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Comprehensive River Management Plan

Big Sur River

Los Padres National Forest



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Introduction

The Wild and Scenic Rivers Act (WSR Act) of 1968 (Public Law 90-542, as amended) provides for a National Wild and Scenic River System that preserves the free-flowing condition of selected rivers in the Nation and protects for present and future generations their outstandingly remarkable values.

The Big Sur Wild and Scenic River is entirely within the Ventana Wilderness. The WSR states that any portion of a designated WSR within a wilderness area shall be subject to the provisions of both the Wilderness Act and the WSR Act and, with respect to the preservation of river values, and in the case of conflict, the more restrictive provisions apply.

Through the Los Padres Condor Range and River Protection Act of 1992 (Public Law 102-301), Congress amended the WSR Act to add the following portion of the Big Sur River to the system.

The main stems of the South Fork and North Fork of the Big Sur River from their headwaters to their confluence and the main stem of the river from the confluence of the South and North Forks downstream to the boundary of the Ventana Wilderness in Los Padres National Forest, for a total area of approximately 19.5 miles long by ¼ mile wide on each side of the river (See attached maps).

The boundaries of the Big Sur River component of the National WSR System were published in the Federal Register (67 Federal Register 9953, March 5, 2002) as follows:

Boundary Description

The Big Sur River, California, Wild and Scenic River is located in the Los Padres National Forest, in the County of Monterey, State of California. The following description refers to the attached maps titled ZIGZAG CREEK QUADRANGLE; PARTINGTON RIDGE QUADRANGLE; VENTANA CONES QUADRANGLE; BIG SUR QUADRANGLE; AND PFEIFFER POINT QUADRANGLE, dated 1995. Being the bed of said river and strips of land extending 1320 feet from the ordinary high water mark on both sides of said river as represented on the maps and described as follows:

The main stems of the South Fork and North Fork of the Big Sur River from their headwaters to their confluence and the main stem of the river from the confluence of the South and North Forks downstream to the boundary of the Ventana Wilderness in the Los Padres National Forest, for a total distance of approximately 19.5 miles.

For rivers designated after January 1, 1986, Congress directed the Federal agency charged with the administration of each component on the National WSR System to prepare a Comprehensive River Management Plan (CRMP), to provide for the protection of the river values (free-flowing condition, water quality and outstandingly remarkable values). The plan is required to address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of the WSR Act.

The WSR Act provides specific direction as to the contents and key elements of a CRMP. Specifically, a CRMP should:

1. Describe the existing resource conditions including a detailed description of the outstandingly remarkable values (ORVs),
2. Define the goals and desired conditions for protecting river values,
3. Address user capacities,
4. Address water quality issues and instream flow requirements,

5. Reflect a collaborative approach, recognizing the responsibilities of and opportunities for partnership with all stakeholders,
6. Identify regulatory authorities of other governmental agencies that assist in protecting river values, and
7. Include a monitoring strategy to maintain desired conditions.

The ORVs for the Big Sur River are Scenic, Recreation, and Ecological (Final EIS, Los Padres National Forest LRMP).

A CRMP is to be developed in compliance with National Environmental Policy Act (NEPA). Issues are identified that prevent or impede the protection and enhancement of ORVs. The resultant CRMP describes the management direction/actions of the selected alternative at a programmatic level. Identified management actions generally require a site-specific analysis prior to implementation. The CRMP will be incorporated as an amendment to the Los Padres National Forest Land and Resource Management Plan.

Description of River Setting and Values

Regional River Setting

Regional River Setting: The Big Sur River is located in Monterey County approximately 200 miles from San Francisco and 300 miles from Los Angeles California. The closest population centers are the cities of Carmel and Monterey. Although the Big Sur River lies close to these heavily populated areas, the river does receive visitors from all over the world.

Access to the River corridor is limited. The nearest public vehicle access is Highway 1, and the Pine Ridge Trail is located at the Big Sur Interagency Visitor Center.

Most of the Big Sur River with the exception of the last two miles lies within the Ventana Wilderness in Monterey County.

The river is characterized by steep to very steep slopes covered by chaparral or oaks. The stream channel is mostly boulders and rock rubble with rapidly flowing water and small to-to-moderate sized pools. Some gravel and sand bars occur, particularly in association with naturally formed debris barriers. Springs occasionally dot the stream banks and steep canyon walls enclose the channel in places; water falls are an occasional occurrence.

Redwoods are found almost the entire length of the Big Sur River from the Forest Boundary to the confluence of the North and South Forks. The Big Sur River is one of the longest and most gradual of the coastal streams lined with redwoods. Of particular interest is the variety of trees and shrub species associated with the coast redwood: bigleaf maple, white alder, California bay, tanoak, and madrone. A good canopy of trees covers the majority of the river.

River Classification: The entire length of the Big Sur River that is in the administrative boundaries of the Los Padres National Forest is designated a Wild River.

Free-flow values and impacts: The Big Sur River with its two tributaries, the South Fork and North Fork, are free-flowing without any dams or diversions.

Outstandingly Remarkable Values

Scenic

Abundant, rapid, flowing water, with pools, springs and an occasional waterfall; interesting landforms; diverse tree canopy with redwoods; combination of scenic features uncommon to Central and Southern California.

These components in different combinations create color, size, and shape contrasts that create outstanding scenery. The entire length of the river is natural, undisturbed, and part of a larger area known as the Ventana Wilderness. Occasional vistas that allow wide views of the landscape enhance the contrast of the riparian zone in the river corridor against the expansive red wood covered hills.

Recreation

The natural sulfur hot springs pools near Sykes Camp, the redwood-riparian environment, and the yearlong water flows provide outstanding opportunities for hiking, primitive camping, swimming, fishing, picnicking, and nature study.

There is an established trail system that generally parallels the river. The river corridor provides a cool and scenic area with access to plenty of water that enhances recreation.

Ecology

The extensive riparian corridor, along the Big Sur River allows for an outstanding diverse combination of alders, maples, willows and bay with dominant over story of redwood.

The Big Sur River remains relatively natural and surrounded by a large wilderness area. This contiguous, intact, and large protected ecosystem is rare in southern California, and the Big Sur River has become a refuge for riparian-dependent plant and animal species.

Resource Values

Vegetation

The Ventana Wilderness contains many different vegetation types. This is due to the dramatic variations in topography, the mild but varied climate, and the long history of wildfire occurrence. Records dating back to 1869 document the flooding and resultant soil movement following periodic wildfire. The present ecosystem evolved through the influence of recurring fire, flood and soil movement sequence. Much of the wilderness is mantled by a cover of brush and chaparral with scattered annual grass meadows. This plant complex is typical of southern California's vegetation.

Deep narrow canyons have been carved by the fast flowing Big Sur River. Here virgin stands of Coastal Redwoods and their associated understory species thrive within the coastal fog zone. This contiguous, intact, and large protected ecosystem is rare in southern California, and the Big Sur River has become a refuge for riparian-dependent plant and animal species.

There are no Research Natural Areas now existing in the Big Sur River Corridor.

Vegetation/Soil

Concentrated recreational use along the river corridor may adversely impact water quality by contributing excessive sediment, nutrients, and bacteria into the river. Stream bank trampling can damage or eliminate riparian vegetation leading to accelerated erosion, soil compaction and nutrient discharges. Washing clothes or dishes and personal hygiene add chemical constituents that can be deleterious to fish or wildlife. Bacteria (as fecal coliform) may enter the river directly, from overland water runoff or subsurface water from pit toilets.

Fire/Fuels

Wildfire is the primary natural disturbance process in the landscape. Before European settlement, lightning and Native American ignited fires were primary factors shaping the vegetation. Fire history records for the Big Sur watershed have been kept since 1911, with 7

large fires of over 177,000 acres that have burned within the watershed, up to the Kirk complex of 1999. Currently, 90 percent of the fires are human caused with 10 percent of lighting origin, but the primary acreage burn has been caused by lightning since 1977 to 1999. This watershed burns regularly with no chaparral vegetation older than 27 years.

Even though there is an extensive fire history in the Big Sur watershed, there are also stands of pre-settlement grasses (native grasses) that do not burn during high fire season.

During the Marble Cone and Kirk Creek fires, which burned approximately 265,000 acres in 1977 and 1999, dozers were used within the wilderness to construct fire lines along the ridges tops. During the Marble Cone a dozer-constructed line was constructed down the river corridor to Ventana Camp.

The rainy season following large wildfires usually creates increased runoff and sedimentation, which scours the entire riparian corridor below the wildfire area increasing sedimentation to the river.

Fish and Wildlife

Wildlife along the Big Sur is typical of the area. Common species include: Mule Deer, Bobcat, Gray Fox, Striped Skunk, Gray Squirrel, Dusky Footed Woodrat, Great Horned Owl, Red Tailed Hawk, Scrub Jay, Roughskin Newt, and Banana Slug. The most unique species sighted in the area are the Peregrine Falcon, an occasional visitor, and the Ringtail Cat and Spotted Owl, rarely seen nocturnal inhabitants of the area.

The Big Sur contains an excellent Rainbow Trout fishery that is underfished because of poor access. Rainbow Trout have not been planted in the Big Sur River since 1975, following adoption of the Steelhead Rainbow Trout policy, which prohibits the planting of resident fish in Steelhead drainages (Titus et al. *in prep.* 2003).

Threatened, Endangered and Sensitive Species

The Big Sur River supports a healthy population of threatened South-Central California Coast Steelhead Trout (Titus et al. *in prep.* 2003). Until recently, only the lowermost 6 miles of the river have been accessible to Steelhead. Upstream migration beyond this point was blocked by a natural bedrock fall. Between 1981 and 1984, the California Department of Fish and Game performed a series of modifications on the barrier to enhance Steelhead passage beyond this point (Titus et al. *in prep.* 2003). Now Steelhead have access to an additional 15 miles of the main stem and several miles of tributary habitat (Cooper 2003), but primary spawning and rearing habitat continues to be located within the lowermost 6 miles of the river. The California Department of Fish and Game planted Brown Trout (a non-Native species) in the Big Sur River in the 1960's. This species became established and a "sparse" population still survives (Nelson 2003).

The endangered California condor has been observed within the Big Sur River corridor, and the California spotted owl, a Forest Service sensitive wildlife species, is common in the riparian habitat. Suitable habitat exists for the threatened California Red-Legged Frog as well as the following Forest Service sensitive species: Willow Flycatcher, Western Red Bat, Pacific Pond Turtle, California Legless Lizard, and the Foothill Yellow-legged Frog.

Ecology

The extensive riparian corridor, along the Big Sur River allows for an outstanding diverse combination of alders, maples, willows and bay with dominant over story of redwood.

The Big Sur River remains relatively natural and surrounded by a large wilderness area. This contiguous, intact, and large protected ecosystem is rare in southern California, and the Big Sur River has become a refuge for riparian-dependent plant and animal species.

Recreation Usage

The Pine Ridge trail is the most frequently used trail on the Monterey Ranger District. It has been a popular destination since the establishment of the Ventana Primitive Area in 1931. Accounts show that estimated use peaked in the late 1960s to the mid 1970s. In 1979, use on the pine Ridge trail accounted for 67% of the total wilderness permits issued for the year (2,952 permits).

In 1981, 57,300 Recreation Visitor Days (RVDs) were recorded for the Big Sur River Corridor (Final Environmental Impact Statement Land and Resource Management Plan, Los Padres National Forest). In 2002, 29,838 RVDs were recorded for the Pine Ridge Trail out of Big Sur Station. Use was heaviest during the months of April through September, which is consistent with use patterns in 1981. Use levels for 2002, are down 17% from 1979 and 48% from 1981. A reduction in parking spaces at the Pine Ridge trailhead at Big Sur Station is thought to be a contributing factor to the reduction in use.

Wilderness ranger observations also revealed the following estimates; 75% of the use in the Big Sur River Corridor is overnight use, 25% day use, 60-65% of the users are first time users, 1 out of every 8 people has a dog with them and 85% of those dogs are unleashed and 98-100% of users are on foot.

Recreation (ROS/LAC Classifications)

The Los Padres National Forest is considered an "urban forest" because of its close proximity to the San Francisco Bay Area and Los Angeles metropolitan area. The Big Sur River is a focal point for recreation in the Ventana Wilderness. Primitive camping, hiking, horseback riding, fishing, nature study, photography, swimming, and wading are popular activities.

Two well accepted concepts of recreation management were incorporated into this planning process. The Recreation Opportunity Spectrum (ROS) provides a means for classifying areas in relation to the types of recreation opportunity experience that are or can be provided and the setting in which they occur. The Limits of Acceptable Change (LAC) concept was used to develop strategies for managing use to maintain the desired ROS. The LAC concept does not focus attention on limiting use to an estimated capacity, but it can provide an estimate of the desired level of use. River managers may have several possible solutions to overuse problems if they can encourage users to adjust their habits.

Allocating or limiting use may be necessary, if conditions deteriorate to such a degree. The planning process was designed to be flexible and respond to changes in the river conditions without the need for major revisions. The process emphasizes objectives and establishes a monitoring system that will trigger implementation of management options on the Big Sur Wild and Scenic River to protect its unique qualities.

Site condition surveys were completed for Sykes Camp in 2001 and 2002. Additional site condition surveys were also completed for Ventana, Terrace Creek, Barlow Flat and Redwood Camps in 2002. The results of the 2002 monitoring for Ventana, Terrace Creek, Barlow Flat, and Sykes are found in Table 1 (see attachment C). These data are an indirect measure of use and provide an assessment of recreation usage levels and their resultant impact.

Land Ownership

There are no private lands within the Big Sur Wild and Scenic River corridor.

Special Uses

There are no permitted mining claims, no livestock grazing, no water withdrawals, diversions and no special use permits within the Big Sur Wild and Scenic River corridor. All Federal lands within the Ventana Wilderness Area were previously withdrawn from mineral entry pursuant to the Wilderness Act of 1964, similarly the Wilderness Act prohibits issuance of new livestock grazing permits or new water diversion permits. The Forest Service discourages flights over wilderness within 2,000 feet of the ground surface. The Federal Aviation Administration (FAA) has agreed to and the National Oceanic and Atmospheric Administration have posted, for the FAA, a 2,000-foot over terrain flight advisory on appropriate aeronautical charts.

Planning Context

Relationship to Other Federal Regulatory Agencies

The Los Padres National Forest is required to consult with the United States Fish and Wildlife Service and the National Oceanic and Atmospheric Administration concerning how forest management activities may affect threatened and endangered species. Biological Assessments addressing Threatened and Endangered species have been developed (see Attachments A & B). The Southern California Conservation Strategy was developed in response to difficulties in balancing protection of threatened and endangered species and other resource uses.

Relationship to Other Federal, State and Local Government Plans

The Los Padres National Forest Land and Resource Management Plan (March, 1988) establishes long-range direction and associated goals and objectives. Specific direction for the management of wilderness areas and WSRs are found in this document. The Big Sur River CRMP will be incorporated into the Land and Resource Management Plan (LRMP) as an amendment. The Los Padres National Forest is currently revising the LRMP and the CRMP will be incorporated into the revised LRMP.

Relationship to Other Regional Coordinating Bodies

The California State Water Resources Control Board (SWRCB) has responsibility for enforcing requirements of the Clean Water Act. The Big Sur River is within the Big Sur watershed. As outlined in the California Unified Watershed Assessment (October 1998), the Big Sur River is a Category 1 (Impaired) Priority Watershed. Category 1 watersheds are candidates for increased restoration activities due to impaired water quality or other impaired natural resource goals (emphasis on aquatic systems). The watershed is considered impaired because of activities outside the forest boundary. Any restoration activities would have to be consistent with WSR and Wilderness Acts and would be addressed in a project specific NEPA analysis.

The Big Sur WSR corridor lies within the Monterey County Air Pollution Control District. The District is a non-attainment area for several California State Ambient Air Quality Standards. The only Forest Service activity that contributes to air quality is prescribed burning. Prior to prescribed fire activities, the Forest Service prepares and submits a Smoke Management Plan that describes the planned activities and expected impacts to air quality. If approved, a permit is issued for the activity.

Management Direction

Non-native Invasive Weeds (*Ecological ORV*)

In many locations within and adjoining the Big Sur WSR corridor French broom a, non-native invasive weed, has become established. This invasive weed is aggressive and can destroy the ecological balance and diversity of native vegetation.

Desired Condition: Existing infestations of French broom will not increase in size as a result of human disturbance and new spot infestations of French broom or other non-native invasive weeds will be a priority for control measures. (see attachment D, Guidelines for Coordinated Management of Invasive Weeds in the Big Sur Weed Management Area).

Water Quality (*Ecological ORV*)

Concentrated recreational use along the river corridor may adversely impact water quality by contributing excessive sediment, nutrients, and bacteria into the river. Stream bank trampling can damage or eliminate riparian vegetation leading to accelerated erosion, soil compaction and nutrient discharges. Washing clothes or dishes and personal hygiene add chemical constituents that can be deleterious to fish or wildlife. Bacteria (as fecal coliform) may enter the river directly, from overland water runoff or subsurface water from pit toilets.

Desired Condition: Maintain the water quality of the Big Sur River and its tributaries for maintenance and enhancement of fisheries and aquatic environments and for scenic and recreational enjoyment. Encourage “Leave No Trace” and wilderness ethics. This will be accomplished through trailhead signing at Big Sur, brochures, and visitor contacts, and assuming some level of compliance would reduce the disturbance and siltation from moving in-stream rocks, reduce garbage and thereby increase water quality.

Dogs (*Recreation ORV*)

Non-leashed dogs may be disrupting wildlife behavior and disturbing the public within the WSR corridor.

Desired Condition: Minimize conflicts between dogs and recreationists and wildlife by requiring that all dogs be leashed at all times while in the river corridor.

Degradation of Riparian Vegetation (*Ecological ORV*)

As dead and down wood becomes scarce, campers are tempted to cut live vegetation for campfires. Forest Service observations and Site Condition Surveys (Table 1) indicate that repetitive cutting and concentrated recreational use at Ventana, Terrace Creek, Barlow Flat and Sykes Camps may prevent regeneration of existing riparian vegetation.

Desired Condition: Preserve and restore riparian woodland vegetation along the stream banks and on the floodplain of the Big Sur River. Campfire will be prohibited during the months of May 1st through September 30th, so that restoration of riparian areas can occur. Educate the public on negative effects to vegetation and riparian areas caused by the cutting of live vegetation. This can be accomplished by direct public contacts by wilderness rangers and written literature.

Sykes Camp Hot Springs (*Recreation ORV*)

Both native and non-native material (i.e., sandbags) are currently being used to contain warm water pools within the river system near Sykes Camp. Typically, the impoundments will wash out during winter storm events and will be rebuilt by visitors to the hot springs when the waters recede.

Desired Condition: Preserve other ORVs while providing for recreational enjoyment. At the three natural sulfur hot springs near Sykes Camp, discourage containment structures and encourage 'Leave No Trace' and wilderness ethics.

Recreational Use Levels and Camp Site Capacity (*Recreation ORV*)

Site condition surveys were completed for Sykes Camp in 2001 and 2002. Additional site condition surveys were also completed for Ventana, Terrace Creek, Barlow Flat and Redwood Camps in 2002 and in our professional opinion are currently at a desired condition. These data are an indirect measure of use and provide an assessment of recreation usage levels and their resultant impact. Future site conditions surveys will be used to determine if campsites are within or moving toward desired conditions. This will determine future management actions.

Desired Condition: Manage the area to preserve wilderness values and the ORVs. Future surveys conducted using campsite condition field data forms will determine if wilderness values and the ORV's are being met.

Wildlife (*Ecological ORV*)

Wildlife values, particularly threatened and endangered species, were identified as an ORV. Threatened South-Central California Coast Steelhead Trout inhabit the Big Sur River; and the endangered California condor has been observed within the river corridor. Suitable habitat exists for the threatened California Red-Legged, but focused surveys conducted up to this point have failed to establish occupancy. Recreational uses, such as camping and hiking on trails that cross the habitat and introductions of invasive exotic plant and animal species have the potential to impact sensitive and listed species and their habitats.

Desired Condition – Threatened and endangered species are protected. Campers, hikers and equestrians are directed to campsites and well-maintained trails. Stream crossings are kept to a minimum in an effort to disturb as little of the habitat as possible.

Ecology (*Ecological ORV*)

The extensive riparian corridor along the Big Sur River remains relatively natural and surrounded by a large wilderness area.

Desired Condition - The natural ecology of the Big Sur River remains intact. The diversity of plants and animals remains or is enhanced. Wilderness values are considered for all activities including wildfire suppression.

Free-Flowing Condition (*Ecological ORV*)

Free-flowing condition is one of the values for which the Big Sur River was designated a wild river. The designation protects the river from having a dam built on it or the effects of a dam built in a lower portion of the river from reaching the wild and scenic portion. This river has never had a diversion that would affect the character of a free-flowing river.

Desired Condition – The Big Sur WSR is maintained in a free-flowing condition, and connectivity of the river and tributaries is enhanced when compatible with other ORVs.

Scenic (Ecological ORV)

The river corridor, in conjunction with the larger area of the watershed that is natural and undisturbed, combines to create beautiful scenery.

Desired Condition – Scenic values of the entire watershed and maintenance of a natural appearance are considered when managing, planning or implementing any projects in or around the Big Sur River.

Management Actions

This CRMP also incorporates the following additional combination of direct and indirect actions to protect the ORVs of the Big Sur WSR corridor. Direct management will be used where resource concerns have been identified. Indirect management will emphasize influencing or modifying visitor behavior by influencing visitor's decisions.

1. Directional signage for pit toilets will be improved and additional pit toilets of a Wallowa quality or higher will be installed where needed after site-specific analysis.
2. Issue a Forest Order that:
 - a. Requires dogs to be leashed at all times when within the river corridor.
 - b. Prohibits wood fires at Ventana, Terrace Creek, Barlow Flat and Sykes Camps during high-use season (May 1st through September 30th).
3. Provide visitor information, education and interpretive services primarily in the form of brochures and maps to:
 - a. Encourage distribution of visitor use to other destination and nearby trails.
 - b. Educate users on "Leave No Trace" camping, including proper waste disposal and sanitation.
 - c. Provide educational and awareness information on non-native invasive weeds and Sudden Oak Death.
 - d. Provide other information for safety of visitors and protection of the ORVs as appropriate.
4. Evaluate potential for creating additional campsites at Ventana, Barlow Flat, Terrace Creek and Sykes Camps. Existing sites if determined by future site condition surveys to be in need of rehabilitation, the site will be closed and rehabilitated.
5. At the Sykes Hot Springs if current containment structures are washed out due to a heavy rain event, the wilderness ranger/volunteer's, will remove remaining materials. The Forest Service will discourage any containment structures (ie.sand bags/natural materials) and will dismantle any future constructed structures, so as not to impede the natural flow of the river. Also, Forest Service will educate visitors to the importance of free flowing water to wildlife and riparian vegetation. This can be accomplished by direct public contacts by wilderness rangers/volunteer's and written literature. Direct visitors to other trails and locations within the Ventana Wilderness.
6. Discourage use of inappropriate satellite campsites and social trails. This can be accomplished by Wilderness Ranger contacts and directing visitors to different location

within the Ventana Wilderness. Wilderness rangers will also dismantle any inappropriate satellite campsites by removing campfire rings.

Monitoring Strategy

The Limits of Acceptable Change¹ planning framework will be used as a guiding principle for monitoring. Social and ecological conditions will be monitored to determine when corrective management actions should be implemented to protect the ORVs. Forest Service personnel and/or volunteer(s) will document effectiveness monitoring in patrol logbooks.

Implementation Monitoring

- Visitor information/education material is available
- Pit toilets are available and in acceptable condition.
- Forest Order developed for leashed dog restriction.
- Forest Order developed for prohibition of wood fires at Ventana, Terrace Creek, Barlow Flat and Sykes Camp.

Effectiveness Monitoring

- Patrol logbooks will be kept by all Wilderness Patrols.
- Review patrol logbooks annually for overall river corridor condition, including, but not limited to, amount of trash, development of fire rings, cutting of live vegetation, invasive weeds, overcrowding of campgrounds, number of dogs off-leash.
- Campsite condition surveys will be completed every 3-5 years following initial baseline data.

If annual review of monitoring indicates repetitive documentation of excessive trash, development of fire rings, cutting of live vegetation, spread of invasive weeds, overcrowding of campgrounds and dog's not leashed, then site specific environmental analysis will be conducted as appropriate and the Limits of Acceptable Change Process will be used to determine the appropriate corrective action.

Literature Cited

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