

Executive Summary

Introduction

In 1987, the U.S. Congress designated 122 miles of the Merced River—from the headwaters in the Yosemite Wilderness to the impoundment at Lake McClure—as a Wild and Scenic River. According to the Wild and Scenic Rivers Act, a river is eligible for designation if it possesses what the act calls *outstandingly remarkable values*. These are the rare, unique, or exemplary qualities that set it apart from all other rivers in the nation. The goal of designating a river as Wild and Scenic is to preserve its free-flowing condition and protect and enhance its distinct values for the benefit and enjoyment of present and future generations. The National Park Service manages 81 miles of the Merced River, encompassing both the main stem and the South Fork in Yosemite National Park and the El Portal Administrative Site. This designation gives the Merced River special protection under the Wild and Scenic Rivers Act and requires the managing agencies to prepare a comprehensive management plan for the river and its immediate environment.

Pursuant to the Wild and Scenic Rivers Act requirements, the National Park Service prepared and issued the *Merced Wild and Scenic River Comprehensive Management Plan and Final Environmental Impact Statement* (Merced River Plan/FEIS) in June 2000 (NPS 2000c). After the Record of Decision was signed in August 2000, the Merced River Plan entered a lengthy litigation process. The validity of the plan was challenged based on contentions that the National Park Service failed to prepare a plan that protected and enhanced the Outstandingly Remarkable Values of the Merced River, thereby violating the Wild and Scenic Rivers Act.

The Merced River Plan was upheld in U.S. District Court with the exception that language be added to specifically indicate how the plan amends the park's *General Management Plan*. However, the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit Court of Appeals or the Court) further ruled that the Merced River Plan is deficient on two grounds. In its October 27, 2003 opinion, the Court stated that the “Merced Wild and Scenic River Comprehensive Management Plan (CMP) is invalid due to two deficiencies: (1) a failure to adequately address user capacities; and (2) the improper drawing of the Merced River’s boundaries at El Portal.”¹ On April 20, 2004, the same court clarified its original opinion, stating that the National Park Service “must prepare a new or revised CMP that adequately addresses user capacities and properly draws the river boundaries in El Portal.”

In response to the Court’s direction, the National Park Service is preparing the *Merced Wild and Scenic River Revised Comprehensive Management Plan and Supplemental Environmental Impact Statement* (hereafter referred to as the Revised Merced River Plan/SEIS). This revised plan will amend the existing Merced River Plan to address the two deficiencies identified by the Court and to specify how it amends the *General Management Plan*. This Revised Merced River Plan does not replace the Merced River Plan adopted in 2000, but corrects the deficiencies in its management elements.

¹ Friends of Yosemite Valley v. Norton, 348 F.3d 789, 803 9th Cir. 2003.

What is the purpose of this Supplemental Environmental Impact Statement?

The purpose of the Revised Merced River Plan/SEIS is to produce a revised comprehensive management plan that:

- Protects and enhances the Merced Wild and Scenic River's Outstandingly Remarkable Values and free-flowing condition by adopting a user capacity program that is consistent with the Wild and Scenic Rivers Act and the 1982 Secretarial Guidelines.²
- Develops a user capacity program that provides for a diversity of appropriate recreational opportunities and visitor freedom, so long as this does not conflict with the National Park Service mission of protecting natural and cultural resources and the quality of the visitor experience.
- Re-examines the river area boundary based on the Outstandingly Remarkable Values at the El Portal Administrative Site pursuant to the Wild and Scenic Rivers Act's protection and enhancement mandate.
- Makes appropriate revisions to the park's 1980 *General Management Plan* (as amended), as directed by the 1987 legislation designating the river Wild and Scenic.

User Capacity Management and the VERP Framework

The Ninth Circuit Court of Appeals directed the National Park Service to revise the Merced River Plan to address user capacity and to specifically set limits on use that are consistent with protection and enhancement of the Outstandingly Remarkable Values of the Merced River. The 2000 Merced River Plan identified the Visitor Experience and Resource Protection (VERP) framework as the National Park Service's preferred method for addressing user capacity within the Merced Wild and Scenic River corridor. The Merced River Plan did not, however, identify specific indicators and standards³, and stated that it would take approximately five years for a VERP program to be fully implemented. Thus, the Court directed the park to revise the Merced River Plan to address what it called the "specific measurable limits on use" that would be in place to address user capacity until the VERP program is fully implemented.

User capacity can be addressed in a number of ways, as noted in many academic studies and by the Court of Appeals in its October 2003 ruling. The Court specifically noted that user capacity can be addressed by setting limits in a number of ways "*...whether by setting limits on the specific number of visitors, by monitoring and maintaining environmental and experiential criteria under the VERP framework, or through some other method,*" and that the requirements to address user capacity within a Wild and Scenic River corridor "*...do not ... require that the administering agency advance one particular approach to visitor capacity in all circumstances (e.g., a head count of all entrants to Yosemite).*" In addition, direction on use limits is also provided in the 1982 Secretarial

² The 1982 Wild and Scenic Rivers Guidelines were prepared jointly by the Secretary of the Interior (National Park Service) and Secretary of Agriculture (U.S. Forest Service). These guidelines present the overall process for determining "Eligibility, Classification and Management of Wild and Scenic Rivers" on National Park Service and U.S. Forest Service lands. (See www.nps.gov/rivers/guidelines/html [Federal Register, Vol. 47, No. 173, September 7, 1982]).

³ Indicators are defined as specific, measurable physical, ecological, or social variables that reflect the overall condition of a zone. Standards are defined as the *minimum* acceptable condition for each indicator variable.

Guidelines, which states: “Public use will be regulated and distributed where necessary to protect and enhance (by allowing natural recovery where resources have been damaged) the resource values of the river area. Public use may be controlled by limiting access to the river, by issuing permits, or by other means available to the managing agency through its general statutory authorities.”

What are the methods for managing user capacity?

In a park as vast and diverse as Yosemite, one approach would not be sufficient to address the complex range of park uses and use impacts. The National Park Service investigated how other agencies establish user capacity, reviewed academic studies on managing user capacity on public lands, and met with a number of nationally-recognized experts to evaluate a variety of user capacity methods and specific limits. It was determined that the alternatives presented in this revised plan should include a range of approaches for addressing user capacity, including methods that are currently in use in the park and additional measures that could be added to the current User Capacity Management Program.

In general, the various methods for addressing user capacity in the park are classified into the five groups described below. (This organization establishes the overall outline of the user capacity discussion throughout Chapters II and III.)

1) Limits on Environmental/Experiential Conditions

Instead of tracking and controlling user numbers, the focus of this method is on monitoring and managing the condition of resources and the quality of the visitor experience. The use of limits on environmental and experiential conditions includes establishing measurable standards for resources and for the visitor experience, and then taking management actions to maintain these standards, including potential limits on use. For example, if an area contains sensitive wetlands or riverbanks, the conditions of these resources are monitored to ensure that the types and levels of use in the area are not adversely affecting the resources. If resource conditions are deteriorating, park managers takes steps to change use. These changes could involve reducing use levels, redirecting use away from sensitive areas, or changing the type or timing of use. So, if a riverbank is eroding because many people use the area to launch rafts, management might limit the number of people who can use that area or might close the area to raft launching and direct these people to an area that is better suited to this use.

Conditions that affect visitor experience include crowding and traffic congestion; visitor surveys in Yosemite National Park indicate that these are the two factors that most adversely affect visitors’ recreation experience (Manning et al. 1999a,b, ORCA 2000). By setting traffic congestion as a standard for visitor experience, the congestion can serve as a measure to indicate whether or not conditions are acceptable. When traffic conditions deteriorate, park managers would need to reduce the number of vehicles allowed in an area to make sure that traffic congestion limits are not exceeded—that is, that traffic is not so congested it exceeds the acceptable limit. This method of managing user capacity is the basis for the VERP framework originally adopted as part of the 2000 Merced River Plan.

2) Limits on the Numbers of People

Limits on the number of users can be implemented in several ways. For example, limits can be placed on the number of people in the river corridor, in each river segment, or in each management zone. Similarly, these limits can be expressed as the number of people in 1 year, the

number of people over 24 hours, or the number of people at any one time. Other limits on the number of people can be specific to certain activities, such as the number of rafters allowed in one day, the number of hikers allowed in a wilderness group, or the number of bicyclists allowed to ride as one group.

3) Limits on Facilities

Facility limits include restrictions on the number of overnight accommodations, the number of parking spaces, the number of bus parking spots, within the river corridor. When facility limits are implemented, the management focus is not just on the exact number of people in the area.

Hypothetically, given an area with a specific number of parking spaces, the number of people could be much lower on a day when there was an average of two people per car versus days when the average is four people per car. In practice, Yosemite has derived an average number of people per car (as well as the average number of people per lodging room and campsite), and these averages are based on park visitation data collected over the years. Although the exact number of people is not being directly controlled through facility limits, the range in the number is limited because most people access the park by car and cannot access a developed area if they cannot find a place to park their car. Thus, use is limited by managing the capacity of various facilities.

4) Limits on Specific Activities

Limits on specific activities manage and regulate how many people can do a particular activity in a certain area, or during a certain time period. For example, there are currently limits on the conditions under which rafts can be used on the river, limits on the hours during which rafting can occur, and limits on where rafting, bicycling, fishing or other activities can occur.

5) Other Related User Capacity Methods

In addition to user capacity methods that can be expressed as specific limits, as described previously, other types of methods can affect user capacity. These include federal laws and regulations, as well as existing resource protection programs in Yosemite.

How does Yosemite National Park currently manage user capacity?

The 2000 Merced River Plan identified the VERP framework as the National Park Service's preferred method for addressing user capacity, and stated that it would take approximately 5 years for a VERP program to be fully implemented. However for decades, a number of methods have been used to manage user capacity in Yosemite National Park. These include overnight visitor limits in wilderness, group size limits on trails, facility and utility capacity limits, seasonal and area restrictions on uses such as rafting, and other limits on use. Although all of these measures address user capacity and the potential for user impacts on park resources, the Revised Merced River Plan/SEIS considers alternatives that add new and more comprehensive measures to the ongoing User Capacity Management Program at Yosemite National Park.

In 2004, the National Park Service published a summary of its user capacity program—the *User Capacity Management Program for the Merced Wild and Scenic River Corridor* (NPS 2004a). This document summarizes the various components used by park managers to address user capacity and resource impacts from visitor use. The components of the existing User Capacity Management Program are summarized in table ES-1 and described briefly on the following pages. These components are common to all action alternatives.

Table ES-1
Existing User Capacity Management Program Overview

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

- Provides daily limits on overnight visitors in wilderness

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Trail..... 30
- Vehicle Access Limits in Yosemite Valley based on traffic/parking conditions
- Vehicle Access Limits in Wawona based on parking capacity

General Management Plan Visitor Capacity Goals (per 24-hour period)^a

- Yosemite Valley 18,241
- Cascades/Arch Rock 360
- El Portal 765
- Wawona 3,331

LIMITS ON FACILITIES

- Existing overnight capacities
- Existing parking capacities
- Existing utility system capacities

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles Footbridge downstream to Foresta Road Bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed through provisions of Special Use Permits

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System^b

- Wilderness-wide inventory and monitoring studies focused on impacts to campsites and trails in wilderness

Visitor Experience and Resource Protection

- Desired Conditions/Management Zones. Although the 2000 Merced River Plan adopted the VERP framework for user capacity management, the final steps in the VERP process were not completed, such as the development of specific indicators and standards. The desired conditions were identified through the management zoning adopted in the 2000 Merced River Plan.

OTHER RELATED USER CAPACITY METHODS

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies 2001 (Chapter 8, Use of Parks)

^a Although the *General Management Plan* identified visitor capacities for developed areas, it called for management of these capacities through limits and management of facility capacity, not through entrance station limits.

^b The Wilderness Impacts Monitoring System began implementation in the 1970s.

1) Limits Based on Environmental and Experiential Conditions

Yosemite National Park's Wilderness Management Program has established limits based on environmental and experiential conditions. The Wilderness Impacts Monitoring System (WIMS) was established in the 1970s. Under WIMS, the National Park Service conducts wilderness-wide inventory and monitoring studies focused on campsite and trail impacts. Data gathered from these studies are used to determine when, where, and why significant change occurs, and to provide a system for tracking those changes. The data provides wilderness managers a system to help understand the relationship of natural conditions, visitor experience, and wilderness resource management. WIMS is also used to track the effectiveness of the Wilderness Trailhead Quota System in preventing unacceptable human-caused changes in wilderness areas. Information from WIMS has been used over the years to adjust the trailhead quotas as needed to protect wilderness resources.

Similar to WIMS, the VERP process is also a way of basing limits on environmental and experiential conditions. Its framework is a tool developed by the National Park Service to address user capacity and ensure the protection of natural and cultural resources and the visitor experience (Hof and Lime 1997). Under the VERP framework, user capacity is defined as “the types and levels of visitor use that can be accommodated while sustaining the desired resource and social conditions that complement the purpose of the park units and their management objectives” (NPS 1997q). VERP is an ongoing process that:

- Prescribes what are known as *desired conditions*⁴ for resources and visitor experiences for a given area (not prescribing a maximum number of visitors)
- Selects specific indicators (i.e., qualities that reflect the overall condition of park resources and visitor experience)
- Sets quantifiable standards against which the indicator is measured
- Monitors conditions on-the-ground
- Triggers management actions as required when standards are not being met
- Continually improves and adjusts the program based on the knowledge gained over time
- Regularly reports results to the public

These components provide a sound process for taking informed actions to manage all of the elements of visitor use that may influence desired conditions and the Outstandingly Remarkable Values of the Merced Wild and Scenic River.

VERP is a decision-making *framework* but does not diminish park managers' role in decision making. In fact, managers must make crucial decisions to determine desired conditions, choose appropriate management actions, and assess occasional overlap between protecting park resources and providing for visitor experience opportunities. The VERP framework is used as a form of adaptive management.⁵ Where uncertainty exists about impacts associated with visitor use, knowledge and understanding of visitor use issues improves and evolves over time, and management actions are adapted accordingly (Haas 2002). Because VERP is a science-based

⁴ “Desired conditions” define the qualities and characteristics that are most desired for cultural and natural resources, as well as the visitor experience.

⁵ Adaptive management is a process that allows the development of a plan when some degree of biological and socioeconomic uncertainty exists. It requires a continual learning process, a reiterative evaluation of goals and approaches, and redirection based on an increased information base and changing public expectations (Baskerville 1985).

program, continual hypothesis testing, data collection, and data analysis will result in refinement of indicators and standards to better inform park managers' decisions.

The VERP framework is based on the understanding that there are many aspects of visitor use that must be managed to protect desired conditions, including the number of people in an area, their behaviors, when use occurs (timing), and how much use occurs within a specific area (distribution). To stay within set standards and protect a given area, all aspects of visitor use must be managed.

In summary, the VERP framework establishes quantitative measures of visitor capacity by establishing specific indicators of use and setting measurable limits (standards) that allow for existing conditions to be compared to desired conditions. This process ultimately results in specific information that park managers can use to address visitor use and protect resources and visitor experience.



PROTECT AND ENHANCE
Boardwalks, like this one through Sentinel Meadow, enable visitors to access wetlands without trampling sensitive plants and wildlife habitat. (NPS photo)

2) Limits on Numbers of People

Yosemite National Park manages the number of people in wilderness areas through the Wilderness Trailhead Quota System. This system allows for a total of 1,280 overnight visitors to enter the wilderness each day and is described further in Chapter II.

The Superintendent's Compendium⁶ (NPS 1999b) establishes specific regulations and policies for Yosemite National Park, including specific measurable limits on use. The Superintendent has the authority to manage visitor use to protect the park's natural and cultural resources, and the Compendium documents the reasoning behind the use limits established under this authority (e.g., public use limits, rafting and fishing restrictions, etc.). The Superintendent's Compendium contains several limits on numbers of people, including group size limits for hiking on or off trail, for bicycling, and for stock use. Other limits are related to traffic congestion and parking availability in developed areas of the park.

The 1980 *General Management Plan* also identified maximum daily visitor limits for major developed areas of the park. This plan noted that these capacities would be managed indirectly through limits on the facilities, rather than managed as head counts or entrance gate limits for various areas of the park (NPS 1980a). The daily visitor limits outlined in the *General Management Plan* have been used as the planning goals for all subsequent planning and facility design efforts. Throughout the rest of this Revised Merced River Plan/SEIS, the visitor limits adopted in the *General Management Plan* are referred to as the planning goals for user capacity in developed areas.

⁶ The Superintendent's Compendium (NPS 1999b) establishes specific regulations and policies for Yosemite National Park, including specific measurable limits on use. It is the written determination that explains the reasoning behind the Superintendent's use of delegated authority in matters relating to visitor use.

3) Limits on Facilities

Facility capacities are also used as specific measurable limits on park use. The amounts and types of visitor use in the Merced River corridor are determined, in part, by the available facilities. Overnight capacity is largely controlled by the number of campsites and lodging units, along with the numbers of parking spaces provided for people using the Valley and Wawona to reach backcountry camping areas. Day visitor use is limited by the numbers of parking spaces and the capacity of the road system in the developed areas of the river corridor. In addition to limits set by the capacity of the park's facilities, use within the Merced River corridor is also limited by the capacity of the park's utility systems, namely the ability to collect and treat wastewater.

As discussed above, the *General Management Plan* called for the daily visitor levels in developed areas of the park to be managed through limits on the facilities provided (as described above under Limits on Numbers of People).

4) Limits on Specific Activities

As described previously, the Superintendent's Compendium establishes specific regulations and policies for park management, including specific measurable limits on use. Specific limits have been identified for many recreational uses within the park, including hiking, bicycling, rafting, and fishing. Limits regulate the timing and locations of use, as well as other conditions that limit use (such as seasonal closures or water levels, etc.).

5) Other Related User Capacity Methods

In addition to the user capacity measures that set limits, as described previously, there are other types of measures that can affect user capacity. Numerous federal laws require the National Park Service to protect resources from use-related impacts, even if they do not require the specific identification of a user capacity. The National Park Service has several ongoing natural and cultural resource protection and enhancement programs throughout the park to comply with these federal laws and National Park Service directives. In addition, measures such as management zoning⁷ provide guidance for user capacity by describing the desired types and levels of use and development for various areas within the park and within the Merced River corridor.



UNDERSTANDING AND ENJOYMENT Educational signs help promote awareness of park resources. Such signs can also help direct foot traffic around or away from restoration areas. (NPS photo)

⁷ Management zoning is a technique used by the National Park Service to classify park areas and prescribe future desired resource conditions, visitor activities, and facilities

What are the Proposed Alternatives?

The Revised Merced River Plan/SEIS presents and analyzes four sets of proposals, referred to as *alternatives*. The No Action Alternative represents park management direction and conditions as they existed in the Merced River corridor in October 2003 when the Ninth Circuit Court of Appeals found that the National Park Service must further address user capacity for the Merced River corridor and reassess the river boundary in the El Portal segment. Three action alternatives represent a range of approaches for implementing an expanded user capacity program within the Merced River corridor. The action alternatives also propose a range of river boundary configurations and management zoning prescriptions for the river segment within the El Portal Administrative Site. Each of the three action alternatives addresses the two deficiencies in the existing Merced River Plan as identified by the Court. Table III-11 in Chapter III of this Final Revised Merced River Plan/SEIS presents a comparison of the key features of each alternative.

Alternative 1: No Action

The No Action Alternative represents a baseline against which to compare the action alternatives and represents conditions as of the October 2003 ruling by the Ninth Circuit Court of Appeals. Under this alternative, the management elements of the Merced River Plan would continue to be implemented within the Merced River corridor. The existing boundaries, classifications, Outstandingly Remarkable Values, management zoning prescriptions, River Protection Overlay, and Section 7 determination process described in the Merced River Plan would be applied and govern management of the park within the corridor. Alternative 1 would not include implementation of VERP, since the indicators and standards for the park's VERP program had not been developed at the time of the Court's ruling. This alternative would include the narrow boundary for the El Portal segment adopted in the Merced River Plan.

User capacity for the river corridor under the No Action Alternative would be managed through the use of the existing methods described earlier, including limits on people (through the Wilderness Trailhead Quota System, etc.), limits on facilities (overnight accommodations, day use parking, etc.), limits on specific activities (as documented in the Superintendent's Compendium), and limits on environmental and experiential conditions (such as WIMS, desired conditions established through management zoning). The user capacity component of this alternative is summarized in table ES-1.

Alternative 1 would include implementation of the narrow boundary for the El Portal segment that was described in the selected alternative of the Merced River Plan/FEIS. This boundary is described as the 100-year floodplain or the River Protection Overlay, whichever is greater, along with adjacent wetlands. The total acreage included within the El Portal segment boundary under this alternative is 193 acres. The zoning for this alternative includes primarily Park Operations and Administration (3C) zoning within existing developed areas and Day Use (2C) zoning primarily within undeveloped areas adjacent to the river. Of the 193 acres within the boundary, 137 acres are zoned Day Use (2C) and 56 acres are zoned for Park Operations and Administration (3C). See figure III-1 in Chapter III for the existing El Portal river boundary and management zoning for this alternative.



The Silver Apron cascade, between Vernal and Nevada Falls. (NPS photo by Michael Floyd)

The Merced River Plan is a programmatic document that guides the management of activities in the Merced Wild and Scenic River corridor.

Alternative 2: VERP Program with Interim Limits (Preferred)

Alternative 2—the National Park Service’s Preferred Alternative—would manage and protect the Outstandingly Remarkable Values within the Merced River corridor through the following:

- Implementation of Yosemite’s VERP program (as described in Chapter II)
- Interim limits (approximately 5 years) on park facilities and selected specific activities for each non-wilderness segment of the river
- Continued implementation of existing methods and restrictions on visitor use described for the No Action Alternative (such as Wilderness Trailhead Quota System and limits outlined in the Superintendent’s Compendium)

These methods would be added to the existing User Capacity Management Program as described under Alternative 1. Alternative 2 would result in amending the visitor capacity goals adopted in the *General Management Plan*. The user capacity limits included within this alternative are summarized in table ES-2 and ES-3.

Under Alternative 2, park managers would set and adopt specific limits on overnight accommodations, day-visitor parking, bus parking, the number of buses entering Yosemite Valley and Wawona each day, and corridorwide employee housing for the non-wilderness segments of the river (see tables ES-2 and ES-3). The interim limits would be in place for approximately 5 years, while the VERP indicators and standards continue to be field-tested and improved. At the end of the interim period, the National Park Service would evaluate the VERP program’s effectiveness in providing park managers with sufficient information to manage visitor use in a manner that protects and enhances the river’s Outstandingly Remarkable Values. A report would be presented to the public addressing whether the VERP program has provided the required guidance on visitor use levels and whether facility and specific activity limits should be continued, modified, or eliminated. If the VERP program is providing sufficient data, interim limits would most likely be eliminated. However, if the VERP program is not providing sufficient data, interim limits would continue until VERP is functioning as intended and revisions to the interim limits could be considered. If changes proposed at this time were to result in substantially different environmental consequences than were identified in this document, an appropriate level of National Environmental Policy Act (NEPA) compliance would be completed.

Table ES-2
Alternative 2: User Capacity Management Program Overview

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Trail..... 30
- Vehicle Access Limits in Yosemite Valley based on traffic/parking conditions
- Vehicle Access Limits in Wawona based on parking capacity

LIMITS ON FACILITIES

- Existing utility system capacities
- New facility capacities for each non-wilderness segment (**SEE TABLE ES-3 ON NEXT PAGE**)

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing Prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles Footbridge downstream to Foresta Road Bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed through provisions of Special Use Permits

New total daily bus limit = 92 buses in Yosemite Valley; 28 buses in Wawona

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System

Visitor Experience and Resource Protection

- Desired Conditions/Management Zones
- Specific indicators and standards
- Monitoring
- Enforcement of standards through management actions
- Reporting to the public

OTHER RELATED USER CAPACITY METHODS

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies 2001 (Chapter 8, Use of Parks)

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

Table ES-3
Alternative 2: Interim Limits on Facilities and Specific Activities

Segment Name	Interim Limits
ENTIRE CORRIDOR	
Corridorwide	Interim Limit: 1,969 employee beds
MAIN STEM	
Wilderness	Limited to existing facilities.
Yosemite Valley	Day-visitor parking limited to existing level Interim Limit: 2,197 spaces
	Commercial/noncommercial buses limited/managed to existing parking Interim Limit: 38 bus parking spaces used to manage 92 buses per day
	Overnight lodging accommodations limited to existing level Interim Limit: 1,262 units ^a
	Camping accommodations may increase Interim Limit: 638 sites
Gorge	Day-visitor parking limited to existing levels Interim Limit: 244 spaces
	Commercial/noncommercial buses limited/managed to existing parking Interim Limit: 2 spaces
El Portal	Day-visitor parking limited to existing level Interim Limit: 360 spaces
SOUTH FORK	
Wilderness	Limited to existing facilities.
Wawona (includes below Wawona and impoundment)	Day-visitor parking limited to existing level Interim Limit: 213 spaces
	Commercial/noncommercial buses limited/managed to existing parking Interim Limit: 14 bus parking spaces used to manage 28 buses per day
	Overnight lodging accommodations limited to existing level Interim Limit: 104 units
	Camping accommodations limited to existing level Interim Limit: 99 sites

^a Although there will be some transition period between use of newly constructed sites and sites being taken out of the inventory, at no time will the total number of rooms being occupied exceed 1,262 units.

For segments of the Merced Wild and Scenic River designated as Wild, which includes 51 of the 81 miles within the river corridor, Alternative 2 would continue the limits on the number of people through the existing Wilderness Trailhead Quota System. Other existing elements of the Wilderness Management Program that limit changes to environmental and experiential conditions (such as the WIMS), limit group sizes, and otherwise restrict specific activities (as documented in the Superintendent's Compendium and the *Yosemite Wilderness Management Plan*) (NPS 1989b) would also continue. In addition to these existing measures, this alternative would implement the VERP program, including establishing specific indicators and standards, monitoring indicators, and implementing appropriate management actions.

For the Recreational and Scenic segments of the river corridor (30 of the 81 miles of the river corridor), Alternative 2 would implement the VERP program and set interim limits on visitor facilities and specific activities. These interim limits would remain in place for approximately 5 years or until park managers could determine whether the VERP program is providing the required guidance on appropriate visitor use within the river corridor. If the VERP program is providing sufficient data, interim limits would most likely be eliminated. However, if the VERP program is not providing sufficient data, interim limits would continue until VERP is functioning as intended and revisions to the interim limits could be considered. See table ES-3 for a list of interim limits.

The VERP program would define specific measurable indicators and standards, establish a monitoring program, and implement appropriate management actions to address any standards that are not met. The standards, which would be set at levels designed to protect and enhance the river's Outstandingly Remarkable Values, would provide a quantifiable and documented trigger point for management actions. Park managers would take action when needed either to keep conditions within standards or to bring conditions back into compliance with the standards. The documentation of these standards, as well as regular park reports to the public on the VERP program, would provide a clear commitment from park managers to take actions based on the adopted standards. For a list of potential management actions and the VERP standards and indicators, see tables II-3 and II-5, respectively, in Chapter II.

In response to public comment, Alternative 2 proposes a revised boundary for the El Portal segment of the Merced Wild and Scenic River. The revised boundary has been extended to a quarter-mile on each side of the river, which would include areas that do not contain Outstandingly Remarkable Values. This boundary for the El Portal segment would be similar to the boundaries for all other river segments within Yosemite National Park. The total acreage included within the El Portal segment of the river corridor under Alternative 2 would be 853 acres.

The zoning for the El Portal segment under Alternative 2 consists of Park Operations and Administration (3C) zoning for most areas north of the river and for existing developed areas south of the river. This alternative proposes Day Use (2C) zoning throughout the length of the River Protection Overlay for areas north of the river that may be unsuitable for intensive development due to resource values or other factors and for undeveloped areas south of the river and west of the Highway 140 bridge. South of the river and east of the Highway 140 bridge, Alternative 2 proposes Open Space (2A) zoning. This alternative provides for park administrative uses on 411 acres of the 853 acres within the El Portal segment, and day use facilities and uses would be allowed on 192 acres. The area zoned as Open Space, which could receive only incidental or casual use, would cover 250 acres south of the river. See figure III-2 in Chapter III for the proposed El Portal river boundary and management zoning for Alternative 2.

Alternative 3: VERP Program with Segment Limits

To manage visitor use and protect the Outstandingly Remarkable Values within the river corridor, Alternative 3 would consist of:

- Implementation of the VERP program (as presented in Chapter II)
- A daily limit on the number of visitors within each segment of the river corridor (referred to as *daily segment limits*)
- A daily limit on the number of day hikers on the trail to Half Dome
- An annual limit on visitors for the entire river corridor of 5.32 million (referred to as an *annual corridorwide visitation limit*)
- A limit on the number of employees commuting into the corridor
- A limit on facilities (employee housing)
- Continued implementation of existing methods and restrictions on visitor use described for the No Action Alternative (such as Wilderness Trailhead Quota System and limits outlined in the Superintendent's Compendium)

These methods would be added to the existing User Capacity Management Program as described under Alternative 1. Alternative 3 would result in amending the visitor capacity goals adopted in the *General Management Plan*. The user capacity limits included within this alternative are summarized in table ES-4.

Alternative 3 would manage user capacity in the Merced River corridor in part by limiting the number of people in each segment of the river corridor. Under Alternative 3, park managers would establish a maximum daily visitor limit for each segment of the river corridor, a maximum daily limit for day visitors entering the wilderness on the trail to Half Dome, employee limits for the entire river corridor, and an annual corridorwide visitation limit of 5.32 million visitors per year for the river corridor.

If information gained through the VERP program led to additional restrictions on specific uses or visitor levels in certain areas, the maximum number of visitors could possibly be reduced to below the specified daily segment and annual corridorwide visitation limits. Likewise, if the VERP program provided park managers with information that Outstandingly Remarkable Values were being enhanced and protected through management actions, the maximum number of visitors could possibly be increased above the specified daily segment and annual corridorwide visitation limits. If park managers proposed to raise or lower the segment and/or annual corridorwide visitation limits in the future, the proposal must comply with NEPA and be protective of Outstandingly Remarkable Values. Additional NEPA analysis would be required if the environmental effects of the increased or decreased limits could be substantially different from those documented in this Revised Merced River Plan/SEIS.

Under Alternative 3, the boundary for the El Portal segment of the river corridor would be a quarter-mile wide on each side of the river and would encompass 853 acres. The extended boundary would be similar to the boundaries in other river segments within Yosemite National Park. This boundary would include portions of the El Portal Administrative Site that do not contain Outstandingly Remarkable Values but are located within the quarter-mile boundary, thus restricting the potential for future administrative development as compared to the narrower boundary in Alternative 1.

The Alternative 3 zoning proposed for the El Portal segment would consist of Park Operations and Administration (3C) zoning north of the river and for existing developed areas south of the river. Some specific areas of known cultural value north of the river would be protected and zoned for Day Use (2C), as would the area east of Crane Creek. South of the river, the majority of the Sand Pit would be zoned Day Use (2C), except for an access route to the Murchison structures. The remaining undeveloped areas south of the river would be protected and zoned for Discovery (2B). Alternative 3 provides for park administrative uses (3C) on 399 of the 853 acres within the corridor. Day-use facilities and uses (2C) would be allowed on 131 acres, and 323 acres would be zoned Discovery (2B) for low-intensity use. It should be noted that not all areas zoned for development would be developed. In addition, any development proposed would also have to be consistent with all of the other elements and criteria adopted in the Merced River Plan. Figure III-3 in Chapter III shows the proposed El Portal river boundary and management zoning for Alternative 3.

Table ES-4
Alternative 3: User Capacity Management Program Overview

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Trail..... 30
- Vehicle Access Limits in Yosemite Valley based on traffic/parking conditions
- Vehicle Access Limits in Wawona based on parking capacity

Additional Daily Limits on People by Segment

- Yosemite Valley: Day visitors: 16,680; Overnight visitors: 7,699; Segment maximum total: 24,379
- Gorge: Day visitors: 2,958; Overnight visitors: 0; Segment maximum total: 2,958
- El Portal: Day visitors: 1,144; Overnight visitors: 0; Segment maximum total: 1,144
- Wawona: Day visitors: 2,839; Overnight visitors: 897; Segment maximum total: 3,736

Additional Daily Limit on Day Hikers to Half Dome = 800 visitors

Additional Annual Corridorwide Visitation Limit = 5.32 million visitors

LIMITS ON FACILITIES

- Existing overnight capacities
- Existing parking capacities
- Existing utility system capacities

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles Footbridge downstream to Foresta Road Bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed through provisions of Special Use Permits

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System

Visitor Experience and Resource Protection

- Desired Conditions/Management Zones
- Specific indicators and standards
- Monitoring
- Enforcement of standards through management actions
- Reporting to the public

OTHER RELATED USER CAPACITY METHODS

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies 2001 (Chapter 8, Use of Parks)

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

Alternative 4: VERP Program with Management Zone Limits

To manage visitor use and protect the Outstandingly Remarkable Values within the river corridor, Alternative 4 would consist of:

- Implementation of the VERP program (as presented in Chapter II)
- Established limits on the number of people at one time (PAOT) within each management zone of the river corridor, except for the Wilderness zones
- An annual corridorwide visitation limit of 3.27 million
- Continued implementation of existing methods and restrictions on visitor use described for the No Action Alternative (such as Wilderness Trailhead Quota System and limits outlined in the Superintendent's Compendium)

These methods would be added to the existing User Capacity Management Program as described under Alternative 1. The user capacity limits included within this alternative are summarized in table ES-5.

The limit on the number of people at one time (PAOT) in each management zone (except in Wilderness zones) would be adopted as a range to reflect the different levels of use allowable within each zoning classification. For example, the Happy Isles Fen in Yosemite Valley is zoned as Open Space (2A), as is the area south of the river in the Merced River gorge. Since the Happy Isles Fen is located in the east Valley, has a boardwalk providing access to it, and has interpretive exhibits that are designed to educate visitors, this area would be managed at the high end of the capacity range for zone 2A. The area south of the river in the Gorge segment has little access and no developed visitor facilities, so it would be managed at the low end of the capacity range for zone 2A.

Implementation of the VERP program could further reduce visitor levels in specific areas if necessary to protect and enhance the Outstandingly Remarkable Values. Under Alternative 4, visitor numbers could be reduced to levels below the high range of the capacity factors for management zone limits and the annual corridorwide visitation limit. If all standards were being met and VERP data indicated that the Outstandingly Remarkable Values were being protected and enhanced, park managers could propose increasing the management zone limits and/or the annual corridorwide visitation limit. If the National Park Service proposed to raise either of these limits in the future, the proposal would be required to comply with NEPA. Additional NEPA analysis would be required if the environmental effects of the changes were substantially different from those documented in this Revised Merced River Plan/SEIS.

Alternative 4 provides for a boundary that closely delineates the Outstandingly Remarkable Values along the El Portal segment of the river. The Ninth Circuit Court of Appeals directed the National Park Service to reassess the river boundary in El Portal based on the location of Outstandingly Remarkable Values. This alternative would draw the boundary according to where Outstandingly Remarkable Values were identified on the ground and not include areas of the El Portal Administrative Site that do not contain Outstandingly Remarkable Values. This boundary would result in a total of 813 acres within the river corridor at El Portal.

Table ES-5
Alternative 4: User Capacity Management Program Overview

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Trail..... 30
- Vehicle Access Limits in Yosemite Valley based on traffic/parking conditions
- Vehicle Access Limits in Wawona based on parking capacity

Additional Daily Limits on People at One Time by Management Zone

- 1A – Trailhead Quota System
- 1B – Trailhead Quota System
- 1C – Trailhead Quota System
- 1D – Trailhead Quota System
- 2A – 0.83 to 2.5 PAOT per acre^a
- 2A+ – 0.01 PAOT per acre
- 2B – 0.83 to 2.5 PAOT
- 2C – 5 to 10 PAOT
- 2D – 20 to 100 PPV^b
- 3A – 15 to 20 PAOT per acre
- 3B – 40 to 50 PAOT per acre
- 3C – 25 to 50 PAOT per acre

Additional Annual Corridorwide Visitation Limit = 3.27 million visitors

LIMITS ON FACILITIES

- Existing overnight capacities
- Existing parking capacities
- Existing utility system capacities

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing Prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles Footbridge downstream to Foresta Road Bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed through provisions of Special Use Permit

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System

Visitor Experience and Resource Protection

- Desired Conditions/Management Zones
- Specific indicators and standards
- Monitoring
- Enforcement of standards through management actions
- Reporting to the public

OTHER RELATED USER CAPACITY METHODS

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies 2001 (Chapter 8, Use of Parks)

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

- a PAOT is a People At One Time is a social density factor modeled after the Bureau of Reclamation's *Water Recreation Opportunity Spectrum Guidebook's* the spectrum of recreational setting classifications, comparable to Merced River Plan management zoning.
- b PPV is People Per View modeled after the *Carrying Capacity Research for Yosemite Valley: Phase I Study* done in 1999 on the Yosemite Fall and Vernal Fall trails Attraction (2D) zones).

The management zoning proposed under Alternative 4 would protect and enhance the Outstandingly Remarkable Values by including more restrictive zoning for much of the area south of the river. The area north of the river would be zoned Discovery (2B), except for existing developed areas at Railroad Flat, Rancheria Flat, and Old El Portal. These existing developed areas and the Middle Road area would be zoned for Park Operations and Administration (3C). South of the river, Trailer Village/Abbieville would be zoned Park Operations and Administration (3C); the area to the west and south of Abbieville would be zoned Discovery (2B); and the area to the east of the levee would be zoned Open Space (2A). The 2A Open Space zoning protects Outstandingly Remarkable Values by calling for very low levels of use and strict limitations on facilities within this zone. This zoning proposal is the most restrictive of all proposed alternatives of development opportunities for park administrative facilities. Under this zoning proposal, Alternative 4 provides for 132 acres for Park Operations and Administration (3C), 277 acres of Discovery (2B), and 404 acres of Open Space (2A). The El Portal boundary and zoning for Alternative 4 is shown in figure III-4 in Chapter III.

Environmental Analysis

Chapters IV and V of this document comprise the environmental analysis for this Final Revised Merced River Plan/SEIS, which fulfills the requirements of the NEPA. Chapter IV, Affected Environment, describes the setting and conditions of the areas affected by the alternatives described in Chapter III. Chapter V, Environmental Consequences, analyzes the environmental effects associated with each of the four alternatives. Table III-12 in Chapter III presents a summary comparison of the environmental consequences for each alternative.

Environmentally Preferable Alternative

The Council on Environmental Quality's (CEQ) National Environmental Policy Act (NEPA) regulations and National Park Service NEPA guidelines require that "the alternative or alternatives which were considered to be environmentally preferable" be identified (CEQ Regulations, Section 1505.2). Environmentally preferable is defined as "the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources" (CEQ 1981).

Section 101 of NEPA states that:

"It is the continuing responsibility of the Federal Government to ... (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences; (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice; (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

This Final Revised Merced River Plan/SEIS evaluates alternatives that address user capacity in the river corridor and re-evaluates the corridor boundary in El Portal based on the location of the Outstandingly Remarkable Values. In weighing the benefits of the various alternatives, the user capacity element was given more weight because the user capacity program will be applied to protect and enhance the Outstandingly Remarkable Values throughout the entire 81 miles of the river corridor on National Park Service lands. The El Portal component of the alternatives will affect only the El Portal segment of the Merced River. Although the user capacity elements of each alternative provide for similar levels of environmental protection, Alternative 2 would better meet the above criteria. Alternative 2 meets resource protection goals while also allowing for other beneficial uses and limiting adverse effects on visitor diversity and choice when not needed to meet resource protection objectives. The action alternatives' proposals for the El Portal boundary all meet the requirements of the Wild and Scenic Rivers Act to protect and enhance the Outstandingly Remarkable Values of the Merced River. However, Alternative 2 provides for a quarter-mile boundary on each side of the river which is the maximum allowable boundary under the Wild and Scenic Rivers Act. This boundary would protect and enhance the full extent of the Outstandingly Remarkable Values within the boundary, in addition to those areas in El Portal that do not contain Outstandingly Remarkable Values. Further, Alternative 2 would protect the quality of the visitor experience and the recreation Outstandingly Remarkable Values. Therefore, upon full consideration of the elements of Section 101 of NEPA, Alternative 2 represents the environmentally preferable alternative for the Revised Merced River Plan/SEIS.

Consultation and Coordination Process

The National Park Service published a Notice of Intent to prepare an environmental impact statement on the Revised Merced River Plan in the *Federal Register* on July 27, 2004. A series of public scoping meetings were held in mid-August in Oakland, Mariposa, Yosemite Valley, and El Portal, California. In response to public comment, the public scoping period was extended by 2 weeks and closed on September 10, 2004. All public comment letters, as well as a scoping report, are available for viewing on Yosemite National Park's web site (www.nps.gov/yose/planning/mrp/revision).

The *Draft Merced Wild and Scenic River Revised Comprehensive Management Plan and Supplemental Environmental Impact Statement* was released for public review in January 2005. The Notice of Availability was published in the *Federal Register* on January 14, 2005, and the public review period continued through March 22, 2005. A series of 11 public meetings were held throughout California in February and March 2005 to discuss the draft document. In addition to public testimony received at the public meetings, 147 comment letters were received during the public review period. The public comments received and transcripts from the public hearings are available for viewing on the park web site listed above. The analysis of public comments and agency responses to concerns is included in Appendix F, Summary of Public Comments and Responses.

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