



United States  
Department of  
Agriculture

Forest  
Service

Southwestern  
Region



# Verde Wild and Scenic River Comprehensive River Management Plan

## Coconino, Prescott and Tonto National Forests, Arizona



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June 14, 2004

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# Contents

<b>Chapter 1 - Introduction .....</b>	<b>1</b>
Wild and Scenic River Legislation .....	3
Planning Process .....	4
Agency Jurisdiction .....	4
<b>Chapter 2 - Outstandingly Remarkable Values.....</b>	<b>9</b>
Scenery .....	9
Fish .....	9
Wildlife.....	10
Historic and Cultural.....	11
<b>Chapter 3 - Management Direction for the Verde River Corridor .....</b>	<b>13</b>
Desired Conditions (Goals) for Wild and Scenic Sections .....	13
Management Standards Common to Verde Wild River and Verde Scenic River .....	16
Management Standards for Verde Wild River .....	21
Management Standards for Verde Scenic River .....	22
<b>Chapter 4 - Implementation Schedule .....</b>	<b>27</b>
General Actions .....	27
Scenery Management Actions .....	27
Fish Management Actions .....	28
Wildlife Management Actions .....	28
Cultural and Historic Management Actions .....	30
Water Management Actions .....	30
Vegetation Management Actions.....	31
Recreation Management Actions .....	31
Access and Travel Management Actions .....	32
Interpretation and Environmental Education Actions.....	33
Wilderness Management Actions .....	34
Livestock Grazing Management Actions .....	34
<b>Chapter 5 - Monitoring and Evaluation .....</b>	<b>37</b>
Monitoring and Evaluation Program .....	37
<b>Glossary.....</b>	<b>43</b>
<b>List of Preparers.....</b>	<b>55</b>
Interdisciplinary Team.....	55
Technical Assistance and Support.....	56
<b>Appendix A – Arizona Wilderness Act, Verde WSR Designation.....</b>	<b>57</b>
<b>Appendix B - WSR Act Section 7 Evaluation Procedures .....</b>	<b>59</b>
<b>Appendix C - Maps.....</b>	<b>69</b>



# Chapter 1 - Introduction



A segment of the Verde River became a National Wild and Scenic River (NWSR) through the Arizona Wilderness Act of 1984 (P.L. 98-406) (See Appendix A). This Act amended the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), which requires the USDA Forest Service, in consultation with State and local governments, tribal governments, and the public, to develop a comprehensive river management plan (CRMP). The CRMP is designed first, to protect and enhance the values which caused the river to be designated, and second, to allow other uses that do not substantially interfere with public use and enjoyment of the river's values.

This management plan establishes a comprehensive approach to managing the free-flowing natural character of the river and its values. The plan also provides the direction, management standards, and monitoring efforts that will be applied to protect and enhance river values. This plan is the result of a coordinated effort of three national forests along with many other Federal, State, and local agencies, as well as concerned citizens, to identify a plan for protection and use of the river. The segment of river covered by this plan lies within the administrative boundaries of the Coconino, Prescott, and Tonto National Forests in Gila and Yavapai Counties of central Arizona. The Wild and Scenic River area is generally a half mile wide, a quarter mile each side of, and parallel to the river and encompasses approximately 12,516 acres. Elevations throughout the Wild and Scenic River area range from 2,180 feet to 3,383 feet. The river drops an average of 19.5 feet per mile along its 41 mile, Wild and Scenic River reach. See Figure 1, Verde Wild and Scenic River Location Map.

**Table 1. Verde Wild and Scenic River Acres by Forest<sup>1</sup>**

	<b>National Forest (Acres)</b>	<b>Private (Acres)</b>	<b>Total (Acres)</b>
<b>Verde Wild River</b>			
Coconino NF	505	0	505
Prescott NF	0	0	0
Tonto NF	6,319	0	6,319
<b>Total Wild River</b>	<b>6,824</b>	<b>0</b>	<b>6,824</b>
<b>Verde Scenic River</b>			
Coconino NF	2,846	0	2,846
Prescott NF	2,138	28	2,166
Tonto NF	680	0	680
<b>Total Scenic River</b>	<b>5,664</b>	<b>28</b>	<b>5,692</b>
<b>Total Wild and Scenic River</b>	<b>12,488</b>	<b>28</b>	<b>12,516</b>

<sup>1</sup> Acres reported for Verde Wild and Scenic River are derived from 1997 boundary declaration signed by the Southwestern Regional Forester.

See section under Maps.

**Figure 1. Verde Wild and Scenic River Location Map**

## Wild and Scenic River Legislation

In 1968, Congress passed the National Wild and Scenic River Act (P.L. 90-542), establishing a nationwide system of outstanding free-flowing rivers. The primary purpose of the Act is to balance river development with river protection and conservation. The Act specifically prohibits rivers from future hydroelectric power development and requires managing agencies to protect and enhance those values for which the river was designated.

As defined by the Act, a NWSR must be preserved in a free-flowing condition and must have its water quality protected. In addition, the river must possess one or more outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Outstandingly remarkable values (ORVs) are those values that are river related and are rare, unique, or exemplary in character. Rivers may be added to the system either by an Act of Congress or by the Secretary of the Interior upon official request by a state governor.

Some of the underlying principles of the Act are to:

- Keep selected rivers or river segments in a free-flowing condition and to recognize their importance to our natural and cultural heritage;
- Protect water quality in designated rivers;
- Designate rivers because of their existing attributes and uses, including a river's natural, recreational, and cultural values; and
- Recognize the need to provide for partnerships among landowners, Federal agencies, and local, State, and tribal governments in determining the future of the river area and managing its resources.

Under the Wild and Scenic Rivers Act, designated rivers are classified as wild, scenic, or recreational, depending on the level of development and access present along the river at the time of designation. Wild river segments are the most natural appearing and the least accessible with little or no development present. Scenic river segments have shorelines that are largely undeveloped with few access points. On river segments with the Recreational classification, the shoreline may be more developed and the river is readily accessible by road.

Due to the low levels of development present along the Verde River at the time of its designation, the Arizona Wilderness Act (P.L. 98-406) divided the river into a Wild segment and a Scenic segment. There is no Recreational classification along the Verde River. The Scenic River area begins near Beasley Flat, continues downstream about 18.8 miles to the boundary of the Mazatzal Wilderness, and contains approximately 5,692 acres. The Wild River area lies within the Mazatzal Wilderness, beginning at the wilderness boundary and continuing downstream about 22.2 miles to the confluence of Red Creek, and contains approximately 6,824 acres.

The Arizona Wilderness Act (P.L. 98-406) (see Appendix A) also stipulated that designation of the selected reach of the Verde River as Wild and Scenic “shall not

prevent water users receiving Central Arizona Project water allocations from diverting that water through an exchange agreement with downstream water users in accordance with Arizona water law.” This management plan recognizes that development of these allocations may occur in the future.

## **Planning Process**

The Verde Wild and Scenic River (VWSR) CRMP was developed from the Verde Wild and Scenic River Environmental Assessment (EA) consistent with forest land management planning regulations found at 36 CFR 219. The EA evaluated a range of four alternative management scenarios for the Verde River. The EA weighed the environmental consequences of each alternative. Based on this scientific analysis, a modified version of Alternative 3 (known as Alternative 3a) was selected as the preferred management strategy. This management plan is based on implementation of Alternative 3a (see Map 2, Appendix C).

While the EA describes the management emphasis and identifies some specific activities that could take place within the river corridor, this management plan provides a more comprehensive list of actions, along with desired conditions and management standards for the river.

## **Agency Jurisdiction**

The Wild and Scenic Rivers Act requires that a CRMP be prepared to protect and enhance the values for which the river was designated. The river management plan is designed to be compatible with local and statewide planning goals of all agencies with jurisdiction over the resources of the Verde River. These jurisdictions are described below.

### **USDA Forest Service**

The USDA Forest Service is the Federal agency charged with managing the Verde Wild and Scenic River. The management direction in this CRMP amends the Coconino, Prescott, and Tonto National Forest Land and Resource Management Plans (Forest Plans). The CRMP adds to and modifies standards and guidelines found in each of the three existing Forest Plans that apply specifically to each forest’s portion of the VWSR. Those desired conditions and management standards identified by this plan will supercede comparable management direction in the respective Forest Plans, all other existing management direction will remain as is, unless modified by some other plan or analysis.

The CRMP creates one new land allocation for the Prescott National Forest segment of the Scenic river corridor and provides management direction for that area. In addition, the CRMP amends management direction for existing land allocations on the Coconino and Tonto National Forests (see Map 1, Appendix C). The purpose of the new management direction is to provide consistency among all three forests in managing the Verde Wild and Scenic River and its related outstandingly remarkable values.

Two levels of planning exist within the USDA Forest Service. The first level of planning is programmatic and is represented by the Forest Plans and their amending documents, such as this CRMP. The second level of planning is the project level. Individual project plans implemented within the VWSR corridor will be analyzed for potential site-specific environmental impacts and for compliance with desired conditions and management standards set in the amended Forest Plans through the CRMP. Additional site-specific environmental analysis must be completed prior to implementation of many of the actions identified in this plan. The Forest Service is the agency charged with assuring that water resources projects, both inside and outside the VWSR corridor, with potential to have an effect on the VWSR will be evaluated in compliance with Section 7(a) of the Wild and Scenic Rivers Act. See Appendix B for Section 7(a) evaluation procedures.

### **U.S. Fish and Wildlife Service**

The U.S. Fish and Wildlife Service (USFWS) enforces Federal wildlife laws, protects endangered species, manages migratory birds, restores nationally significant fisheries, and conserves and restores wildlife habitat such as wetlands. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to State fish and wildlife agencies.

For the VWSR, USFWS management and enforcement activities directly affect management and uses. The Agency's role and authority under the Endangered Species Act require that the three national forests enter into informal and/or formal consultation with the Service on the effects of implementation of proposed actions on Federally-listed or proposed species and critical habitat. At the conclusion of formal consultation, the Service issues a biological opinion (BO) that determines whether the selected alternative protects or enhances species and habitat or whether additional actions are required to adequately protect species. The USFWS also participates with Arizona Game and Fish Department (AGFD) and the forests in reintroduction, surveys and monitoring of listed species within the VWSR and the Southwest and provides Federal funds under the act to accomplish these activities.

Under Executive Order 13186 of January 10, 2001, "Responsibilities of Federal Agencies to Protect Migratory Birds," each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement a memorandum of understanding (MOU) with the USFWS that promotes the conservation of migratory bird populations. Nongame migratory birds, many of which are riparian-dependent species, are the focus of this order.

### **Arizona State Historic Preservation Office**

The State Historic Preservation Officer (SHPO) is a State office with a Federal mandate. Under Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations at 36 CFR 800, Federal agencies are required to consult with SHPOs regarding the eligibility of historic and cultural properties for nomination to the National Register of Historic Places, and on determinations of effect from Federal undertakings and management decisions.

Arizona Department of Environmental Quality

The Arizona Department of Environmental Quality (ADEQ) is responsible for protecting public health and the environment by administering the State's environmental quality laws and delegated Federal programs to prevent, control and abate pollution of air, water and land resources.

The department's Water Quality Division regulates drinking water and waste water systems, monitors and assesses waters of the State, and provides hydrologic analysis to support hazardous site remediation. Specific activities include providing critical information on water quality conditions, establishing water quality standards, and developing water quality management plans.

The ADEQ conducts water quality monitoring above, within and below the Verde Wild and Scenic River. ADEQ monitors water quality quarterly at Beasley Flat and contracts with the U.S. Geological Survey (USGS) to conduct water quality monitoring at the gage on the Verde River below Tangle Creek, which is downstream of the Wild and Scenic River segment. ADEQ assesses the quality of the water within the Wild and Scenic River as part of their biannual Water Quality Assessment Reporting required under Section 303 of the Federal Clean Water Act. If water quality within the Wild and Scenic River were to be placed on the list of streams not meeting water quality standards (303(d) list), then ADEQ would place the reach(es) not meeting standards on their schedule of streams for developing water quality management plans. ADEQ can also take enforcement actions for violations of water quality standards within the Wild and Scenic River.

The Forest Service has been designated as the management agency for control of non-point sources of pollution on national forest lands through an Intergovernmental Agreement (IA 16-R3-91-033) with ADEQ. The agreement recognizes that Best Management Practices (BMPs) are the primary means for controlling non-point sources of pollution.

## **Arizona Department of Water Resources**

In 1980, the Arizona Department of Water Resources (ADWR) was created to ensure dependable long-term water supplies for Arizona's growing communities. The ADWR administers State water laws (except those related to water quality), explores methods of augmenting water supplies to meet future demands, and works to develop public policies that promote conservation and equitable distribution of water. The ADWR oversees the use of surface and ground water resources under State jurisdiction and negotiates with external political entities to protect and augment Arizona's water supply.

Surface water rights within and above the Wild and Scenic corridor are administered and enforced by ADWR. Because an adjudication of the Verde River basin has not been completed, these rights have not been quantified and their priority of use has not been established.

Ground water use in the Camp Verde area is not regulated under the Active Management Area (AMA) provisions of the State Ground Water Management Code (1980) because this area has not been designated as an AMA. Recent court decisions are helping to clarify the definition of ground water and surface water, and some of the wells upstream of the Wild and Scenic River corridor may be defined as withdrawing

appropriable surface water. These wells may eventually be administered by ADWR as surface water.

## **Arizona Game and Fish Department**

The Arizona Game and Fish Department (AGFD) is the responsible agency for managing and protecting Arizona's fish and wildlife resources. The VWSR lies within portions of three AGFD Game Management Units (GMUs): 6A, 21 and 22. The agency sets game animal harvest levels, hunting seasons, and similar wildlife population regulatory actions for each GMU, or statewide, based on the species. Within the VWSR corridor, AGFD has no limits on catch and possession of nonnative fish and has placed restrictions on transport of baitfish. Native fish management activities include stocking of razorback sucker and Colorado pikeminnow and angler education programs.

AGFD's strategic plan, "Wildlife 2006," provides goals, objectives and strategies for the management and use of Arizona's wildlife and fish populations and habitat. The strategic plan directs collaboration among agencies to enhance nongame and endangered wildlife habitats and biotic communities, and to prevent avoidable, or mitigate unavoidable losses. Because of the loss, degradation, or fragmentation of most of Arizona's richest wildlife habitat—lowland riparian habitat (like that found along the Verde River)—specific direction for proposed protection efforts is provided in the strategic plan.

Other AGFD riparian habitat management emphases arise from Executive Order No. 89-16, dated June 10, 1989, which directs State agencies to work toward restoration of riparian resources. AGFD has designated the Verde River as a Wildlife Resource Category 1, signifying that it supports habitats that are of the highest value to Arizona wildlife species and are unique and/or irreplaceable on a statewide or ecoregion basis. Other agency direction for projects and subsequent mitigation measures is aimed to achieve no net loss in riparian acres and maintenance or improvement of habitat quality for wildlife and fish populations.

Agency documents, such as "Wildlife of Special Concern in Arizona," identify species with population viability issues including some found in the VWSR. In addition, the Verde River's importance to the bald eagle results in extensive monitoring of bald eagle nests and reproduction in the VWSR. The agency actively participates with the forests in protection of this species. Surveys for sensitive wildlife species and native fish populations are conducted frequently to monitor populations.

## **Gila and Yavapai County Planning**

The authority to regulate and control land use and development activities on private lands within Gila and Yavapai Counties rests with local and county governments and not the Federal Government. The Federal Government does not have the authority to zone or regulate uses of private lands under the Wild and Scenic Rivers Act.



***“There is ever a lurking suspicion that the beginning of things is in some way associated with water, and one may notice that in his private walks he is led by a curious attraction to fetch all the springs and ponds in his route, as if by them was the place for wonders and miracles to happen.”***

John Burroughs (1837-1921)

# Chapter 2 - Outstandingly Remarkable Values

The Wild and Scenic Rivers Act requires a determination that a river and its immediate environment possess one or more specific “outstandingly remarkable values” before that river corridor can be considered for designation as a NWSR (P.L. 90-542, Section 1(b)). Outstandingly remarkable values (ORVs) are defined as values in a river corridor that are directly related to the river and that are rare, unique, or exemplary from a regional or national perspective. The 1982 “Verde River Wild and Scenic River Study Report and Environmental Impact Statement” (VWSR FEIS) (Chapter 3, Section A) found that this portion of the river corridor contained **outstandingly remarkable scenic, fish and wildlife, and historic and cultural values**. The Act also requires that the Wild and Scenic River must first be administered in such a manner as to protect and enhance the river’s values, and second to allow other uses that do not interfere with public use and enjoyment of those river values. Protection and enhancement of the specific outstandingly remarkable values and water quality within the VWSR provides the foundation upon which all management actions and authorizations of uses are based. Descriptions of the ORVs follow.

## Scenery

The Verde River has outstandingly remarkable scenic values. The scenic qualities of landform, vegetation, and water within the Verde Wild and Scenic River are distinctive. Landform varies from steep, rocky canyons framing the river, to plateaus dropping to wide flood plains, with the river as a central feature. Vegetation varies according to terrain, from broad mesquite bosques and cottonwood gallery forests to narrow bands of riparian willows, in contrast to the surrounding dry grassland and desert vegetation. Scenic qualities of the perennial Verde River change dramatically with the seasons and with changes in river flow. Dramatic fall color contrasts with summer greenery. Water flow changes from shallow, still pools and slow water, to high flow, seasonal rapids and waterfalls. Recreationists view the river corridor from the high edges of plateaus and canyons, from within the flood plain, from the riverbank, and from the surface of the river itself.

The VWSR area is visually sensitive due to the combination of high viewer expectations, generally long duration of view, and high amount of detail visible by the viewer. The river corridor is characterized in many locations by open, expansive vistas viewed from numerous locations.

## Fish

Outstandingly remarkable fish values along the Verde Wild and Scenic River (VWSR) result from the high quality habitat that the river provides for native fish species, including several Federally endangered and threatened listed species and their critical habitats. Periodic natural flooding, a diversity of aquatic habitats, and a native fish assemblage make the VWSR a unique and valuable resource in the Southwest.

Historically, the native fish assemblage in the Verde River was comprised of razorback sucker, Colorado pikeminnow, spikedace, loach minnow, Sonora sucker, desert sucker, roundtail chub, speckled dace, and longfin dace. Three of these fish species, the razorback sucker, Colorado pikeminnow, and the loach minnow, were extirpated from

the Verde River basin. The current native fish assemblage found within the VWSR is comprised of the Sonora sucker, desert sucker, the reintroduced razorback sucker and Colorado pikeminnow, and the occasional roundtail chub. The longfin dace and speckled dace are common in tributaries to the VWSR, and only briefly occupy the mainstem after downstream displacement from the tributaries due to flooding. Generally, native species comprise less than 20 percent of the fish community in the VWSR reach of the Verde River. The only notable exception was in 1995 when high reproduction and recruitment of desert and Sonora suckers into the fish community was documented due to spring flooding providing suitable spawning conditions.

Currently, Federally listed fish species in the VWSR include the razorback sucker (endangered), Colorado pikeminnow (experimental nonessential), and the roundtail chub (Forest Service sensitive). There is also designated critical habitat for the razorback sucker throughout the reach of the VWSR, and for the spinedace and loach minnow from Beasley Flat to the Fossil Creek confluence. The AGFD began reintroductions of razorback sucker and Colorado pikeminnow into the Verde River in 1981 and 1985, respectively. Since 1994, the VWSR has been the focal area of the recovery program in Arizona with annual goals to stock 2,000 large individuals of each species.

The introduced, nonnative fish assemblage found in the VWSR includes common carp, channel catfish, flathead catfish, smallmouth bass, largemouth bass, green sunfish, red shiner, and mosquitofish.

## **Wildlife**

Outstandingly remarkable wildlife values along the Verde Wild and Scenic River result from the high quality habitat that the river and its associated riparian areas provide. The VWSR provides habitat for a diverse array of wildlife species and contains some of the most important riparian and associated upland habitat found in Arizona and the Southwest. A number of factors combine to make this area extremely critical for riparian-dependent species, as well as terrestrial wildlife in general. The river's combination of location and orientation provides a ribbon of riparian habitat suitable for birds that seasonally migrate through or inhabit these life zones. It also provides wintering habitat for waterfowl and year-round riparian and associated upland habitat for resident species. Finally, it provides a source of water and aquatic habitat that supports a diverse array of species in an otherwise arid environment.

Currently, there are 51 threatened, endangered, sensitive or special status wildlife species present or potentially present within the river corridor. The corridor contains important nesting habitat for the bald eagle, and potential and suitable habitat for the southwestern willow flycatcher, western yellow-billed cuckoo and Yuma clapper rail. It is home to a thriving population of river otters and beaver. It is a summer home to many riparian-dependent, neotropical migrant birds. In addition, the river and its riparian area provides habitat for over 60 percent of the vertebrate species that inhabit the Coconino, Prescott, and Tonto National Forests. The high variety of both resident and migratory wildlife species found in the river corridor illustrates the corridor's value for these species within Arizona and the Southwest.

Riparian vegetation quality and quantity ultimately determines the number of wildlife species, the population of each species, and sustainability of these levels of the outstandingly remarkable wildlife resource of the VWSR. Willows are a principal vegetation component, but velvet ash, Arizona sycamore, and Fremont cottonwood are also important. Although the river and flood plain seem large, less than 30 percent of the valley bottom has wetter soils capable of supporting lush riparian vegetation communities. Because most of the wildlife found within the VWSR is dependent on riparian vegetation for their livelihood, the restricted distribution and limited acreages only increase the importance of this habitat to wildlife.

## **Historic and Cultural**

The Verde Wild and Scenic River corridor is known to contain archaeological evidence of the occupation and agricultural use and modification of the Verde River flood plains, terraces, and hill slopes by people from prehistoric to modern times. There is evidence of the occupation of people related to the prehistoric Hohokam and Southern Sinagua cultural traditions over a period of at least 600 years and there may be sites from as long ago as 8,000 to 10,000 years. The river corridor is also expected to contain a number of pre-European contact and historic sites reflecting its use and occupation by Yavapai and Apache hunters, gatherers, and farmers. It is known to have sites representing the Anglo, Hispanic, and Basque stockmen who raised or drove cattle and sheep throughout the area. The earliest hydroelectric power plant in the State of Arizona is located in the VWSR corridor at the small settlement of Childs, still occupied and functional. The significance of the Childs Power Plant has already been recognized by its listing in the National Register of Historic Places. The VWSR corridor also contains the burned out remains of one of Arizona's first tourist developments, the Verde Hot Springs Resort across the river from Childs.

The bulk of the prehistoric material known from the VWSR corridor is ascribed to one or the other of two central Arizona archaeological traditions—Hohokam and Southern Sinagua. There is ample evidence that the original agricultural occupation was closely tied to the Hohokam of the Salt and Gila River Valleys (and especially to the Hohokam settlements of the lower Verde). Eventually a distinctive cultural tradition separable from both mainstream Hohokam to the south and the Southern Sinagua to the north developed over much of the area that contains the Verde Wild and Scenic River. Along the Verde River a recognizable cultural boundary was established sometime around 1300 AD near Childs, roughly at the division between the Wild and Scenic portions of the corridor. To the north, in the Scenic section, the settlements along the river appear to have been tied, related, or allied with those in the Middle Verde Valley. For the most part these sites are assigned to the Southern Sinagua cultural tradition. To the south, in the Wild section, they appear to have been part of a cultural development that spread east and west on both sides of the river from the Agua Fria River to the Tonto Creek divide. This group, known informally as the “Verde Hohokam” also maintained a boundary to the south, just below Horseshoe Dam, separating them from the Hohokam of the Phoenix Basin.

Other cultural/ethnic groups represented along the VWSR corridor include the pre-contact and historic Yavapai and Apache who came in after the prehistoric abandonment, Basque and Hispanic sheepherders, and Anglo cattle ranchers. Early 20<sup>th</sup>

century developments by Anglos include the Childs Power Plant and the former Verde Hot Springs Resort. Given the nature of the inventory data, it is safe to say that none of these later groups are adequately represented in the existing inventory.

Despite the fact that relatively little information is available on the individual archaeological sites recorded along the river, it is clear that the historic and cultural resource of the Verde Wild and Scenic River is both outstanding and remarkable. The reason for this conclusion has much to do with the remoteness of the area and the lack of modern encroachment. These sites represent a prehistoric social landscape in a physical setting little changed from the day they were abandoned. And yet, today's environment is not the same, for it continues to evolve.

More than just the landscape, though, the historic and cultural resources of the VWSR provide evidence of what we are only now beginning to recognize as a remarkable history of cultural development. Initially one of several corridors of travel, trade, and migration between northern and southern Arizona, the Verde River eventually became the scene of historical and cultural events that transcended mere topography. Before it was abandoned in prehistoric times, the river ceased to function as a long distance trade and travel route. Instead, it was incorporated into the geographic territories of cultural groups that spanned it from east to west and whose boundaries crossed it north to south. The information contained in and represented by these sites can make an outstanding contribution to the reconstruction of prehistoric lifeways in Arizona.

The Wild and Scenic reach of the Verde River may also have played a key role in the resettlement of central Arizona by the Yavapai and Apache who came into the area from opposite directions and first met in or around the Verde Valley. It may also have been the scene of several confrontations between these tribes and the U.S. Army in their struggle to remain on the lands their ancestors had settled.

Finally, the relatively intact landscape and setting and the range of known and potential site types and periods of occupation combine to represent the better part of an entire prehistoric settlement system that may reflect the development of one or more distinct cultural groups. In addition, many of the individual sites appear to have played significant roles in the development of this settlement system, either in terms of their size or placement or potential for control of travel or contact with other cultural groups. This level of significance, combined with the considerable degree of integrity of many of the sites and their settings, makes the historic and cultural resource of the VWSR eligible for inclusion in the National Register of Historic Places, either as a whole or as a series of individual properties.

# Chapter 3 - Management Direction for the Verde River Corridor

The following desired conditions (goals) and management standards apply to Coconino, Prescott, and Tonto National Forest lands within the Wild and Scenic River corridor of the Verde River. The intent of these desired conditions and management standards is to protect and enhance water quality and outstandingly remarkable values, and to protect the free-flowing character of this segment of the Verde River. The management direction found in this document amends management direction within the three Forest Plans. See Map 1, Appendix C.

This new direction amends previous direction from the Verde Wild and Scenic River portions of the MA-1 and MA-2 land allocations on the Coconino National Forest, and the MA-1C, MA-1D, and MA-4B land allocations on the Tonto National Forest. This management direction also replaces the previous Verde Scenic River portions of MA-6 and MA-7 land allocations on the Prescott National Forest with a new land allocation titled “MA-9 Verde Scenic River.” This new management direction is to be implemented on lands within the designated “Verde Wild River” and “Verde Scenic River” areas, in addition to forestwide direction found in the three Forest Plans. In the case of conflicting direction between VWSR management direction and forestwide direction, the more restrictive shall be applied.

## Desired Conditions (Goals) for Wild and Scenic Sections

### Scenery

Within the VWSR corridor the public experiences a landscape that is dominated by a free-flowing river and is predominantly natural appearing. Deviations from the natural landscape are limited and may include valued cultural landscape features and essential and minimal management elements that blend with the natural landscape. The Childs area is considered a valued cultural feature and managed to retain its scenic integrity. Scenic integrity is Very High throughout the VWSR corridor except at Beasley Flat and Childs, where the scenic integrity is High. Important and desired cultural features are identified and the public has an opportunity to view them.

### Fish

The VWSR contains high quality habitat for self-sustaining populations of razorback sucker, Colorado pikeminnow, roundtail chub, and other native fish species. The public is aware of the importance of native fish and releases listed species when caught. The public is aware of sport fishing resources and opportunities. Aquatic habitat is maintained in a condition with low substrate embeddedness, abundant aquatic food supply, and stable streambanks.

### Wildlife

Wildlife management within the VWSR focuses on a variety of riparian dependent species including migratory birds, management indicator species, game species, and

threatened, endangered, and sensitive species such as southwest willow flycatcher, yellow-billed cuckoo, and bald eagle. Habitat condition for these species is at optimum levels as determined by vertical and horizontal cover, plant density, and species composition of naturally occurring riparian vegetation. Population trends are identified and adjustments made in permitted activities when needed to protect habitat. In the Wild section, natural habitat processes occur, while habitat improvements are implemented as needed to meet wildlife habitat management objectives in the Scenic section.

The river corridor provides important consumptive and nonconsumptive wildlife use opportunities for visitors. The public is aware of these opportunities as well as species protection requirements.

### **Cultural/Historic**

Visitors to the VWSR corridor are aware of the cultural and historic values present, the role of human activity in shaping the landscape of the area, and the importance of protecting these resources. Cultural and historic sites are accessible for public visitation and interpretive facilities are available at primary river access points.

Historic and cultural properties are preserved in place wherever feasible. These sites are protected from vandalism, looting, pothunting, and other forms of unnatural deterioration by inspection and monitoring. Excessive forms of natural deterioration such as gully erosion and animal burrowing that threaten the integrity of features or cultural deposits are minimized. Adverse effects from management activities, visitor impacts, and damaging levels of natural deterioration are mitigated.

An inventory of historic and cultural sites, traditional tribal use areas, and places of traditional or religious significance provides data on all types of sites and cultural values present in the valley. The significance of the historic and cultural resources of the VWSR corridor is recognized in a nomination to the National Register of Historic Places.

### **Water Resources**

The river exists in a free-flowing condition with a range of flows that provide optimum conditions for native fish and wildlife and scenic quality. Instream flow water rights are secured to protect flow-dependent ORVs. Water quality meets or exceeds State water quality standards. Best Management Practices are implemented to prevent water quality degradation from roads, trails, livestock grazing, recreational and other special uses within the VWSR corridor. Healthy and diverse stands of riparian vegetation thrive along the banks and flood plain, reflecting the potential of the river's habitats and maintaining the channel at a higher level of stability. Recovery of channel and habitat conditions following scouring floods is not hindered by management activities within the VWSR corridor.

### **Vegetation**

Plant communities within the river corridor are dominated by native species. Woody, herbaceous, and emergent native vegetation is present consistent with its potential

species composition, density, and structural diversity. Native vegetation offers both bank protection and sediment trapping during floods. Gallery forests are a component of the flood plain surfaces. Trees, shrubs, and grasses cover upland areas adjacent to the river. Soil condition, grass density, and organic matter allow for infiltration of precipitation. Development of native plant communities is not impeded by invasive plant species.

## **Recreation**

The VWSR offers exceptional river-related recreation opportunities that emphasize non-motorized recreation. Recreation activities occur at appropriate locations and intensities such that ORVs are protected and enhanced. Recreation opportunities and activities are primarily nature based and offer outstanding opportunities for experiencing scenic beauty, and the intrinsic cultural and natural resources associated with the river. The high demand for both camping and day use of the VWSR is balanced with the maintenance of outstanding opportunities for primitive recreation and solitude in the Verde Wild River.

Facilities and management emphasize recreation opportunities for individuals, families and small groups. Both day use and camping recreation opportunities are offered, within a predominantly undeveloped river setting. The Beasley Flat and Childs areas are managed for higher levels of visitation and to provide river access while meeting the demands of intensive day-use recreation activities in the river's flood plain. Recreation facility operation, maintenance, enforcement, and management presence are consistent with desired resource conditions for ORVs. Recreation user conflicts are minimal.

Except for the developed areas of Childs and Beasley Flat, the VWSR is managed for a predominantly uncrowded setting. The character of recreation settings is identified and managed through the Recreation Opportunity Spectrum (ROS). Recreation use activities and capacities are established for commercial and non-commercial uses consistent with outstandingly remarkable values and ROS/WOS (Wilderness Opportunity Spectrum) classifications.

Boating activities are allowed, consistent with protection and enhancement of the ORVs. Boating on the VWSR offers outstanding opportunities to experience white water rafting on a wild and free-flowing river. There are undeveloped river camps available and opportunities for primitive recreation and solitude.

Opportunities for new commercial recreation uses are very limited. Protection of the natural resources, noncommercial recreation experience, and availability of recreation space for general public use are primary considerations in managing recreation special uses.

## **Access and Travel Management**

Roads and trails provide access within the VWSR consistent with protection and enhancement of scenic, cultural/historic, wildlife, and fish outstandingly remarkable values, and protection of soil and water quality. The transportation system supports interpretation, recreation, and resource management activities.

## **Interpretation and Environmental Education**

The outstandingly remarkable values of the VWSR are interpreted to provide public appreciation and understanding, and increased resource stewardship. Interpretation and education are integral to successful resource management of the corridor. Interpretive themes stress resource protection, stewardship, “Leave No Trace,” and “Tread Lightly” ethics. Interpretation and education are the primary means of accomplishing management objectives that relate to user impacts and behavior.

## **Wilderness**

Visitors have opportunities for primitive recreation, solitude, physical and mental challenge and inspiration consistent with preservation of the wilderness resource. Natural processes operate freely.

## **Management Standards Common to Verde Wild River and Verde Scenic River**

### **General**

- All management activities in and near the VWSR corridor shall be administered in such a manner as to protect and enhance the river’s free-flowing character, water quality, and outstandingly remarkable values (P.L. 90-542, Wild and Scenic Rivers Act, 1968, Section 1(b), Section 10(a) and Section 12(a), as amended).
- River characteristics necessary to support the existing classifications of Wild or Scenic shall be protected during all management activities (Wild and Scenic River Interagency Guidelines, 47 CFR 173, 9/82) (P.L. 90-542, Section 2(b)(1 and 2)).
- Any conflict between the provisions of the Wilderness Act and the Wild and Scenic Rivers Act shall be resolved in favor of the more restrictive provisions (P.L. 90-542, Section 10(b)).
- This designation shall not prevent water users receiving Central Arizona Project water allocations from diverting that water through an exchange agreement with downstream water users in accordance with Arizona water law (P.L. 98-406, Arizona Wilderness Act, 1984).
- Hydrologic, meteorologic and/or telecommunication facilities may be authorized to be installed and maintained where such facilities are essential to flood control, flood warning, and water reservoir operation purposes, subject to conditions established by the Forest Service (P.L. 98-406, Arizona Wilderness Act, 1984).
- The VWSR is withdrawn from all forms of mineral entry pursuant to the following withdrawals:
  - Salt River Project, 12/14/1904
  - Power Site, 11/16/1956

Arizona Wilderness Act, 8/28/1984

- Forest orders shall be issued as necessary to protect and enhance outstandingly remarkable values and other river-related resources (36 CFR 261).
- Limits of Acceptable Change (LAC) standards shall be established for the VWSR corridor.

### **Scenery**

- Trail maintenance work and structures should blend with the natural setting to the greatest extent possible without compromising their function or resource benefit.
- Existing and proposed developments along the river should be designed or modified to blend with the natural setting and achieve assigned Scenic Integrity Objectives.
- Activities of researchers and cooperators (such as USGS, APS, SRP, etc.) should meet the established Scenic Integrity Objectives.
- The river corridor shall be managed such that the presence of cattle waste, human waste and charcoal/fire pits remains at levels consistent with the assigned Scenic Integrity Objectives.
- When feasible during permit renewal, power lines should be rerouted or modified such that they are less visible from the VWSR.

### **Fish**

- Native fish species shall be emphasized over nonnative fish species.
- Recovery, development, and maintenance of aquatic habitat with low substrate embeddedness, abundant aquatic food supply, and stable streambanks shall not be hindered by forest management activities, permitted, or unpermitted uses. Actions such as increased monitoring, fencing, construction of barriers, site closures, or other administrative actions shall be implemented to provide for protection and enhancement of fish outstandingly remarkable values.
- Species recovery actions should be implemented within the VWSR for species with approved recovery plans or approved management plans.

### **Wildlife**

- There shall be seasonal “no stopping” zones designated along the VWSR in the vicinity of bald eagle nests. Stopping, camping, loud noises, and other activities by river users shall be prohibited where these activities may cause bald eagle nest failure or harm.
- “No stopping” zones shall be designated for other species, as needed.

- The Ladders bald eagle nest territory closure shall be maintained and enforced unless no longer required due to nest abandonment.
- Species recovery actions should be implemented within the VWSR for the southwestern willow flycatcher and other species with approved recovery plans, conservation agreements, or management plans.

### **Cultural and Historic**

- Where management actions have the potential for surface disturbance or alteration of site setting, standard procedures for inventory, evaluation, determination of effect, and consultation with SHPO, the Advisory Council on Historic Preservation, and interested tribes shall be undertaken following the direction in the Programmatic Agreement between USDA Forest Service Region 3 and the SHPOs of Arizona, New Mexico, Oklahoma, and Texas. Clearances for such actions must be approved by the appropriate individual forest supervisor, according to the procedures in FSM 2360.
- Maintenance and repair of damaged sites shall be subject to SHPO and tribal consultation under the Region 3 Programmatic Agreement.
- Documentation of historic and cultural sites and traditional tribal use areas and places of traditional or religious significance shall conform to Region 3 standards as specified in FSM 2361 and FSH 2309. Site descriptions should be at least equivalent to those presented in “An Archaeological Survey and Ethnohistoric Study of the Verde Wild and Scenic River Corridor” prepared by Chris D. North, Louise Senior, and Michael S. Foster, SWCA Environmental Consultants, Cultural Resources Report 02-415, 2003.

### **Water Resources**

- Legal, technical, and/or administrative measures (e.g. State of Arizona instream flow water rights, Federally reserved water rights, conditions on special use permits, etc.) that provide protection for instream flows shall be implemented to provide for protection and enhancement of ORVs (P.L. 90-542, Section 13(c)).
- Water quality shall be maintained or improved to meet or exceed State of Arizona water quality standards (P.L. 90-542, Section 12(c)).
- Best Management Practices shall be implemented during project implementation to prevent water quality degradation.
- Any proposed water resource development projects, either within the designated river corridor or adjacent to it, shall be evaluated under the standards provided in Section 7 of the Wild and Scenic Rivers Act (P.L. 90-542, Section 7(a)).

## **Vegetation**

- Recovery, development, and maintenance of riparian vegetation characteristics (i.e. composition, density, and height) necessary for riparian-dependant species shall not be hindered by forest management activities, permitted, or unpermitted uses, except at designated sites such as river access points, livestock watering sites, trails, parking areas, etc. Actions such as increased monitoring, fencing, construction of barriers, site closures, or other administrative actions shall be implemented where alteration of riparian vegetation occurs beyond the boundaries of designated sites.
- Invasive plant species should be managed so they do not displace or diminish native plant species.

## **Recreation**

- Dispersed camping may occur throughout the VWSR, unless designated closed.
- Facilities and capacities should be consistent with designated ROS, WOS and Scenic Integrity Objectives.
- Where campfires are allowed outside of developed sites, use of a fire pan is required. Only dead and downed wood shall be collected to be used as fuel.
- Camping and campfires may be restricted, as needed, depending on the results of resource monitoring.
- Overnight boaters shall carry portable toilets and fire pans, and remove their ashes and human waste from the river corridor.
- Additional dispersed camping regulations for boaters and nonboaters may be implemented as needed to protect riparian and scenic values.
- Frequent monitoring and official presence should be provided at the more heavily used dispersed recreation areas.
- Management activities shall be consistent with prescribed Recreation Opportunity Spectrum and Wilderness Opportunity Spectrum classes (FSM 2311.1 and Forest Plans). See Map 3, Appendix C.

## **Access and Travel Management**

- Motor vehicle use shall occur only on roads and locations designated for this use. No new roads shall be built in the VWSR. See Map 2, Appendix C.
- Motorized watercraft use shall be prohibited within the VWSR.
- Road and trail signs and barriers should be installed where needed to inform the public about travel management regulations and to discourage unauthorized motorized use. These improvements shall be consistent with ROS and Scenery Management System (SMS) guidelines.

## **Interpretation and Environmental Education**

- All interpretation and education within the VWSR corridor should be guided by a comprehensive interpretive strategy that emphasizes stewardship of and education about the river's outstandingly remarkable values.
- Education and interpretive information should be readily available at visitor contact points and high use areas. The Payson and Verde Ranger Stations and communities of Payson, Strawberry, and Camp Verde should be the primary venues for offsite visitor information about the VWSR.
- Interpretive mediums that do not require permanent facilities within the VWSR should be emphasized.
- The public should be informed about requirements for proper disposal of trash and human waste, animal control, and other "leave no trace" techniques.
- Volunteers and local communities may play an important role in implementing interpretation and education goals.
- Public awareness of the impacts of nonnative fish, crayfish, and plants on the river's natural ecosystem should be increased through interpretation and education.
- The river runner registration system shall serve as a primary venue to educate river runners about bald eagle closures, safety, and minimum impact river running techniques, such as low impact camping.

## **Livestock Grazing**

- Livestock grazing shall be excluded from Verde River riparian habitat, unless a site-specific NEPA analysis approved by the forest supervisor authorizes future grazing use. The river corridor should be inspected regularly when livestock are in adjacent pastures to ensure livestock are not in riparian areas.
- Livestock water sources shall be developed outside the VWSR corridor except at three locations on the Brown Springs Allotment. These water access points shall be located at selected sites where riparian vegetation will not be degraded and where livestock can be prevented from accessing other riparian areas.
- Livestock may be herded across the river between Forest Roads (FR) 57 and 502.

## **Other Special Uses**

- Permitted special uses shall meet CRMP desired conditions and be consistent with the protection and enhancement of the river's ORVs.

## **Management Standards for Verde Wild River**

### **Scenery**

- Scenic Integrity Objective for the Verde Wild River shall be Very High.

### **Cultural and Historic**

- Methods for repairing damaged sites shall take into consideration any technological restrictions applicable within the Wild portions of the river as specified within wilderness management direction for the Mazatzal Wilderness.

### **Recreation**

- The Wild River, below Childs, shall be classified as predominantly WOS II. See Map 3, Appendix C.
- No more than two priority commercial river use permits shall be allowed on the Verde Wild River, with 200 user days each. In addition, a temporary pool may be available with 100 total user days and no more than 25 user days per permit.
- Commercial trip group size shall be limited to 12 persons in the Wild River and a limit of one trip launch per day.
- Noncommercial river trip group size shall be limited to 12 persons in the Wild River.
- Total river runner capacity for the Wild River shall be 60 persons launching per day. This capacity includes all private, commercial, educational, and research trips.

### **Access and Travel Management**

- The following trails are part of the National Forest Trail Systems within the Verde Wild River (see Map 2, Appendix C):
  - o Verde River Trail (#11), Tonto National Forest
  - o High Water Trail (#20), Tonto National Forest

### **Interpretation and Environmental Education**

- The direction found in the Mazatzal Wilderness Implementation Plan should be followed in regards to interpretive efforts in wilderness areas that are part of the VWSR.

## **Wilderness Management**

- Management activities within the Wild River should be accomplished using the “minimum tool” approach (Minimum Requirement Decision Guide, Arthur Carhart National Wilderness Training Center). A programmatic “minimum tool” analysis is desirable and most efficient; however, the “minimum tool” analysis should occur for site-specific actions as well. (Wilderness Act of 1964, Section 4(c))
- Differences between management direction found in the Mazatzal Wilderness Implementation Plan and this CRMP shall be resolved in favor of the more restrictive.

## **Other Special Uses**

- Motion picture, video, and television filming, and commercial still photography shall be prohibited within the Wild River unless the filming activity is wilderness dependant and found to be necessary to meet the minimum requirements for the administration of the areas of the purpose of the Wilderness Act.
- Motion picture, video, and television filming, and commercial still photography within the Wild River shall be prohibited except for documentaries that are consistent with wilderness management objectives.
- Hydrologic, meteorologic and/or telecommunication facilities may be authorized to be installed and maintained where such facilities are essential to flood control, flood warning, and water reservoir operation purposes, subject to conditions established by the Forest Service (P.L. 98-406, Arizona Wilderness Act, 1984).

## **Management Standards for Verde Scenic River**

### **Scenery**

- Scenic Integrity Objectives for the Verde Scenic River shall be High for the Beasley Flats and Childs recreation areas and Very High elsewhere.
- New parking areas should be located out of sight of important viewing locations, such as the river.
- When important to maintaining assigned Scenic Integrity Objectives, scenic easements may be acquired on private land from willing sellers.

### **Recreation**

- Beasley Flat Day Use Recreation Area, Verde Hot Springs area, and the new boat launch area at the terminus of FR 502 shall be closed to camping.
- Improvements at the Verde Hot Springs shall be limited to those activities necessary to meet interpretive, safety, or resource protection goals.

- Developed recreation facilities shall be provided at Beasley Flat and Childs.
- A boat launch site shall be provided at the terminus of FR 502.
- No new developed campgrounds or picnic grounds shall be constructed within the corridor except for relocation of Childs Campground facilities and the development of a day use area in the location of the original campground.
- The Beasley Flat and Childs areas shall be classified as Roaded Natural ROS (see Map 3, Appendix C).
- The area between Beasley Flat and Childs shall be classified as Semi-primitive Motorized and Semi-primitive Non-motorized ROS, and WOS I (within the Cedar Bench Wilderness). See Map 3, Appendix C.
- Management presence and visitor interpretation and education should be provided commensurate with the expected higher use levels at the Childs and Beasley Flat areas.
- No more than two priority commercial river use permits shall be allowed in the Verde Scenic River, with 400 user days each. In addition, a temporary pool may be available on the Scenic River section with 200 total user days and no more than 50 user days per permit.
- Commercial river trip group size shall be limited to 25 persons in the Verde Scenic River with a maximum of 2 trip launches per day.
- Noncommercial river trip group size shall be limited to 25 people in the Verde Scenic River. Permits may be issued for noncommercial groups over 25 people on a case-by-case basis.
- Total river runner capacity for the Verde Scenic River shall be 250 persons launching per day. This capacity includes all private, commercial, educational, and research trips.

### **Access and Travel Management**

- The following roads comprise the Forest Road Systems within the Verde Scenic River (see Map 2, Appendix C). All other roads shall be decommissioned.
  - o FR 57 – Maintained for public high-clearance vehicle use, Tonto National Forest.
  - o FR 502 – Maintained for public passenger car use to within 100 feet of the river's edge to facilitate boaters launch and take-out, Coconino National Forest.
  - o FR 16 – Maintained for public high-clearance vehicle use to within one-quarter mile of the river's edge, to facilitate public access to the river, Tonto National Forest.
  - o FR 334 – Maintained for public passenger car use to Beasley Flat Day Use Recreation Area, Prescott National Forest.

- o FR 9206Y – Maintained for administrative access only, Coconino National Forest.
- o FR 9244 – Maintained for public high-clearance vehicle use to within one-tenth of a mile of the river's edge to facilitate access to the river at Verde Falls, Coconino National Forest.
- o FR 500 – Maintained for public high-clearance vehicle use to a dead end near the river, Coconino National Forest.
- o FR 9709R – Maintained for public high-clearance vehicle use to a dead end with access to the Ladders Trail, Prescott National Forest.
- The following trails are part of the Forest Trail System within the Verde Scenic River (see Map 2, Appendix C):
  - o Cavates Trail (new trail converted from FR 9242), Coconino National Forest
  - o Verde Falls Trail, Coconino National Forest
  - o Ladders Trail (#16), Prescott National Forest
  - o New Trail (converted from FR 16), Tonto National Forest
  - o Verde Hot Springs Trail (#48), Coconino National Forest
  - o Towel Creek Trail (#16), Coconino National Forest
  - o Lower Cedar Bench Trail (#540), Prescott National Forest
- Small trailheads/parking areas may be constructed, as needed, to support the use of National Forest System trails within the VWSR.
- Roads and trails should be designed and maintained consistent with identified ROS and SMS guidelines and with best management practices.
- Roads that are decommissioned and converted to trails should be narrowed and restored to meet a semi-primitive trail character, consistent with soil and watershed protection.

### **Wilderness Management**

- Differences between management direction for Cedar Bench Wilderness and this CRMP shall be resolved in favor of the more restrictive.

### **Interpretation and Environmental Education**

- The developed areas of Beasley Flat and Childs should serve as primary onsite interpretive venues for cultural and natural history. The Childs area interpretation shall be consistent with direction from the FERC decommissioning decisions.
- Signs and permanent structures should be used primarily in existing developed sites or where information is important for visitor safety or resource protection.

### **Livestock Grazing**

- Range improvements may be authorized in the designated river corridor to protect the river's values.
- Fences should be located and constructed with materials that minimize their visibility from the river.

### **Other Special Uses**

- Motion picture, video, and television filming, and commercial still photography shall be prohibited within the Cedar Bench Wilderness of the Scenic River, unless the filming activity is wilderness dependant and found to be necessary to meet the minimum requirements for administration of the areas of the purpose of the Wilderness Act.
- Motion picture, video, and television filming, and commercial still photography may be permitted in the Scenic River section outside of the Cedar Bench Wilderness, if no other reasonable location can be found.
- The Skeleton Ridge Ranch Headquarters near Childs (under special use permit) shall be maintained so long as it is essential to the ranching operations under permit.

### **Utilities and Communication Sites**

- Regular maintenance activities, such as access and line clearing, shall be performed in manners consistent with protection and enhancement of the river's ORVs.
- Power lines in existence prior to WSR designation may be considered nonconforming inconsistencies in relation to scenery goals. As opportunities arise, they should be brought into compliance with assigned Scenic Integrity Objectives.
- Construction of new electronic sites, utility lines, or transmission lines shall not occur within the VWSR.
- Reconstruction or expansion of existing transmission lines may be permitted only if they are consistent with standards for protection and enhancement of ORVS.



# Chapter 4 - Implementation Schedule

This chapter outlines management actions that could be implemented within the VWSR, by resource area. For each of the actions, the forest responsible for the action, and the estimated initiation date is listed. This list of possible actions may be updated without further NEPA documentation.

**Primary Responsibility:** Identifies the forest or district responsible for initiating the particular action. It does not necessarily mean that the unit identified will carry out all aspects of the action, only that it will insure that necessary steps are taken to coordinate and facilitate the completion of the action.

**Project Initiation:** Estimates when the action will be initiated or the time period over which it will be conducted.

**Budget Note:** *Although the plan establishes management standards, monitoring elements and potential projects, accomplishment and implementation will depend upon final budget allocations. If budget allocations are insufficient, activities proposed in the plan may need to be rescheduled. Insufficient budgets over a period of several years could cause an inability to implement proposed activities, to apply management standards, and to achieve some of the desired conditions.*

## General Actions

### VWSR Management

- Designate a steering committee with members from the three national forests to implement the CRMP. Functions of the steering committee would include oversight of project priorities and annual program of work, and delegation of primary responsibilities. The steering committee will consist of one forest supervisor, one forest recreation staff, and one district ranger. The forest supervisors may rotate the committee members by position, as needed.

Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing

- Write and implement forest orders to codify public use restrictions for the VWSR.

Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing

## Scenery Management Actions

### Scenic Restoration

- When opportunities arise, retrofit, screen, redesign, or remove existing developments (such as gauging stations, fence lines, power lines, etc.) that are inconsistent with the established Scenic Integrity Objectives of the VWSR.

Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing

## **Fish Management Actions**

### **Species Management**

- Fish biologists to participate in design of livestock watering access points to avoid affecting habitat for native fish species.  
Primary Responsibility: Verde District Ranger  
Project Initiation: 2004
- Coordinate with AGFD to continue to conduct surveys, management, and recovery actions for native fish species.  
Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing

### **Fish Interpretation and Environmental Education**

- Develop brochures, web pages, ROGs, and other media that provide information on listed fish species, consistent with a comprehensive VWSR interpretive strategy.  
Primary Responsibility: Prescott Forest Supervisor  
Project Initiation: 2005
- Coordinate with AGFD to install signs at Verde River boat launch points, develop brochures and other media to identify listed fish species and provide fishing regulations for release when caught, consistent with a comprehensive VWSR interpretive strategy.  
Primary Responsibility: Verde and Red Rock District Rangers  
Project Initiation: 2004
- Post sportfishing resources, opportunities, and regulations on forests' Web pages and VWSR Recreation Opportunity Guide (ROG).  
Primary Responsibility: Forest Supervisors  
Project Initiation: 2005

## **Wildlife Management Actions**

### **Bald Eagle Management**

- Determine seasonal “No Stopping” zones for each bald eagle nest based on site distances and other factors, and delineate these zones on forest orders, maps, ROG sheets, brochures, etc. to inform recreationists and other users.  
Primary Responsibility: Forest Supervisors  
Project Initiation: 2005
- As funding allows, continue financial and logistical support for the Bald Eagle Nestwatch Program, or as required in the Arizona Bald Eagle Conservation Agreement.

Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing

- Continue forest or Agency participation on the Southwestern Bald Eagle Management Committee.  
Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing

### **Other Species Management**

- Coordinate with AGFD to continue to conduct surveys, management, and recovery actions for wildlife species.  
Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing
- Wildlife biologists shall participate in design of livestock watering access points to avoid affecting habitat for riparian-dependant wildlife species.  
Primary Responsibility: Verde District Ranger  
Project Initiation: 2004

### **Wildlife Habitat Improvements**

- Conduct a species habitat assessment if it appears that habitat improvements might be needed within the Scenic River corridor.  
Primary Responsibility: District Rangers  
Project Initiation: As needed
- Coordinate requests from the AGFD or other agencies for habitat modification or improvement projects within the Scenic River corridor.  
Primary Responsibility: District Rangers  
Project Initiation: Ongoing

### **Wildlife Interpretation and Environmental Education**

- Identify locations along the river corridor where wildlife viewing opportunities exist.  
Primary Responsibility: District Rangers  
Project Initiation: 2006
- Develop brochures, Web pages, and other media that display the wildlife resources of the VWSR and wildlife viewing opportunities, consistent with the comprehensive VWSR interpretive strategy.  
Primary Responsibility: Forest Supervisors  
Project Initiation: 2006
- Install signs at Verde River boat launch points, develop brochures and other media that explain the need for active protection measures being implemented for wildlife, especially bald eagle, consistent with a comprehensive VWSR interpretive strategy.  
Primary Responsibility: District Rangers  
Project Initiation: 2006

## **Cultural and Historic Management Actions**

### **Cultural and Historic Interpretation and Environmental Education**

- Develop interpretive displays at the Beasley Flats Cavates and Childs/Verde Hot Springs archaeological sites, as appropriate and consistent with a comprehensive VWSR interpretive strategy.  
Primary Responsibility: Verde and Red Rock District Rangers  
Project Initiation: 2006
- Incorporate cultural and historic site etiquette and protection information into information sources available for river users, consistent with a comprehensive VWSR interpretive strategy.  
Primary Responsibility: District Rangers  
Project Initiation: 2006

### **National Register of Historic Places Nomination**

- Prepare nominations to the National Register of Historic Places for the cultural and historic sites within the VWSR corridor. Consider incorporating these properties into a nomination recognizing the cultural heritage of a larger portion of the river.  
Primary Responsibility: Forest Supervisors  
Project Initiation: 2005

## **Water Management Actions**

### **Water Quantity**

- Initiate comprehensive, interdisciplinary instream flow assessment.  
Primary Responsibility: Tonto National Forest  
Project Initiation: 2004
- File Federal Reserved Right Claim for protection of instream flows.  
Primary Responsibility: Tonto National Forest  
Project Initiation: 2006

### **Water Quality**

- Respond to water quality violations based on monitoring conducted by ADEQ, USGS, and others above, below, and within the VWSR corridor. Seek enforcement of water quality laws through EPA and ADEQ.  
Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing
- Implement Best Management Practices to reduce nonpoint sources of pollution originating on National Forest System lands.

Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing

## **Vegetation Management Actions**

### **Invasive Species Management**

- Inventory and map invasive vegetation species and update the inventory periodically.  
Primary Responsibility: District Rangers  
Project Initiation: 2005
- Develop an integrated pest management plan that identifies direction and priorities for inventory, management and monitoring of invasive plant species.  
Primary Responsibility: Forest Supervisors  
Project Initiation: 2006

## **Recreation Management Actions**

### **Recreation Facilities**

- Add proposed Childs recreation site improvements to the Southwestern Region Capital Investment Schedule.  
Primary Responsibility: Coconino Forest Supervisor  
Project Initiation: 2005
- Develop and implement a master plan for the Childs area to include conversion of the current campground to a day use area, extension of the Verde Hot Springs Trail, new developed camping with host facilities outside the flood plain, a boat launch at the terminus of FR 502, day use parking, and interpretation.  
Primary Responsibility: Red Rock District Ranger  
Project Initiation: 2007 (or consistent with FERC Childs decommissioning plans)
- Develop wheelchair access to the river, as feasible, in the Childs area.  
Primary Responsibility: Red Rock District Ranger  
Project Initiation: 2007

### **Regulations and Enforcement**

- Continue to implement a river patrol program, coordinated between the three forests. Include a volunteer component that accomplishes river program goals and fosters cooperation and communication between management agencies and river users.  
Primary Responsibility: District Rangers  
Project Initiation: Ongoing
- Implement a river runner registration system in order to measure river use including season, numbers, and demographics, and to ensure that river runners are provided with river safety and minimum impact information.

Primary Responsibility: District Rangers  
Project Initiation: 2005

## **Access and Travel Management Actions**

### **Motorized Vehicle Restrictions**

- Establish forest orders to address motor vehicle cross-country travel restrictions and restrictions on motorized watercraft on the river.

Primary Responsibility: Forest Supervisors  
Project Initiation: 2005

### **Roads and Trails**

- Decommission the last one-tenth of a mile of FR 9244. Construct a small trailhead where the road ends. Construct the short “Verde Falls Trail” to access Verde Falls from the end of FR 9244.

Primary Responsibility: Red Rock District Ranger  
Schedule: 2005

- Decommission FR 9245.

Primary Responsibility: Red Rock District Ranger  
Project Initiation: 2005

- Convert Forest Road 9242 to a nonmotorized trail to the Cavates area opposite Beasley Flat. Gate the road at approximately one-quarter mile outside of the VWSR boundary. Construct a small trailhead where the road ends and becomes a nonmotorized trail. Rehabilitate user-created road damage in the area.

Primary Responsibility: Red Rock District Ranger  
Project Initiation: 2005

- Convert Forest Road 9709R to a nonmotorized trail and gate it at a location approximately one-half mile west of the Verde River and outside of the VWSR corridor. Add this new trail segment to Forest Trail 16 (Ladders Trail). Construct a small trailhead, as needed, where the road ends and becomes a nonmotorized trail.

Primary Responsibility: Verde Ranger District  
Project Initiation: 2005

- Convert Forest Road 9206Y (into Childs Campground) to a public nonmotorized trail and an administrative access road beginning at the junction with FR 502. Add this new trail segment to the Verde Hot Springs Trail (#48) and design it to access day use areas along the river’s east bank, with a terminus at Verde Hot Springs.

Primary Responsibility: Red Rock District Ranger  
Project Initiation: 2005

- Convert Forest Road 16 to a nonmotorized trail at a location approximately one-eighth mile from the river and gate it to prevent motor vehicle access into the

riverbed and Mazatzal Wilderness. Construct a small parking area where the road ends and becomes a nonmotorized trail.

Primary Responsibility: Cave Creek District Ranger  
Project Initiation: 2005

- Upgrade Forest Road 502 to public high-clearance vehicle use design standards.  
Primary Responsibility: Red Rock District Ranger  
Project Initiation: 2007 (or consistent with FERC Childs decommissioning plans)
- Amend Forest Transportation Atlases on each forest as actions are implemented.  
Primary Responsibility: Forest Supervisors  
Project Initiation: 2005

### **Trailhead/Parking Area Development**

- Construct new trailheads/parking areas, each to accommodate parking for 2 to 3 passenger vehicles, vehicle turnaround, parking barriers, and signs, as appropriate. Develop these trailheads on:
    - FR C574 to serve Towel Creek, Lower Cedar Bench, and Cold Water Trails
    - FR 9709R to serve Ladders Trail
    - FR 9242 to serve Cavates Trail
    - FR 9244 to serve Verde Falls Trail at that location
    - FR 502 to serve the extension of the Verde Hot Springs Trail (20 to 30 vehicle capacity)
    - FR 16 to serve a new trail at that location
    - FR 57 to provide access to the river
- Primary Responsibility: District Rangers  
Project Initiation: 2005

## **Interpretation and Environmental Education Actions**

### **Interpretive Planning, Venues and Media**

- Develop a comprehensive interpretive strategy for the VWSR corridor.  
Primary Responsibility: Prescott Forest Supervisor  
Project Initiation: 2005
- Utilize signs, press releases, and other venues to inform the public of road closures and other new standards associated with this CRMP. Focus this effort within the local communities and Maricopa County.  
Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing through 2005
- Lead efforts to develop a Verde River Ranger program in partnership with local communities that include education and interpretation opportunities.  
Primary Responsibility: Prescott Forest Supervisor  
Project Initiation: 2006

- Implement a river user’s education program consistent with the expected level of visitation and resource protection needs.  
Primary Responsibility: Prescott Forest Supervisor  
Project Initiation: Ongoing
- Update the Verde River ROG as needed to provide current information and accomplish resource protection goals.  
Primary Responsibility: Forest Recreation Staff Steering Committee Member  
Project Initiation: Annually
- Communicate river runner regulations through a variety of venues including signs at launch points, the FS ROG, and Web sites.  
Primary Responsibility: Forest Supervisors  
Project Initiation: Ongoing
- Develop a Host program for the Beasley Flat Day Use Area and Childs Campground to enhance resource protection, encourage proper camping etiquette, and provide information to national forest visitors.  
Primary Responsibility: Red Rock District Ranger  
Project Initiation: Ongoing

## **Wilderness Management Actions**

### **Implementation Plans**

- Review and update the Mazatzal Wilderness Implementation Plan to assure conformity with the requirements of the CRMP.  
Primary Responsibility: Tonto Forest Supervisor  
Project Initiation: 2005

## **Livestock Grazing Management Actions**

### **Grazing**

- Exclude grazing from the riparian areas along the Verde River.  
Primary Responsibility: Cave Creek and Verde District Rangers  
Project Initiation: 2005

### **Range Improvements**

- Identify locations and install fences to facilitate livestock grazing exclusion from the riparian areas along the Verde River.  
Primary Responsibility: Cave Creek District Ranger and Prescott Forest Supervisor  
Project Initiation: 2005

- Identify and develop alternative water sources for livestock.  
Primary Responsibility: Verde, Payson and Cave Creek District Rangers  
Project Initiation: 2004



***“Wild rivers are earth’s renegades, defying gravity, dancing to their own tunes, resisting the authority of humans, always chipping away, and eventually always winning.”***

Richard Bangs, “River Gods”



# Chapter 5 - Monitoring and Evaluation

## Monitoring and Evaluation Program

The monitoring and evaluation program is the management control system governing the implementation of the CRMP. The program is designed to be the foundation for the long-term protection and enhancement of the river-related values in the corridor. The specific objectives of this program are to determine whether:

- o Planned desired conditions are achieved;
- o Management standards are being followed;
- o Management standards are effective in protecting and enhancing the ORVs; and
- o Intensity of monitoring is commensurate with the risks, costs, and values involved in meeting desired conditions.

The monitoring activities described in Table 2 are designed to be specific to the VWSR corridor and are to be conducted in addition to other monitoring activities prescribed in Forest Plans. Implementation of the following monitoring elements will be based on the availability of funding. If adequate funding is not available, some monitoring activities may not take place. All three national forests involved with management of the VWSR will make every effort to identify opportunities that would reduce the actual cost to the government. The following table outlines the key indicators, resource conditions, sampling procedures, and typical resultant management actions that will be conducted on the VWSR by river-related value.

**Table 2. Monitoring Program – Verde Wild and Scenic River**

River-Related Value	Key Indicator	Resource Condition	Sampling Procedure and Frequency	Management Actions to be Triggered if Conditions are Not Met
Scenic Integrity	Human and livestock waste, charcoal and fire pits, trash, and vegetation damage. Built environment image.	Meets High SIO at Beasley Flat and Childs developed sites. Meets Very High SIO within remainder of VWSR corridor.	Use established river camp condition survey instruments. Periodic inventory of motor vehicle track locations. Photo documentation of developments in VWSR corridor.	Additional education and awareness campaign, additional enforcement efforts, and better control of livestock in the riparian area. Modification of built environment to be consistent with SIO.
High Quality Fish and Wildlife Habitat	Native fish composition	Self-sustaining populations of native fish species.	Coordinate with AGFD to assist in annual fish inventories.	Coordinate with AGFD to identify conditions that may contribute to degradation of native fish species composition and assist in mitigation.
	Streambank/Vegetation Condition	<p>Streambanks are covered by vegetation at potential/capability levels.</p> <p>Streambanks are stable with no alteration due to livestock grazing, except at restricted, designated livestock water access points.</p> <p>Streambanks are stable with only light alteration due to recreation use at limited locations.</p> 	<p>Inspections for general presence of unauthorized livestock at key areas in conjunction with general habitat and species surveys.</p> <p>Inspect the river for unauthorized livestock monthly when cattle are in a pasture adjacent to the river.</p> <p>Inspect weekly if there is a water lane in the pasture or for two seasons after an exclusion fence is built to ensure the fence is effectively keeping cattle out of the VWSR riparian zone.</p> <p>Inspections for recreation induced streambank erosion and loss of streamside vegetation at key areas as necessary.</p> <p>A minimum of two inspections per year (spring/early summer and fall) of the entire VWSR, including use of permanent photo points and other permanent locations. Incorporate information on vegetation and streambank condition obtained during species surveys. Prepare an annual report incorporating comparative photos with narrative assessments of conditions.</p>	<p>Identify sources of unauthorized livestock use in riparian areas, have livestock removed promptly, and make necessary repairs to prevent future unauthorized use.</p> <p>Relocate fences or close pastures to grazing where unauthorized use or noncompliance with grazing instructions impacts riparian vegetation in the corridor.</p> <p>Develop other livestock watering sources outside the VWSR corridor where unauthorized use occurs in more than one grazing season.</p> <p>Identify sources of recreation impacts to streambanks and mitigate them. Encourage recreation users to practice “Leave No Trace” and “Tread Lightly” ethics.</p> <p>Establish temporary, seasonal, or permanent closures to allow streambanks to stabilize after repeated recreational impacts.</p>

River-Related Value	Key Indicator	Resource Condition	Sampling Procedure and Frequency	Management Actions to be Triggered if Conditions are Not Met
	Upland vegetation condition	Upland vegetation species composition and plant density are at levels prescribed in allotment management plans (AMPs).	Sampling procedure and frequency are conducted as prescribed in AMPs.	Adjust management actions as specified in AMPs if prescribed vegetation species and plant density conditions are not met.
TES Species Viability	Bald eagle nest success	Bald eagle productivity within the VWSR continues at or exceeds current levels. Any decline in productivity is related to factors not associated with management of the VWSR.	Continue annual biological evaluation reproduction surveys in cooperation with the AGFD. Continue annual support for the Nestwatch Program to monitor eagle nests. Annually review biological evaluation nest productivity within the VWSR with the AGFD and identify potential protective or	Designate “No Stopping” zones with signs if recreation and other uses are affecting bald eagle reproduction. Implement closure orders where violations of “No Stopping” zones are affecting bald eagle reproduction.

River-Related Value	Key Indicator	Resource Condition	Sampling Procedure and Frequency	Management Actions to be Triggered if Conditions are Not Met
Archaeological and Historic Site Integrity	Artifact loss or displacement due to theft, visitation impacts or natural processes	Surface artifact assemblage remains substantially intact with minimal disruption by removal or destruction from baseline description.	<p>management measures.</p> <p>Inspections of high probability and frequently visited sites by river rangers, minimum of once per year; Highest priority monitoring sites<sup>2</sup>:</p> <p>Prescott NF –  AR-03-09-05-201 Brown Spr Ruin  AR-03-09-05-207 Beasley Flat Site  Coconino NF-  AR-03-04-01-199 Cliff Dwelling  AR-03-04-01-266 Beasley Cavates  AR-03-04-01-498  AR-03-04-01-521 Fossil Cr Ruin  AR-03-04-01-1204  Tonto NF-  AR-03-12-01-52 Black Ridge Ruin  AR-03-12-01-58 Red Creek Ruin  AR-03-12-01-296 Squaw Butte Ruin  AR-03-12-01-590 Warm Spr Ruin  AR-03-12-01-1186  AR-03-12-04-45 East Verde Ruin  Additional sites may be added to this priority list at any time, as conditions warrant.  Periodic inspections by heritage specialists.  Additional inspections by volunteer site stewards as available.</p>	Collect and curate appropriate sample of remaining artifacts and all diagnostic artifacts; Post site with protection message
	Contextual Damage	Standing or coursed masonry walls remain intact without damage from visitor use. Features and rock art remain free from vandalism. Sites remain free of evidence of recreational activities such as fire rings,	Inspections of high probability and frequently visited sites by river rangers, minimum of once per year. Periodic inspections by heritage specialists. Additional inspections by volunteer	Stabilize and repair architectural and/or pothunting/vandalism damage. Remove trash, fire rings and obliterate trails. Post site with protection message. Establish temporary, seasonal, or permanent closures to prevent visitation of sensitive sites

<sup>2</sup> Baseline conditions for cultural and historic sites will be determined by descriptions found in “An Archaeological Survey and Ethnohistoric Study of the Verde Wild and Scenic River Corridor” by Chris D. North, Louise Senior, and Michael S. Foster, SWCA Consultants, Cultural Resources Report 02-415, 2003, or if not included in that study, the most recent applicable documentation.

River-Related Value	Key Indicator	Resource Condition	Sampling Procedure and Frequency	Management Actions to be Triggered if Conditions are Not Met
	Natural Damage	trash, and unauthorized trails. Features and cultural deposits remain substantially unaffected by natural erosion or animal impacts compared to baseline descriptions.	site stewards as available. Inspections of high probability and frequently visited sites by river rangers, minimum of once per year. Periodic inspections by heritage specialists. Additional inspections by volunteer site stewards as available.	after repeated contextual damage impacts. Stabilize and repair erosional or animal caused damage. Redirect runoff away from erosionally sensitive features or cultural deposits. Identify and implement measures to redirect animal attraction to the site.
High Water Quality	Select water quality parameters including fecal coliform, E. Coli, pH, turbidity <sup>3</sup> , dissolved oxygen, total phosphorous, total nitrogen, hardness, and selected anions, cations, and metals.	State of Arizona numeric water quality standards that are intended to protect the designated uses of warm water aquatic community, full body contact, fish consumption, agricultural livestock watering, and agricultural irrigation. 	Quarterly monitoring by ADEQ at their long term monitoring site at Beasley Flat and quarterly monitoring by the USGS at their gage below Tangle Creek.	Identify possible sources of pollutants. If non-point sources derived from NFS lands, implement corrective actions to reduce pollutants to levels consistent with water quality standards. If pollutant source is on other than NFS lands, work with ADEQ to implement corrective actions or develop corrective plans.
Streamflows Needed to Protect ORVs	Mean daily streamflow	Streamflows are protected from diversions that would reduce flows below those necessary to protect the flow-dependent ORVs, other than those diversions authorized in the Act (P.L. 98-406).	Continuous monitoring of streamflows at the USGS gauge near Camp Verde (gauge no. 09506000), at the USGS gauge below Tangle Creek (gauge no. 09508500), and at the low flow gauge permitted to the Verde Watershed Association near Verde Falls.	Protest new water right applications that would reduce flows below those needed to protect ORVs. Protest actions to sever and transfer water rights that would adversely affect streamflows needed to protect ORVs. Work with ADWR and other interested parties to prevent or reduce impacts from ground water pumping that would adversely affect streamflows necessary to protect ORVs.
Character of Recreation Opportunities – Scenic River	ROS (RN, SPNM); visitors' adherence to regulations on waste removal and	Landscape is natural appearing; presence of human feces, trash, and charcoal are at levels consistent with LAC guidelines; contact levels between recreation parties	Capacity studies including vehicle and visitor counts at launch points, on the river and on roads. Use of registration system at river launch	Increase visitor information through multiple venues; implement river launch site check-in/registration procedures; increase river patrols and enforcement; reduce or increase river use

<sup>3</sup> The turbidity standard may change to a suspended sediment concentration standard that is only applied during baseflow conditions if a recent revision to the surface water standards proposed by ADEQ is approved by the EPA.

River-Related Value	Key Indicator	Resource Condition	Sampling Procedure and Frequency	Management Actions to be Triggered if Conditions are Not Met
	<p>vehicle restrictions Impacts (trash, compacted soils, and damaged vegetation) associated with high use recreation areas of Childs and Beasley Flat do not expand into adjacent areas. Social encounter levels.</p>	<p>meet ROS parameters. High use areas and their adjacent environment are properly managed to protect natural and cultural resource values, while allowing for recreation use.</p> 	<p>points. Condition surveys are conducted each year to sample dispersed recreation use areas. LAC indicators and guidelines are established and monitored. Social science studies are initiated to determine the social contact level characteristics for the Scenic River and to establish LAC guidelines for the Scenic River. Visual observations and photo points would be established within and adjacent to high use areas. Monitoring would occur as needed. Periodic inventory of motor vehicle track locations.</p>	<p>capacities. Restrict vehicular river crossing.</p>
<p>Character of Recreation Opportunities – Wild River</p>	<p>WOS I; visitors' adherence to regulations on waste removal and vehicle restrictions. Social encounter levels.</p>	<p>Landscape is natural appearing; presence of human feces, trash, and charcoal are at levels consistent with LAC guidelines; contact levels between recreation parties meet WOS I parameters.</p>	<p>Capacity studies including vehicle and visitor counts at launch points and on the river. Use of registration system at river launch points. Condition surveys are conducted each year to sample dispersed recreation use areas based on established LAC indicators and guidelines. Social science studies are initiated to determine the social contact level characteristics for the Wild River and to amend, as needed, the LAC guidelines for the Wild River. Periodic inventory of motor vehicle track locations.</p>	<p>Increase visitor information through multiple venues; implement river launch site check-in/registration procedures; increase river patrols and enforcement; reduce or increase river use capacities.</p>
<p>Nonmotorized Character Consistent with Established ROS and WOS</p>	<p>Vehicle tracks and other evidence of illegal motorized entry in cross-country areas.</p>	<p>All nonmotorized areas maintain their integrity.</p>	<p>Ranger patrols on and off the river. Desired frequency is at least every other year.</p>	<p>Increase visitor information through multiple venues. Additional vehicle barriers or road closures are instituted.</p>

# Glossary

## **A Activity**

Actions, measures, or treatments that are undertaken that directly or indirectly produce, enhance, or maintain forest outputs and rangeland outputs, or achieve administrative and environmental quality objectives. Forest Service activity definitions, codes, and units of measure are contained in the Management Information Handbook (FSM 1309.11)

## **B Best Management Practices (BMP)**

A practice or combination of practices that are the most effective and practical (including technological, economic and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

## **C Code of Federal Regulations (CFR)**

The listing of various regulations pertaining to management and administration of Federal lands.

### **Corridor**

The lands within the designated Verde Wild and Scenic River areas.

### **Critical Habitat**

For threatened or endangered species, the specific areas within the geographical area occupied by the species (at the time it is listed, in accordance with provisions of Section 4 of the Endangered Species Act) on which are found those physical or biological features essential to the conservation of the species. This habitat may require special management considerations or protection.

### **Cultural/Historic Resources**

Includes the remains or records of districts, sites, areas, structures, buildings, networks, neighborhoods, memorials, objects and events from the past that have scientific, historic or cultural value. They may be historic, prehistoric, archaeological, or architectural in nature. Cultural and historic resources are an irreplaceable and nonrenewable aspect of our national heritage.

## **D Designated Wild and Scenic River**

A river that is part of the National Wild and Scenic River system (P.L. 90-542 Wild and Scenic Rivers Act).

**Desired Condition**

A portrayal of the land or resource conditions which are expected to result if goals and objectives are fully achieved.

**Developed Recreation Site**

Distinctly defined or designated area where facilities are provided for concentrated public use; e.g., campgrounds, picnic areas, and boating sites.

**Dispersed Recreation**

Outdoor recreation that takes place outside developed recreation sites or in a wilderness area.

**Diversity**

The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan. (36 CFR 219.3)

**E**

**Environment**

The complex of climatic, soil and biotic factors that act upon an organism or ecological community and ultimately determine its form and survival.

**Environmental Assessment**

A concise public document for which a Federal agency is responsible that briefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

**Erosion**

The wearing away or detachment of the land surface by running water, wind, ice, or other geological agents.

**F**

**Flood Plain**

The lowland and relatively flat areas adjoining inland waters, including at a minimum, that area subject to a 1 percent or greater chance of flooding in any given year. (Executive Order No. 11988, 5/24/77).

**Free-Flowing**

As applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion,

straightening, rip-rapping, or other modification of the waterway. (P.L. 90-542, as amended, Section 16(b))

**G****Game**

Wildlife that are hunted for sport and regulated by State Game regulations.

**Goal**

A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principle basis from which objectives are developed. (36 CFR 219.3)

**H****Habitat**

The place where a plant or animal naturally or normally lives and grows.

**High Quality Habitat**

Habitat that completely satisfies a species' existence requirements.

**Hydrology**

The scientific study of the properties, distribution, and effects of water in the atmosphere, on the earth's surface, and in soil and rocks.

**I****Instream Flows**

Water rights that are acquired to ensure streamflows are maintained within the stream channel.

**Integrated Pest Management**

A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed. The information considered in selecting appropriate strategies includes the impact of the unregulated pest population on various resources values, alternative regulatory tactics and strategies, and benefit/cost estimates for these alternative strategies. A basic principle in the choice of strategy is that it be ecologically compatible or acceptable. (36 CFR 219.3)

**Interdisciplinary Team**

A team of people that collectively represent several disciplines and whose duty it is to coordinate and integrate planning activities.

### **Invasive Species**

A plant considered to be extremely destructive or harmful to agriculture and designated by law. An undesirable species that conflicts with, restricts, or otherwise causes problems with management objectives.

## **L**

### **Land Allocation**

The assignment of a management emphasis to particular land areas with the purpose of achieving the goals and objectives of that alternative.

### **Landscape**

An area composed of interacting ecosystems that are repeated because of geology, soils, climate, flora, fauna, and human influences throughout the area. Landscapes are generally of a size, shape, and pattern that is determined by interacting ecosystems.

### **Landscape Character**

Particular attributes, qualities, and traits of a landscape that give it an image and make it identifiable or unique. Landscape character provides a frame of reference from which to determine scenic attractiveness and to measure scenic integrity.

### **Limits of Acceptable Change (LAC)**

A planning framework that establishes explicit measures of the acceptable and appropriate resource and social conditions in recreation settings as the appropriate management strategies for maintaining and/or achieving those conditions.

## **M**

### **Management Area**

An area with similar management objectives and a common management prescription.

#### **Management Direction**

A statement of multiple use and other goals and objectives, the associated management prescriptions, and standards for attaining them. (36 CFR 219.3)

### **Management Indicator Species**

Species defined in a Forest Plan or other planning document as representative of a larger habitat or community. Management

impacts and effects on other members of the community are assumed to be indicated by the selected species.

### **Management Practice**

A specific activity, measure, course of action, or treatment. (36 CFR 219.3)

### **Minimum Tool**

The least impactful method, equipment, device, force, regulation, practice, or use that will meet the management objective in a wilderness context. This represents the “how” question that must be asked to ensure that the process to implement the minimum required action will minimize impact on social and biophysical wilderness values. Minimum tool is not synonymous with primitive tool. In some cases the minimum tool could be a motorized tool or a form of mechanical transport. (Minimum Requirement Decision Guide, Arthur Carhart National Wilderness Training Center)

### **Monitoring**

To watch, observe, or check, especially for a specific purpose, such as to keep track of, regulate, or control.

## **N**

### **National Environmental Policy Act (NEPA) (1969)**

An Act, to declare a National policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

### **National Forest Lands**

All national forest lands reserved or withdrawn from the public domain of the United States, all national forest lands acquired through purchase, exchange, donation, or other means, and other lands, waters or interests therein which are administered by the Forest Service or are designated for administration through the Forest Service as a part of the system. (16 U.S.C. 1608)

### **National Register - Eligible Property**

A property that has been determined eligible for National Register of Historic Places listing by the Secretary of the Interior, or one that has not yet gone through the formal eligibility determination process but meets the National Register criteria. For management

purposes, an “eligible” property is treated as if it were already listed.

**O Objective**

A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals. (36 CFR 219.3)

**Outstandingly Remarkable Values (ORVs)**

River related resource values that are rare, unique or exemplary, and are significant at a regional or National level. (Interagency Wild and Scenic Rivers Coordinating Council)

**P Plant Communities**

A vegetation complex unique in its combination of plants that occur in particular locations under particular influences. A plant community is a reflection of integrated environmental influences on the site, which includes soils, temperature, elevation, solar radiation, slope, aspect, and rainfall.

**R Recreation Opportunity Spectrum (ROS)**

Land delineations that identify a variety of recreation experience opportunities categorized into six classes on a continuum from primitive to urban. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs. This is measured based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use. (FSM 2311.1 and USDA Forest Service, 1982, ROS User Guide) The six classes are:

**Primitive** - Area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low, and evidence of other users is minimal. The area is managed to be essentially free from evidence of management restrictions and controls. Motorized use within the area is not permitted.

**Semi-primitive Non-motorized** - Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum onsite controls and restrictions may be present, but subtle. Motorized recreation use is not permitted.

**Semi-primitive Motorized** - Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum onsite controls and restrictions may be present, but subtle. Motorized recreation use of local primitive or collector roads with predominantly natural surfaces is permitted.

**Roaded Natural** - Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of humans. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, and evidence of other users prevalent. Resource modification and utilization practices are evident but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

**Rural** - Area is characterized by a natural environment that has been substantially modified by development of structures, vegetative manipulation, or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. Facilities for intensified motorized use and parking are available.

**Urban** – Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans are predominant onsite and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

### **Riparian Areas**

Geographically delineated areas, with distinctive resource values and characteristics, which are composed of aquatic and riparian ecosystems. Riparian areas typically include areas adjacent to all streams, lakes, ponds and areas comprising seeps, springs, and wetlands.

### **Riparian Vegetation**

Vegetation growing on or near the banks of a stream or body of water on soils that exhibit some wetness characteristics during some portion of the growing season.

## **Road**

A general term denoting a way, for purposes of travel by vehicles greater than 40 inches in width. (FSM 7710.51).

## **S**

### **Scenery Management System (SMS)**

An overall framework for the orderly inventory, analysis, and management of scenery. This system applies to every acre of national forests and national grasslands administered by the Forest Service and to all Forest Service activities including, but not limited to, timber harvesting, road building, stream, range, and wildlife improvements, special use developments, utility line construction, recreation developments, and fuels management. (Agriculture Handbook 701, "Landscape Aesthetics: A Handbook for Scenery Management" FSM 2380.61)

### **Scenic Integrity**

The state of naturalness or a measure of the degree to which a landscape is visually perceived to be "complete." The highest scenic integrity ratings are given to those landscapes that have little or no deviation from the landscape character valued by constituents for its aesthetic quality. (Agriculture Handbook 701, "Landscape Aesthetics: A Handbook for Scenery Management" FSM 2380.61)

**High** - Landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident.

**Very High** - Unaltered – Very high scenic integrity refers to landscapes where the valued landscape character "is" intact with only minute, if any, deviations. The existing landscape character and sense of place is expressed at the highest possible level.

### **Scenic Integrity Objectives**

Definitions of the degrees of deviation from the landscape character that may occur at any given time as established by using the process described in Agriculture Handbook 701, "Landscape Aesthetics: A Handbook for Scenery Management" (FSM 2380.61). Scenic integrity objectives are an integral part of Forest Plan revisions, environmental assessments, environmental impact statements, and project level planning.

**Sediment**

Solid material, both mineral and organic, that is in suspension, and is being transported from its site of origin by air, water, gravity, or ice, or has come to rest on the earth's surface either above or below sea level.

**Sensitive Species**

Those species of plants or animals that have appeared in the Federal Register as proposed for classification and are under consideration for official listing as endangered or threatened species, that are on an official State list, or that are recognized by the Regional Forester as needing special management to prevent their being placed on Federal or State lists.

**State Historic Preservation Officer (SHPO)**

The official appointed or designated pursuant to Section 101(b)(1) of the National Historic Preservation Act to administer the State historic preservation program or a representative designated to act for the SHPO. Among other duties, the SHPO advises and assists Federal agencies and others to ensure that historic properties are considered at all levels of planning and development.

**Streamflow**

The flow of water, generally with its suspended sediment load, down a well defined watercourse.

**T****Threatened Species**

Any species of animal or plant which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and which has been designated in the Federal Register by the Secretary of Interior as a threatened species.

**Turbidity**

The degree of opaqueness, or cloudiness, produced in water by suspended particulate matter, either organic or inorganic. Measured by light filtration or transmission and expressed in Jackson Turbidity Units (JTU).

**U****Upland Vegetation**

Vegetation in the corridor that is not riparian, and is generally categorized as desert scrub, desert grassland, or mixed woodlands.

## W

### **Water Quality**

The biological, physical, and chemical properties of water that make it suitable for given specified uses.

### **Watershed**

The line separating head streams which flow to different river systems; it may be sharply defined (crest of a ridge), or indeterminate (in a low undulating area).

### **Wetlands**

Areas that are inundated by surface or ground water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction (Executive Order 11990). Under normal circumstances the area does or would support a prevalence of vegetative or aquatic life.

### **Wild and Scenic Rivers**

Those rivers or sections of rivers designated as such by congressional action under the 1968 Wild and Scenic Rivers Act (P.L. 90-542), as supplemented and amended, or those sections of rivers designated as wild, scenic, or recreational by an act of the Legislature of the State or States through which they flow. Wild and Scenic Rivers may be classified and administered under one or more of the following categories:

**Wild River Areas** - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

**Scenic River Areas** - Those rivers or sections of rivers that are free of impoundments, with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

**Recreational River Areas** - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

### **Wilderness**

Areas designated by congressional action under the 1964 Wilderness Act. Wilderness is defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation. Wilderness areas are protected and managed to preserve their natural conditions,

which generally appear to have been affected primarily by the forces of nature, with the imprint of human activity substantially unnoticeable; have outstanding opportunities for solitude or for a primitive and unconfined type of recreation; include at least 5,000 acres or are of sufficient size to make practical their preservation, enjoyment, and use in an unimpaired condition; and may contain features of scientific, educational, scenic, or historical value as well as ecologic and geologic interest.

### **Wilderness Opportunity Spectrum (WOS)**

Land delineations that identify a spectrum of wilderness experience opportunities categorized into four classes on a continuum from most primitive to least primitive. Each class delineates varying degrees of resource and social conditions for the management of an area. (FSM 2311.12) The four classes are:

**Class 1** – The most primitive setting, characterized by an unmodified natural environment. Class 1 areas provide an outstanding opportunity for isolation and solitude free from evidence of human activities and with very infrequent encounters with users. Management strategies strongly emphasize sustaining and enhancing the natural ecosystem.

**Class II** – Characterized by an essentially unmodified natural environment. There is high opportunity for exploring and experiencing isolation from the sights and sounds of humans with the probability of encountering other users being low. Management strategies emphasize sustaining and enhancing the natural ecosystem.

**Class III** – Characterized by an essentially unmodified natural environment where ecological and natural processes are moderately affected by the action of users in a few areas. There are moderate opportunities for exploring and experiencing isolation from the sights and sounds of humans, with the probability of encountering other users being low to moderate. Management strategies emphasize sustaining and enhancing the natural ecosystem.

**Class IV** – The least primitive setting, characterized by a predominantly unmodified natural environment where ecological and natural processes are substantially affected by the actions of users in many locations. There are moderate to low opportunities for exploring and experiencing isolation from the sights and sounds of humans, with the probability of encountering other users being moderate to high. Management strategies are oriented to sustaining and enhancing the natural ecosystem.



# List of Preparers

## Interdisciplinary Team

**Ken Anderson – Lead District Ranger, Coconino National Forest.** Ken functions as the district ranger of the Red Rock Ranger District. He has a B.S. in Forestry from Kent State University and 34 years of experience with the Forest Service, having worked in 3 regions and 4 national forests.

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# Appendix A – Arizona Wilderness Act, Verde WSR Designation

PUBLIC LAW 98-406—AUG. 28, 1984

98 STAT. 1485

Public Law 98-406  
96th Congress

## An Act

To designate certain national forest lands in the State of Arizona as wilderness, and  
for other purposes.

Aug. 28, 1984  
[H.R. 4707]

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That this Act may be cited as the “Arizona Wilderness Act of 1984”.

Arizona  
Wilderness  
Act of 1984.

SEC. 104. Section 3(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1274) is amended by inserting the following after paragraph (50):

“(51) VERDE, ARIZONA.—The segment from the boundary between national forest and private land in sections 26 and 27, township 13 north, range 5 east, Gila Salt River meridian, downstream to the confluence with Red Creek, as generally depicted on a map entitled ‘Verde River—Wild and Scenic River’, dated March 1984, which is on file and available for public inspection in the Office of the Chief, Forest Service, United States Department of Agriculture; to be administered by the Secretary of Agriculture. This designation shall not prevent water users receiving Central Arizona Project water allocations from diverting that water through an exchange agreement with downstream water users in accordance with Arizona water law. After consultation with State and local governments and the interested public and within two years after the date of enactment of this paragraph, the Secretary shall take such action as is required under subsection (b) of this section.”



# Appendix B - WSR Act Section 7 Evaluation Procedures

Excerpted from:

## Wild & Scenic Rivers Act: Section 7

May 1997

Council Contact: Jackie Diedrich, USDA Forest Service, Portland, Oregon

*Technical Report of the Interagency Wild and Scenic Rivers Coordinating Council*

### INTRODUCTION

Congress passed the Act to preserve selected rivers from the dams and developments associated with many of the nation's waterways. While the Act provides a number of important measures to protect and enhance the values for which rivers are added to the National Wild and Scenic Rivers System (National System), none is more significant than the restrictions to water resources projects provided in Section 7. Through the language of this section, Congress expressed the clear intent to protect river values from the harmful effects of water resources projects.

More specifically, the Act prohibits the Federal Energy Regulatory Commission (FERC) from licensing the construction of hydroelectric facilities on rivers that have been designated as components of the National System, or which have been authorized by Congress for study as potential additions. Further, the Act prohibits other federal agencies from assisting in the construction of any water resources project that would have a direct and adverse effect on a designated river or congressionally authorized study river. The Act also includes a standard that governs water resources projects below or above a designated river or congressionally authorized study river. Determinations under Section 7(a) are made by the river-administering agency.

### STATUTORY BACKGROUND

Section 7(a) states in part:

*The Federal Power Commission [FERC] shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, as amended, on or directly affecting any river which is designated in section 3 of this Act as a component of the national wild and scenic rivers system or which is hereafter designated for inclusion in that system, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation of a river as a component of the national wild and scenic rivers system.*

The first sentence of Section 7(a) applies a more stringent standard to projects licensed by the FERC than for other federally assisted projects proposed on a designated river (i.e., a prohibition to the FERC). Importantly, both standards in this sentence apply to projects proposed within the river corridor. The second sentence of Section 7(a), which applies to the FERC and other federal agencies, defines a standard for projects proposed outside (i.e., below/above or on a tributary stream) the designated river. It specifically identifies scenic, recreational, and fish and wildlife as the four values to be evaluated.

## DEFINITIONS

The Act does not define the terms expressed in Section 7; however, the U.S. Forest Service (USFS) has codified regulations for Section 7 at 36 CFR 297 which includes definitions. These definitions are based on Departments of Agriculture and Interior interpretations of Section 7 as developed in response to specific situations.

*Construction:* Any action carried on with federal assistance affecting the free-flowing characteristics or the scenic or natural values of a wild and scenic river (WSR).

*Federal Assistance:* Any assistance by an authorizing agency before, during, or after construction. Such assistance may include, but is not limited to: a license, permit, preliminary permit, or other authorization granted by the FERC; a license, permit or other authorization granted by the Army Corps of Engineers, (ACOE), Department of the Army, pursuant to the Rivers and Harbors Act and Section 404 of the Clean Water Act. Assistance also includes federal funding of projects such as state highway proposals.

*Free-flowing:* Defined in the Act at Section 16(b) as “existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.”

*Invade:* Encroach or intrude upon.

*River Corridor:* Means a river and the adjacent area within the boundaries of a designated river, or a river and the adjacent area within one-quarter mile of the banks of a congressionally authorized study river (one-half mile for designated/study rivers authorized under the Alaska National Interest Lands Conservation Act).

*River-administering Agency:* One of the four federal agencies that may be charged with administration of a component of the National System. These agencies are the Bureau of Land Management (BLM), National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), and USFS.

*Section 7 Standards:* This paper offers an evaluation process to provide context for measuring a proposed project against the specific standard rather than a more precise definition.

*Water Resources Projects:* Any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (FPA), or other construction of developments which would affect the free-flowing characteristics of a wild and scenic or congressionally authorized study river. In addition to projects licensed by the FERC,

water resources projects may also include: dams; water diversion projects; fisheries habitat and watershed restoration/enhancement projects; bridges and other roadway construction/reconstruction projects; bank stabilization projects; channelization projects; levee construction; recreation facilities such as boat ramps and fishing piers; and, activities that require a 404 permit from the ACOE.

## **STANDARDS AND EVALUATION PROCEDURES**

The remainder of this text provides an interpretation of the standards in Section 7 and presents methods to evaluate the effects of proposed water resources projects for congressionally designated rivers. It is presented in the form of a key, based on the type of project and location.

### **Congressionally Designated Rivers: Section 7(a)**

#### **A. Water Resources Projects Within the River Corridor**

##### *1. Proposed Hydroelectric Facilities (Licensed by the FERC)*

The FERC is prohibited from issuing a license (or exemption) for construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the FPA if the project is “on or directly affecting” a designated river.

The FERC routes applications for preliminary permits and licenses for proposed hydroelectric facilities to river-administering agencies for determinations of whether the project is “on or directly affecting” a designated river. The river-administering agencies apply the statute to prohibit any project work licensed under the FPA within the river corridor.

##### *2. Existing Hydroelectric Facilities (Licensed by the FERC)*

In the rare instances where an existing hydroelectric facility is included in a designated river corridor, modifying or relicensing of the facility is not prohibited by the Act. The river administering agency should evaluate the proposed modification or relicense application to ensure that proposed operations protect or enhance river-related values under the “direct and adverse” effects standard. The baseline for evaluation of existing hydroelectric facilities is the project’s configuration and operation at the time of the river’s designation as subsequently modified through FERC processes. The baseline also includes the values as assessed at the date the river was added to the National System and the current resource conditions and trends. In certain situations, the change of operations (per modification or relicense) may be of positive benefit to river-related values. Opportunities identified in the river management plan (or other plans) may be used to recommend enhancements. However, such recommendations are not part of the Section 7 determination, or binding on the FERC. (Application of Section 7 does not, however, restrict an agency’s authority to provide terms and conditions or other article requirements under the FPA.)

##### *3. Other Proposed Federally Assisted Water Resources Projects (Agency Other than the FERC)*

Unlike proposed FERC-licensed projects, which are prohibited if they are “on or directly affecting” a WSR, other proposed federally assisted water resources projects are prohibited only if they would have a “direct and adverse effect” on the values for which a river was added to the National System. Examples of projects that would likely be subject to this standard include, but are not limited to: dams; water diversion projects; fisheries habitat and watershed restoration/ enhancement projects; bridge and other roadway construction/reconstruction projects; bank stabilization projects; channelization projects; levee construction; recreation facilities such as boat ramps and fishing piers; and, activities that require a Section 404 permit from the ACOE.

## **B. Water Resources Projects Outside the River Corridor**

### *1. Proposed or Modification/Relicense of Hydroelectric Facilities (Licensed by the FERC)*

The FERC is subject to the river-administering Secretary’s finding relating to developments (i.e., FERC-licensed projects) located below/above or on a stream tributary to the designated river. The downstream/upstream project may be constructed (proposed project) -- or reconfigured or operations modified (modification/relicense) -- as long as the designated river is not invaded by the project, or the scenic, recreational, and fish and wildlife values present at the date of designation are not unreasonably diminished. Opportunities identified in the river management plan (or other plans) may be used to recommend enhancements. However, such recommendations are not part of the Section 7 determination, or binding on the FERC. (Application of Section 7 does not, however, restrict an agency’s authority to provide terms and conditions or other article requirements under the FPA.)

### *2. Other Proposed Federally Assisted Water Resources Projects (Agency Other than the FERC)*

The river-administering agency evaluates non-hydroelectric project proposals under the “invade the area or unreasonably diminish” standard. Examples of projects that may be subject to this standard include, but are not limited to non-hydroelectric dams and other projects that affect the free-flowing characteristics of the designated river.

## **SECTION 7, NATIONAL ENVIRONMENTAL POLICY ACT (NEPA), AND COORDINATION WITH PROPONENT/REGULATING AGENCY**

A separate environmental document is not required for a Section 7 determination. Rather, the federal official proposing or permitting the project typically includes analysis of what, if any, impact the proposal would have on a designated or potential WSR in their respective environmental and/or permitting processes. The river-administering agency is responsible for conducting the Section 7 analysis and making a determination under the statute. This responsibility does not preclude utilizing staff expertise of the proposing/permitting agency in the evaluation process. The Section 7 determination is signed and transmitted to the proposing/permitting agency via respective river-administering agency processes.

### *1. Hydropower Proposals (Licensed by the FERC)*

For hydropower proposals, a preliminary Section 7 determination should be completed at the final application stage. This approach is based on the assumption that sufficient detail of the project proposal is not available until the final application. This preliminary determination will precede the environmental assessment (EA) or environmental impact statement (EIS) conducted prior to the licensing decision. Completing the preliminary determination with the final application provides the river-administering agency an opportunity to recommend measures to reduce adverse effects to within acceptable levels, if the proposal is found inconsistent with the appropriate Section 7 standard.

During the environmental analysis process, the FERC will develop alternatives and may assess the project under different configurations than proposed in the license application. Importantly, the river-administering agency will reserve the right to reevaluate a Section 7 determination completed for the final application in the event the alternatives considered in the environmental analysis modify the project, or otherwise create impacts not previously addressed. The river administering agency will evaluate and make its Section 7 determination responsive to the FERC’s draft and final environmental documents.

*Note:* The FERC is considering new procedures that would allow the NEPA process to take place earlier in the licensing process and formalizing cooperating agency status under NEPA. The river-administering agency would complete the preliminary Section 7 determination coincident with the environmental document (including the draft) or final application, whichever is issued first.

## *2. Other Federally Assisted Water Resources Projects (Agency Other than the FERC)*

For proposed water resources projects “assisted” by other federal agencies, the Section 7 determination would be conducted responsive to draft and final environmental documents, respectively (i.e., when sufficient alternative detail and discussion of environmental consequences is available in a NEPA document). The river-administering agency should identify WSR concerns early in the scoping process and should cooperate with the proposing agency to the greatest extent possible.

Section 7 creates a requirement for consultation between the river-administering agency and the federal agency assisting the construction of the project. Project proponents, if not federal agencies, are not required to consult directly with the federal river-administering agency, and no new permits are required under Section 7. However, project proponents should be encouraged to consult informally with the river-administering agency early in the siting and project design process, in order to avoid delays and costs associated with projects that cannot be approved under Section 7.

The river-administering agency should, as appropriate, coordinate its evaluation process with other agencies that are required to review and comment on the project. Depending on the type of proposed project, this may include: USFWS (Fish and Wildlife Coordination Act, Endangered Species Act, and other statutes); National Marine Fisheries Service (Endangered Species Act); Environmental Protection Agency (Clean Water Act, Clean Air Act); and state fish, wildlife, water quality, and other agencies. Coordination with these other agencies should begin as early as possible in the process, preferably in the first stages of project planning.

For a water resources project proposed by a river-administering agency, the Section 7 determination should be documented in, or appended to, the environmental analysis. Similarly, for 5(d)(1) study rivers, an analysis of the potential effects of a proposed water resources project on free-flow, water quality, and the outstandingly remarkable values (ORVs) should be incorporated, appended, or available in the analysis file.

## **SECTION 7 AND THE FERC LICENSING PROCESS**

A key step to facilitate Section 7 determinations for hydropower proposals is the early identification in the consultation process of precisely what information the proponent must collect or analyze to address issues necessary for the determination. This information appears in Exhibit E of the proponent's application for license or relicense and serves as the basis of the determination. Careful identification of information and analysis needs, at appropriate steps in the consultation process, will greatly simplify the work associated with completing a Section 7 determination responsive to the final application and draft/final environmental analysis documents.

It is also important to note that the Section 7 determination does not provide the river-administering agency an avenue to require mitigation and enhancement needs (relative to the licensing process). If a determination is made that a project would result in a direct and adverse effect, or, for projects below/above the designated river, to invade the area or unreasonably diminish (or diminish for a study river) the scenic, recreational, and fish and wildlife values present at the date of designation, the responsible official may recommend measures to eliminate adverse effects.

## **EVALUATION PROCEDURE UNDER “DIRECT AND ADVERSE”**

Evaluation procedure under the direct and adverse effects standard for existing projects licensed by the FERC, or other federally assisted projects inside the designated river (Section 7(a)).

The following questions should be considered in a typical analysis under this standard. The scope of the evaluation should be consistent with the magnitude and complexity of the proposed activity. The resulting analysis may be documented in a few pages or a much lengthier product, as required.

**1. Define the Proposed Activity.** Describe the proposed activity in terms of the:

- a. Project proponent(s);
- b. Purpose/need for the project;
- c. Geographic location of the project (include a map);
- d. Duration of the proposed activities;
- e. Magnitude/extent of the proposed activities; and,
- f. Relationship to past and future management activities.

**2. Describe How the Proposed Activity Will Directly Alter Within-Channel Conditions.** Address the magnitude and spatial extent of the effects the proposed

activity will have on within-channel attributes. Give special attention to changes in features that would affect the ORVs. Describe:

- a. The position of the proposed activity relative to the streambed and streambanks.
- b. Any likely resulting changes in:
  - (1) Active channel location;
  - (2) Channel geometry (cross-sectional shape, width/depth characteristics);
  - (3) Channel slope (rate or nature of vertical drop);
  - (4) Channel form (straight, meandering, or braided);
  - (5) Relevant water quality parameters (turbidity, temperature, nutrient availability); and,
  - (6) Navigation of the river.

**3. Describe How the Proposed Activity Will Directly Alter Riparian and/or Floodplain Conditions.** Address the magnitude and spatial extent of the effects the proposed activity will have on riparian/floodplain attributes. Give special attention to changes in features that would affect the ORVs. Describe:

- a. The position of the proposed activity relative to the riparian area and floodplain.
- b. Any likely resulting changes in:
  - (1) Vegetation composition, age structure, quantity, or vigor;
  - (2) Relevant soil properties such as compaction or percent bare ground; and,
  - (3) Relevant floodplain properties such as width, roughness, bank stability, or susceptibility to erosion.

**4. Describe How the Proposed Activity Will Directly Alter Upland Conditions.** Address the magnitude and spatial extent of the effects the proposed activity will have on upland attributes. Give special attention to changes in features that would affect the ORVs. Describe:

- a. The position of the proposed activity relative to the uplands.
- b. Any likely resulting changes in:
  - (1) Vegetation composition, age structure, quantity, or vigor;
  - (2) Relevant soil properties such as compaction or percent bare ground; and,

(3) Relevant hydrologic properties such as drainage patterns or the character of surface and subsurface flows.

c. Potential changes in upland conditions that would influence archaeological, cultural, or other identified significant resource values.

**5. Evaluate and Describe How Changes in On-Site Conditions Can/Will Alter Existing Hydrologic or Biologic Processes.** Evaluate potential changes in hydrologic and biologic processes by quantifying, qualifying, and/or modeling the likely effects of the proposed activity on:

- a. The ability of the channel to change course, re-occupy former segments, or inundate its floodplain.
- b. Streambank erosion potential, sediment routing and deposition, or debris loading.
- c. The amount or timing of flow in the channel.
- d. Existing flow patterns.
- e. Surface and subsurface flow characteristics.
- f. Flood storage (detention storage).
- g. Aggradation/degradation of the channel.
- h. Biological processes such as:

- (1) Reproduction, vigor, growth and/or succession of streamside vegetation;
- (2) Nutrient cycling;
- (3) Fish spawning and/or rearing success;
- (4) Riparian dependent avian species needs;
- (5) Amphibian/mollusk needs; and,
- (6) Species composition (diversity).

**6. Estimate the Magnitude and Spatial Extent of Potential Off-Site Changes.**

Address potential off-site or indirect effects of the proposed activity, acknowledging any uncertainties.

a. Consider and document:

- (1) Changes that influence other parts of the river system;
- (2) The range of circumstances under which off-site changes might occur (for example, as may be related to flow frequency); and,
- (3) The likelihood that predicted changes will be realized.

b. Specify processes involved, such as water and sediment, and the movement of nutrients.

**7. Define the Time Scale Over Which Steps 3-6 are Likely to Occur.** Review steps 3-6, looking independently at the element of time. Define and document the time scale over which the effects will occur.

**8. Compare Project Analyses to Management Goals.** Based on the analysis of steps 3-7, identify and document project effects on achievement, or timing of achievement, of management goals and objectives relative to free-flow, water quality, riparian area and floodplain conditions, and the ORVs and river classification.

**9. Make the Section 7 Determination. Based on the analysis of steps 3-8, document:**

- a. The effects of the proposed activity on conditions of free-flow, including identification of any proposed measures to minimize those effects.
- b. Any direct and adverse effects on the ORVs for which the river was designated.

## **EVALUATION PROCEDURE UNDER “INVADE THE AREA OR UNREASONABLY DIMINISH”**

Evaluation procedure under the invade or unreasonably diminish standard for projects licensed by the FERC, or other federally assisted projects outside the designated river corridor (Section 7(a)).

The evaluation procedure for this standard does not lend itself to a common series of questions as developed for the direct and adverse effects standard. Rather, the evaluation should be focused on describing the potential of the proposed project to either invade the designated river, or diminish the scenic, recreational, and fish and wildlife values. The following text provides an outline for documenting the determination and, importantly, identifies the questions to consider in evaluating the magnitude of the effects.

### **Suggested Outline for Determination**

**Introduction:** Briefly describe the project and attributes of the designated river (clearly identify the ORVs).

**Section 7(a) Requirement:** Describe the standard. Include the following text.

*Section 7(a) of the Act provides a specific standard for review of developments below or above or on a stream tributary to a designated river. Such developments may occur as long as the project “will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area as of the date of designation . . .” This standard applies to projects outside the river corridor but on the same river or a tributary.*

(Relate the project location to the designated river.)

*The initial question to be addressed is whether or not the proposed project invades the designated river. The term invade is defined as encroachment or*

*intrusion upon. If the project is determined to invade the designated river, the proponent would be advised to develop measures to eliminate this unacceptable effect.*

*If the proposed project does not invade the designated river, the next question to be answered, relative to the standard in Section 7(a), is whether or not the proposed project will “unreasonably diminish” any of the specified values. Given that the standard implies that some diminution of values may be determined reasonable, there are two questions to consider:*

*1. Does the proposed project cause diminution of the scenic, recreational, and fish and wildlife values of the designated river as present at the date of designation?*

*2. If there is diminution, is it unreasonable? This would suggest an evaluation of the magnitude of the loss. Factors to be considered include:*

*(1) Whether the value contributed to the designation of the river (i.e., outstandingly remarkable); and,*

*(2) The current condition and trends of the resource. (If diminution is determined unreasonable, measures may be recommended to reduce adverse effects to within acceptable levels.)*

**Rationale for Determination:** Identify the document that provides the basis for the evaluation. For hydroelectric proposals, the application, including Exhibit E, is the basis for the preliminary Section 7 determination, reserving the right for further evaluation based on the results of subsequent environmental analysis. For a non-hydroelectric project, this document is the proposing agency or river-administering agency’s environmental document. Also include, if appropriate, that staff specialists utilized available additional data as described in an accompanying Section 7(a) report.

**Determination:** Describe the findings as to whether the proposed project will invade the area or unreasonably diminish the four identified values: scenic, recreational, fish, wildlife. If the finding is that the proposal will invade the area or unreasonably diminish any of the four specified values, identify recommendations to reduce adverse effects to within acceptable levels, as possible.

**Signature:** Of the responsible official.

**Section 7(a) Report:** Include, as appropriate, a report that provides the detailed discussion of the potential effects that lead to the conclusions summarized in the determination.

*Note:* The completed Section 7 determination (determination and, if appropriate, an accompanying report) should then be included in, or appended to, the project’s environmental document. Refer to preceding discussion “Section 7, NEPA, and Coordination with Proponent/ Regulating Agency.”

# Appendix C - Maps

See section under Maps.

