1 – 4	Yes	Local, Regional, and National*

\*Most sites are eligible for the National Register of Historic Places but have not been listed at this time.

**Scenic Values**

**Criteria:**

The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed, may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment.

**Attributes:**

Diversity of View – consider the presence of high relief; severe surface variation; rich color combinations ; pleasing contrast in soil, rock, vegetation, and water; views that greatly enhance visual quality; still or cascading water that is dominant in the landscape. Consider diversity of vegetation types in interesting patterns, textures, color, and contrasts.

Evaluation of Present Situation:

Characteristic of all 4 segments is the variety of the deciduous riparian vegetation, (trees, shrubs and grasses) which provides seasonal interest in color and texture. This lower area is in contrast to the surrounding arid slopes covered in primarily evergreen trees and shrubs which remain constant through out the year. The river is predominantly slow flowing flat water, but there are areas of small rapids and falls of 1-2 feet over rocks.

In addition to individual ORV's within the river corridor related to rock formations, vertical cliffs, or interesting vegetation, there are significant distant views from the rim above the river. These include vistas of the San Francisco Peaks, Mingus Mountain, Bill Williams Mountain and Red Rocks of Sedona.

In the PNF visual analysis study, all lands adjacent to the Upper Verde River were rated as *Retention* (Forest Service 1986).

Segment 1 - The topography of this first segment varies but is predominantly gently rolling hills on either side of the river.

Segment 2 - This portion of the river is characterized by areas of red sandstone and grey limestone cliffs. This segment has the most natural feel.

Segment 3 - The topography of this segment is varied. The first part is predominantly gently rolling hills on either side of the river until it flattens out in the area around Perkinsville. Just East of Perkinsville to the end of the segment is the most scenic, due to the canyon effect of tall and narrow rock walls, both red and grey in color. One of the most unique parts of this stretch is the steep, winding narrow canyon of the Mormon Pocket area. From the end of segment 3 and into segment 4, there are a wide variety of visually attractive geologic formations.

Segment 4 - The canyon opens up as the river travels east. It passes the Sycamore Canyon Wilderness and continues to have good views and interesting geological formations, but also more evidence of man. Towards the end of this segment the landscape opens up and there is a power line visible from either side of the river.

Determination for Scenic ORV:

Scenery is an Outstandingly Remarkable Value (ORV) for the entire stretch of the Upper Verde River. The Verde River is one of Arizona's major perennial rivers. The combination of water and riparian vegetation enclosed by rolling hills or steep rocky slopes make the Upper Verde a unique and treasured asset of Regional importance. The landscape changes as one travels down the river, but there is always an interesting variety of colors, textures and topography (May 2009).

<b>SCENIC SUMMARY</b>	Presence of ORV (Yes/No)	Scale of Importance (Local, Regional, or National)
Segment 1 - 4	Yes	Local and Regional

**Aquatic Species Values**

Criteria:

Aquatic species values may be judged on the relative merits of either fish/aquatic species populations or habitat or a combination of these river-related conditions.

Attributes:

Habitat - The Upper Verde River provides exceptional high-quality habitat for fish species indigenous to the region of comparison. Of particular significance is habitat for wild stocks and/or federal or state listed or candidate threatened, endangered, or sensitive species. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable value.

Populations - The Upper Verde River is nationally and regionally important for fish species. Of particular significance is the presence of wild stocks and/or federal or state listed or candidate threatened, endangered, or sensitive species. Diversity of species is an important consideration and could, in itself, also lead to a determination of outstandingly remarkable value.

Evaluation of Present Situation:

Presently, there are 10 fish or aquatic species with suitable or occupied habitat in the Upper Verde River (Table 2).

**Table 2. Fish Species Habitat suitable within the Upper Verde River**

Species Common name Scientific Name	Status 2008
<b>Razorback sucker</b> <i>Xyrauchen texanus</i>	Endangered <sup>1</sup> Critical habitat
<b>Spikedace</b> <i>Meda fulgida</i>	Threatened <sup>2</sup> Critical habitat
<b>Mexican garter snake</b> <i>Thamnophis eques megalops</i>	Candidate <sup>3</sup>
<b>Desert sucker</b> <i>Catostomus latipinnis</i>	Sensitive <sup>4</sup>
<b>Longfin dace</b> <i>Agosia chrysogaster</i>	Sensitive
<b>Roundtail chub</b> <i>Gila robusta</i>	Sensitive
<b>Sonora sucker</b> <i>Catostomus insignis</i>	Sensitive
<b>Lowland leopard frog</b> <i>Rana yavapaiensis</i>	Sensitive
<b>Arizona toad</b> <i>Bufo microscaphus</i>	Sensitive
<b>Narrow-headed garter snake</b> <i>Thamnophis rufipunctatus</i>	Sensitive

1 Listed as Endangered under the Endangered Species Act

2 Listed as Threatened under the Endangered Species Act

3 Listed as a Candidate species for Federal listing under the Endangered Species Act

4 USDA Forest Service – Southwestern Region Sensitive species.

All Segments - The Verde River is one of the few remaining perennial, free-flowing rivers in Arizona for most of its length. The entire Upper Verde River contains aquatic habitat

for fish and aquatic wildlife species. There is a diversity of aquatic habitats (low gradient riffles, high gradient riffles, glides/runs, and pools) throughout the reach.

The Upper Verde River retains a native fish population of six species based on surveys (1986-2008) (Arizona Game & Fish Department and Forest Service data). There have been limited surveys for aquatic wildlife species. The native fish and aquatic species known within the Upper Verde River include spokedace, roundtail chub, Sonora sucker, desert sucker, longfin dace, speckled dace, Mexican garter snake, narrow-headed garter snake, Arizona toad, and lowland leopard frog (known mainly from tributaries). Spikedace populations in the Upper Verde River have become rare in recent years and were last observed in 1997. There is the potential to augment the Upper Verde River spikedace populations from other population sources in the Gila River Basin. There is also a plan to reintroduce razorback sucker at Stillman Lake above the Upper Verde River section (USFWS 2007 draft). There is a proposal to build a fish barrier for the management of listed fish species under the Biological Opinion for the Central Arizona Project (USFWS 2008).

Non-native fish and aquatic species commonly found in the Upper Verde River include smallmouth bass, green sunfish, red shiner, common carp, channel catfish, flathead catfish, yellow bullhead, mosquitofish, bullfrog, and crayfish (Arizona Game & Fish Department and Forest Service data).

*Current Special Management Designations*

Segments 1 - 3: Designated critical habitat for the spikedace includes 43 miles of the Upper Verde River main stem and adjacent floodplain within 300 lateral feet on either side of bankfull stage, from near the confluence with Sycamore Creek upstream to Sullivan Dam (USFWS 2007). A total of 31 miles of critical habitat occur in the project area.

Segments 3 - 4: Designated critical habitat for the razorback sucker includes the Verde River and its 100-year floodplain from the PNF boundary at Perkinsville to Horseshoe Dam, including Horseshoe Lake to the full pool elevation (USFWS 1994). A total of 16 miles of designated razorback sucker critical habitat occur in the project area.

Determination for Fisheries ORV:

Fisheries are an ORV for the entire stretch of the Upper Verde River (Sillas 2009). The Verde River is one of Arizona’s major perennial rivers. The Upper Verde River is one of a few rivers in the Gila River Basin that retain a native fish assemblage in spite of the occurrence of a variety of non-native species.

There is high interest in the Upper Verde River and its native fish population from the Prescott National Forest, State and Federal agencies, and private conservation organizations. The spikedace population and aquatic habitat is of considerable value to the conservation of the species range-wide in the Gila River Basin. It is one of five river complexes throughout the range of the spikedace with special emphasis for the species.

<b>FISHERIES SUMMARY</b>	Presence of ORV (Yes/No)	Scale of Importance (Local, Regional, or National)
Segment		
1 – 4	Yes	Local, Regional, and National

## Wildlife Values

### Criteria:

Wildlife values may be judged on the relative merits of either terrestrial or aquatic wildlife populations or habitat, or a combination of these conditions.

### Attributes:

**Habitat** - The river, or area within the river corridor, provides exceptionally high quality habitat for wildlife of national or regional significance, and/or may provide unique habitat or a critical link in habitat conditions for federal or state listed or candidate threatened, endangered, or sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitat is an important consideration and could, in itself, lead to a determination of outstandingly remarkable value.

**Populations** - The river, or area within the river corridor, contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique, and/or populations of federal or state listed or candidate threatened, endangered, or sensitive species. Diversity of species is an important consideration and could, in itself, also lead to a determination of outstandingly remarkable value.

### Evaluation of Present Situation:

There are 17 terrestrial wildlife species and/or habitats present within the Upper Verde River (table 3).

**Table 3. Terrestrial Wildlife Species and/or Habitat Present within the Upper Verde River**

<b>Species</b>	<b>Status 2008</b>
<b>Common black hawk</b> <i>Buteogallus anthracinus</i>	Sensitive
<b>American peregrine falcon</b> <i>Falco peregrinus</i>	Sensitive
<b>Bald eagle</b> <i>Haliaeetus leucocephalus</i>	Threatened
<b>Western yellow-billed cuckoo</b> <i>Coccyzus americanus occidentalis</i>	Candidate
<b>Southwestern willow flycatcher</b> <i>Empidonax traillii extimus</i>	Endangered
<b>Lucy's warbler</b> <i>Vermivora luciae</i>	MIS <sup>1</sup>
<b>Rufus sided towhee</b> <i>Pipilo maculatus</i>	MIS
<b>Mule deer</b> <i>Odocoileus hemionus</i>	MIS
<b>Pronghorn antelope</b> <i>Antilocapra americana</i>	MIS
<b>Abert's towhee</b> <i>Pipilo aberti</i>	Sensitive
<b>Western red bat</b> <i>Lasiurus blossevillii</i>	Sensitive WSC <sup>2</sup>

<b>Pale Townsend's big-eared bat</b> <i>Corynorhinus townsendii pallescens</i>	Sensitive
<b>Pocket free-tailed bat</b> <i>Nyctinomops femorosaccus</i>	Sensitive
<b>Osprey</b> <i>Pandion haliaetus</i>	WSC
<b>Belted kingfisher</b> <i>Megaceryle alcyon</i>	WSC
<b>River otter</b> <i>Lontra canadensis Sonora</i>	WSC
<b>Least bittern</b> <i>Ixobrychus exilis</i>	Candidate (State)

<sup>1</sup>PNF Management Indicator Species (Forest Service 1986)

<sup>2</sup> State of Arizona State Wildlife Species of Concern

Determination for Wildlife ORV:

Wildlife is an ORV for the entire stretch of the Upper Verde River. The Upper Verde River corridor under consideration for Wild and Scenic Eligibility has undergone changes in regional importance. Additional parcels outside of the PNF have been added to public ownership. The riparian community and high water quality provides for remarkable diversity and abundance of wildlife species. The Upper Verde River contains 10 species of special concern including: 1 endangered, 1 threatened, 1 candidate, 9 Southwestern Region sensitive species, and 3 State wildlife species of concern. Numerous other species rely on the river corridor for migration and use. Wildlife abundance and the presence of federally listed species make wildlife an outstandingly remarkable value of national significance (Hartwig 2009).

<b>WILDLIFE SUMMARY</b>	Presence of ORV (Yes/No)	Scale of Importance (Local, Regional, or National)
Segment		
1 – 4	Yes	Local, Regional, and National

**Recreational Values**

Criteria:

Recreational opportunities are, or have the potential to be, popular enough to attract visitors from throughout or beyond the region of comparison or are unique or rare within the region. River-related opportunities include, but are not limited to, sightseeing, interpretation, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. The river may provide settings for national or regional usage or competitive events.

Attributes:

Diversity of Use – Consider the number and variety of recreation uses occurring within the corridor.

Experience Quality – Pristine corridors may be considered an ORV compared to corridors that are visually monotonous, heavily developed, or noisy.

Evaluation of Present Situation:

See Table 4.

**Table 4. Recreational Activities by Segment within the Upper Verde River Study Area**

	<b>Segment 1</b>	<b>Segment 2</b>	<b>Segment 3</b>	<b>Segment 4</b>
Length of Season	Mid February –Late June Mid September–Late November	Mid February –Late June Mid September–Late November	Mid February –Late June Mid September–Late November All year on train	All year on train
Diversity of Use	Camping, exploring, kayaking, wading, swimming, bird watching, viewing wildlife, fishing, hunting, photography and picnicking	Camping, exploring, kayaking, wading, swimming, bird watching, viewing wildlife, fishing, hunting photography and picnicking	Camping, exploring, kayaking, wading, swimming, bird watching, viewing wildlife, fishing, hunting photography and picnicking and train traveling	Camping, exploring, kayaking, wading, swimming, bird watching, viewing wildlife, fishing, hunting photography, sight seeing, picnicking and train traveling
Experience Quality	Unique – rare, long riparian corridor	Unique – rare, long riparian corridor. Feeling of solitude and remoteness	Unique – rare, long riparian corridor and popular train ride offering sight seeing	Unique – rare, long riparian corridor and popular train ride offering sight seeing
Access	Drivable access to river from private land. 2 public non-motorized trails to river	2 non-motorized trails	4 non-motorized trails, 1 road	5 roads
Level of Use	Little use, but some illegal use –(illegal OHV use occurs)	Little use	Scenic train ride from Clarkdale to Perkinsville & back daily & 2x/day in peak season creates a high level of use from train	Scenic train ride from Clarkdale to Perkinsville & back daily & 2x/day in peak season creates a high level of use from train
Associated Opportunities	Hiking and viewing heritage resources, interpretive and educational opportunities	Hiking and viewing heritage resources, interpretive and educational opportunities	Hiking and viewing heritage resources, interpretive and educational opportunities, sightseeing from train	Sightseeing from train
Attractiveness	High	High	High	High
Flow	Generally low flow. Navigable by canoe &/or kayak.	Generally low flow. Navigable by canoe &/or kayak.	Generally low flow. Navigable by canoe &/or kayak.	Generally low flow. Navigable by canoe &/or kayak.
Sites and Facilities	Prehistoric site visible from river.	Prehistoric site visible from river.	Prehistoric sites visible from river.	Prehistoric sites visible from river. Commercial train ride available Clarkdale- Perkinsville provides some facilities
Shoreline Development	Little evidence of pipeline that crosses the river. May not be evident in near future due to planting of native vegetation	Little evidence of human activity	Some evidence of human activity (Verde River Railroad – train activity and track system)	Some evidence of human activity (roads, Verde River Railroad – train activity and track system)

Determination for Recreation ORV:

Recreation is an ORV for the entire stretch of the Upper Verde River. Recreational use of the Upper Verde River is a highly valued activity among many people. The opportunity to swim, wade, canoe, kayak or raft, fish, hunt, explore, view wildlife and birds, or simply enjoy the serenity and beauty found in and around this aquatic environment draws many visitors to the Verde River each year (Baxter 2009). People travel from all over the country and even internationally and ride the train for enjoyment, bringing the scale of importance for segments 3 and 4 to national importance.

<b>RECREATION SUMMARY</b>	Presence of ORV (Yes/No)	Scale of Importance (Local, Regional, or National)
Segment		
1 - 2	Yes	Local and Regional
3 - 4	Yes	Local, Regional, and National

**Geological Values**

Criteria:

The river, or the area within the river corridor, contains one or more examples of a geologic feature, process, or phenomenon that is unique or rare within the region of comparison. The feature(s) may be in an unusually active stage of development, represent a “textbook” example, and/or represent a unique or rare combination of geologic features.

Attributes:

Diversity of Features/Feature abundance – consider the landforms and geologic/hydrologic setting with unusual or outstanding features.

Evaluation of Present Situation:

Geology along the Upper Verde River includes granitic and sedimentary rocks with recent basalt flows on the surface topography. The Upper Verde is thought to have developed into its current form around 2 to 2.5 million years ago.

The Verde River is located within the physiographic region known as the Transition Zone, which is situated between two provinces: Colorado Plateau to the north and the Basin and Range Province to the south. The Upper and Middle Verde River are situated mainly in the Transition Zone. This Zone has characteristics of both provinces stated. This is represented by past episodes of both extension (thinning of the earth’s crust) and compression. Visually, this is characterized by valleys separated by mountainous areas, also known as Basin and Range. In addition, deformity of the region by past tectonic activity such as faulting and uplifting led to the deposition of rock and alluvial sediments similar to those in the Colorado Plateau.

All Segments – The Upper Verde River meanders through diverse terrain of gentle sloping to narrow canyons, broad desert valleys and perennial streams areas. Overall, the watershed and tributaries of the River are located within northwest to north trending valleys and mountains associated with compression and extension.

The hydrogeology of the Upper Verde River region consists of water bearing (basin fill) alluvial sediments and interbedded volcanic rocks which contribute to aquifer conditions. Fill sediments are estimated to be Tertiary (Cenozoic) in age, which is up to 65 million

years ago (Ma). These deposits are underlain by permeable Paleozoic rocks (~550-250 Ma). Together, they create the regional aquifer in the Big Chino sub-basin.

Segments 3 and 4 - Outcrops of the rocks along segments 3 and 4 are seen as red, well-bedded horizontal layers of sandstone underlain by massively bedded limestone containing solution cavities.

Determination for Geologic ORV:

Geology is an ORV for the entire stretch of the Upper Verde River. Segments 1 through 4 of the Verde River are within watersheds that are surrounded by the Bradshaw Mountains and Black Hills to the south, the Juniper Mountain and Santa Maria Mountains to the west, and the San Francisco Mountains to the north.

The watersheds and valleys are bounded by these features; these mountains create hydrogeological boundaries that influence the movement of surface and groundwater at the regional scale. The current geologic map of the headwaters of the Verde River indicates numerous faults adjacent or within the vicinity of the Verde River, which coincides with the river and its tributaries' drainage patterns (Alvarado 2009). In comparison to other geologic features nationally and within the region, this ORV is of Local importance.

<b>GEOLOGY SUMMARY</b>	Presence of ORV (Yes/No)	Scale of Importance (Local, Regional, or National)
Segment		
1 – 4	Yes	Local

**Botanical Values**

Criteria:

Vegetative and ecological values may be judged on the relative merits of either populations or communities, or a combination of these conditions.

Attributes:

Does the river or river corridor contain nationally or regionally important populations of indigenous plant species? Of importance are species considered to be unique or populations of federal or state listed, candidate, threatened, endangered, or sensitive species.

Does the river or river corridor contain nationally or regionally important plant communities?

Evaluation of Present Situation:

Segment 1 - Natural riparian processes and diverse native riparian plant communities are present.

Segment 2 - Natural riparian processes and diverse native riparian plant communities are present.

Segment 3 - Two Region 3 sensitive plant species occur. Natural riparian processes and diverse native riparian plant communities.

Segment 4 - Natural riparian processes and diverse native riparian plant communities.

Determination for Botany ORV:

Botany is an ORV for the entire stretch of the Upper Verde River. Natural riparian processes and diverse native riparian plant communities are present throughout the entire Upper Verde River. Riparian areas account for only 0.4% of Arizona’s total area. The role of riparian areas is disproportionate to their size, particularly in semi-arid regions. This is mainly due to the many functions and values of riparian areas. Riparian areas support more productive and diverse vegetation assemblages and serve more ecological functions than their terrestrial upland counterparts. These areas provide important links between terrestrial upland and aquatic ecosystems. Two Region 3 sensitive species are documented from the project area. Its exact location in relation to the river is not known (Carsey 2009).

<b>BOTANY SUMMARY</b>	Presence of ORV (Yes/No)	Scale of Importance (Local, Regional, or National)
Segment		
1 - 4	Yes	Local and Regional

**Eligibility Determination**

**Table 5. Eligibility Determination Summary**

<b>Segment</b>	<b>Free-Flowing Criteria</b>	<b>ORVs</b>	<b>Eligible</b>
Segment 1	Yes	Cultural Scenic Fisheries Wildlife Recreation Botanical	Yes
Segment 2	Yes	Cultural Scenic Fisheries Wildlife Recreation Botanical	Yes
Segment 3	Yes	Cultural Scenic Fisheries Wildlife Recreation Botanical	Yes
Segment 4	Yes	Cultural Scenic Fisheries Wildlife Recreation Botanical	Yes

**River Classification Evaluation**

The four pages that follow document the classification by segment:

Classification - SCENIC						
Segment 1: From FS boundary near Paulden AZ to confluence of King Tributary and Verde River (~5.9 miles)						
ATTRIBUTE	WILD:		SCENIC:		RECREATIONAL:	
<b>Water Resources Development</b>	Free of Impoundment.	Y	Free of Impoundment.	Y	Some existing impoundment or diversions.  The existence of low dams, diversion, or other modifications of the watercourse, provided the watercourse remains free-flowing and generally natural and riverine in appearance.	N
						N
<b>Shoreline Development</b>	Essentially primitive. Little or no evidence of human activity.  The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable.  A limited amount of domestic grazing or hay production is acceptable.  Little or no evidence of past timber harvest. No ongoing timber harvest.	N	Largely primitive and undeveloped. No substantial evidence of human activity.  The presence of small communities or dispersed dwellings or farm structures is acceptable.  The presence of grazing or hay production or row crops.  Evidence of past logging or ongoing timber harvest, provided the forest appears natural from the riverbank.	Y	Some developments. Substantial evidence of human activity.  The presence of extensive residential development and a few commercial structures.  Lands may have been developed for the full range of agricultural uses.  May show evidence of past and ongoing timber harvest.	N
		N		Y		N
		Y		N		N
		N		Y		Y
<b>Accessibly</b>	Generally inaccessible except by trail.  No roads, railroads or other provision for vehicular traffic within river area. A few existing roads leading to the boundary of the area.	N	Accessible in places by roads.  Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads.	Y	Readily accessible by roads.  The existence of parallel roads on one or both banks as well as bridge crossings and other river access points.	N
		N		Y		N
<b>Water Quality</b>	Meets or exceeds Federal criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except when exceeded by nature conditions.	Y	No criteria prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendment of 1972 made it a national goal that all waters of the United States be made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study provided a water quality improvement plan exists or is being developed in compliance with applicable federal and state laws.			

Classification - WILD						
Segment 2: From confluence of King Tributary and Verde River to APS power line (~5.6 miles)						
ATTRIBUTE	WILD:		SCENIC:		RECREATIONAL:	
<b>Water Resources Development</b>	Free of Impoundment.	Y	Free of Impoundment.	Y	Some existing impoundment or diversions.  The existence of low dams, diversion, or other modifications of the watercourse, provided the watercourse remains free-flowing and generally natural and riverine in appearance.	N
<b>Shoreline Development</b>	Essentially primitive. Little or no evidence of human activity.	Y	Largely primitive and undeveloped. No substantial evidence of human activity.	Y	Some developments. Substantial evidence of human activity.	N
	The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable.	Y	The presence of small communities or dispersed dwellings or farm structures is acceptable.	N	The presence of extensive residential development and a few commercial structures.	N
	A limited amount of domestic grazing or hay production is acceptable.	Y	The presence of grazing or hay production or row crops.	N	Lands may have been developed for the full range of agricultural uses.	N
	Little or no evidence of past timber harvest. No ongoing timber harvest.	N	Evidence of past logging or ongoing timber harvest, provided the forest appears natural from the riverbank.	Y	May show evidence of past and ongoing timber harvest.	N
<b>Accessibly</b>	Generally inaccessible except by trail.	Y	Accessible in places by roads.	N	Readily accessible by roads.  The existence of parallel roads on one or both banks as well as bridge crossings and other river access points.	N
	No roads, railroads or other provision for vehicular traffic within river area. A few existing roads leading to the boundary of the area.	Y	Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads.	N		N
<b>Water Quality</b>	Meets or exceeds Federal criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except when exceeded by nature conditions.	Y	No criteria prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendment of 1972 made it a national goal that all waters of the United States be made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study provided a water quality improvement plan exists or is being developed in compliance with applicable federal and state laws.			

Classification - SCENIC						
Segment 3: From APS power line to below confluence of Sycamore Canyon and Verde River (~19.5 miles)						
ATTRIBUTE	WILD:		SCENIC:		RECREATIONAL:	
<b>Water Resources Development</b>	Free of Impoundment.	Y	Free of Impoundment.	Y	Some existing impoundment or diversions.  The existence of low dams, diversion, or other modifications of the watercourse, provided the watercourse remains free-flowing and generally natural and riverine in appearance.	N
<b>Shoreline Development</b>	Essentially primitive. Little or no evidence of human activity.	N	Largely primitive and undeveloped. No substantial evidence of human activity.	Y	Some developments. Substantial evidence of human activity.	N
	The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable.	Y	The presence of small communities or dispersed dwellings or farm structures is acceptable.	N	The presence of extensive residential development and a few commercial structures.	N
	A limited amount of domestic grazing or hay production is acceptable.	Y	The presence of grazing or hay production or row crops.	N	Lands may have been developed for the full range of agricultural uses.	N
	Little or no evidence of past timber harvest. No ongoing timber harvest.	Y	Evidence of past logging or ongoing timber harvest, provided the forest appears natural from the riverbank.	N	May show evidence of past and ongoing timber harvest.	N
<b>Accessibly</b>	Generally inaccessible except by trail.	N	Accessible in places by roads.	Y	Readily accessible by roads.	N
	No roads, railroads or other provision for vehicular traffic within river area. A few existing roads leading to the boundary of the area.	N	Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads.	Y	The existence of parallel roads on one or both banks as well as bridge crossings and other river access points.	N
<b>Water Quality</b>	Meets or exceeds Federal criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except when exceeded by nature conditions.	N	No criteria prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendment of 1972 made it a national goal that all waters of the United States be made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study provided a water quality improvement plan exists or is being developed in compliance with applicable federal and state laws.			

Classification - RECREATION						
Segment 4: From confluence of Sycamore Canyon and Verde River to PNF boundary (~6.7 miles) near Clarkdale AZ						
ATTRIBUTE	WILD:		SCENIC:		RECREATIONAL:	
<b>Water Resources Development</b>	Free of Impoundment.	N	Free of Impoundment.	N	Some existing impoundment or diversions. (Ditch on former Alvarez property)	Y
					The existence of low dams, diversion, or other modifications of the watercourse, provided the watercourse remains free-flowing and generally natural and riverine in appearance.	Y
<b>Shoreline Development</b>	Essentially primitive. Little or no evidence of human activity.  The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable.  A limited amount of domestic grazing or hay production is acceptable.  Little or no evidence of past timber harvest. No ongoing timber harvest.	N	Largely primitive and undeveloped. No substantial evidence of human activity.	N	Some developments. Substantial evidence of human activity.	Y
					The presence of extensive residential development and a few commercial structures.	N
					Lands may have been developed for the full range of agricultural uses.	N
					May show evidence of past and ongoing timber harvest.	N
<b>Accessibly</b>	Generally inaccessible except by trail.  No roads, railroads or other provision for vehicular traffic within river area. A few existing roads leading to the boundary of the area.	N	Accessible in places by roads.  Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads.	Y	Readily accessible by roads.	Y
					The existence of parallel roads on one or both banks as well as bridge crossings and other river access points.	N
<b>Water Quality</b>	Meets or exceeds Federal criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except when exceeded by nature conditions.	N	No criteria prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendment of 1972 made it a national goal that all waters of the United States be made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study provided a water quality improvement plan exists or is being developed in compliance with applicable federal and state laws.			

**Table 5. Summary of Segments and their Eligibility Classification**

Segment	Segment Length (miles)	Related Features (Start/End of Segment)	Eligibility Classification
1	5.9	From western FS boundary near Paulden, AZ to confluence of King Tributary and Verde River	Scenic
2	5.6	From confluence of King Tributary and Verde River to APS power line and West-wide Energy Corridor	Wild
3	19.5	From APS power line and West-wide Energy Corridor to below confluence of Sycamore Canyon and Verde River	Scenic
4	6.7	From confluence of Sycamore Canyon and Verde River to Prescott National Forest boundary near Clarkdale, AZ	Recreation

Total 37.7 These four segments are bounded by an area that extends one-quarter mile from the high water mark on each of the segments.

### Interim Management

In its opinion, the Ninth Circuit Court (CBD v. Veneman 2005) concluded that the Forest Service's 1993 Resource Information Report prepared for the Arizona Congressional Delegation constitutes eligibility for the 57 rivers contained in that report. Forest Service policy at FSH 1909.12, Chapter 8.12 states that Forest Plan direction for eligible rivers should provide the following protection:

1. ...free flowing characteristics cannot be modified.
2. Outstandingly remarkable values (ORVs) must be protected, and to the extent practicable, enhanced.
3. Management and development of the river and its corridor cannot be modified to the degree that eligibility or classification would be affected. Projects with the potential to affect the free flowing character, ORVs, or classification of the 57 eligible rivers must be assessed specific to impacts to river eligibility and classification. If a project may affect eligibility or classification of any of these rivers, then the project should be discontinued, modified to eliminate these effects, or river suitability should be determined.

This report documents the PNF's updated eligibility report for the Upper Verde River. The CNF concurs with the eligibility and Recreation classification for segment 4. At this time, the PNF and CNF are not completing suitability analyses as part of the Forest Plan Revision processes.

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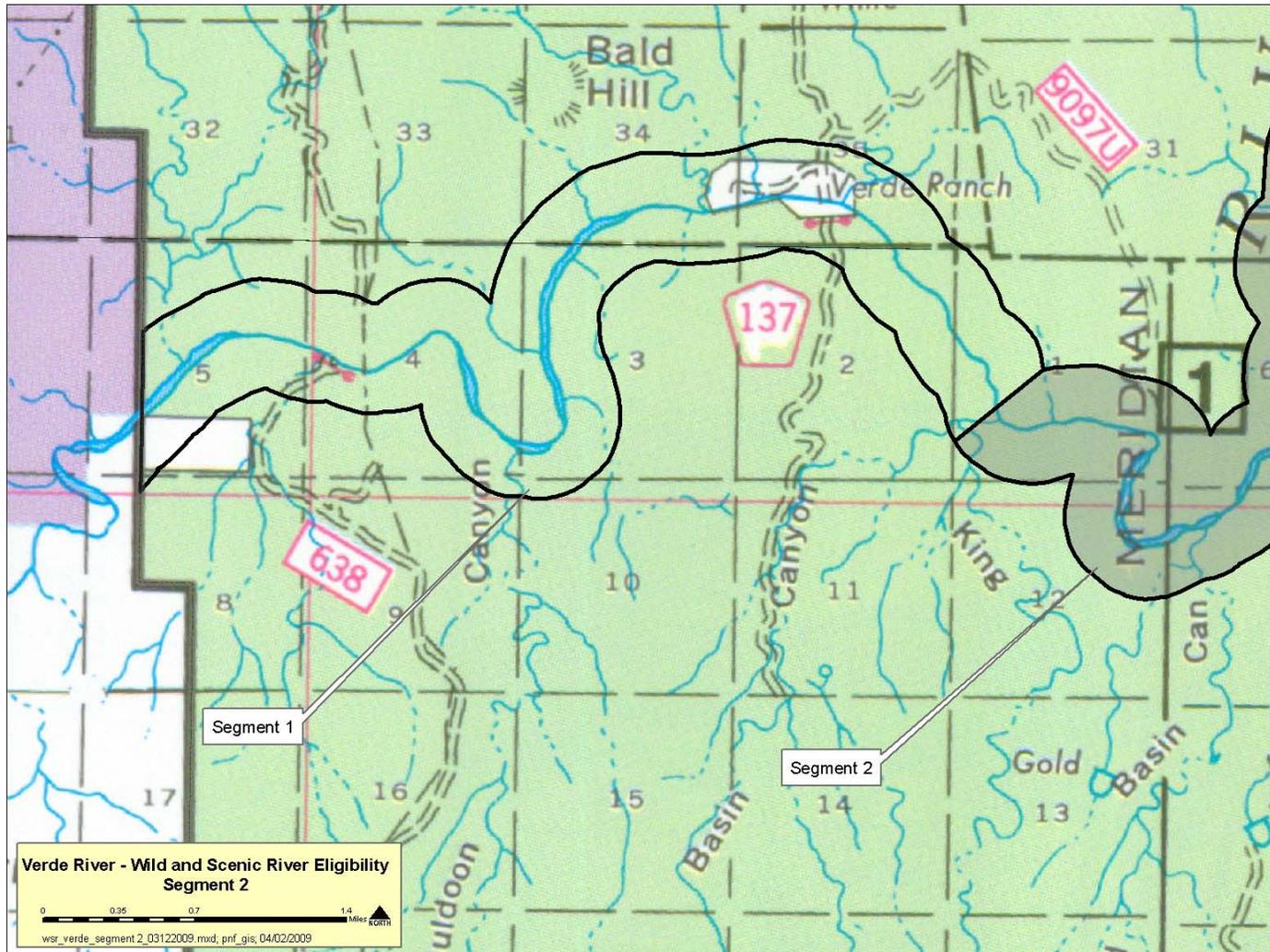
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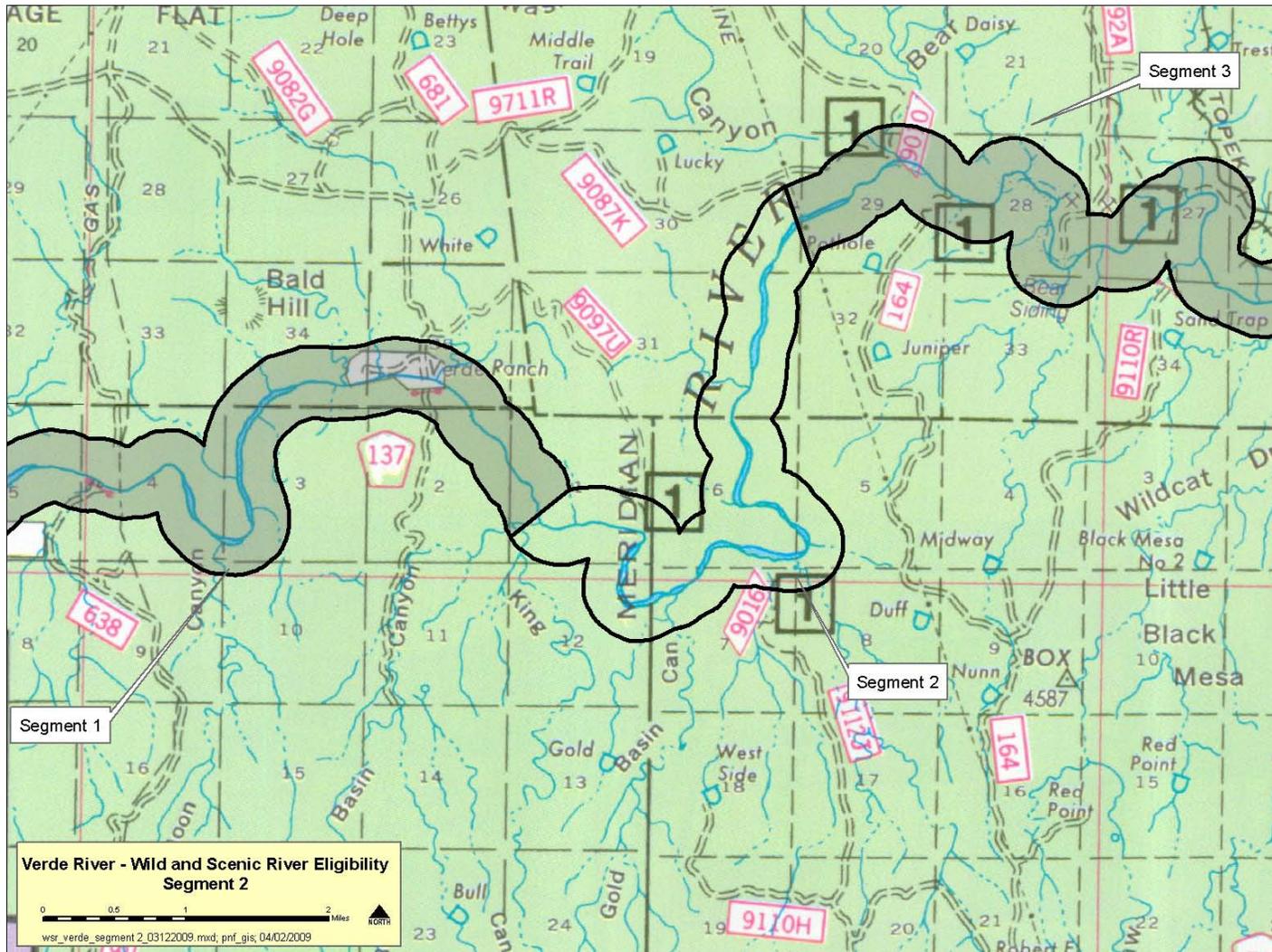
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Appendix A – Segment 1



## Appendix A – Segment 2





## Appendix A – Segment 4

