

Visitor Experience/Recreation

Affected Environment

Visitors to natural environments may be aware of resource conditions along trails and at recreation sites; however it is somewhat difficult to measuring human perceptions of beneficial or adverse impacts in a National Park. Generally, visitors perceptions of environmental impacts tend to be limited to what they can easily see and different people may have different perceptions based on their prior experience, education with regards to the particular environmental issues and the activities they engage in within any given park location. This section relies on a combination of park staff experience, published literature and public surveys to describe potential impacts to the visitor experience.

Regulatory Framework

The Wilderness Act of 1964

The Wilderness Act of 1964 directed the Secretary of the Interior to study federal lands within the national wildlife refuge and national park systems, and recommend to the President those lands suitable for inclusion in a national wilderness preservation system. The Secretary of Agriculture was similarly directed to study and recommend such lands within the national forest system. The act grants Congress the final decision regarding designations. The Wilderness Act defines wilderness as including the following characteristics:

...wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation...

The Wilderness Act prohibits certain uses in designated wilderness including motor vehicles, motorized equipment, landing of aircraft, other forms of mechanized transport, and structures or installations except as necessary to meet the minimum requirements for the administration of the area for the purpose of the Act.

Segments 1, 5, and 8 are located in designated wilderness areas and are therefore subject to the management provisions of the Wilderness Act. Within Segment 1, the area surrounding the Merced Lake High Sierra Camp is a Potential Wilderness Addition. To the greatest extent possible, a Potential Wilderness Addition is managed as wilderness. This area would become wilderness when current prohibited or inconsistent uses have ceased.

Title 36 of the Code of Federal Regulations

“The regulations in this chapter provide for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the National Park Service. These regulations would be utilized to fulfill the statutory purposes of units of the National Park System: to conserve scenery, natural and historic objects, and wildlife, and to provide for the enjoyment of those resources in a manner that would leave them unimpaired for the enjoyment of future generations”.

Concessions Management Improvement Act of 1998

The Concessions Management Improvement Act requires that contracts for visitor facilities and services “be limited to those that are necessary and appropriate for public use and enjoyment” of the national park area in which they are located, “ and that are consistent to the highest practicable degree with the preservation and conservation of the areas.” Title 36 of the Code of Federal Regulations (36 CFR 51) outlines the requirements for the preservation of the parks and administration of commercial service operations. In order to implement the requirements of law, National Park Service has Management Policies. Management policies are guiding principles or procedures that set the framework and provide direction for management decisions.
(<http://www.nps.gov/policy/DOrders/thingstoknow.htm>)

Superintendent’s Compendium

The *Superintendent’s Compendium* is a compilation of designations, closures, permit requirements, fees, and other restrictions made by the superintendent, in addition to what is contained in Title 36 of the Code of Federal Regulations and other applicable federal statutes and regulations.

Director’s Order #17: National Park Service Tourism

The purpose of the Director’s Order #17 calls for “the promotion and support of sustainable, responsible, informed, and managed visitor use through cooperation and coordination with the tourism industry.” This purpose is elaborated upon by Operating Premises and Operational Policies that guide management decisions relating to tourism activities at Yosemite National Park.
(<http://www.nps.gov/policy/DOrders/thingstoknow.htm>)

Director’s Order #83: Public Health

Director’s Order #83 outlines measures the NPS will take to ensure compliance with prescribed public health policies, practices, and procedures. This order establishes NPS policy with respect to all public health activities within Yosemite National Park, regardless of whether those activities are carried out by NPS and other federal employees, or by other organizations, including the U.S. Public Health Service. The core policies include prevention, control, and investigation of food-, water-, and vector-borne diseases in the national parks (NPS 2004a).

The National Trails System Act

The National Trails System Act provides for the ever-increasing outdoor recreation needs of an expanding population. To promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the nation, trails should be established primarily near the urban areas of the nation, and secondarily within scenic areas, such as Yosemite National Park, and along historic travel routes of the nation, which are often more remotely located (NPS 2009).

NPS 2006 Management Policies

The *2006 Management Policies* state that the purpose of NPS interpretive and educational programs is to advance this mission by providing memorable educational and recreational experiences that will (1) help the public understand the meaning and relevance of park resources, and (2) foster development of a sense of stewardship. The programs do so by forging a connection between park resources, visitors, the community, and the national park system (NPS 2006). Yosemite National Park provides a variety of resources and support staff that allow these programs to advance the public's understanding of the park's qualities.

Overview of Visitation and Visitor Demographics

People travel to Yosemite National Park for a multitude of reasons and their experiences are highly individualized. Some visit the park in the company of friends and family to marvel at its iconic landscape features — its dramatic waterfalls and geologic wonders. Others seek the solitude and primitive nature of the park's wilderness. Some come to study the park's unique and diverse plant and animal life. Others are attracted by its excellent recreational opportunities, including rock climbing and bouldering, cross country skiing, and backcountry hiking and camping. Thus, the continuum of visitor experiences extends from highly social to isolated, from independent to directed, from spontaneous to controlled, from easy to challenging, and from natural to more urban (NPS 2000c). The Merced River plays an important role in shaping these experiences. This section describes the types of visitor facilities and services, including educational and interpretive services, overnight accommodations, and recreational opportunities available throughout the Merced River corridor within the study area, which contribute to the overall visitor experience.

Annual Parkwide Visitation

Annual park visitation has risen 22% in the last five years, from a 20-year low of 3.24 million visitors in 2006, to 3.95 million in 2011. The record for visitation was set in 1996, when the park received just over four million visitors (NPS 2012a). Park visitation over the last 20 years is shown in **table 9-139**.

Monthly Parkwide Visitation

Timing and duration of park visitation varies widely throughout the year. As **figure 9-39** indicates, visitor attendance is highest between the months of May and October. Between 1990 and 2010, August has been the month of highest average visitation, while January has been the lowest.

TABLE 9-139: ANNUAL VISITATION, YOSEMITE NATIONAL PARK 1990-2011

Year	Annual Visitation	Year	Annual Visitation
1990	3,124,939	2001	3,368,731
1991	3,423,101	2002	3,361,867
1992	3,819,518	2003	3,378,664
1993	3,839,645	2004	3,280,911
1994	3,962,117	2005	3,304,144
1995	3,958,406	2006	3,242,644
1996	4,046,207	2007	3,503,428
1997	3,669,970	2008	3,431,514
1998	3,657,132	2009	3,737,472
1999	3,493,607	2010	3,901,408
2000	3,400,903	2011	3,951,393

SOURCE: NPS Stats. Accessed via Internet on June 29, 2012 at <http://www.nature.nps.gov/stats/park.cfm>.

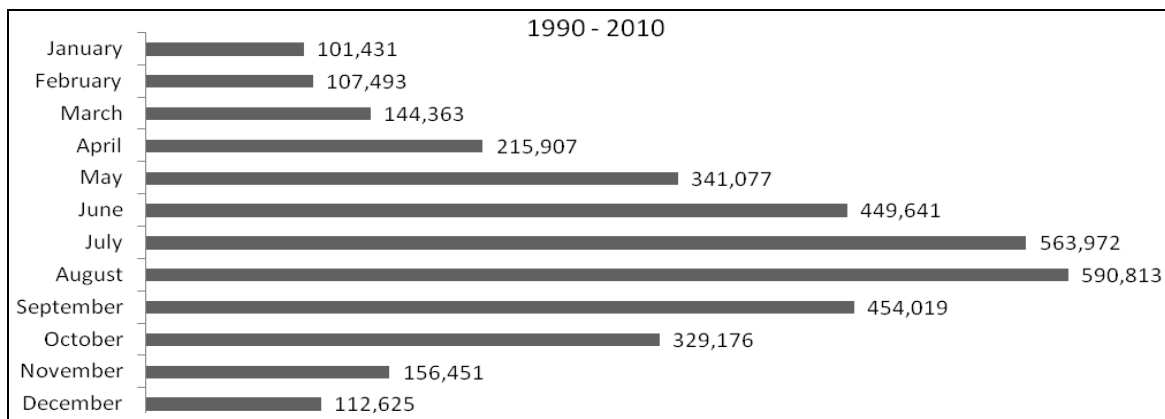


Figure 9-39
Average Park Visitation by Month (1990–2010)

These trends vary slightly for 2011 visitation counts; July had the highest visitation count with 704,553 people visiting the park in July, and February the lowest with 93,588 visitors (<http://www.nature.nps.gov/stats/viewReport.cfm>).

Daily Parkwide Visitation

During July, the month with the highest park visitation in 2011, there were an average of 22,728 daily visitors to the park. During February, the month with the lowest park visitation in 2011, the number of average daily visitors to the park was 3,342 (NPS Stats. 2012).

Visitor Survey Responses

Parkwide Visitor Use Survey. The NPS periodically conducts visitor surveys to help park managers better understand the interests and needs of park visitors. The most recent parkwide survey was

conducted in 2009. The survey looked at visitor origin and destination, reason for visit, duration of visit, activities of interest, and many other topics. Among those surveyed, 36% reported entering the park through the south entrance, while 21% reported entering through the Arch Rock entrance. The majority of those surveyed (57%) reported never having previously visited the park in their lifetime. Overnight visitors (within or near the park) constituted 69% of respondents. Duration of day visits averaged 7.2 hours, while length of stay for overnight visitors averaged 57 hours (2.4 days) (Blotkamp et al. 2009).

The survey also asked visitors about where and how they spent their time while in the park. **table 9-140** lists some of the most commonly identified destinations within the park. As the table indicates, the vast majority of respondents (70%) reported visiting Yosemite Valley generally, with specific destinations in the valley also frequently cited. Respondents named viewing scenery (93%), taking a scenic drive (64%), and day hiking (54%) as common activities within the park. When asked about primary activities in which they engaged, respondents similarly identified viewing scenery (45%), day hiking (27%), and taking a scenic drive (27%). This study indicates that visitor activities are concentrated within the Yosemite Valley and Wawona. (Blotkamp et al. 2010).

TABLE 9-140: PERCENT OF VISITORS AT COMMON VISITOR DESTINATIONS

Visitor Destination	Percent of Visitors
Yosemite Valley	70%
Yosemite Falls	59%
Bridalveil Fall	52%
El Captain Meadow	43%
Wawona	33%
Vernal Fall	28%
Half Dome	22%
Indian Cultural Museum	13%
Pioneer Yosemite History Center	12%
Little Yosemite Valley	8%
Yosemite Wilderness	5%
High Sierra Camps	3%
SOURCE: Blotkamp, Ariel et al. 2010. <i>Yosemite National Park Visitor Study</i> . NPS Science Program.	

River Corridor Visitor Use Survey. Completed in July of 2012, *Boats, Beaches and Riverbanks: Visitor Evaluations of Recreation on the Merced River in Yosemite Valley* (Whittaker, D., and B. Shelby, 2012) provides the most recent visitor use data. Data from this survey is more relevant to actions proposed for Segment 2 as this survey was specific to Yosemite Valley. The survey was conducted in July 2011 over the course of 15 days with 806 individuals completing the survey. All respondents were Merced River shore or boating users. Shore users included those who were relaxing, picnicking, swimming, hiking, or biking. Key study findings include:

- 56% of respondents were staying in Yosemite Valley.
- 85% were spending two or more days in the park.
- The most common river activities in which participants engaged during this visit were relaxing on shore (76%); swimming (58%); picnicking (48%), and hiking (44%), boating (29%), biking (27%), and fishing (5%).
- Participation in activities among river users in this survey versus parkwide users in the 2009 study differed. River users were more likely to picnic (48% vs. 33%) and bicycle (27% vs. 12%), but less likely to go hiking (44% vs. 54%).

This study also evaluated crowding. Generally, if greater than 80% of respondents report feeling crowded while participating in an activity, the area is considered greatly over capacity. Activities where greater than 80% of visitors reported feeling crowded were all transportation related: driving roads (90%), finding parking (99%), and riding shuttles (83%). If 65% to 80% of respondents report feeling crowded while participating in an activity, the area is considered over capacity. Activities where between 65% and 80% of visitors reported feeling crowded were hiking and biking (68%). Activities where between 35% (low normal) and 65% (high normal) of visitors reported feeling crowded were boating (60%), relaxing (54%), and swimming (45%).

The following sections generally describe the types of visitor facilities and services, overnight lodging accommodations, campgrounds, and recreation activities available throughout the Merced River corridor. This is followed by a description of the specific visitor facilities and services, overnight lodging accommodations, campgrounds, and recreation activities in each river segment.

Visitor Facilities and Services Overview

Commercial Services

Yosemite offers a variety of commercial visitor services, including lodging, food and beverage, and retail. Among those interviewed for the 2009 visitor use study, 46% reported eating in a park restaurant; 43% shopped in a store other than the Yosemite Valley Visitor Center bookstore; and 34% shopped within the Valley Visitor Center bookstore (Blotkamp et al. 2010). The majority of the park's visitor services are concentrated within Yosemite Valley. Yosemite Village, which is approximately 90 acres, is the core area for most of the development and day use in Yosemite Valley. Visitor facilities and services are also offered at Yosemite Lodge, Curry Village, and The Ahwahnee. Beyond Yosemite Valley, commercial visitor services within the study area are relatively few and exist only in El Portal and Wawona and at the Merced Lake High Sierra Camp.

Trails

Trails and trail types within the study area range from easy to strenuous and short to long, and can be either paved or unpaved. There are 78 miles of trails within the study area — approximately 30 miles within the designated wilderness and 48 miles in non-wilderness areas.

Although no restrictions have been established for day hiking in the wilderness with the exception of hiking to Half Dome, which requires a separate permit, permits are required for overnight stays in the wilderness. Wilderness permits are issued to a limited number of people for each trailhead in order that visitors may experience solitude associated with the wilderness. Sixty percent of the permits can be reserved ahead of time and 40% are available on a first-come, first-served basis the day before departure. Wilderness permits are issued to groups of hikers. Groups are limited to 15 per group when traveling on established trails and eight per group when traveling off-trail more than 0.25 mile. Groups traveling with stock are limited to 25 head of pack and saddle stock per party (NPS 1999b).

Stock Use

Pack stock (horses, mules, burros and llamas) use in Yosemite National Park falls into three categories: commercial, administrative, and private. Parkwide, commercial trips account for approximately 50% of stock use parkwide and are booked through the park concessioner or pack stock operations located outside the park. Administrative stock use accounts for approximately 45% of stock use parkwide with park employees using stock to “clear trails, support trail crew camps, maintain composting toilets, perform research, perform resource management activities, conduct backcountry search and rescue activities, and conduct backcountry ranger patrols.” The remaining 5% of stock use is private. (Acree et al. 2010). In 2010, within the Merced River Corridor, 383 stock nights (overnight trips where stock was used) were recorded (83 commercial and 300 administrative).

There are two commercial stables in the study area — the Yosemite Valley stable and the Wawona stable. Guided stock rides are available from both stables and in 2012, rides of either two-hours or a half-day in duration were available. Guided pack and saddle trips are also available for longer visits to the wilderness and take visitors to one or more of the High Sierra Camps. The number and duration of rides varies from year to year as determined by park administration and is dependent upon trail conditions and visitation. Therefore, the actual number of days that the stables are open varies from year to year. In 2011, a total of 14,400 stock day trips (defined as one person/one horse) were taken from these two stables:

- Yosemite Valley stable
 - 2 hour = 11,250
 - half day = 1,500
- Wawona stable
 - 2 hour = 1500
 - half day = 100
 - full day = 50

Title 36 of the Code of Federal Regulations and the Superintendent’s Compendium regulate stock use within Yosemite National Park. The use of horses or pack animals is permitted on all unpaved foot trails in Yosemite Valley and in Wawona on the Wawona Meadow Loop Road, Four-Mile Road, and Eleven-Mile Road. Bicycle paths, tram roads, shuttle bus routes, and the Mirror Lake Road are specifically closed to stock use except for administrative activities. Stock use is also permitted on all park trails except the Mist Trail from Happy Isles to Nevada Falls and the Lower Chilnualna Falls Foot Trail in Wawona.

Wilderness overnight stock parties on designated trails are limited to 25 head of stock and 15 people. Wilderness overnight stock parties using authorized, non-maintained stock routes are limited to

12 head of stock and eight people. The maximum number of stock for parties not spending nights in the wilderness is 25 head of stock on designated trails and 12 head on other authorized stock routes.

Loose herding and grazing is prohibited in front-country areas, and established front-country campsites must be cleaned daily (i.e., manure and uneaten fodder removed). Watering facilities must be used when provided.

Interpretation and Education Services

A heritage of stewardship is perpetuated through opportunities for education and interpretation of the Merced River and its unique values. These opportunities represent a proactive approach to protecting the river from human impacts. Park interpreters and volunteers serve a primary natural and cultural resource preservation role in the park. Interpreters connect people to the meaning and significance of the park by conveying information and educational programs to visitors and park employees about the history and function of park ecosystems and the relationship between various park resources. Interpretive and educational services include educational/school programs; field seminars; evening programs and ranger-led walks; valley-floor tram tours; audio-visual presentations at park visitor centers; interpretive wayside exhibits; cultural history museums; park open houses (primarily a tool to provide information about park planning projects); and published materials available at entrance stations, visitor centers, and campground and lodging registration desks. Most publications, as well as Web-based and social interpretive media, address values in Segments 1–8, while on-site programs and products are focused within three segments of the river: Yosemite Valley, Merced River Gorge, and Wawona.

Information and Materials. The NPS provides visitors with published information regarding Yosemite National Park in many different formats. These include Yosemite National Park's Web site, official park mailings, and e-newsletter updates. Information is also distributed at entrance stations and visitor centers and includes the free *Yosemite Guide* newspaper (published eight times a year), a free park brochure/map, handouts on self-guided nature trails, and supplemental education materials and fact sheets. (Portions of the *Yosemite Guide* are translated into German, French, Spanish, Italian, Chinese, and Japanese.) Information includes travel and directions to the park; important information for planning visits (e.g., seasonal weather conditions and road closures); activities and special events in the park; lodging and campground reservation information; information on park planning projects; and a variety of maps and graphics to provide orientation to the park's roads, features, facilities, services, and trails. It also serves as a primer on Yosemite's natural and cultural history and scenic beauty.

Park staff offer a wide range of media (e.g., the orientation audio-visual program at the Yosemite Valley Visitor Center) and interpretive programs to assist visitors in understanding the park's natural and cultural resources. The park's primary concessioner also provides information on lodging and other visitor services on their Web site, as well as interpretive programs at guest lodges and the High Sierra Camps. In addition, park partners, such as the Yosemite Conservancy and NatureBridge, collaborate with the NPS to provide evening programs and information about park events and natural history.

Facilities. Yosemite Village and Wawona each have a visitor center and a wilderness center. In Wawona, these functions are combined at the Wawona Visitor Center at Hill's Studio. The Yosemite Valley Wilderness Center, the Nature Center at Happy Isles, and the Wawona Visitor Center are open

seasonally during the summer. The Yosemite Valley Visitor Center is open year-round to provide visitors with wilderness trip planning information as well as permits during the winter when the Yosemite Valley Wilderness Center is closed. Additional information on park facilities, visitor services, and wilderness trip planning is available at the seasonal information and permit station at Big Oak Flat and from registration staff at campgrounds and lodging facilities. Commercial bus operators also provide orientation and information to visitors transported to and from the park. Visitors can also gain information from self-guided brochures and interpretive wayside exhibits throughout the park.

Programs. A wide range of interpretive programs and materials are available to the public (see **table 9-141**). Programs are offered by several entities and cover a wide variety of topics, including geology, astronomy, botany, wildlife, trees, hydrology, cultural history (American Indian, Buffalo Soldiers, settlements, and modes of transportation), Junior Ranger programs, wilderness, fire, rock climbing, and bouldering. Programs range in duration from less than 1 hour to all-day hikes and multi-day seminars and residential field science experiences. Interpretive hikes venturing into the Yosemite Wilderness aim to support wilderness management by increasing visitor understanding of park resources and management concerns.

Overnight Lodging Accommodations

There are 1,160 units of overnight lodging available in the Merced River corridor at six concessioner-operated facilities: Yosemite Lodge, Housekeeping Camp, Curry Village, The Ahwahnee, the Wawona Hotel, and the Merced Lake High Sierra Camp. Facilities range from rustic tent cabins to deluxe hotel rooms and cabins. In addition, private lodging accommodations available within the corridor consist of the Yosemite View Lodge in El Portal and many independently owned, small-scale operations in Wawona.

The 2009 visitor use survey, described previously, found that 58% of visitors who stayed overnight within the park stayed in lodging (Blotkamp et al. 2010). During the summer, occupancy at lodging units in Yosemite Valley is very high.

Camping Areas

There are nine designated camping areas within the Merced River Corridor, providing 565 campsites in Yosemite Valley and Wawona and three designated camping areas in the Yosemite Wilderness. Some of these areas offer facilities, such as restrooms with flush toilets, running water, trash, and recycling collection. Others are more primitive, offering only compost toilets and food storage lockers. Camping areas within the main stem and South Fork Merced River corridor exist in the wilderness area above Nevada Fall (Segment 1), in Yosemite Valley (Segment 2), and Wawona (Segment 7). There are no designated camping areas in the Merced River gorge or El Portal (Segments 3 and 4) or in the South Fork Merced River corridor, outside of Wawona (Segments 5, 6, and 8). The 2009 visitor use survey, described previously, found that among visitors who stayed overnight within the park, 31% tent camped in a developed camping area, while 11% stayed at a backcountry campsite (Blotkamp et al. 2010). During the summer, campgrounds are usually 100% occupied on weekends and on many weekdays.

TABLE 9-141: INTERPRETIVE AND EDUCATIONAL SERVICES IN THE RIVER CORRIDOR

Organization	Yosemite Valley	Yosemite Wilderness	Wawona/El Portal
National Park Service	<ul style="list-style-type: none"> • Ranger-led walks, talks • Self-guided nature trails • Interpretive performances, slideshows, audio-visual programs • Interpretive wayside exhibits • Nature Center at Happy Isles • Museum, visitor center, and trail exhibits • Research library • Indian Village of Ahwahnee • Indian Cultural Center (planned) • History — Yosemite Cemetery • Interpretive publications • Evening programs • Open-air tram tours 	<ul style="list-style-type: none"> • Multi-day ranger-guided High Sierra Camp loop trips that include a stop at the Merced Lake High Sierra Camp • Evening programs 	<ul style="list-style-type: none"> • Environmental Living Program • Stage Coach Living History Program • Ranger-led walks, talks • Wawona Campground • Pioneer Yosemite History Center • Evening programs (EP) • Wawona Visitor Center
Delaware North Companies Parks and Resorts at Yosemite	<ul style="list-style-type: none"> • Rock climbing classes (Yosemite Mountain School). • Interpretive performances (Ranger Ned) • Interpretive talks, slideshows, audiovisual programs • Guided hikes • Bus tours • Open air tram tours 	<ul style="list-style-type: none"> • Guided wilderness trips 	<ul style="list-style-type: none"> • Interpretive talks, slideshows, audiovisual programs
Yosemite Conservancy	<ul style="list-style-type: none"> • Interpretive publications • Art classes and educational seminars • Yosemite Theater presentations 	<ul style="list-style-type: none"> • Educational seminars • Scientific research and habitat restoration 	<ul style="list-style-type: none"> • Educational seminars
NatureBridge	<ul style="list-style-type: none"> • Educational field-science programs for school-age children and adult groups 	<ul style="list-style-type: none"> • Guided wilderness trips 	NA
Sierra Club	<ul style="list-style-type: none"> • Interpretive walks and talks • LeConte Memorial Lodge exhibits and library • Interpretive exhibits • Library 	<ul style="list-style-type: none"> • Guided wilderness trips 	NA
The Ansel Adams Gallery	<ul style="list-style-type: none"> • Art exhibits • Photo walks and classes • Film presentation 	NA	NA

SOURCE: Merced Wild and Scenic River Plan: Preliminary Alternative Concepts Summary Comparison Table. March 2012

Recreational Activities

The Merced River and South Fork Merced River offer diverse, river-related recreational opportunities. The experience of recreating in these areas is inextricably linked to the river’s dynamic natural processes, which have helped form and continue to influence the scenery and evocative landscape. In this setting, visitors are able to experience nature on a grand scale, one in which the river is paramount. Within these surroundings, people of all ages and abilities enjoy exemplary experiences that often create personal memories, traditions, and multi-generational bonding among family and friends. A few such activities include hiking, kayaking, swimming, and fishing. The availability of these opportunities varies by location within the Merced River and South Fork Merced River corridors. A summary of recreational activities within the various segments of the corridor is provided in table 9-142.

TABLE 9-142: RECREATIONAL ACTIVITIES WITHIN THE MERCED RIVER CORRIDOR

River	Park Area	Recreational Opportunities
Merced River	Wilderness (Segment 1)	Backpacking/hiking, camping, High Sierra Camp experience, stock use, fishing, swimming/wading, nature study, photography, cross-country skiing, snowshoeing
	Yosemite Valley (Segment 2)	Walking/hiking, picnicking, camping, rock climbing and bouldering, cross-country skiing, snowshoeing, ice skating, fishing, photography, swimming/wading, floating, nature study, stock use, sightseeing, rafting, kayaking, interpretive programs, bicycling, art classes
	Merced River Gorge (Segment 3)	Rock climbing and bouldering, fishing, swimming/wading, photography, sightseeing, nature study
	El Portal (Segment 4)	Whitewater rafting/kayaking, fishing, swimming/wading
South Fork Merced River	Wilderness (Segments 5, 6)	Backpacking/hiking, camping, stock use, fishing, swimming/wading, nature study, photography, sightseeing, cross-country skiing, snowshoeing,
	Wawona (Segment 7)	Hiking, picnicking, camping, cross-country skiing, snowshoeing, fishing, photography, swimming/wading, floating, nature study, stock use, sightseeing, rafting, interpretive programs, golfing
	Wilderness Below Wawona (Segment 8)	Hiking, fishing, whitewater kayaking

Segment 1: Merced River Above Nevada Fall

Visitor Facilities and Services

Commercial Services. Commercial services in Segment 1 are minimal and consist of the Merced Lake High Sierra Camp (see description under Overnight Lodging Accommodations) and commercial guided multi-day pack trips.

Trails. There are nearly 800 miles of marked and maintained trails providing access to and throughout the Yosemite Wilderness. Within the Merced River corridor, there are approximately 30 miles of

wilderness trails. The most heavily used wilderness trails are those above Nevada Fall (Segment 1). Primary access to this area is provided by the Mist and John Muir trails, which originate in Yosemite Valley. The Yosemite Falls Trail and the Four Mile Trail originate in the valley and lead to wilderness areas beyond the corridor.

Interpretation and Education. Interpretive and educational activities in Segment 1 occur at the Merced Lake High Sierra Camp and include ranger-led day walks and evening programs. There are also multi-day ranger-guided High Sierra Camp loop trips that include a stop at the Merced Lake High Sierra Camp.

Overnight Lodging Accommodations

Merced Lake High Sierra Camp. This is the largest and most remote (in terms of distance from trailhead) of the five High Sierra Camps in Yosemite. It is located on the east end of Merced Lake at 7,150 feet above sea level and can accommodate up to 60 overnight guests. Most visitors arrive on foot, but some arrive via stock from other High Sierra Camps. The camp includes 22 tents, each of which can accommodate two to four people. Two of these tents are used to house employees, and one is set aside for wranglers traveling with stock. Showers and flush toilets are available, and a dining hall accommodates 70 people. The camp also serves meals to through-hiking backpackers. Helicopters are used to transport items that are too big to safely transport with stock, responses to medical emergencies, and to facilitate transport and disposal of solids from the camp's septic system. All refuse is packed out by stock. Occupancy rates at the Merced Lake High Sierra Camp during a typical season are high.

Camping

There are three separate designated wilderness camping areas within the Merced River corridor above Nevada Fall: Little Yosemite Valley, Moraine Dome, and Merced Lake Backpacker's camping areas. These designated camping areas are popular wilderness camping destinations within the park and are heavily used during the summer months (NPS 2011e). In addition to these designated areas, campers may also engage in dispersed camping at wilderness locations with some restrictions.

There is no limit on the number of campers at any of the designated camping areas and no specific number of campers that they can accommodate. The number of permits for wilderness camping is controlled by an overnight quota system, but the individual number of campers on a given night is subject to the travel choices of each individual group, which is only partially regulated by the wilderness permit.

Little Yosemite Valley Backpacker's Camping Area. This is the western-most camping area within the Merced River corridor above Nevada Fall. This location can accommodate approximately 125 overnight campers. Facilities include one composting toilet, two fire rings, 21 bear-proof boxes for food storage, and informational signage. Use of this area during the summer months (i.e., between Memorial Day and Labor Day weekends) is generally heavy.

Moraine Dome Camping Area. Also in Little Yosemite Valley, this smaller, undeveloped backpacker camping area is located just east of the Little Yosemite camping area. This location can accommodate approximately 50 overnight campers and offers no facilities.

Merced Lake Backpackers Camping Area. This location is located further upstream, along the eastern shore of Merced Lake, near the Merced Lake High Sierra Camp. This area can accommodate approximately 90 overnight campers. Facilities include potable water, flush toilets, fire rings, and approximately eight bear boxes. As with those discussed previously, these campsites tend to be heavily used during the summer months.

Recreational Activities

Fishing. The headwater areas of both the Merced River and South Fork Merced River have mountain ponds and alpine lakes, as well as snowmelt and ephemeral streams, within their boundaries. Fishing in the wilderness lakes is a popular activity for visitors, particularly at Merced Lake High Sierra Camp, where fishing takes place in Washburn and Merced lakes. Wilderness lakes support nonnative brown and rainbow trout populations.

Swimming. In the wilderness, swimming occurs in certain reaches of the Merced River, downstream from various cascades, including Bunnell Cascade. Swimming also takes place near Moraine Dome and in the many lakes in the upper Merced River corridor, particularly in Merced Lake and Washburn Lake.

Hiking. Climbing Half Dome is a popular wilderness hike. Ranging from 14 to 16 miles in length depending on the route, this hike involves scaling the backside of the dome with cables and requires a permit. The current permit system allows 400 total hikers per day — 300 day visitors and 100 overnight visitors. Permits are distributed via a lottery both at the beginning of the season and on a daily basis. An environmental assessment is currently being prepared for Half Dome and will refine permit regulations.

Stock Use. Visitors participate in commercial overnight stock trips to the wilderness originating from various points both inside and outside of the park. More information on stock use and stock trails can be found in the “Visitor Facilities and Services Overview” section, above.

Other Activities in the Merced River Corridor. Visitors participate in other activities along the river that may not be specifically related to or dependent on the river. These include rock climbing and bouldering. The experiences of visitors engaged in these activities may be enhanced by the river, but the river and its values are not the primary focus of these experiences.

Segment 2: Yosemite Valley

Visitor Facilities and Services

Commercial Services. Yosemite Valley offers the broadest range of visitor facilities and services within the river corridor. Commercial services include: food and beverage, retail, lodging, and recreation rentals. Additional non-commercial services include museums, galleries, and educational and interpretive facilities. In Yosemite Valley, visitor facilities and services are located in five distinct locations — Yosemite Village, Yosemite Lodge complex, Curry Village, The Ahwahnee, and Housekeeping Camp. **Table 9-143** below summarizes the visitor facilities and services in each location. Each location also provides overnight accommodations.

TABLE 9-143: VISITOR FACILITIES AND SERVICES BY LOCATION AND TYPE

Location	General Use	Specific Facilities and Services
Yosemite Village	Retail Services	Degnan’s Delicatessen and gift shop, Village Store complex (gift/grocery, fast food and specialty retail), Ansel Adams Gallery
	Visitor Services	Main Yosemite National Park U.S. Post Office, ATM and check cashing facility, concessioner garage (open to visitors), medical and dental clinic, tour kiosk, recycling center
	Interpretation/Education	Visitor Center, Yosemite Museum and Research Library, Wilderness Center, Yosemite Art Center
Curry Village	Retail Services	Dining pavilion, fast food outlets, a gift/grocery store, specialty retail
	Visitor Services	Ice rink, raft and bicycle rentals, swimming pool, tour kiosk, NPS Campground Reservation Center, recycling services
	Interpretation/Education	Mountaineering school, outdoor amphitheater
Yosemite Lodge	Retail Services	Restaurant, a food court, fast food outlet, bar, a gift/grocery store, and specialty retail store,
	Visitor Services	Post office, bike rental, pool, tour desk
	Interpretation/Education	Outdoor amphitheater, indoor evening program space, two meeting rooms
Housekeeping Camp	Retail Services	Camp Store
	Visitor Services	Laundry, Showers
	Interpretation/Education	
The Ahwahnee	Retail Services	Dining room, bar and lounge, two gift shops
	Visitor Services	Swimming pool
	Interpretation/Education	Concessioner tours

Trails. There are over 46 miles of trails in Yosemite Valley, including approximately 7 miles of paved bike paths, 0.75 mile of boardwalks, and almost 10 miles of informal trails. The length of the trails in Yosemite Valley is illustrated in table 9-144.

Interpretive and Educational Services. Yosemite Valley provides numerous, diverse interpretive and education programs. At least 77 outdoor wayside exhibits reveal meaningful stories related to biology, hydrology, geology, scenery, and recreation. At least 10 different interpretive walks travel into the Merced River corridor, helping visitors gain a deeper understanding of river values. Six different curriculum-based education programs expose students to the same, as well as summer daily offerings of Junior Ranger programs. DNC Interpretation, Sierra Club at Le Conte Memorial Lodge, Yosemite Conservancy, and other partners also share river stories and resource protection messages with visitors to Yosemite Valley. Campfire programs are offered on multiple topics, some river related. Programming aims to meet the goals outlined in the park’s *Long Range Interpretive Plan*, and is usually modified annually to match current trends in visitation and park operational capacity. Several venues provide space for interpretive and educational programming.

TABLE 9-144: YOSEMITE VALLEY TRAIL LENGTHS AND LEVEL OF DIFFICULTY

Trail Name	Length	Difficulty
Bridalveil Fall	0.5 mile round-trip (RT)	Easy
Lower Yosemite Fall	1.1 miles (RT)	Easy
Cook’s Meadow Loop	1 mile (RT)	Easy
Mirror Lake/Meadow	2 miles (RT)	Easy
Valley Floor Loop	13 miles (RT)	Moderate
Four Mile Trail	9.6 miles (RT)	Strenuous
Panorama Trail via Mist Trail	8.5 miles one-way	Strenuous
Upper Yosemite Fall	7.2 miles (RT)	Strenuous
Vernal and Nevada falls	Footbridge: 1.6 miles (RT) Vernal Fall: 2.4 miles (RT) Nevada Fall: 5.4 miles (RT)	Strenuous
Half Dome (permit required)	via Mist Trail: 14 miles (RT) via John Muir Trail: 16.3 miles(RT) via Mist and John Muir Trails: 15.2 miles (RT)	Strenuous

- The Nature Center at Happy Isles currently sits on the historic site of the California State Fish Hatchery built by the Fish and Game Commission in 1927. The building houses wildlife dioramas, tracking tips, interactive exhibits, and four different environments including riverine. The Nature Center has been used as a hub for extensive Jr. Ranger Programs, including one- and two-hour Jr. Ranger walks and Jr. Ranger Campfires located 0.25 mile from the center at the A-frame campfire ring.
- Yosemite Valley Visitor Center was built in 1966 as part of the Service-wide Mission 66 initiative. The interior of the one-story visitor center contains updated exhibits created in 2007. Exiting the rear doors of the visitor center, one enters an open courtyard that leads to the theater where a 20-minute film, *Spirit of Yosemite*, is shown throughout the day.
- Yosemite Museum was completed in 1925, designed by architect Herbert Maier in the newly emerging National Park Service Rustic Style. It opened to the public in May of 1926 as the first building constructed as a museum within the NPS. The first floor of the building houses exhibits that are open to the public. Adjacent to the museum gift store is a small collection room that is used by NPS curatorial staff and is an area where tours are given by request. The Yosemite Museum is staffed by NPS Indian Cultural Demonstrators who demonstrate a variety of traditional skills, including basket making and preparation, acorn preparation, beading, jewelry making, string making, and flint knapping.
- Outside the back doors of the Yosemite Museum and the Valley Visitor Center, to the north, is the Indian Village of Ahwahnee. Here visitors follow a self-guided experience through the reconstructed Indian Village by way of wayside exhibits and a brochure.
- Lower Pines Campground Amphitheater is the only outdoor amphitheater located in an existing Yosemite Valley campground. Evening ranger programs are offered during summer.
- Lower River Campground Amphitheater is an outdoor amphitheater located in Yosemite Valley at the former Lower Rivers Campground. This amphitheater is used infrequently.

- LeConte Memorial Lodge, designated a National Historic Landmark in 1987, was built by the Sierra Club in 1903. LeConte Memorial Lodge is open to the public in summer and contains a library of relevant titles. Evening programs, offered Friday through Sunday, focus on natural science, and specifically the history and science of Yosemite Valley.
- NatureBridge is a primary park partner that provides curriculum-based educational programming for grades 6–12 in Yosemite National Park. Many of their programs take place in the Merced River corridor and highlight the significance of outstandingly remarkable values of the river.
- Overnight Lodging Accommodations. Lodging options available within this segment are summarized below.

Yosemite Lodge. Near the base of Yosemite Falls, this lodge encompasses an area of about 40 acres, and offers 245 lodge and family rooms (DNC 2011a), as well as the visitor services and facilities described in the previous section. Pine and Oak Cottages, as well as cabins with and without baths that were damaged by the January 1997 flood, have been removed.

Housekeeping Camp. Currently 266 units are available for use by visitors at Housekeeping Camp (DNC 2011a). Each unit (one half of a duplex structure) can accommodate six people, with a total of 12 people per structure. Food preparation is allowed in Housekeeping Camp, thereby increasing its popularity with visitors. As noted in the “Hydrology” section of this chapter, several of the Housekeeping Camp units are located within the 10-year floodplain and subject to inundation (NPS 2011e).

Curry Village. The Historic District at Curry Village, about 50 acres, offers a total of 400 units, including cabins with and without private baths, tent cabins, and rooms in Stoneman Lodge (DNC 2011a). Visitor services and facilities are described in the previous section. As noted in the Geology section of this chapter, 72 Curry Village units were destroyed or removed from service following the 2008 rock fall (<http://parkplanning.nps.gov/projectHome.cfm?projectId=29566>).

The Ahwahnee. The Ahwahnee, a 12-acre National Historic Landmark, offers 123 rooms and cottages. Of these, 99 are currently deluxe hotel rooms and 24 are cottage rooms.

Campgrounds

There are five public campgrounds within Yosemite Valley: Upper Pines, Lower Pines, North Pines, Camp 4, and Backpackers. Following the 1997 flood and related infrastructure damage, 124 sites were removed at the former Upper River Campground and 138 sites were removed at the former Lower River campground. Campground availability in the Yosemite Valley is extremely limited during peak summer months, with most campgrounds operating at or near capacity during this period. In addition, as noted in the “Hydrology,” “Vegetation,” and “Wetlands” sections of this chapter, heavy use at campgrounds near the Merced River has given rise to an expansion of social trails across meadows, vegetation trampling, and streambank erosion (NPS 2011e).

Upper Pines Campground. Located in east Yosemite Valley, Upper Pines Campground has 240 total sites. On average, 4.5 people occupy each site and stay for an average of 2.7 nights (NPS 2011 d, e). The

10 restrooms in the campground (NPS 2011f) are connected to the Yosemite Valley sewer collection system. An RV dump station is located at the entrance to Upper Pines Campground.

Lower Pines Campground. Located in the east Valley to the west of Upper Pines Campground, Lower Pines Campground has 76 total sites. On average, 4.66 people occupy each site and stay for an average of 2.71 nights (Bryan 2011b, 2011e). The three restrooms in the campground (NPS 2011f) are connected to the Yosemite Valley sewer collection system. Lower Pines Campground has an amphitheater for ranger-led programs.

North Pines Campground. Located in the east Valley, to the north of Lower Pines across the Merced River, North Pines Campground has 86 total sites. On average, 4.2 people occupy per site and stay for an average of 2.71 nights. There are 23 RV-only sites at this campground (Bryan 2011b). The four restrooms in the campground (NPS 2011f) are connected to the Yosemite Valley sewer collection system.

Camp 4. Located north of Yosemite Lodge, Camp 4 has 35 sites (Bryan 2011b) which are available on a first-come, first-served basis. There is one restroom facility in the campground, which is connected to the Yosemite Valley sewer collection system. Camp 4 is listed on the National Register of Historic Places because of its nationally significant role in the development of rock climbing as a sport (NPS 2011f).

Backpackers Campground. Located to the north of North Pines Campground across Tenaya Creek, Backpackers Campground has 25 sites. Backpackers Campground allows only campers with wilderness permits. They may stay either the day before their departure into the Yosemite Wilderness or the evening of their return from the Wilderness. This campground has five vault toilets that are not connected to the Yosemite Valley sewer collection system, and no potable water (NPS 2011f).

Recreational Activities

Fishing. In the stretches of the Merced River that flow through the Yosemite Valley, brown trout, rainbow trout, brook trout, and smallmouth bass are commonly sought by visiting anglers. Fishing in Yosemite National Park is regulated under state and federal (NPS) fishing regulations prohibiting the use of live bait and barbed hooks. The area between Happy Isles to Foresta Bridge is designated as catch-and-release waters for rainbow trout.

Swimming. Swimming and wading in the Merced River corridor is popular during the summer. In a 2012 study of river visitors in Yosemite Valley, 58% reported participating in swimming during their visit (Whittaker, et al. 2012). The NPS does not officially designate swimming areas except those areas closed to swimming and bathing — Emerald Pool and the Silver Apron above Vernal Fall.

The park encourages visitors to avoid fast-moving water and unsafe pools above waterfalls. In the valley, swimming is a popular activity in the Merced River, Tenaya Creek, and at Mirror Lake. Most sections of the river in Yosemite Valley are within easy access from lodging areas, roads, campgrounds, and day use areas. Many of these areas are heavily used, particularly where they are adjacent to developed campgrounds and upstream or downstream of certain bridges, such as Stoneman and

Swinging bridges. Two public pools at Yosemite Lodge and Curry Village are used during the summer months. There is a year-round guest pool at The Ahwahnee.

Rafting and Kayaking. Visitors can rent rafts from the primary concessioner at Curry Village if water levels are sufficient. Rafting has been popular in the valley since the 1980s, and all rafting is self-guided. The concessioner is permitted to have 100 rental rafts on the river at any time when the water level and air temperature are within guidelines established by the Superintendent to protect visitor safety. The number of operating days varies on a yearly basis due to these factors. Visitors also use various personal rafts and flotation devices throughout the Merced River corridor. Motorized boating on the Merced River is prohibited.

All operational aspects of the raft rental system are controlled by the NPS pursuant to the terms of the *Concession Contract Operating Plan* and related direction to the concessioner provided by formal correspondence and periodic operational performance evaluations conducted by NPS staff. Per the Concession Contract, the concessioner may not exceed 100 rafts on the river at one time.

Rafting regulations have been implemented to protect river habitat and provide for visitor safety in the valley. In general, park management encourages visitors to launch and remove rafts at sandbars and beach locations. The concessioner must use designated areas for launching and removal of nonmotorized watercraft. Nonmotorized vessels are allowed on the section from Stoneman Bridge to Sentinel Picnic Area during the hours of 10:00 a.m. to 6:00 p.m. There is a raft launch site on the downstream side of Stoneman Bridge, where the river typically has slow-moving water during the summer. Concessioner nonmotorized watercraft is not permitted past the Sentinel Beach Picnic Area. Areas around launch sites can become denuded of vegetation due to heavy use, causing bank erosion and sedimentation (NPS 2011e).

Picnicking. Yosemite Valley visitors can choose from six designated picnic areas and facilities, including the Church Bowl Picnic Area near Ahwahnee Meadow, the Lower Yosemite Fall Picnic Area, the Swinging Bridge Picnic Area, the Sentinel Beach Picnic Area, the El Capitan Picnic Area, and the Cathedral Beach Picnic Area. These picnic areas offer picnic tables, vault toilets, and garbage and recycling receptacles. With the exception of the Lower Yosemite Fall and Church Bowl picnic areas, each has a grill. None has potable water. Visitor use is generally heavy at these picnic areas, often exceeding the capacity of the picnic area infrastructure during peak summer months.

Hiking. Visitors have access to Yosemite Valley trails that range from a short stroll to the base of Lower Yosemite Fall to an ambitious 14- to 16-mile round-trip day hike to the top of Half Dome. Thirty-five miles of hiking trails are available on the Yosemite Valley floor. Many of these closely parallel the Merced River, providing access to and views of the river along the way. Some of these trails are shared with bicyclists and/or stock users. Several walking loops are available in East Yosemite Valley, and there are two loops in West Yosemite Valley: (1) between Swinging Bridge and El Capitan Bridge, and (2) between El Capitan Bridge and Pohono Bridge. Day hikers can circumnavigate the valley using the Valley Loop Trail, which is shared by stock. A trail network provides multiple routes between the Happy Isles/Mirror Lake area and Yosemite Village. Self-guiding interpretive trails can be found at Mirror Lake and in the Indian Village of Ahwahnee behind the Yosemite Valley Visitor Center. A multi-use paved trail (shared by pedestrians and bicyclists) links Yosemite Lodge to the

Happy Isles area on both sides of the Merced River. Paved trails (multi-use trails and roads closed to private vehicles) in the valley are approved for use by visitors with pets. Heavy and multiple uses often create congestion on paved trails, especially in Yosemite Village. Several trails have wayside exhibits to interpret features encountered along the way. The Mist Trail is one of the most popular short hikes in Yosemite National Park. It follows the Merced River, starting at Happy Isles in Yosemite Valley, past Vernal Fall, Emerald Pool, to Nevada Fall. Along the trail, the Merced River is a tumultuous mountain stream, lying in a U-shaped valley. Enormous boulders are dwarfed by the sheer granite rock faces, which rise to 3,000 feet above the river. Through it all, the Merced River rushes down from its source in the high Sierra, broadening as it crosses the floor of Yosemite Valley.

Stock Use. Day rides on mule and horseback and overnight trips to the wilderness all originate in the Yosemite Valley stables in Curry Village. More information on stock use and stock trails can be found in the “Visitor Facilities and Services Overview” section above.

Other Activities in the River Corridor

Biking. Bikers can bring their own bicycles or rent them. There are two bike rental stands in Yosemite Valley, one at Curry Village and the other at Yosemite Lodge. This is a popular activity and rentals include bikes and trailers for children as well as accessible transportation rentals such as wheelchairs, electric mobility scooters, hand crank bicycles (recumbent bicycles), and tandem bicycles. Bicycle rentals vary from day to day and year to year, depending on opening/closing dates, weather, and overall visitation.

Winter Activities. Many activities are available to park visitors during the winter months, including cross-country skiing, tubing/sledding, ice skating, and snowshoeing. Most cross-country ski routes follow summer trails or traverse the open meadows. At elevations of 4,000 feet, Yosemite Valley sometimes has snow for long periods; however, snow at lower elevations, such as in El Portal, is rare. Ice skating is available at a concessioner-operated rink at Curry Village and is used in the winter by both visitors and residents. Yosemite Valley serves as a primary lodging center for visitors pursuing winter recreation.

Other Activities. Visitors participate in other activities along the river that may not be specifically related to or dependent on the river. Among these are rock climbing and bouldering, and classes offered by the Yosemite Mountaineering School, the Art Activity Center, the Yosemite Conservancy, and the Ansel Adams Gallery.

Segments 3 and 4: Merced River Gorge and El Portal

Visitor Facilities and Services

Commercial Services. Commercial services in El Portal include a small grocery store and a gas station. Additional facilities and services include the El Portal post office, a community center, and a community park. Other services are provided on private land.

Trails. There are no hiking trails in Segments 3 and 4.

Interpretation and Education. The interpretation and education opportunities in the Merced River Canyon are currently limited to wayside exhibits. Currently, four outdoor wayside exhibits explain natural processes related to biology, hydrology, geology, scenery, and recreation.

Recreational Activities

Fishing. The Merced River between the park boundary and the Forest Road Bridge, also known as El Portal reach, has been designated as a Wild Trout Fishery by the California Department of Fish and Game because of the favorable growing season and conditions of the river in this stretch (CDFG 2004). The popularity of angling is growing in the El Portal reach due to these favorable fishing conditions. Because anglers typically work the river as they walk upstream, there are only a few well-known fishing areas, including west of the wastewater treatment plant in El Portal, the Sand Pit, near the Highway 140 Bridge, across the road from El Portal Market, and near the confluence with Crane Creek. The California Department of Fish and Game continues to stock trout species in the Merced River just below the Foresta Road Bridge; these fish populations move upstream and have the potential to travel as far as Yosemite Valley (Stevens 2004).

Commercial fly-fishing guide services are permitted along the Merced River within El Portal Administrative Site and the park, between the Foresta Road Bridge on the west and the confluence with Yosemite Creek on the east in Yosemite Valley. Fly-fishing is most popular in late September and early October during the caddis fly hatch (Hubner 2004). Fly-fishing is least popular during the warmest summer months because of the difficulty in finding fish and the harm to the fishery that can occur when the water levels drop and the water warms up.

Swimming. During the summer, visitors and residents alike swim in the Merced River Canyon. The river between Pohono Bridge and the intersection of El Portal and Big Oak Flat roads is a popular swimming location, despite a lack of appropriate access in many places. There are also numerous swimming holes along the Merced River Canyon, some easier to access than others.

In El Portal, Patty's Hole is a well-known swimming location just west of the El Portal Market, but is not a formally designated day use area. The January 1997 flood washed away a number of trees that had shielded this stretch of the river from view by motorists passing on Highway 140, thus increasing public awareness and use of the swimming area.

Rafting and Kayaking. Whitewater rafting and kayaking occur in the El Portal reach for both commercial outfitters and private boaters. This reach of the river is generally considered Class III rapids. Certain sections can be Class V, depending on the flow rate, which attracts boaters from across the state. No commercial rafting operations are permitted upstream of the Foresta Road Bridge; however, there are no regulations on where private boaters may enter the water or when they can run the river. A launch site for private boaters is located adjacent to the Highway 140 Bridge. The NPS does not regulate private boater recreation due to low use levels. Because the Merced River is used seasonally due to the absence of dams, the highest use of the river is directly correlated with the heaviest runoff periods, typically April through mid-July (Horne 2004).

Hiking. There are no noteworthy hiking trails within the Merced River gorge segment. Similarly, few visitors hike in the area of El Portal, though day hiking is more common along the old Foresta Road and just west of El Portal along Incline Road.

Picnicking. Picnic facilities are available at Cascade Picnic Area and at the Arch Rock Entrance Station.

Segments 5, 6, and 7: South Fork Merced River

Visitor Facilities and Services

Commercial Services. Dining and retail facilities, as well as a golf course, a snack stand/golf shop, and service station are available in Wawona.

Trails. Trails in Wawona, including length and difficulty, are identified in the table 9-145 below:

TABLE 9-145: TRAILS IN THE WAWONA AREA

Trail	Distance	Difficulty
Wawona Meadow Loop (Round-trip)	3.5 miles	Easy
Swinging Bridge Loop (Round-trip)	4.75 miles	Moderate
Wawona to Mariposa Grove (One-way)	6 miles	Moderate
Mariposa Grove of Giant Sequoias		
<ul style="list-style-type: none"> • Grizzly Giant Tree and California Tunnel Tree (Round-trip) 	1.6 miles	Moderate
<ul style="list-style-type: none"> • Wawona Point (Round-trip) 	6 miles	Moderate
<ul style="list-style-type: none"> • Outer Loop Trail (Round-trip) 	6.9 miles	Moderate
Alder Creek Trail (Round-trip)	12 miles	Strenuous
Chilnualna Falls Trail (Round-trip)	8.2 miles	Strenuous

Wilderness access to the South Fork Merced River (Segment 5) is from Forest Service trailheads to the south via a formal NPS trail on U.S. Forest Service land, at the Bishop Creek confluence.

Interpretation and Education. Wawona interpretive programming is provided late spring through early fall. Some programs focus on park history from 1864 to present. The Wawona Covered Bridge is a key element in those programs. Stage rides and interpretation of the bridge (through signage and ranger-led walks) and the Pioneer Yosemite History Center help visitors understand the significance of this covered bridge. There are also several programs in Segment 7 that provide opportunities for visitors to understand more deeply the meanings associated with outstandingly remarkable values, such as geology, hydrology, cultural history, recreation, and biology. Those programs involve ranger walks and evening campfire programs. A curriculum-based Environmental Living Program is offered in Segment 7, reaching hundreds of school children each year. Several venues provide space for a myriad of interpretive and education programming.

- Wawona Visitor Center at Hill’s Studio is located on the grounds of the Wawona Hotel in the historic art studio that was constructed in the early 1880s for the famous western painter Thomas Hill. It includes a bookstore, orientation area, exhibit hall, and wilderness permit station.
- Wawona Campground Amphitheater consists of wooden benches with metal supports, and a rock-lined campfire circle. The amphitheater does not have a projector screen and has no electricity, so the interpretive programs are the “classic” old-fashioned Campfire Talks.
- Pioneer Yosemite History Center is a collection of historic cabins and a Covered Bridge. The cabins (each of which represent a different chapter in the historic development of Yosemite National Park) were moved to their current location and were relocated next to the then recently restored Covered Bridge as a Mission 66 project to allow park visitors to explore and understand the growth and development of Yosemite National Park and the National Park idea in America.

Overnight Lodging Accommodations

Wawona Hotel. The 104-room Wawona Hotel, a national historic landmark, is within the river corridor. Visitor facilities and services at the Wawona Hotel are discussed in the previous section.

Campgrounds

Wawona Campground. This is the only NPS campground along the South Fork of the Merced River. It is located adjacent to the river, northwest of the Wawona Hotel and Golf Course. Wawona Campground has 96 sites including one group site, two stock-use campsites, and two campground host sites (NPS 2011f). There are 46 tent-only and four RV-only campsites. The group campsite only accommodates tents. The remaining campsites would accommodate either tents or RVs. Each campsite contains a fire ring, picnic table, and food locker and is near a restroom with potable water and flushing toilets. The six restrooms in the campground (NPS 2011f) are connected to a septic system that is not part of the Wawona sewer collection system. Heavy use at the Wawona Campgrounds can stress the septic system and leach field, creating potential water quality impacts during peak use periods.

Recreational Activities

Fishing. As described for the headwaters of the Merced River, the upper watershed of the South Fork Merced River is host to mountain ponds, alpine lakes, and ephemeral streams. Wilderness lakes support relatively good brown and rainbow trout populations. On the South Fork Merced River, however, most fishing (primarily for brown and rainbow trout) takes place downstream of the water intake and impoundment area in Wawona.

Swimming. In the South Fork Merced River, swimming is common in the vicinity of Swinging Bridge, alongside the Wawona Campground, and near the picnic area east of the campground. In recent years, swimming has also become more popular through the town of Wawona. Access to the river downstream of Swinging Bridge is somewhat limited due to private property along the river. Natural pools also exist in the upper reaches of the South Fork Merced River and are used by wilderness visitors. Swimming is

prohibited at the pool of the Wawona Domestic Water Intake and 100 yards upstream. A swimming pool is located on the grounds of the Wawona Hotel and is available for hotel guests.

Rafting and Kayaking. Limited rafting occurs on the South Fork Merced River between Swinging Bridge and Wawona Campground. In this reach, the river's gradient is relatively flat. As in the valley, rafting regulations have been implemented to protect river habitat and provide for visitor safety in the valley. In general, park management encourages visitors to launch and remove rafts at sandbars and beach locations.

Rafting and kayaking in Wawona must adhere to the following per the *Superintendent's Compendium*, which states, "the South Fork of the Merced River is closed to all vessels, except it is open to non-motorized vessels and floatation devices downstream of the Wawona Swinging Bridge. Vessels are defined by the Coast Guard definition (36 CFR, section 1.5(a)(1); CFR, section 1.5(f)).

Picnicking. Wawona visitors have access to picnic areas near the Wawona Store and at the Wawona Campground. These picnic areas offer picnic tables, vault toilets, and garbage and recycling receptacles. The South Fork Merced River Picnic Area, which is located approximately 0.5 mile upstream of the Wawona Campground, has a vault toilet, tables, grills, garbage and recycling.

There are flush toilets and running water at both the campground and the picnic area near the store in Wawona. Presently the toilets at the picnic area are not adequate for the number of people using them, and there is often a long wait to use the facilities. This is exacerbated by the fact that the shuttle stop for Mariposa Grove, which is located there, provides inadequate parking for visitors.

Hiking. There are seven hikes in the Wawona area ranging from the easy Wawona Meadow Loop to the strenuous wilderness trails to Alder Creek and Chilmualna Falls. Moderate hikes include the Swinging Bridge Loop, the Wawona to Mariposa Grove trail, and several trails in the vicinity of Mariposa Grove that are not in the study area. There are also numerous informal trails along the river in this area.

Other Activities in the River Corridor

Golf. Golf is available in Wawona at the historic Wawona Golf Course (established in 1918). This golf course is an organic golf course (free of pesticides and herbicides) and is also a certified Audubon Cooperative Sanctuary. Only authorized golfing parties are permitted to use the golf course because of the danger associated with being hit by golf balls. The length of time the course is open varies year by year, depending on weather conditions, but the course is generally open when the Wawona Hotel is operating between June and October. On average, 25 to 34 groups of four people golf per day. This golf course accommodates approximately 9,000 people per year (NPS 2004d). Some cross-country skiing also takes place on Wawona Meadow and the golf course. Currently, Yosemite is preparing an amendment to the National Historic Landmark District that proposes adding the golf course and Wawona Meadow to the District. The lower portion of the golf course is within the wild and scenic river corridor. The golf course is also used as the spray field for the town's sewer system.

Tennis. A tennis courts is located on the grounds of the Wawona Hotel and is available for hotel guests.

Environmental Consequences Methodology

This analysis evaluates the effects of the various alternatives on the visitor experience in the study area. The analysis considers changes in facilities and services, overnight lodging accommodations, camping, and recreation activities. Commercial services include food service, retail, equipment rentals, and other commercial activities. Non-commercial facilities and services include day use areas, trails, interpretation, information, and education. Visitor facilities also include roads and parking areas, which are discussed in detail in the transportation impact analysis and are referenced in this discussion. Overnight lodging accommodations include hotel, motel and cottage rooms; cabins with bath, rustic canvas tent cabins and Housekeeping Camp units. Campgrounds include facilities where visitors supply their own shelter. Recreation activities include hiking, fishing, biking, rock climbing, swimming, floating, nonmotorized boating, auto-touring, picnicking, and horseback riding.

This analysis addresses whether potential management activities under the various alternatives would result in a change in access to, availability of, type of, or quality of visitor facilities and services, overnight accommodations, campgrounds, or recreation activities. While the quality of recreation activities is affected by natural resource conditions, the current discussion does not reanalyze the natural resource impacts of each action within each alternative. Rather, this section references the natural resource impact analysis presented elsewhere in this chapter. Finally, the availability of recreation activities and overnight accommodations, including the comparison of supply and demand, overlap with aspects of the socioeconomic analysis. This section does not reanalyze the socioeconomic impacts of each alternative but instead refers to the socioeconomic analysis presented elsewhere in this chapter.

This analysis evaluates the study area of the Merced Wild and Scenic River, using the following criteria:

- **Context.** The context of the impact considers whether the impact would be local, segmentwide, parkwide, or regional. For the purposes of this analysis:
 - Local impacts would be those that occur in a specific area within a segment of the river. This analysis would further identify if there are local impacts in multiple segments.
 - Segmentwide impacts would consist of a number of local impacts within a single segment, or larger-scale impacts that would affect the segment as a whole.
 - Parkwide impacts would extend beyond the river corridor and the study area within Yosemite National Park.
 - Regional impacts would be those that extend to the Yosemite gateway region.
- **Intensity.** The intensity of the impact considers whether the impact to visitor services would be negligible, minor, moderate, or major.
 - Negligible impacts would not be detectable and would not have a discernible effect on visitor services. Where impacts are quantifiable, less than 2.5% of visitor services would be affected in a particular segment of the river corridor.
 - Minor impacts would be slightly detectable, but would not be expected to have an overall effect on the availability of visitor services. Where impacts are quantifiable,

approximately 2.5% to 5% of visitor services would be affected in a particular segment of the Merced River corridor.

- Moderate impacts would be clearly detectable to visitors and could have an appreciable effect on the availability of visitor services. Where impacts are quantifiable, approximately 5% to 10% of visitor services would be affected in a particular segment of the corridor.
 - Major impacts would have a substantial, highly noticeable influence, and could permanently alter access to and availability of visitor services. Where impacts are quantifiable, greater than 10% of visitor services would be affected in a particular segment of the corridor.
- **Duration.** The duration of the impact considers whether the impact would occur in the short term or the long term.
 - A short-term impact would be temporary in duration, such as short-term impacts associated with construction or restoration activities.
 - A long-term impact would have a permanent effect on the visitor’s experience, at least within the planning horizon for the *Merced River Plan*.
 - **Type of Impact.** The type of impact considers whether the impact would be beneficial or adverse to the visitor experience and its effect on access to, availability of, type of and quality of the visitor experience. Beneficial impacts would increase the access, availability, type, or quality of the recreation activities, facility or service, or overnight accommodation. Adverse impacts would reduce access to or availability of visitor services.
 - Access would include actions to increase access, such as Architectural Barriers Act Accessibility Standards (ABAAS)/Americans with Disabilities Act (ADA)-compliance, or changes to access to river segments for boating, etc.
 - Availability includes changes to the inventory available, such as campsites, wilderness permits, etc.
 - Type includes changes to the variety of recreation activities allowed, or the types of overnight accommodations, such as the mixture of tent cabins, hard-side cabins, hotel lodging, and Housekeeping Camp lodging.
 - Quality includes changes to natural resource conditions, trail and facility conditions, presence, or absence of crowding, etc. Judging whether changes to a visitor’s experience are positive or negative is subject to personal preferences; what some may view as a desirable change could be considered undesirable by others. Therefore, this analysis considers multiple points of view when drawing conclusions about the type of impact.

Environmental Consequences of Alternative 1 (No Action)

Impacts of Actions to Protect and Enhance River Values

Under Alternative 1 (No Action), restoration and resource management activities would continue at the current level as part of the park’s ongoing management of natural and cultural resources. These activities include selected meadow restoration and riverbank projects, invasive species control, and limited conifer removal from meadows to improve views. Certain alterations to the biophysical environment would

remain including riverbank riprap, abandoned infrastructure in the riverbed, informal meadow trails, conifer encroachment in meadows, and riverbank impacts from scouring and visitor use. For most visitors, the overall quality of the visitor experience would not be affected by current natural resource conditions. For all visitors, the encroachment of conifers into the non-wilderness meadows would reduce the views and vistas that draw many visitors to Yosemite.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Under Alternative 1, visitation to Yosemite Valley is anticipated to increase approximately 3% annually based on current trends. Outside of wilderness areas, where wilderness permits control the number of overnight users, no formal systems or methods for controlling access would be implemented. This annual increase in the number of visitors is likely to exacerbate crowding and congestion on roads and at key visitor sites in the valley.

Increased visitation would likely affect transportation and parking. Visitors would likely experience increased traffic congestion and increased difficulty finding parking, especially during peak visitation months.

Under Alternative 1, all terms and conditions of the visitor services contract between Delaware North Corporation and the NPS would remain as negotiated. Under Alternative 1, this contract would be renegotiated in 2015, presumably with the same terms and conditions as currently exist. Under Alternative 1, the types and amounts of concessioner-operated visitor services currently offered throughout the park would remain as they are currently; however, because the visitor population would continue to expand, there would likely be fewer staff per visitor, which could result in longer lines and more crowding at concessioner-operated visitor facilities and services corridorwide. Visitor facilities and services would not be adjusted to reflect increased visitation.

Under Alternative 1, the number and type of overnight accommodations and campground sites would remain as they are currently. Demand for lodging and camping currently exceeds supply, especially during the peak season. Increasing visitation is likely to exacerbate this problem.

Under Alternative 1, routine trail maintenance would occur consistent with the current programmatic categorical exclusion for trail maintenance in the park. Visitors would experience trail quality consistent with today's conditions and trail conditions would not noticeably diminish. No new trails would be added. Under Alternative 1, there may be continued conflicts between stock and hikers on trails, while some improvements to the visitor experience will continue to be made through existing restoration actions.

Under Alternative 1, educational and interpretive activities related to natural and cultural resources would be guided by current plans and the recommendations of the recent *Comprehensive Interpretive Plan*. This document guides parkwide educational and interpretive activities for the coming five to 10 years. Visitors would continue to have access to a wide variety of interpretive activities, including exhibits, signage, talks, and guided hikes.

Segment 1: Merced River Above Nevada Fall

Impacts of Actions to Protect and Enhance River Values

In Segment 1 meadows and other sensitive natural areas would continue to be affected by stock grazing and human use. NPS would continue ongoing resource management activities to improve management of stock and restore areas affected by human use.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Merced Lake High Sierra Camp. The Merced Lake High Sierra Camp would remain at its present size (60 beds) and operate much as it does today. The Merced Lake High Sierra Camp would remain located on land designated as a Potential Wilderness Addition. The Merced Lake High Sierra Camp is the subject of differing public opinion. Some visitors feel that, despite its location in a Potential Wilderness Addition, the Merced Lake High Sierra Camp is part of Yosemite's history and adds to their visitor experience and should remain in the wilderness. Others feel that the High Sierra Camp is a developed use that is not appropriate in the wilderness and should be removed.

Camping. Backpacking and camping in Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers camping area would remain unchanged from current conditions. Together, the zone capacities for these areas is approximately 200 campers in designated camping areas. Little Yosemite and Merced Lake Backpackers camping areas would retain the existing facilities including restrooms. (Bear boxes are slated for removal prior to plan adoption). Moraine Dome would continue to have no facilities. Backpackers could also continue to camp away from the Merced River in dispersed sites. Retention of designated campsites would be beneficial to those visitors who appreciate having some facilities (e.g. restrooms) as part of their experience in the wilderness. Some visitors, desiring a more primitive wilderness experience, would experience the designated camping areas and facilities as detracting from their experience. The Wilderness Character section of this chapter evaluates Alternatives 1 through 6 in light of the mandated characteristics of wilderness. This section addresses wilderness from the different perspective of visitor experience.

Boating. Actions that would permit (and thus limit) private boating would not be established in wilderness segments.

Overnight Capacity and Wilderness Permits. Overnight access to the wilderness would continue to be based upon wilderness zone capacities and regulated by wilderness permits that limit the number of overnight visitors that can enter the wilderness each day at various trailheads. Despite these regulations, some visitors would perceive crowding and an unacceptable number of visitor encounters while others would not. The total capacity of the Little Yosemite Valley Zone would remain at 150. The demand for overnight use permits in the wilderness would continue to exceed supply, leaving some visitors unable to secure a permit and thus unable to have the recreational experience they planned at the time they desired. The estimated number of overnight users in Segment 1 under Alternative 1 is 350 and the estimated number of day users is 380.

Segment 1 Impact Summary. Implementation of Alternative 1 would result in segmentwide, long-term, negligible, adverse impacts on visitor experience and recreation within Segment 1.

Segment 2: Yosemite Valley

Impacts of Actions to Protect and Enhance River Values

Under Alternative 1, visitors would have much the same experience as they do today but with more people due to a projected 3% annual increase in visitation. Baseline peak day use, or people at one time (PAOT) within Yosemite Valley under Alternative 1 would continue to be around 8,272, while maximum overnight capacity would remain at about 6,564. The visitor experience of those attuned to natural and cultural resource needs and conditions would likely be lessened by the impacts of human use on some of the valley's meadows and riverbanks and by the presence of structures, campsites, trails, and parking lots within the floodplain, which affect water quality and riverbank condition. Those visitors who are more interested in sightseeing, and who come for a day visit to a few select sites, would likely be less aware of resource impacts. Those visitors who stay longer and visit mainly for recreation may notice some impacts of human use along riverbanks and other high-use areas. All visitors would notice crowding during peak months at many destinations and along trails.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Activities. Under Alternative 1, a wide range of activities would continue to be provided, but many of those activities would be crowded during peak visitation months. Those visitors engaged in water-based activities, such as swimming, rafting, and paddling in the Merced River, would likely experience crowding during peak months. Visitors engaging in land-based activities, such as hiking, bike-riding, horseback riding, and scenic driving, would be similarly affected by crowding. Nonresource-based recreation, such as ice skating and swimming in pools would continue to be available, with visitors using swimming pools experiencing crowding during warm weather. Day use sites, such as Swinging Bridge, Sentinel Beach, and Cathedral Beach, would continue to exceed their intended visitor use capacity and visitors engaged in these activities would likely experience crowded conditions. Picnic facilities and restrooms at these sites would remain undersized. Key destinations, including Yosemite, Bridalveil, Vernal, and Nevada falls and the routes leading to them, would seem crowded on peak days, lessening visitors' experience of these sites.

Visitor Services. In addition to recreational activities, the valley would continue to support a wide range of visitor services, including food and beverage facilities such as snack shops, buffets and food courts, bars, restaurants, and grocery stores; and retail establishments including gift shops, sporting goods stores, and bicycle and raft rental facilities. Visitors staying in overnight accommodations do not have an option to cook and rely on the food and beverage services for their meals. Some visitors consider the existing amount of commercial activities to be more than necessary and not in keeping with the natural resource qualities of the valley

Camping and Lodging. Under Alternative 1 in Segment 2, a total of 466 campsites would accommodate up to 2,892 people per night, and a total of 1,034 units of lodging — including hotels, lodges, and tent cabins — would accommodate up to 3,672 people per night. In both cases, demand would continue to exceed supply, especially during peak visitation months. Visitors able to secure reservations for lodging or camping may experience impacts resulting from the general crowded

nature of the Merced River corridor during peak months. Those visitors unable to secure lodging in the park would be required to change their plans or stay outside the park.

Parking. Under Alternative 1, approximately 2,337 parking spaces would be available for day visitors in the valley. These numbers would not increase with the increase in visitors. Demand for parking currently exceeds supply during peak season. As the number of visitors increases, visitors would notice related increases in congestion, noise, and pedestrian/vehicular conflicts, as well as a reduction in air quality. All of these would negatively affect the experience of most visitors.

Transportation. Regional bus service into Yosemite Valley would be expanded during the peak summer season under Alternative 1, allowing an estimated maximum of 720 people per day to arrive in the valley on regional transit. Within the park, shuttle service would continue to operate at seven to ten-minute intervals. Both the number of buses and the frequency would remain constant and could be inadequate to meet the increased number of visitors.

Total Visitation. Under Alternative 1, the number of peak day use (PAOT) would be 1,295, and the maximum number of overnight visitors would be 865. There would be no day-use reservation system or ability to control the number of visitors before their arrival at the entrance station. Visitors would be likely to experience some degree of crowding, congestion and difficulty finding parking spaces during periods of peak visitation. The levels of crowding, congestion and difficulty finding parking would increase if numbers of visitors increase during periods of peak use.

Segment 2 Impact Summary. Implementation of Alternative 1 would result in segmentwide, long-term, major, adverse impacts on visitor experience and recreation within Segment 2.

Segments 3 and 4: Merced River Gorge and El Portal

Impacts of Actions to Protect and Enhance River Values

Segment 3 (Merced River Gorge) and Segment 4 (El Portal) experience minimal visitor use. Most visitors pass through these segments on their way to and from Yosemite Valley. There are no facilities in Segment 3. Primary facilities in Segment 4 are the El Portal Administrative Facility and the residences and limited commercial facilities in the community of El Portal. Due to the presence of both the Administrative Facility and employee housing, there are human-made features and activities in Segment 4 that affect the Merced River's natural condition, including a levee, abandoned infrastructure, riprap, and roadside parking affecting water quality and the community of valley oaks. Under Alternative 1, these features and activities would continue to affect natural resources and water quality, but would not have a significant effect on the visitor experience due to the small number of visitors to Segment 4.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Segments 3 and 4 under Alternative 1 would continue to be lightly used by visitors. Current visitor activities in Segments 3 and 4 include scenic driving along Highway 140, rock climbing, and river-related activities such as swimming, boating, and fishing. Camping is not allowed in Segments 3 and 4, and no facilities would be provided for camping under Alternative 1. Due to the projected 3% annual

increase in visitation, activities and recreation areas in Segments 3 and 4 may become slightly more crowded as visitors, seeking an alternative to visiting the valley, recreate in this area. NPS visitor facilities in Segments 3 and 4 include the Cascades Picnic Area and the Arch Rock Entrance Station.

Parking. Under Alternative 1, there are 180 parking spaces in Segment 3 and 214 parking spaces in Segment 4, mostly along the roadsides and at the store and gas station. Despite future increases in visitation, parking is not likely an issue for recreational visitors in Segments 3 and 4, as recreational use is limited in these Segments.

Total Visitors. Under Alternative 1, the number of people recreating in these Segments could increase slightly due to the projected growth in visitors, however Segments 3 and 4 would continue to provide scenery, uncrowded conditions, and a variety of water-based recreation opportunities.

Segments 3 & 4 Impact Summary. Implementation of Alternative 1 would result in segmentwide, long-term, negligible, beneficial impacts on visitor experience and recreation within Segments 3 & 4.

Segments 5, 6, 7, and 8: South Fork Merced River

Impacts of Actions to Protect and Enhance River Values

This area includes wilderness (Segments 5 and portions of Segments 6 and 7), a WSRA wild segment (Segment 8); the Wawona Impoundment (Segment 6), and Wawona (Segment 7). Segments 5 and 8 are remote and undisturbed and resource quality is high due to low use levels. Wawona Impoundment is off-limits to visitors because of safety and water quality concerns. Resource impacts would be most noticeable in Wawona.

Low summer flows related to the Wawona Impoundment and surface water withdrawals could reduce river flows downstream. Visitors participating in water-based recreation activities, especially rafting and floating, may find there is less water available, which could alter the experience and also increase crowding as visitors seek those locations where there is the most water.

Reduced flows may also result in lower water quality due to higher sediment levels. Additionally, water quality issues that could affect the quality of visitors engaged in water-based recreation activities could be negatively affected by ground and surface water contamination from septic tanks and leach fields not functioning properly at the Wawona Campground, which could affect both ground and surface water quality if capacity is exceeded.

Some facilities and activities in Segment 7 would remain in the floodplain, including abandoned infrastructure; the Wawona Campground dumpsite; informal trails, some which extend across private land; and a number of campsites. These activities would continue to cause riverbank erosion. Owners of the private property where visitors trespass to access the Wawona Swinging Bridge would continue to be unhappy with the unauthorized use and the related impacts to their private property. Others, including those visitors accessing the river via informal trails, would continue to seek out dispersed areas to recreate with fewer crowds. Those in the riverside campsites would continue to camp in these locations.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Segments 5 and 8 are remote and would continue to be used by hikers. A small amount of backpacking occurs in Segment 5, and some Class 5 rafting occurs in Segment 8. These segments experience a small number of visitors and the visitor experience is satisfying to those who visit.

Facilities. In Wawona, visitors would continue to experience crowding at almost all venues during peak summer months. At the Wawona Store Picnic Area, crowding, resulting from a shortage of picnic facilities, seating, and shade, as well as undersized restrooms, would worsen as the number of visitors increases.

Recreational Activities. Visitors participating in hiking, fishing, biking, swimming, and nonmotorized boating would experience increasingly crowded conditions as the number of visitors increases. Opportunities for experiencing solitude while engaging in recreational activities would be lessened, especially during months of peak visitation at popular day-use areas along the river.

The Wawona stables would continue to offer day rides into the wilderness. This would continue to cause minor conflicts between stock and hikers and impact the quality of the trail due to stock urine, feces and flies.

Parking. Day parking capacity in Wawona would be 290 spaces, which would become increasingly inadequate as the number of visitors expands. This would increase congestion as people circle the area searching for parking.

Camping and Lodging. Under Alternative 1, a total of 99 campsites, including one group and two horse sites, would accommodate up to 618 people per night. A number of campsites would remain in the floodplain, providing a unique opportunity for visitors to camp close to the water. In terms of lodging, a total of 104 units at the Wawona Hotel would accommodate up to 247 people per night. In both cases, demand would continue to exceed supply, especially during peak visitation months.

Total Visitors. Visitor use in Segment 7 under Alternative 1 would be approximately 13,443 per day.

Segments 5-8 Impact Summary. Implementation of Alternative 1 would result in segmentwide, long-term, moderate, adverse impacts on visitor experience and recreation within Segments 5-8.

Summary of the Alternative 1 (No Action) Impacts

Under Alternative 1, park visitation is expected to increase 3% annually (approximately 117,000 people per year based upon 2011 visitation). Visitor services and facilities, such as restaurants, shops, and raft and bicycle rentals, would continue at current levels. The number and types of overnight accommodations, both lodging and campsites, would not change, remaining at post-1997 flood and rockslide numbers. Access to, availability, and diversity of recreational opportunities in the Merced River corridor would be similar to current opportunities and include the use of nonmotorized watercraft (e.g., rafts, inner tubes, kayaks), swimming and wading, hiking, backpacking, camping, rock climbing, fishing, sightseeing, photography, nature study, bicycling, and stock use. Roads and parking would retain their current configurations.

Alternative 1 would not affect access to or types of visitor facilities and services, overnight lodging, campgrounds, or recreation activities. However, potential increased visitation over time could result in a corridor-wide, long-term, moderate to major, adverse impact on the visitor experience owing to uncontrolled crowding and congestion at existing recreation sites and visitor facilities; the continued inability to meet demand for camping and lodging; and congestion on roads and in parking lots. These impacts would likely be most noticeable during months of peak visitation.

Cumulative Impacts of Alternative 1 (No Action)

Cumulative impacts on visitor experience are based on analysis of past, present, and reasonably foreseeable future actions in and around Yosemite National Park, in combination with potential effects of Alternative 1. The projects identified include only those that could affect visitor experience within the Merced River corridor or in the study area. See Appendix B for a full list of cumulative projects. In general, this includes construction, removal, or improvements to visitor services and does not include employee housing projects.

Past Actions

Past actions have generally resulted in beneficial impacts on the visitor experience by providing access to recreational opportunities within the Merced River corridor and the study area, and by improving existing recreation opportunities, visitor facilities and services, and overnight accommodations. However, these past park improvements could be seen as non-beneficial to some visitors who prefer less development and a more primitive experience. These past actions include:

- Various trail and road improvement projects
- Lower Yosemite Fall Project
- Yosemite Valley Campground Restroom improvements
- A range of orientation and interpretation services in and immediately surrounding the Merced River corridor, which include visitor centers, wilderness centers, ranger-led tours, and guided wilderness trips
- The Ahwahnee improvement projects
- Curry Village development
- Curry Village Registration Building, Guest Lounge and Amphitheater Rehabilitation
- Yosemite Valley campground improvements
- Capital Improvement Fund ABAAS/ADA Compliance improvements

Past actions also include a decrease in overnight lodging and camping facilities in Yosemite Valley. The closure of the Upper River and Lower River campground facilities following the 1997 flood eliminated 376 campsites from use. As a result, there is a shortage of camping opportunities in the valley and demand regularly exceeds supply. Following the rock fall in 2008, an additional 122 lodging units were removed from use due to being located in the rock fall hazard zone.

Present Actions

Similar to past actions, present actions would result in beneficial effects. New and improved facilities enhance visitor experience. However, management plans can result in both adverse and beneficial impacts on visitor experience. For example, management plans may reduce or close existing recreational opportunities that some visitors would see as adverse for the lack of access to these resources. However, limiting recreational opportunities due to congestion would improve opportunities for solitude and a primitive and unconfined recreational experience for other visitors. Specific examples of present actions include the following:

- ***Improved Facilities:*** *Ahwahnee Comprehensive Rehabilitation Plan*, Rehabilitate Wawona Road, Tioga Road Rehabilitations
- ***New Visitor Facilities and Services:*** Wahhoga Indian Cultural Center
- ***Management Plans:*** *Half Dome Trail Stewardship Plan*, Recreation Facility Analysis, *Scenic Vista Management Plan*, *Comprehensive Interpretive Plan*

Reasonably Foreseeable Future Actions

Future actions could result in both beneficial and adverse effects. New and improved facilities that would enhance visitor experience include:

- Curry Village Rehabilitation
- Ahwahnee Dormitory Seismic Upgrades
- The Ahwahnee Improvements

Future actions that could benefit visitor services include:

- Concessioner Prospectus updates
- Curry Village and Ahwahnee facility improvements

Management plans that could result in a lack of access for some visitors and an improved experience for other visitors include:

- *Forthcoming Yosemite Wilderness Stewardship Plan/EIS*
- *Half Dome Trail Stewardship Plan*

Overall Cumulative Impacts of Alternative 1 (No Action)

Future management of Yosemite National Park, particularly areas within or near the Merced River corridor, could result in both beneficial and adverse impacts on visitor experience, as described above. Alternative 1, when considered with past, present, and future actions, would continue to allow for availability and diversity of recreation activities and visitor services and facilities similar to current conditions. This could result in enhanced visitor experience for some and reduced access for others. Thus long-term, adverse impacts would be moderate.

Alternative 1 would contribute to the adverse cumulative effect of crowded localized conditions along the river corridor.

Alternative 1 would not address the shortage of camping and overnight lodging opportunities in Yosemite Valley. Although this would not have a cumulatively additive effect compared with current conditions, when compared to conditions at the time of designation (1987), this would continue to be a reduction in camping opportunities in the study area. This would have a long-term, adverse impact on the availability and diversity of visitor services.

With the NPS anticipated 3% increase in annual visitation, crowding and congestion could increase in the gateway communities as visitors seek overnight lodging, meals, supplies, and fuel outside of the park. This could be considered a regional, short-term, moderate, adverse impact. However, in the long-term, this may be a beneficial impact because more services and facilities could be provided to visitors in areas outside of the park, thus decreasing congestion and crowding within the park. The inability to meet camping and lodging demand could constitute a regional, long-term, moderate, adverse impact because some visitors would be displaced as a result of an insufficient number of campsites and lodging units in the park.

Environmental Consequences of Actions Common to Alternatives 2–6

Corridorwide Actions

Impacts of Actions to Protect and Enhance River Values

Biological Resource Actions. Corridorwide programmatic biological resource actions common to Alternatives 2-6 include removal and restoration of informal meadow trails; removal of conifer seedlings from meadows; restoration of eroded riverbanks; establishment of a 150' riparian protection zone where new development would be prohibited and removal/relocation of all campsites within 100 feet of the ordinary high water mark.

These actions would improve natural resources and the visitor experience. Eliminating informal trails would improve the overall quality of the trail system which is beneficial to the visitor experience. For a small number of visitors the closure and revegetation of meadow trails would be considered a limitation on access and availability. Associated educational and interpretive actions would improve visitor understanding of natural processes.

Actions to remove vegetation encroaching in meadows would improve views and vistas to and from key locations within the Merced River corridor and improve the visitor experience for most visitors. Being able to experience the views and vistas of important natural landmarks is a significant component of passive recreational activities, such as sightseeing, contemplation, and painting, as well as active pursuits such as hiking. If prescribed fire is used to eliminate encroaching vegetation, visitors present at the time of the burn would experience smoke and poor air quality. This would be a short-term, minor adverse impact on the visitor experience.

Removal and relocation of campsites would eliminate access to and availability of camping in close proximity to the water. This would diminish the visitor experience for those accustomed to these campsites.

There are no project level biological resource actions proposed for Alternatives 2-6.

Hydrologic/Geologic Resource Actions. Corridorwide programmatic hydrologic/geologic resource actions common to Alternatives 2-6 include removal of underground infrastructure that alters hydrology; removal of riprap and replacement with native vegetation; and management of large wood. These actions would improve natural resource conditions and hydrologic function throughout the corridor thereby enhancing the quality of the visitor experience.

Corridorwide hydrologic/geologic resource projects common to Alternatives 2-6 include removal of underground infrastructure that alters hydrology; removal of riprap and replacement with native vegetation; and management of large wood. These actions would improve natural resource conditions and hydrologic function throughout the corridor thereby enhancing the quality of the visitor experience.

Segment 1: Merced River Above Nevada Fall

Impacts of Actions to Protect and Enhance River Values

Biological Resource Actions. Programmatic biological resource actions common to all alternatives in Segment 1 include:

- Relocating trails out of sensitive habitats
- Removal of informal trails and revegetation with native plants in Merced Lake Shore Meadow
- Rerouting trails from wetlands in Echo Valley and mineral spring outflow between Merced and Washburn Lakes
- Rerouting trails from Triple Peak Fork Meadow

These natural resource improvements would enhance the natural character of the wilderness in Segment 1 and improve the quality of the visitor experience. Boardwalk construction would detract from the undeveloped character of Segment 1. Relocating trails would be a preferable solution in the wilderness.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Boating. Under Alternatives 2-6, boating would be allowed in Segment 1. Allowing boating in Segment 1 by permit would provide a changed recreation opportunity. For those visitors who prefer a pristine wilderness experience with little human-caused disturbance, boating (even under permit) in Segment 1 would detract from the quality of their visitor experience.

Segment 1 Impact Summary: Actions to protect and enhance river values within Segment 1 would have a local, long-term, negligible to minor, beneficial impact on visitor experience and recreation. Actions to manage user capacities, land use, and facilities within Segment 1 would have local, long-term, negligible to minor, beneficial impacts on visitor experience and recreation within Segment 1.

Segment 2: Yosemite Valley

Impacts of Actions to Protect and Enhance River Values

Biological Resource Actions. Specific projects to protect and enhance the river's biological values that would occur within Segment 2 under Alternatives 2-6 include: removing one and formalizing five other vehicle pullouts for river access along El Portal Road, restoring 4.5 acres of riparian habitat in the area of Yosemite Lodge, 20 acres in the area of the western portion of the Former Upper Pines Loop Campground, and removal of infrastructure and restoration of an additional 30 acres at the Former Upper and Lower Pines campgrounds; restoring impacted areas of Ahwahnee Meadow, which includes removal of tennis courts; improving access and removing infrastructure from riparian areas at Cathedral Beach, Housekeeping Camp, and Bridal Veil; constructing a boardwalk extension to reduce Sentinel Meadow trampling; fencing and vegetation management at Stoneman Meadow, restoring floodplain habitat at Devil's Elbow, and filling ditches not serving current operational needs. This work would require the use of heavy equipment, including excavators, skid steers, loaders, and dump trucks.

These projects would have significant short-term impacts on the visitor experience by limiting visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. The larger the project in size and the longer its duration, the greater the impact on the visitor. In certain circumstances, restoration activities, although beneficial to the resource, may alter the visitor's experience by limiting direct interaction with natural resources (e.g. touching versus seeing). Generally, increased visitor use results in greater restrictions in order to protect the resource and therefore would have a short-term, minor, adverse impact on visitor experience. Visitor experience benefits include improved river access, and opportunities for education and interpretation of restoration action. In the long-term, the results of these actions would improve natural resources and hydrologic function and would have moderate beneficial impact on visitor experience.

Hydrologic/Geologic Resource Actions. Programmatic hydrologic/geologic actions Common to Alternatives 2-6 in Segment 2 include installation of constructed log jams and bioengineered stabilization on riprap at Superintendent's Bridge; placement of large wood to lessen scouring from Clark's Bridge and the road bridge at Happy Isles; relocating the Upper Pines Dump Station to protect water quality; removal of 3800' of pack stock trail adjacent to the river; redesign of the Swinging Bridge Picnic Area; placement of large wood at Sentinel Bridge to improve free-flow; and development of a large wood management policy. These projects would all involve short-term construction impacts, and closure of the areas where work is occurring. In the long-term, these actions would have a moderate, local beneficial impact on the natural environment and hydrologic function of the river and the quality of the visitor experience. The redesign of the Swinging Bridge Picnic Area would also improve access to and the quality of this visitor facility.

Hydrologic/geologic projects also include the removal and revegetation of 3,400 feet of riprap. The 3,400 feet of restoration will take place at several locations along Leidig Meadow; along Sentinel Boardwalk; near Sentinel Crossover; on the west side near Housekeeping Camp Bridge, on both sides of the river at Stoneman's Bridge; two small areas south and east of the Ahwahnee Bridge; a small area east of Lower Pines Campground; and an area northeast of the Upper Pines Campground. In addition, the removal of 2300' of riprap and riverbank stabilization is also common to all. Stabilization activities are planned at Swinging Bridge and Superintendents Bridge; and along the northern riverbank from Ahwahnee Bridge to Sugar Pine Bridge. In the short-term, these projects would have a local, moderate, adverse impact on the visitor experience due to construction impacts, restricted access to the areas of the river where riprap is being removed, noise and dust caused by equipment use and trucks, and increased congestion caused by trucks used to haul riprap from the project area. In the long term, this project would greatly improve the natural character and hydrologic function of the river and therefore improve the quality of the visitor experience by reducing the flood hazard, and restoring meadows and the riparian environment which is visually pleasing.

Removal of the abandoned gauging station at Pohono Bridge; and removal of former Happy Isles footbridge footings and gauge station are two additional projects that are Common to Alternatives 2-6 in Segment 2. These two projects would have a short term adverse effect on the visitor experience due to construction impacts and possible closure of Pohono Bridge. The latter action would eliminate circulation involving this bridge until construction is completed. In the long term, this project would greatly improve the natural character and hydrologic function of the river and therefore improve the quality of the visitor experience by reducing the flood hazard, and restoring meadows and the riparian environment which is visually pleasing.

Placement of eight constructed log jams in the channel between Clark's and Sentinel Bridges would have a short term adverse impact on the visitor experience due to construction impacts including closure of this stretch of the river for up to 12 weeks and noise, compaction, and dust from heavy equipment and trucks used to transport logs and place and secure the log jams. In the long term, this project would improve hydrologic function of this stretch of the river which would lessen scouring and river widening, improving natural conditions and the visitor experience in part by removing obstacles to boating,

A final project Common to Alternatives 2-6 in Segment 2 is the restoration of 8.7 acres of riparian ecosystem at Yosemite Lodge where units were lost during the 1997 flood. This action would have a short-term adverse effect on visitor experience due to construction impacts and closure of this area. Opportunities for education and interpretation of this restoration project during construction would enhance this aspect of the visitor experience. Once complete, this project would improve the natural character and hydrologic function of this area, improving the quality of the visitor experience by reducing the flood hazard, and restoring meadows and the riparian environment which is visually pleasing.

Cultural Resource Actions. Programmatic cultural resource actions common to alternatives 2-6 in Segment 2 involve rerouting roads and trails; closure and restoration of informal trails; removal of infrastructure; removal of graffiti; and restoration of traditionally used plant populations. Most of these actions would include some form of education and interpretation that would increase access to

and availability of information and enhance visitor understanding of cultural resources. Rerouting or closing and restoring informal roads and trails and removal of infrastructure and graffiti would also improve natural resources and therefore, the visitor experience. In those areas where cultural resources are also used for climbing, eliminating access to these sites would have a short term local adverse impact on those who use these areas.

There is one cultural resource project in Segment 2 that is common to Alternatives 2-6. This project would fence off access to a large bedrock mortar near Yosemite Lodge, eliminating the non-technical climbing on this feature. Eliminating this recreational activity would be a local, short-term negligible adverse impact. Protection and interpretation of this resource would improve the educational and interpretive component of the visitor experience. Overall this project would have a local, minor, long-term beneficial impact on the visitor experience.

Scenic Resource Actions. There are no programmatic scenic resource actions proposed for Segment 2 that are common to Alternatives 2-6.

There are several projects that propose the thinning and removal by mechanical methods of trees greater than 6" dbh in order to improve near and distant views of meadows, waterfalls, and key features such as Half Dome and El Capitan. In the short-term these projects would have local, minor, adverse impacts on the visitor experience as the areas where the tree removal is occurring would likely be inaccessible to visitors; and tree removal projects may create noise and dust. Once complete, these projects would improve access to views and vistas from trails, bridges, picnic areas, roads and buildings in Segment 2. Because viewing the scenery is an important aspect of the visitor experience, these projects would have a local, moderate, long-term beneficial impact on the visitor experience. Many of these projects also involve restoration of the project areas once tree removal is complete. This includes closure and revegetation of informal trails created by visitors in order to access a view; and restoration of meadows and project areas once trees have been removed. These actions would improve the natural resources in those project areas where restoration is proposed which would be a local, moderate, long-term beneficial impact on visitor experience.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Recreation Facilities. Recreation activities removed under Alternatives 2-6 would include The Ahwahnee and Yosemite Lodge pools, the Ahwahnee tennis court (currently unused), bike rental facilities at Curry Village and Yosemite Lodge, and the Curry Ice Rink.

The removal of the Yosemite Lodge swimming pool would likely affect a large number of visitors. Currently, both the Yosemite Lodge Pool and the Curry Village Pool are open to the public, while the use of the Ahwahnee pool is limited to hotel guests. The pools are well used in the summer months and provide opportunities for swimming under the supervision of qualified lifeguards during periods when river conditions are not suitable for swimming. Removal of the Yosemite Lodge Pool would leave only the Curry Village Pool to meet the public demand for pool swimming. The Yosemite Lodge pool is larger, with greater capacity than the Curry Village pool, thus its removal is likely to result in crowding at the Curry Village Pool.

All bicycle rental facilities would be removed under Alternatives 2-6, although visitors could still bring their own bikes for riding. The bicycle rental facilities, which are located in Curry Village and Yosemite Lodge also rent bicycles with attached trailers for children, strollers, wheelchairs, electric mobility scooters, hand crank bicycles (recumbent bicycles), and tandem bicycles for use by riders with limited vision. While the actual number of visitors who utilize these services is small in comparison to total valley visitation, the impact of eliminating the service is likely to be significant to those who need accommodation. Eliminating this service would eliminate this activity for all visitors who did not bring their own bicycle or other form of mobility equipment to address special needs. Removing bicycle rentals would reduce the number of visitors able to experience riding throughout the valley; and could increase vehicular congestion and/or shuttle bus crowding as visitors may choose to drive or take a shuttle bus to the various destinations within the valley that were easy to access by bicycle but too spread out for walking.

The Curry Ice Rink is well-used during periods of peak winter visitation. Although the ice rink does not specifically connect visitors to the Merced River, it does provide an outdoor recreation experience surrounded by the natural features of Yosemite Valley. The ice rink also provides an opportunity to engage youth in park experiences.

All commercial stock day rides would be eliminated in Segment 2 under Alternatives 2-6. For those visitors who are unable to walk a great distance, stock rides provide an opportunity to access Mirror Lake and view Vernal Falls without being on foot. It also provides an activity for those visitors who spend several days in the valley and desire different types of experiences. However, elimination of day stock rides would improve trail conditions by eliminating the dust, feces, flies and urine related to stock use on these trails. This would be a benefit to hikers whose visit is negatively affected by such conflicts.

Also common to Alternatives 2–6 would be substantial improvements to Cathedral, Sentinel, and Swinging Bridge picnic areas. These areas are currently affected by overuse. Improvements would increase the overall quality of these areas by improving restrooms and parking, reducing crowding, and directing visitors to specific use areas.

A wide variety of nature-based recreational activities, such as hiking, visiting key destinations, contemplation, and river swimming, would remain under Alternatives 2–6.

Commercial. Commercial and visitor services that would be removed from or repurposed to a noncommercial use under Alternatives 2–6 include the Happy Isles and Yosemite Lodge snack stands, the Concessioner Garage building, the Yosemite Lodge Nature Shop, Village Sport Shop (which would become a visitor contact center), the Yosemite Art Center, and the Concessioner General Office. Removal of these facilities would require visitors to find some commercial items elsewhere. In the case of food, many options would remain; however, for visitors needing sporting equipment, the removal/repurposing of the Village Sport Shop would be inconvenient and could alter travel plans if an essential piece of equipment was forgotten. Emergency auto services would still be available as the Concessioner Garage service would be relocated to the Government Utility Building. Removal of the Yosemite Art Center would affect the visitor experience of those familiar with the facility and its

offerings. Over time, visitors would become accustomed to the absence of these facilities and would no longer expect them as a part of their experience in Yosemite.

Interpretation. Interpretive and educational activities common to Alternatives 2–6 in Segment 2 would include the addition of an interpretive (nature) walk through the former Lower River Campground. This and other interpretive and educational activities benefit visitors and improve their experience because they are better able to understand river-related natural processes, the park’s ecological restoration work, and how they can protect the river.

Transportation. Transportation improvements that would simplify visitor access under Alternatives 2–6 include the addition of shuttle stops at Camp 4 and at El Capitan Meadow. These would provide much needed visitor access to these frequently visited destinations.

Segment 2 Impact Summary: Actions to protect and enhance river values would result in short-term, minor, adverse impacts on visitor experience. Over the long-term, these actions would have moderate beneficial impacts on visitor experience and recreation within Segment 2. Actions to manage user capacities, land use, and facilities would also have local, short-term, minor, adverse impacts. Over the long-term, these actions would have minor beneficial impacts on visitor experience and recreation within Segment 2.

Segments 3 and 4: Merced River Gorge and El Portal

Impacts of Actions to Protect and Enhance River Values

Biological Resource Actions. Specific projects to protect and enhance the river’s biological values that would occur within Segment 4 under Alternatives 2-6 include removing asphalt and imported fill from the Abbeville and Trailer Village areas. The project would require the use of a skid steer and dump truck, and take several weeks to complete. The closure of this site, construction disturbance, and resulting noise and dust would have a local, short term, minor, adverse impact on visitor services.

Hydrologic/Geologic Resource Actions. Programmatic hydrologic/geologic actions Common to Alternatives 2-6 in Segment 4 include removal of abandoned infrastructure at Cascades Picnic Area and development of mitigation measures for revetment construction and repair. The former action would improve the Cascades Picnic Area which would improve access to this facility and the quality of the visitor experience. This would also improve the natural character and hydrologic function of this area, another benefit to the visitor experience.

Cultural Resource Actions. There are three programmatic cultural resource actions in Segment 4 that are Common to Alternatives 2-6. These actions involve removal of abandoned infrastructure, informal trails and roads to protect cultural resource sites. Protection and interpretation of cultural resources would benefit the educational and interpretive component of the visitor experience.

Scenic Resource Actions. The Scenic Vista Management Plan in the Merced River Corridor sets forth one project in Segment 3 to remove conifers at the Cascade Falls viewpoint to maintain views of the falls. This project involves the removal by mechanical methods of a maximum of 14 trees greater than 6 inch diameter breast height. In the short-term this project would have local, minor, adverse impact on

the visitor experience at Cascade Falls during tree removal as this area would likely be inaccessible to visitors; and tree removal may create noise and dust. Once complete, this project would improve access to views of Cascade Falls from this viewpoint. Because viewing scenery is an important aspect of the visitor experience, this project would have a local, moderate, long-term beneficial impact on the visitor experience.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Visitor Facility. Under Alternatives 2–6, a public restroom would be constructed in El Portal to accommodate visitors traveling to and through the El Portal Administrative Site. Because one does not exist at present, this would improve the experience of recreational visitors.

Segments 3 & 4 Impact Summary: Actions to protect and enhance river values would result in long-term, minor, beneficial impacts on visitor experience and recreation within Segment 3. Actions to manage user capacities, land use, and facilities would also have local, long-term, minor, beneficial impacts.

Segments 5, 6, 7, and 8: South Fork Merced River

Impacts of Actions to Protect and Enhance River Values

Actions common to Alternatives 2–6 that are designed to protect and enhance resource values in Segments 5, 6, 7 and 8 include water conservation measures to provide more water for river-dependent species. This would also improve the quality of water-based recreation activities owing to increased flows in the river. Other actions that are designed to improve flow and enhance river function include removal of abandoned infrastructure, removal of a dumpsite adjacent to the South Fork Merced River, and relocation of the Wawona Maintenance Yard away from the river. In each of these cases, the native ecosystem would be restored. As opposed to seeing facilities and infrastructure along the river, visitors would experience a much more natural corridor, which would improve the quality of their experience.

A new operations facility would be constructed, which would improve operational efficiency but would have no direct effect on visitor experience.

River access would be formalized near the Wawona Store, which would greatly improve the condition of the slope in this area. Visitors would be directed to a path that would provide river access while protecting and restoring denuded riverbanks. This would enhance visitor safety by providing a formal route to the river and improving natural resources. Similar improvements would occur at the Wawona Picnic Area along the South Fork Merced River, thus benefitting both natural resources and visitors.

Hydrologic/Geologic Resource Actions. Programmatic hydrologic/geologic actions Common to Alternatives 2-6 in Segment 7 include restoration of the Greenemeyer Sandpit and formalizing roadside parking to reduce water quality contamination. The former action would improve natural resource quality and hydrologic function of the river in this Segment and would therefore benefit the visitor experience. Formalizing roadside parking would provide access to removal of abandoned infrastructure at Cascades Picnic Area and development of mitigation measures for revetment

construction and repair. The former action would improve the Cascades Picnic Area which would improve access to this facility and the quality of the visitor experience. This would also improve the natural character and hydrologic function of this area, another benefit to the visitor experience.

Cultural Resource Actions. There is one programmatic cultural resource action in Segment 5 and four in Segment 7 that are Common to Alternatives 2-6. These actions involve removal of informal trails and parking, relocation of campsites to protect cultural resource sites from unintentional damage, and preparation of a site management plan for the Wawona hotel to reduce construction and visitor use impacts on cultural resources. Protection and interpretation of cultural resources would benefit the educational and interpretive component of the visitor experience.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Visitor Facilities. Under Alternatives 2–6, the visitor facilities and restrooms at the Wawona Store would be renovated. This action would add additional picnic facilities, seating, and shade and also expand the restroom facilities, which currently are undersized for the number of people served. Visitors waiting in this area for a shuttle would experience a more comfortable, less crowded environment.

The restrooms at Wawona Campground would also be renovated under Alternatives 2–6. The addition of a new, expanded facility would benefit campground visitors and replace an aging system.

Also common to Alternatives 2–6 in Segment 7 is the construction of a new trail across public land on the south side of the South Fork Merced River to access the Wawona Swinging Bridge. Restrooms, waste disposal, and parking would also be added. A formal trail would make it easier for visitors to access various parts of the river without travelling on informal trails across private land. New facilities would enhance the quality of the visitor experience, making it easier to park and spend the day on the river.

Under Alternatives 2–6, wilderness limited boating would be allowed in the South Fork Merced River wilderness (Segments 5 and 8). Boating in Segments 5 and 8 would provide a recreation opportunity and enhance the visitor experience for those visitors who participate in this activity. For those visitors who prefer a pristine wilderness experience with little human-made disturbance, the addition of boating in Segments 5 and 8 would detract from the quality of their visitor experience.

Segments 5-8 Impact Summary: Actions to protect and enhance river values would result in long-term, minor, beneficial impacts on visitor experience and recreation within Segments 5-8. Actions to manage user capacities, land use, and facilities would also have local, long-term, minor, beneficial impacts.

Summary of Impacts Common to Alternatives 2–6

Actions common to Alternatives 2–6 serve as a basis for the improvement of biological, scenic, hydrological/geologic and cultural improvement in all alternatives. Actions to manage visitor use and experience would result in the restoration of 166 acres of meadow and riparian habitat areas. Actions to manage facilities and use eliminate many non-resource-based activities and facilities, such as ice

skating, snack stands, and retail facilities; improve restrooms; allow wilderness boating; and construct new trails and access points. With implementation of mitigation measure MM-VEX-1, as appropriate (see Appendix C), actions common to Alternatives 2–6 would have a corridorwide, long-term, moderate, beneficial impact on access to and availability of recreation and visitor services and would improve the overall quality of the visitor experience by reducing development, improving natural resource quality and increasing the natural resource focus of the visitor experience.

Environmental Consequences of Alternative 2: Self-reliant Visitor Experiences and Extensive Floodplain Restoration

All River Segments

Segment 1: Merced River Above Nevada Fall

Impacts of Actions to Manage User Capacity and Facilities

Under Alternative 2 in Segment 1, the most notable changes to the visitor experience would be the removal of the Merced Lake High Sierra Camp; all designated camping converted to dispersed camping; and reduced wilderness zone capacities. Reduced capacities and dispersed camping allow for the opportunity for visitors to camp out of sight and sound from other campers.

Merced Lake High Sierra Camp. The removal of Merced Lake High Sierra Camp would eliminate overnight lodging in Segment 1. The camp and all related infrastructure would be removed and the camp would be designated as wilderness. This would create an experience where visitors are self-reliant and the landscape is natural and undeveloped. For visitors who desire this type of experience, the removal of the camp would be beneficial; however, there are many visitors for whom the Merced Lake High Sierra Camp defines the quality of their recreational experience. Some have been visiting this and other High Sierra Camps for generations. Others support the potential Historic District designation of the High Sierra Camp, believing it is a cultural resource from the early days of the park. For these visitors, the closure of the Merced Lake High Sierra Camp would have an adverse effect on their experience both in the wilderness and generally in Yosemite.

Camping. Overnight camping at designated campsites would be eliminated under Alternative 2 in favor of dispersed camping. Dispersed camping and minimal facilities are in keeping with the undeveloped quality of the wilderness. Visitors seeking a true wilderness experience would benefit from these changes. Visitors who desire less crowding but still appreciate a designated area to camp with provision of minor facilities may have a somewhat less positive visitor experience owing to the increase in dispersed camping and removal of facilities.

Wilderness Capacity. Under Alternative 2, the capacity of the Little Yosemite Valley Wilderness Zone would be reduced by 83%, from 150 to 25. Because zone capacity and wilderness permit numbers are related, the number of wilderness permits would also be reduced which would result in even greater difficulty gaining access to the wilderness. However, the reduction in overnight visitors would improve the solitary nature of wilderness camping.

Visitor Use. Wilderness Zone capacities in Segment 1 would be reduced from 380 people under Alternative 1 (No Action) to 195 under Alternative 2, a reduction of 47%. The number of day visitors would remain at 350. This decrease in overnight visitors would reduce the number of wilderness encounters and increase the experience of solitude in the wilderness. Some visitors would benefit from the reduction in activity and visitation; others would be less concerned with these issues because they perceive the wilderness as already uncrowded.

Segment 1 Impact Summary: Actions to manage user capacities, land use, and facilities within Segment 1 would have local, long-term, moderate, adverse impacts on visitor experience and recreation within Segment 1.

Segment 2: Yosemite Valley

Impacts of Actions to Protect and Enhance River Values

Projects proposed in Segment 2 to protect and enhance river values involve removing buildings from the Yosemite Lodge area, restoring of areas from which Yosemite Lodge development was previously removed due to flood damage, and rerouting and revegetating a portion of the Valley Loop Trail. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities, and the end result of restored natural areas, would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the impacts would be long term and beneficial.

Biological Resource Actions. Specific projects to protect and enhance the river's biological values that would occur within Segment 2 under Alternative 2 include: rerouting trails at Ahwahnee Meadows; removing and restoring a portion of Northside Drive (900 feet) and rerouting the bike path; removing 1,335 feet of Southside Drive, re-alignment of the road, reconfiguring Curry Orchard parking lot, and extending the Stoneman Meadow boardwalk; removing campsites and infrastructure from the 100-year floodplain and restoring 25.1 acres of floodplain and riparian habitat; and removing informal trails and informal parking at El Capitan Meadow. This work would require the use of heavy equipment, including excavators, skid steers, loaders, and dump trucks.

These projects would have significant short-term impacts on the visitor experience by limiting visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. The larger the project in size and the longer its duration, the greater the impact on the visitor. In certain circumstances, restoration activities, although beneficial to the resource, may alter the visitor's experience by limiting direct interaction with natural resources (e.g. touching versus seeing). Generally, increased visitor use results in greater restrictions in order to protect the resource and therefore would have a short-term, minor, adverse impact on visitor experience. Visitor experience benefits include opportunity for education and interpretation of restoration action. In the long-term, the results of these actions would improve natural resources and hydrologic function and would have moderate beneficial impact on visitor experience.

Hydrologic/Geologic Resource Actions. Specific projects to protect and enhance the river’s hydrologic and geologic values that would occur within Segment 2 under Alternative 2 include: relocating unimproved Camp 6 parking and rerouting a portion of Northside Drive; removing the Stoneman, Ahwahnee and Sugar Pine Bridges; and restoring these areas to natural conditions. This work would require the use of heavy equipment, including excavators, skid steers, loaders, and dump trucks. These actions would likely limit visitor access while these areas are being restored. Construction impacts including truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the projects would be long term and beneficial.

The scale of restoration proposed under Alternative 2, in combination with activities common to Alternatives 2–6, would change the physical appearance of Yosemite Valley. There would be fewer roads, trails, buildings, and bridges, and noticeably more relatively undisturbed natural areas. Because the number of visitors would also be controlled under Alternative 2 (see discussion below), the reduction in roads, trails, and riverbank access under Alternative 2 would not result in crowding on the remaining roads and trails.

The interpretive and educational opportunities associated with this scale of restoration would explain these landscape-level changes to visitors. Education would benefit all visitors but would especially help explain why the appearance of the valley has changed.

Impacts of Actions to Manage User Capacity and Facilities

Visitor Use Levels. Under Alternative 2, visitors would experience much less crowding in Segment 2 because peak day use levels would decrease by 18%, from 8,272 to 6,289 PAOT; while maximum overnight capacity would decrease by 28%, from 6,564 to 4,758 people per night. Access to the East Valley by private vehicle would be managed through a day use parking permit system that would require the purchase of a permit before entry. Alternative 2 would significantly reduce the maximum daily visitation to Yosemite Valley from current levels; however, demand is likely to significantly exceed supply during peak season, resulting in many dissatisfied individuals unable to access parking in the East Valley. Implementing the permit system would benefit those visitors who are able to secure a permit because the valley would be much less crowded during peak season and provide an improved visitor experience.

Camping and Lodging. In keeping with the resource-based experience focus of Alternative 2, total camping would be decreased in Segment 2, from the 466 existing campsites to a total of 450 campsites. More notably, lodging would decrease by 46%, from 1,034 rooms to 556 rooms, due to the removal of Yosemite Lodge and Housekeeping Camp. The total overnight capacity would decrease by 38%, from 6,564 to 4,758. The reduction in total overnight accommodations would exacerbate the demand for overnight facilities, which would continue to exceed the supply.

Parking. Day parking would decrease by 23% from 2,337 spaces currently to 1,800 spaces and peak day use within these areas would decrease from 8,272 to 5,858. The greater reduction in day visitors,

coupled with other transportation-related improvements and alternatives, would make finding parking much easier and reduce congestion and crowding significantly during peak months.

Recreation Facilities. Additional developed facilities removed under Alternative 2, in addition to those common to Alternatives 2–6, would include the Curry Village stables and the visitor-serving retail facilities contained in Yosemite Lodge — the gift shop, and Mountain Room Bar. The removal of the stables would eliminate this type of recreation from the valley. The actions common to Alternatives 2–6 would eliminate many other types of active recreation, including bicycle rentals, tennis, most swimming pools, ice skating, and so forth. Removal of these additional activities would create an environment characterized mostly by nature-based activities, such as hiking, wildlife viewing, limited boating, and swimming at designated beaches. Removal of additional retail, in addition to the actions common to Alternatives 2–6, would make the valley much less commercial, providing mostly for basic needs, with a focus on experiences that are nature based.

Raft rentals would be discontinued under Alternative 2 in favor of private boating, which would be limited to 25 trips per day with designated put-in and take-out locations. This would significantly reduce access to boating in Segment 2 and affect those visitors who come to Yosemite to participate in water activities. The limit on the number of trips per day would further reduce the opportunity to participate in this experience. With limited put-in and take-out locations, which are also day use areas, crowding could increase.

Segment 2 Impact Summary: Actions to protect and enhance river values would result local, long-term, minor to moderate, beneficial impacts on visitor experience and recreation within Segment 2. Actions to manage user capacities, land use, and facilities would also have minor beneficial impacts on visitor experience and recreation within Segment 2.

Segment 3 and 4: Merced River Gorge and El Portal

Impacts of Actions to Protect and Enhance River Values

Within Segment 4, the park would establish oak protection areas in the Odgers' fuel storage area and the parking lots adjacent to this area. Parking and new building construction would be prohibited within the oak protection areas. The restoration of this area would improve natural resources and have a local, long-term, negligible beneficial impact on the visitor experience.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Boating. Alternative 2 would implement boating restrictions in Segments 3 and 4, limiting put-in and take-out locations as well as the number of boats per day. This would reduce the ability of visitors to casually boat on the Merced River.

Parking. The day parking capacity would be the same under Alternative 2 as under Alternative 1, with 180 spaces in Segment 3 and 214 spaces in Segment 4. Parking is not likely to be an issue for visitors in Segments 3 and 4. Under Alternative 2, the number of visitors passing through Segments 3 and 4 and those recreating in Segment 3 and in Segment 4 are expected to remain constant, with no change from that under Alternative 1.

Segments 3 & 4 Impact Summary: Actions to protect and enhance river values would result in local, long-term, negligible, beneficial impacts on visitor experience and recreation within Segment 4. Actions to manage user capacities, land use, and facilities would have local, long-term, negligible, adverse impacts on visitor experience and recreation within Segments 3 & 4.

Segments 5, 6, 7, and 8: South Fork Merced River

Impacts of Actions to Manage User Capacity and Facilities

This area includes wilderness (Segments 5 and 8), the Wawona Impoundment (Segment 6), and Wawona (Segment 7). Segments 5 and 8 are remote and undisturbed, and resource quality is high in these segments due to very low levels of use. There are no developed activities or facilities in Segments 5 and 8. Segment 6, the Wawona Impoundment, is off limits to visitors because of safety and water quality concerns.

Camping. In keeping with the restoration theme of Alternative 2, all campsites would be removed from the 100-year floodplain. Visitors who value improved resource conditions would find removal of these campsites beneficial to their experience and in keeping with this restoration-intensive alternative. Removal of these campsites would have a negative impact on the experience of those visitors for whom camping close to the South Fork Merced River is an important part of their experience of Yosemite.

Recreation Facilities. To accommodate the increased restoration focus of Alternative 2, visitors would experience a reduction in the number of facilities and services available, including golf, tennis, and riding. Most noticeably, the Wawona Golf Course and golf shop would be removed under Alternative 2 and the site restored. This would eliminate golfing in the South Fork Merced River corridor. This action would negatively affect visitors for whom golf is an important part of their experience. For those visitors who do not golf or feel golf is an inappropriate activity so close to the river, the removal of this facility and the restoration of the site would be a benefit.

Removal of the Wawona tennis courts would eliminate tennis as a recreational activity in the South Fork Merced River corridor. This might prove to be a disappointment to the hotel visitors who seek out tennis as part of their Yosemite experience. However, this likely involves a small number of guests. For most guests, the removal of tennis would have no effect on their experience in Wawona, and in the long run the removal might improve their experience by affording them more nature-based, river-dependent activities.

Removal of the Wawona stables would completely eliminate day rides from Segment 7. For visitors who participate in these activities, this action would negatively affect their visitor experience. However, participation in these activities is limited, so its removal would not affect most visitors to Wawona.

Boating. Boating would be allowed in Segment 7, but regulations would limit put-in and take-out sites. This would negatively affect those visitors who are accustomed to unrestricted boating access in Segment 7.

Parking. Total parking spaces in Wawona would remain at 290 spaces. This number is currently inadequate during peak times, and visitors would continue to experience crowding and congestion as they search for parking.

Overnight Accommodations. The number of overnight lodging units at the Wawona Hotel would remain the same as under Alternative 1. Demand for overnight reservations would continue to exceed demand throughout the season. The removal of 32 campsites from the Wawona Campground would result in a 33% reduction in the number of campsites. Demand frequently exceeds supply at this campground and removal of these sites, coupled with similar visitation levels, would exacerbate this problem.

Total Visitation. Peak day use levels (PAOT) would increase over that of Alternative 1, from 1,295 to 1,321, primarily due to increased transit use.

Segments 5-8 Impact Summary: Actions to manage user capacities, land use, and facilities would have local, long-term, negligible to minor, beneficial impacts on visitor experience and recreation within Segments 5-8.

Summary of Impacts from Alternative 2: Self-reliant Visitor Experiences and Extensive Floodplain Restoration

Alternative 2 is the most restoration-intensive of all the alternatives, focusing on self-reliant visitor experiences and extensive floodplain restoration. Visitors would experience fewer roads, trails, buildings, and bridges, and noticeably more relatively undisturbed natural areas. Restoration actions would improve the quality of natural resources and thus the overall visitor experience. However, under Alternative 2, the extent of the restoration actions, a total of 347 acres in addition to those restoration actions common to Alternatives 2-6, though highly beneficial to resource conditions and river function, would noticeably reduce access to and availability of recreation and visitor services. Actions under Alternative 2 would generally eliminate recreational activities that are not directly resource based. These actions would include closure of Merced Lake High Sierra Camp; an 87% decrease in Little Yosemite Valley Wilderness Zone capacity and related reduction in wilderness permit quotas; elimination of bicycle rentals, commercial rafting, stock use, golf, tennis, and swimming pools; elimination of most nonriver-related visitor services; a 43% reduction in lodging and 8% reduction in camping; and an overall reduction in peak day use levels (PAOT) within the corridor by 12%. These actions would improve the experience of visitors once they were within the Merced River corridor as a result of less congestion, but would also result in many people being unable to gain access to the East Valley via private vehicle and the experiences it provides. Because there will be a reduction in the total number of visitors, these visitors would overall experience less crowding and enjoy a more natural, restored landscape. Overall, with implementation of mitigation measure MM-VEX-1 and MM-VEX-2, as appropriate (see Appendix C); these actions would result in a corridorwide, long-term, minor beneficial impact on access to and availability of recreation and visitor services and the overall quality of the visitor experience.

Cumulative Impacts from Alternative 2: Self-reliant Visitor Experiences and Extensive Floodplain Restoration

Cumulative effects on visitor experience as it relates to visitor services are based on analysis of past, present, and reasonably foreseeable future actions in the Yosemite region in combination with potential effects of the actions under Alternative 2. The projects identified below include only those that could affect visitor experience within the Merced River corridor or in the park vicinity.

Past Actions

The General Management Plan for Yosemite National Park (1980). This plan is the basic document for management of Yosemite National Park. The *Merced River Plan/EIS* would amend the *General Management Plan* to meet the mandates of the Wild and Scenic Rivers Act.

The Concession Services Plan (1992). This is the 1992 amendment to the General Management Plan that guides the management of concession enterprises such as lodging, food, retail and other commercial services in Yosemite National Park. The plan serves as the basis for contracts between the national Park Service and the park's primary concessioner. The *Merced River Plan/EIS* would amend the *Concessioner Services Plan* to meet the mandates of the Wild and Scenic Rivers Act.

Present Actions

Projects currently underway that may have an effect on the visitor facilities and services and the visitor experience include the following plans, projects, and assessments.

- *Yosemite Wilderness Stewardship Plan/EIS*. This plan utilizes direction from the *Merced River Plan* to address the Merced River corridor component of this plan. Alternative 2 removes the Merced Lake High Sierra Camp and wilderness camping areas and facilities that would allow for including the current nonwilderness inholding to be designated as wilderness.
- *Tuolumne Wild and Scenic River Comprehensive Management Plan*. The Tuolumne River Plan would establish long-term guidance for protecting water quality, free-flowing condition, and unique values for the portion of the Tuolumne River that flows through the park.
- *Scenic Vista Management Plan: Environmental Assessment*. This plan protects Yosemite's views and vistas, part of the overall visitor experience. Actions set forth in this plan amend the *Scenic Vista Management Plan*.
- *Mariposa Grove Restoration Plan*. Decisions made in this plan are expected to help manage visitor crowding and congestion in Wawona.
- *Half Dome Trail Stewardship Plan*. This plan addresses wilderness character on this trail and may affect use patterns along trails between Happy Isles and Little Yosemite Valley.
- *Ahwahnee Comprehensive Rehabilitation Plan*. This plan improves visitor facilities and services at The Ahwahnee. Alternative 2 proposes removal of some facilities and services at The Ahwahnee.
- *Ansel Adams Gallery Rehabilitation Plan*. This plan improves a visitor-serving facility.

- *Comprehensive Interpretive Plan.* This plan outlines a comprehensive approach to interpreting park natural and cultural resources and guides interpretive and educational efforts for the next five to 10 years. The significant number of restoration activities and associated interpretation and education actions under Alternative 2 would need to be considered as this plan is further developed.
- *Curry Village Rock Fall Hazard Zone Structures Project.* This plan addresses the structures within this zone. The outcome of this plan would affect lodging in this area. Alternative 2 removes structures from the rock fall hazard zone.
- *Yosemite Environmental Education Campus* NatureBridge and the NPS will be constructing a new education center at Henness Ridge (and restoring the Crane Flat campus to natural conditions)

Overall Cumulative Impact from Alternative 2: Self-reliant Visitor Experiences and Extensive Floodplain Restoration

The cumulative impacts of Alternative 2 management measures for visitor experience and recreation would generally be beneficial for Segments 1–8. Past and present facilities improvements and upgrades would enhance the visitor experience and reduce demand on park facilities. Visitors would also benefit from past and present habitat restoration and resource management projects and plans. As a result, the cumulative impact of Alternative 2 management measures, in light of past, present, and reasonably foreseeable future projects, would be parkwide, long term, moderate, and beneficial.

Environmental Consequences of Alternative 3: Dispersed Visitor Experiences and Extensive Riverbank Restoration

Segmentwide

Impacts of Actions to Protect and Enhance River Values

With the exception of the corridorwide actions common to Alternatives 2–6, there would be no additional corridorwide actions under Alternative 3 to protect and enhance river values.

Segment 1: Merced River Above Nevada Fall

With the exception of the actions common to Alternatives 2–6, there would be no additional actions under Alternative 3 to protect and enhance river values in Segment 1.

Impacts of Actions to Manage User Capacity and Facilities

Merced Lake High Sierra Camp. Under Alternative 3, Merced Lake High Sierra Camp would be converted to a temporary outfitter camp providing lodging for 15 people. This would reduce lodging in Segment 1 in Alternative 3 by 75%. The Merced Lake High Sierra Camp and all related infrastructure would be removed and the area would be designated as wilderness. This would create an experience where visitors are self-reliant and the landscape is natural and undeveloped. For visitors who desire this type of experience, changing the camp to a temporary outfitters camp would be

beneficial; however, there are many visitors for whom the Merced Lake High Sierra Camp defines the quality of their recreational experience. Some have been visiting the High Sierra Camps for generations. Others support the potential Historic District designation of the High Sierra Camp, believing it is a cultural resource from the early days of the park. For these visitors, the conversion of the camp to a temporary outfitters camp would have an adverse effect on their experience, both in the wilderness and generally in Yosemite.

Camping. Under Alternative 3, all designated camping in Segment 1 would be converted to dispersed camping. With the conversion to dispersed camping, visitors have the opportunity to camp out of sight and sound from other campers. Dispersed camping and minimal facilities are in keeping with the undeveloped quality of the wilderness. Visitors seeking a true wilderness experience would benefit from these changes. Visitors who value less crowded areas, but still appreciate organized camping and minor facilities, may have a somewhat less positive visitor experience owing to the increase in dispersed camping and removal of facilities.

Wilderness Capacity. Under Alternative 3, the capacity of the Little Yosemite Valley Wilderness Zone would be reduced from existing levels by 50%, from 150 to 75 overnight visitors per day. This would improve the solitary nature of wilderness camping due to the reduced number of people but because zone capacity and wilderness permit numbers are related, this would result in increased difficulty gaining access to the wilderness.

Overnight Use. Wilderness Zone capacities in Segment 1 would be reduced from 380 people under Alternative 1 (No Action) to 260 under Alternative 3, a reduction of 32%. The number of day visitors would remain at 350. This decrease in zone capacity would reduce the number of encounters with other visitors and increase the experience of solitude in the wilderness. The importance of these two factors varies according to visitor. For some, the reduction in activity and visitation would be beneficial; others would be less concerned with these issues because they experience the wilderness as already uncrowded.

Segment 1 Impact Summary: Actions to manage user capacities, land use, and facilities within Segment 1 would have local, long-term, moderate, adverse impacts on visitor experience and recreation within Segment 1.

Segment 2: Yosemite Valley

Impacts of Actions to Protect and Enhance River Values

Alternative 3 would restore more than 300 acres of meadow and riparian habitat throughout the Merced River corridor. This is not as significant as the restoration of 347 acres under Alternative 2; however, visitors would still notice the improved condition of the natural environment, including the removal of structures and facilities within the floodplain, restoration of riverbanks and meadows, removal of bridges, and an overall improvement in the functioning of the river.

Under Alternative 3, restoration activities would be similar to, but not as extensive as, those proposed under Alternative 2. As under Alternative 2, certain projects, such as restoration of areas from which Yosemite Lodge development was previously removed due to flood damage would proceed. Many

familiar signs of human use and activity would be removed to accommodate floodplain and meadow restoration. Visitor impacts would be similar to Alternative 2; however, campsites would be removed from within 150 feet of the ordinary high-water mark instead of from the 100-year floodplain. This would result in the removal of fewer campsites for restoration purposes. Extensive restoration would have a number of impacts on the visitor experience, and the impacts would differ depending on the perspective of visitors. As under Alternative 2, regardless of the visitor, the scale of restoration proposed under Alternative 3, in combination with the actions common to Alternatives 2–6, would result in a physically altered Yosemite Valley. There would be fewer roads, trails, buildings, and bridges, and noticeably more relatively undisturbed natural areas. Those visitors who value an ecosystem with less human-made features and disturbances would find their experience very positive. Those visitors who have grown accustomed to more development might miss activities in which they have participated in the past, such as stock use, staying at Yosemite Lodge, and camping adjacent to the Merced River. These visitors might also be negatively affected by the diminishment of the relative freedom provided under Alternative 1, in terms of river access and areas to recreate.

The interpretive and educational opportunities associated with this scale of restoration would explain these landscape-level changes to visitors. Education would benefit all visitors but would especially help those who do not understand why the appearance of the valley has changed and who may feel that certain aspects of the Yosemite they used to know and activities in which they had once participated have either disappeared or become less available.

Biological Resource Actions. Specific projects to protect and enhance the river's biological values that would occur within Segment 2 under Alternative 3 include: rerouting trails at Ahwahnee Meadows; removing and restoring a portion of Northside Drive (900 feet) and rerouting the bike path; removing 1,335 feet of Southside Drive, re-alignment of the road, reconfiguring Curry Orchard parking lot, and extending the Stoneman Meadow boardwalk; and removing campsites and infrastructure from the 100-year floodplain and restoring 12 acres of floodplain and riparian habitat; and erecting fencing and signage to redirect visitor traffic, and removing informal trails at El Capitan Meadow. This work would require the use of heavy equipment, including excavators, skid steers, loaders, and dump trucks.

These projects would have significant short-term impacts on the visitor experience by limiting visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. The larger the project in size and the longer its duration, the greater the impact on the visitor. In certain circumstances, restoration activities, although beneficial to the resource, may alter the visitor's experience by limiting direct interaction with natural resources (e.g. touching versus seeing). Generally, increased visitor use results in greater restrictions in order to protect the resource and therefore would have a short-term, minor, adverse impact on visitor experience. Visitor experience benefits include opportunity for education and interpretation of restoration action. In the long-term, the results of these actions would improve natural resources and hydrologic function and would have moderate beneficial impact on visitor experience.

Hydrologic/Geologic Resource Actions. Specific projects to protect and enhance the river's hydrologic and geologic values that would occur within Segment 2 under Alternative 3 include: relocating unimproved Camp 6 parking; removing the Stoneman, Ahwahnee and Sugar Pine Bridges;

and restoring these areas to natural conditions. This work would require the use of heavy equipment, including excavators, skid steers, loaders, and dump trucks. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise, and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Impacts of Actions to Manage User Capacity and Facilities

Visitor Use Levels. Under Alternative 3, visitors would experience the least crowding of any alternative, as peak day use levels would decrease by 24%, from 8,272 to 6,289; while maximum overnight capacity would fall 23%, from 6,564 to 5,027. Based on monthly visitation statistics, this projected reduction would be more consistent with current visitation in early summer. As a result the visitors at this time would experience less crowding than is normal today in peak months, although nothing like the winter visitation experience, which has approximately 87% less visitors than the peak.

Day Use Management. The day-use management system would have the same impacts on visitors as that under Alternative 2 — a reduction in crowding, congestion and resource damage. However, demand is likely to significantly exceed supply during peak season, resulting in many dissatisfied individuals unable to access the park. Implementing the permit system, among other transportation-related management measures, would benefit the experience of those visitors who are able to secure a permit because the valley would experience much less crowding and traffic congestion during peak season.

Overnight Accommodations. Total camping would increase by 2% in Segment 2, from the 466 existing campsites to a total of 477 campsites. Lodging would decrease by 40%, from 1,034 rooms to 621 rooms. Most notable among the overnight accommodations removed would be Housekeeping Camp and 42% of the units at Yosemite Lodge. Demand for both camping and overnight lodging, which currently exceeds supply, would be exacerbated by this reduction and visitors would find it more difficult to secure a place to stay within the park.

Parking. Day parking would be reduced from 2,337 spaces to 1,597 spaces, a 32% decrease. The reduction in day visitors, coupled with increased transportation options during peak months, would make finding parking much easier and reduce congestion and crowding significantly.

Recreation Facilities. Developed facilities removed under Alternative 3, in addition to those removed under the actions common to Alternatives 2–6, would include all facilities related to Housekeeping Camp. The Curry Village stables and the Yosemite Lodge Gift Shop would be reduced in size. Although not as extensive as the changes to commercial facilities and services proposed in Alternative 2, these reductions would help reduce the commercial nature of the valley and focus on activities and visitor services that are nature based, but would limit access to and availability of a number of types of visitor facilities and services.

Boating. Boat rentals would be discontinued under Alternative 3 in favor of private boating, which would be limited to 50 trips per day (twice as many trips as under Alternative 2), with designated put-in and take-out locations. This would significantly reduce access to boating in Segment 2 and affect those

visitors who come to Yosemite regularly to participate in water activities. The limit on the number of trips per day would further reduce the opportunity to participate. With limited put-in and take-out locations, which are also day use areas, there could be some crowding.

Segment 2 Impact Summary: Actions to protect and enhance river values would result local, long-term, minor to moderate, beneficial impacts on visitor experience and recreation within Segment 2. Actions to manage user capacities, land use, and facilities would also have minor beneficial impacts on visitor experience and recreation within Segment 2.

Segment 3 and 4: Merced River Gorge and El Portal

Impacts of Actions to Protect and Enhance River Values

In addition to the actions common to Alternatives 2–6 in Segments 3 and 4, additional actions would improve and protect the oak habitat in Segment 4 which would improve the natural resources in this area and have a local, long-term, negligible beneficial effect on the visitor experience.

Impacts of Actions to Manage User Capacity and Facilities

Boating. Alternative 3 would implement boating restrictions in Segments 3 and 4, limiting put-in and take-out locations as well as the number of boats per day. This would reduce the ability of visitors to casually boat on the Merced River.

Parking Capacity. The day parking capacity would be the same as under Alternative 1 (No Action), with 180 spaces in Segment 3 and 214 spaces in Segment 4. Parking is not likely an issue for visitors in these segments.

Segments 3 & 4 Impact Summary: Actions to protect and enhance river values would result in local, long-term, negligible, beneficial impacts on visitor experience and recreation within Segment 4. Actions to manage user capacities, land use, and facilities would have local, long-term, negligible, adverse impacts on visitor experience and recreation within Segments 3 & 4.

Segments 5, 6, 7, and 8: South Fork Merced River

Impacts of Actions to Protect and Enhance River Values

No additional resource protection actions, aside from those described as common to Alternatives 2–6, would occur in Segments 5, 6, 7 and 8 under Alternative 3.

Impacts of Actions to Manage User Capacity and Facilities

This area includes wilderness (Segments 5 and 8), the Wawona Impoundment (Segment 6), and Wawona (Segment 7). Segments 5 and 8 are remote and undisturbed, and resource quality is high in these segments due to very low use levels. There are no developed activities or facilities in Segments 5 and 8. Segment 6, the Wawona Impoundment, is off limits to visitors owing to safety and water quality concerns.

In keeping with the restoration theme of Alternative 3, 27 campsites would be removed from within 150-feet of the river, reducing the number of campsites by 28% from under Alternative 1. Visitors who value improved resource conditions would find removal of these campsites beneficial to their experience and in keeping with this restoration-intensive alternative. Removal of these campsites would have an adverse impact on the experience of those visitors for whom camping close to the South Fork Merced River is an important part of their experience of Yosemite.

Recreation Facilities. Under Alternative 3, visitors would experience a reduction in the number of facilities and services available to them, including golf, tennis, and riding. Most noticeably, the Wawona Golf Course and golf shop would be removed under Alternative 3 and the site restored. This would eliminate golfing in the South Fork Merced River corridor. This action would negatively affect visitors for whom golf is an important part of their experience. For those visitors who do not golf or feel golf is an inappropriate activity so close to the river, the removal of this facility and the restoration of the site would be a benefit.

Removal of the Wawona tennis courts would eliminate tennis as a recreational activity in the South Fork Merced River corridor. This might prove to be a disappointment to the hotel visitors who seek out tennis as part of their Yosemite experience. However, this likely would involve a small number of guests. For most guests, the removal of tennis would have no effect on their experience in Wawona, and in the long run the removal might improve their experience by affording them more nature-based, river-dependent activities.

Removal of the Wawona stables would completely eliminate this type of recreation activity from Segment 7. For visitors who participate in day rides, this action would negatively affect their experience. However, a limited number of visitors participate in this activity, so its removal would not affect most visitors in Wawona.

Boating. Boating would be allowed in Segment 7, but regulations would limit put-in and take-out sites with no limits on the number of rafts. Not limiting the number of rafts would be beneficial to boaters because they would continue to have access to the same level of boating as they would under Alternative 1.

Overnight Accommodations. The number of overnight lodging units at the Wawona Hotel would remain the same as under Alternative 1. Demand for overnight reservations would continue to exceed demand throughout the season. The removal of 27 sites from the Wawona Campground would result in a 28% reduction in the number of campsites. Demand frequently exceeds supply at this campground and removal of these sites, coupled with visitation levels that are unchanged from under Alternative 1, would exacerbate this problem.

Parking. Total parking spaces in Wawona would remain at 290 spaces. This number is currently inadequate during peak times, and visitors would continue to experience crowding and congestion as they search for parking.

Total Visitation. Unlike Yosemite Valley under Alternative 1, which would experience noticeably less visitor use under Alternative 3, this area would still be crowded during peak times, lessening the visitor

experience. Peak day use levels (PAOT) would increase over that of Alternative 1, from 1,295 to 1,321, primarily due to increased transit use.

Segments 5-8 Impact Summary: Actions to manage user capacities, land use, and facilities would have local, long-term, negligible to minor, beneficial impacts on visitor experience and recreation within Segments 5-8.

Summary of Impacts from Alternative 3: Dispersed Visitor Experiences and Extensive Riverbank Restoration

The focus of Alternative 3 is on dispersed visitor experiences and extensive riverbank restoration. After Alternative 2, Alternative 3 is the most restoration-intensive of Alternatives 2-6. Visitors would experience fewer roads, trails, buildings, and bridges, and noticeably more relatively undisturbed natural areas. In general, restoration actions improve the quality of natural resources and thus the overall visitor experience. However, under Alternative 3, the extent of the restoration actions, a total of 302 acres in addition to those restoration actions common to Alternatives 2-6, although highly beneficial to resource conditions and river function, would noticeably reduce access to and availability of recreation and visitor services, and the overall visitor experience. Actions under Alternative 3 generally eliminate recreational activities that are not directly resource based including conversion of Merced Lake High Sierra Camp to a temporary pack camp; a capacity reduction of 50% in the Little Yosemite Valley Wilderness Zone and associated reduction in number of wilderness permits issued; elimination of bicycle rentals, commercial rafting, stock use, golf, tennis, and swimming pools; elimination of most nonriver-related visitor services; a 35% reduction in lodging and 3% reduction in camping; and an overall reduction in people in the corridor at one time during peak days by 12%. Parking capacity would be reduced by 19% and, within East Yosemite Valley, private vehicle access managed by a day use permit parking system. These actions would improve the experience of visitors once they were within the Merced River corridor owing to less crowding and congestion, and would also address the demand for more camping in the valley. However, a significant number of visitors would be unable to gain access to the East Valley via private vehicle and the experiences it provides.

Due to the improved condition of natural resources and acreage of restored areas; elimination of a number of non-river-related based activities; a reduced development footprint; an increase in camping and limits on the number of visitors, this alternative would result in a corridorwide, long-term, minor to moderate, beneficial impact on access to and availability of recreation and visitor services and the overall quality of the visitor experience.

These actions would improve the experience of visitors once they were within the Merced River corridor owing to much less crowding and congestion, but would result in many people being unable to gain access to the East Valley via private vehicle and the experiences it provides. Overall, with implementation of mitigation measure MM-VEX-1 and MM-VEX-2, as appropriate (see Appendix C), these actions would result in a corridorwide, long-term, major, adverse impact on access to and availability of recreation and visitor services and the overall quality of the visitor experience.

Cumulative Impacts from Alternative 3: Dispersed Visitor Experiences and Extensive Riverbank Restoration

Cumulative effects on visitor experience as it relates to visitor services are based on analysis of past, present, and reasonably foreseeable future actions in the Yosemite region in combination with potential effects of the actions under Alternative 3. Cumulatively considerable projects would be the same as those identified for Alternative 2, and include only those that could affect visitor experience within the Merced River corridor or in the park vicinity.

Overall Cumulative Impact from Alternative 3: Dispersed Visitor Experiences and Extensive Riverbank Restoration

The cumulative impacts of Alternative 3 management measures on visitor experience would generally be beneficial in Segments 1–8. Past and present visitor services improvements and upgrades would enhance visitor experience and reduce the existing stress on visitor facilities. Visitors would also benefit from past and present habitat and riverbank restoration and resource management projects and plans. As a result, the cumulative impact of Alternative 3 management measures, in light of past, present, and reasonably foreseeable future projects, would be parkwide, long term, minor to moderate, and beneficial.

Environmental Consequences of Alternative 4: Resource-based Visitor Experiences and Targeted Riverbank Restoration

Corridorwide

Impacts of Actions to Protect and Enhance River Values

With the exception of the corridorwide actions common to Alternatives 2–6, there would be no additional actions corridorwide actions under Alternative 4 to protect and enhance river values.

Segment 1: Merced River above Nevada Fall

Impacts of Actions to Protect and Enhance River Values

With the exception of actions common to Alternatives 2–6, there are no additional actions proposed under Alternative 4 to protect and enhance river values in Segment 1.

Impacts of Actions to Manage User Capacity and Facilities

Merced Lake High Sierra Camp. The removal of Merced Lake High Sierra Camp would eliminate overnight lodging in Segment 1. The camp and all related infrastructure would be removed and the camp would be designated as wilderness. This would create an experience where visitors are self-reliant and the landscape is natural and undeveloped. For visitors who desire this type of experience, the removal of the camp would be beneficial; however, there are many visitors for whom the Merced Lake High Sierra Camp defines the quality of their recreational experience. Some have been visiting

this High Sierra Camp for generations. Others support the potential Historic District designation of the High Sierra Camp, believing it is a cultural resource from the early days of the park. For these visitors, the closure of the Merced Lake High Sierra Camp would have an adverse effect on their experience, both in the wilderness and generally in Yosemite.

Camping. Under Alternative 4, designated camping would remain at Moraine Dome. Designated camping at Merced Lake Backpackers Camping Area would be expanded into the High Sierra Camp site, facilities would be removed, and a composting toilet would be added. At Little Yosemite Valley Backpacker's Camping Area, designated camping would remain, facilities would be removed, and a composting toilet would be added. For those visitors seeking a pristine wilderness experience, the removal of the High Sierra Camp would be beneficial; however, the retention of designated camping may not be in keeping with the wilderness experience they are seeking. The retention of designated camping would benefit those visitors who seek the quiet and solitude of the wilderness but prefer designated camping and toilet facilities.

Wilderness Capacity. Wilderness Zone capacities in Segment 1 would be reduced from 380 people under Alternative 1 (No Action) to 270 under Alternative 3, a reduction of 29%. The number of day visitors would remain at 350. This would improve the solitary nature of wilderness camping owing to the reduced number of people but because zone capacity and wilderness permit numbers are related, this would make it increasingly difficult for visitors to gain overnight access to the wilderness.

This decrease in overnight visitors would reduce the number of encounters with other visitors and increase the experience of solitude in the wilderness. The reduction in activity and visitation would be beneficial to some visitors while others would be less concerned with these issues because they experience the wilderness as already uncrowded.

Segment 1 Impact Summary: Actions to manage user capacities, land use, and facilities within Segment 1 would have local, long-term, moderate, adverse impacts on visitor experience and recreation within Segment 1.

Segment 2: Yosemite Valley

Impacts of Actions to Protect and Enhance River Values

Under Alternative 4, visitors would experience restoration of approximately 223 acres of meadow and riparian habitat in the Merced River corridor. Coupled with the restoration actions common to Alternatives 2–6, these improvements would result in noticeable improvement to the resources over that of Alternative 1. Many of the areas proposed for restoration under Alternatives 2 and 3 would be addressed but with somewhat less intensity. Under Alternative 4, Stoneman Bridge would not be removed but its impact on river flows would be mitigated. Some restoration of Ahwahnee, El Capitan, and Stoneman meadows would occur, but not to the levels proposed in Alternatives 2 and 3. As under Alternative 3, campsites and infrastructure would be removed from within 150 feet of the ordinary high-water mark and these areas restored, as would be the area from which Yosemite Lodge development was previously removed due to flood damage. The present-day Yosemite Lodge would remain under Alternative 4, as would a portion of the units at Housekeeping Camp.

Projects proposed in Segment 2 to protect and enhance river values involve rerouting and revegetating a portion of the Valley Loop Trail. This would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Biological Resource Actions. Specific projects to protect and enhance the river’s biological values that would occur within Segment 2 under Alternative 4 include: removing fill and constructing a boardwalk over meadow and wet areas at Ahwahnee Meadows; installing culverts beneath Northside Drive; removing 1,335 feet of Southside Drive, re-alignment of the road, reconfiguring Curry Orchard parking lot, and extending the Stoneman Meadow boardwalk; removing campsites and infrastructure from the 100-year floodplain and restoring 12 acres of floodplain and riparian habitat; and erecting fencing, signage, and boardwalks to redirect visitor traffic, and removing informal trails at El Capitan Meadow. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Hydrologic/Geologic Resource Actions. Specific projects to protect and enhance the river’s hydrologic and geologic values that would occur within Segment 2 under Alternative 4 include: relocating unimproved Camp 6 parking; placing large wood and constructed logjams along the base of Stoneman Bridge; removing the Ahwahnee and Sugar Pine Bridges; and restoring these areas to natural conditions. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Visitor Use Levels. Under Alternative 4, visitors would generally experience reduced crowding in Segment 2 because peak day use levels would decrease by 9%, from 8,272 to 7,554 people at one time. However, maximum overnight capacity would increase by 10%, from 6,564 to 7,224 people per night. Visitors would experience less crowding than under Alternative 1 owing to this reduction. Visitor use would be managed through an East Valley day use parking permit system. Once the Yosemite Valley parking capacity was reached, visitors would be directed to remote parking in the Gateway communities and instructed to take public transportation, which would be expanded under Alternative 4 to meet the increase in visitors. As discussed in Alternatives 2 and 3, reducing the number of visitors would improve the visitor experience for those who are able to access the park. For those who cannot gain access, the quality of their experience would be diminished.

Camping and Lodging. Camping opportunities in Yosemite Valley would increase 50%, from 466 sites to 701 sites. This is a significant increase in camping and would help to meet the current demand

for camping in the valley. An increase in camping would provide the opportunity for many more visitors to stay overnight in the valley relatively inexpensively. Lodging would decrease 24%, from 1034 units to 823 units. Overall, overnight accommodations would increase 7% under Alternative 4. It is likely that demand for overnight accommodations of all types would continue to exceed supply.

Additional facilities removed under Alternative 4 would include the Curry Village stables; the Nature Shop, and the Housekeeping Camp grocery store. Facilities reduced in size include the Yosemite Lodge Gift Shop. Picnic areas would be added in various locations throughout the valley. Although not as extensive as the changes to commercial facilities and services proposed under Alternatives 2 and 3, these reductions would help reduce the commercial nature of the valley and focus on activities and visitor services that are nature based, but would limit access to and availability of a number of types of visitor facilities and services.

Boating. Both private and commercial boating would be allowed in Segment 2. Up to 100 trips per day would be allowed by permit, and put-ins and take-outs would be limited. Commercial boating would be allowed with a staging area at Housekeeping Camp. Commercial trips would be limited to 75 boats at one time or approximately 200 trips per day. The addition of commercial rafting with some restrictions would add a type of activity that is not proposed under Alternatives 2 and 3. Restricting numbers of boats and put-in and take-out locations reduces trampling and erosion and helps protect natural resources.

Parking. Day parking would be reduced by 12%, from 2,337 to 2,045 visitor parking spaces available in the valley (a reduction of 292 spaces). Coupled with the day-use management system (which would limit the number of day visitors), expanded bus service, roadway alignment and intersection performance, and new remote parking in El Portal, Alternative 4 would improve the visitor experience by lessening congestion and the time required to look for parking. Visitor/vehicular use conflicts would be mitigated and traffic congestion further reduced with the provision of an underpass at Yosemite Lodge. This would also improve pedestrian safety and the overall visitor experience around Yosemite Lodge.

Segment 2 Impact Summary: Actions to protect and enhance river values would result local, long-term, minor to moderate, beneficial impacts on visitor experience and recreation within Segment 2. Actions to manage user capacities, land use, and facilities would also have minor beneficial impacts on visitor experience and recreation within Segment 2.

Segment 3 and 4: Merced River Gorge and El Portal

Impacts of Actions to Protect and Enhance River Values

In addition to the actions common to Alternatives 2–6 in Segments 3 and 4, additional actions would improve and protect the oak habitat in Segment 3 which would improve the natural resources in this area and have a local, long-term, negligible beneficial effect on the visitor experience.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Boating. Alternative 4 would implement boating restrictions in Segments 3 and 4, limiting put-in and take-out locations and the number of boats per day to 10 per segment. This would reduce the ability of visitors to casually boat on the river.

Parking. The day parking capacity would be the same as under Alternative 1, with 180 spaces in Segment 3 and 214 spaces in Segment 4. Parking is not likely an issue for visitors in these segments. Under Alternative 4, the number of visitors passing through Segments 3 and 4 would decrease from under Alternative 1; however, those recreating in Segment 3 and 4 are expected to remain constant with no change from Alternative 1.

Alternative 4 would add a 200-vehicle parking lot in El Portal, which would provide remote parking for valley visitors. This would be a valuable addition for those visitors who prefer to avoid the lines and permits required to access the valley, but it would not affect those who choose to recreate in Segments 3 and 4.

Segments 3 & 4 Impact Summary: Actions to protect and enhance river values would result in local, long-term, negligible, beneficial impacts on visitor experience and recreation within Segment 4. Actions to manage user capacities, land use, and facilities would have local, long-term, negligible, adverse impacts on visitor experience and recreation within Segments 3 & 4.

Segments 5, 6, 7, and 8: South Fork Merced River

Impacts of Actions to Protect and Enhance River Values

In addition to the resource actions common to Alternatives 2–6, 27 sites would be removed from the Wawona Campground to protect cultural resources and the 100-foot riparian buffer. Visitors who value improved resource conditions would find removal of these campsites beneficial to their experience and in keeping with this restoration-intensive alternative. Removal of these campsites would have a negative impact on the experience of those visitors for whom camping close to the South Fork Merced River is an important part of their experience of Yosemite.

Impacts of Actions to Manage User Capacity and Facilities

Recreation Facilities. The Wawona Golf Course, golf shop, and tennis courts would be retained under Alternative 4. This would be a beneficial decision for the relatively small number of golfers and tennis players, but an adverse impact on those who believe that golf is an inappropriate activity so close to the South Fork Merced River. For most guests, the availability of tennis and golf does not have an effect on their visitor experience. The retention of these facilities is not in keeping with a visitor experience characterized by nature-based, river-dependent activities.

Removal of the Wawona stables would completely eliminate this type of recreation activity from Segment 7. For visitors who participate in day rides, this action would adversely affect their visitor experience. However, a limited number of visitors participate in this activity, so its removal would not affect most visitors to Wawona.

Boating. Boating would be allowed in Segment 7, but regulations would limit put-in and take-out sites and the number of boats to five. This would adversely affect those visitors who are accustomed to unrestricted boating access.

Overnight Accommodations. The number of overnight lodging units at the Wawona Hotel would remain the same as under Alternative 1. Demand for overnight reservations would continue to exceed demand throughout the season. The removal of 27 sites from the Wawona Campground would result in a 28% reduction in the number of campsites. Demand frequently exceeds supply at this campground and removal of these sites, coupled with visitation levels that are equal to the current levels, would exacerbate this problem.

Parking. Total parking spaces in Wawona would remain at 290 spaces. This number is currently inadequate during peak times, and visitors would continue to experience crowding and congestion as they search for parking.

Total Visitation. The total number of visitors to Segment 7 under Alternative 4 is expected to be the same as under Alternative 1. Crowding and congestion occur in Wawona and along the river during peak times and this would continue. Peak day use levels (PAOT) would increase over that of Alternative 1, from 1,295 to 1,399, primarily due to increased transit use.

Segments 5-8 Impact Summary: Actions to manage user capacities, land use, and facilities would have local, long-term, negligible to minor, beneficial impacts on visitor experience and recreation within Segments 5-8.

Summary of Impacts from Alternative 4: Resource-based Visitor Experiences and Targeted Riverbank Restoration

The focus of Alternative 4 is on resource-based visitor experiences and targeted riverbank restoration. Alternative 4 strikes a balance between restoration and visitor use. Under Alternative 4, the extent of restoration actions would be 223 acres, in addition to those restoration actions common to Alternatives 2–6. Restoration activities would be noticeable to visitors but less extensive than the restoration proposed under Alternatives 2 and 3. In general, restoration actions improve the quality of natural resources and hydrologic function of the river and thus the overall quality visitor experience.

Actions under Alternative 4 generally reduce recreational activities that are not directly resource based. These actions would include removal of Merced Lake High Sierra Camp; a capacity reduction of 33% in the Little Yosemite Valley Wilderness Zone and associated reduction in number of wilderness permits issued; elimination of bicycle rentals, stock use, and swimming pools; elimination of most nonriver-related visitor services; a 20% reduction in lodging and 37% increase in camping; and an overall reduction in peak day use levels (PAOT) within the corridor by 5%. Commercial boating in the valley would be allowed under Alternative 4, a pedestrian underpass would be added at Yosemite Lodge, and a remote parking lot would be added in El Portal to reduce congestion in the valley. Visitor use in Yosemite Valley would be reduced by 17% and access controlled by an East Valley day use parking permit system. Once maximum parking capacity in the valley was reached, access would be limited to overflow parking. These actions would improve the experience of visitors once they were within the Merced River corridor owing to less crowding and congestion, and would also address the

demand for more camping in the valley. However, some visitors would be unable to gain access to the East Valley via private vehicle and the experiences it provides.

Due to the improved condition of natural resources and acreage of restored areas; elimination of a number of non-river-related based activities; a reduced development footprint; an increase in camping and limits on the number of visitors; and with implementation of mitigation measure MM-VEX-1 and MM-VEX-2, as appropriate (see Appendix C), this alternative would result in a corridorwide, long-term, minor to moderate, beneficial impact on access to and availability of recreation and visitor services and the overall quality of the visitor experience.

Cumulative Impacts from Alternative 4: Resource-based Visitor Experiences and Targeted Riverbank Restoration

Cumulative effects on visitor experience as it relates to visitor services are based on analysis of past, present, and reasonably foreseeable future actions in the Yosemite region in combination with potential effects of the actions proposed under Alternative 4. Cumulatively considerable projects would be the same as those identified for Alternative 2, and include only those that could affect visitor experience within the Merced River corridor or in the park vicinity.

Overall Cumulative Impact from Alternative 4: Resource-based Visitor Experiences and Targeted Riverbank Restoration

The cumulative impacts of Alternative 4 management measures on visitor experience would generally be beneficial in Segments 1–8. Past and present visitor services improvements and upgrades would enhance visitor experience and reduce the existing stress on visitor facilities. Visitors would also benefit from past and present habitat and riverbank restoration and resource management projects and plans. As a result, the cumulative impact of Alternative 4 management measures, in light of past, present, and reasonably foreseeable future projects, would be parkwide, long term, minor to moderate, and beneficial.

Environmental Consequences of Alternative 5: Enhanced Visitor Experiences and Essential Riverbank Restoration

Corridorwide

Impacts of Actions to Protect and Enhance River Values

With the exception of the corridorwide actions common to Alternatives 2–6, there would be no additional actions corridorwide actions under Alternative 5 to protect and enhance river values.

Segment 1: Merced River Above Nevada Fall

Impacts of Actions to Protect and Enhance River Values

With the exception of the actions common to Alternatives 2–6, there would be no additional actions under Alternative 5 to protect and enhance river values in Segment 1.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Merced Lake High Sierra Camp. Visitors to Segment 1 would continue to have a wilderness-oriented experience, characterized by self-reliance and opportunities for solitude. The Merced Lake High Sierra Camp would be reduced by 40%, from 60 beds to 42. This would make the Camp equal in size to other High Sierra Camps. Composting toilets will be installed in this location. This size reduction would be beneficial to the experience of some visitors as it would retain the historical use and provide a different type of accommodation for visitors. The reduction in the size of the camp and removal of the water treatment plant, although not as desirable as eliminating the entire camp to those who oppose it, would reduce the impact of this developed facility on the wilderness landscape.

Camping and Lodging. Little Yosemite Valley Backpacker's, Moraine Dome, and the Merced Lake Backpackers camping areas would remain as designated camping areas under Alternative 5, with maximum overnight visitation set by zone capacity, or 150 for the LYV Zone and 50 for the Merced Lake Zone. Merced Lake Backpacker's Camping Area would replace the existing wastewater system with composting toilets. Little Yosemite Backpacker's Camping Area would retain the existing facilities, including restrooms. Moraine Dome would continue to have no facilities. Backpackers could also continue to camp away from the Merced River in dispersed sites. Some visitors would experience crowding and an unacceptable number of visitor encounters, which would impinge on the solitude they desire in the wilderness. Others would perceive the number of overnight visitors in this Segment 1 as low and benefit from the opportunity to experience camping in the relatively uncrowded wilderness. Retention of designated campsites would be beneficial to those visitors who value minimal facilities as part of their wilderness experience. Some visitors, desiring a more primitive wilderness experience, would experience the designated camping areas and facilities as contrary to the wilderness experience.

Boating. Allowed as an activity in Segment 1, under Alternative 5, boating would be limited to five boats per day. This would lessen the visitor experience for those who want to boat in Segment 1 but may improve the experience of those visitors who prefer a wilderness experience with little human-made disturbance.

Wilderness Capacity. Wilderness Zone capacities in Segment 1 would be reduced from 380 people under Alternative 1 (No Action) to 362 under Alternative 5, a reduction of 5%. The number of day visitors would remain at 350. As is currently the case, demand for overnight use permits in the wilderness would continue to exceed supply, leaving some visitors unable to secure a permit and thus unable to have the recreational experience they planned at the time they desired. The retention of the existing wilderness capacity would likely have an adverse effect on those individuals who feel the wilderness should be much less crowded, with fewer visitor encounters.

The slight decrease in overnight visitors would reduce the number of encounters with other visitors and increase the experience of solitude in the wilderness. The importance of these two factors varies according to visitor. Some would benefit from the reduction in activity and visitation, while others would be less concerned with these issues, as they experience the wilderness as already uncrowded.

Segment 1 Impact Summary: Actions to manage user capacities, land use, and facilities within Segment 1 would have local, long-term, minor, adverse impacts on visitor experience and recreation within Segment 1.

Segment 2: Yosemite Valley

Impacts of Actions to Protect and Enhance River Values

Under Alternative 5, visitors would experience restoration of approximately 197 acres of meadow and riparian habitat in the Merced River corridor. Coupled with the restoration actions common to Alternatives 2–6, these improvements would result in noticeable improvements to the resources over that of Alternative 1. Education and interpretation related to the widespread restoration and enhancement activities in Segment 2 would help visitors understand the changes to the natural landscape, the beneficial effects of restoration to the natural environment and the function of the river, and the techniques used to achieve these changes.

Projects proposed in Segment 2 to protect and enhance river values involve restoring areas from which Yosemite Lodge development was previously removed due to flood damage; and rerouting, revegetating, and constructing a boardwalk along a portion of the Valley Loop Trail. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities, and the end result of restored natural areas, would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the impacts would be long term and beneficial.

Biological Resource Actions. Specific projects to protect and enhance the river’s biological values that would occur within Segment 2 under Alternatives 5 include: removing fill and constructing a boardwalk over meadow and wet areas at Ahwahnee Meadows; installing culverts beneath Northside Drive; reconfiguring the Curry Orchard parking lot; removing campsites and infrastructure from the 100-year floodplain and restoring 6.5 acres of floodplain and riparian habitat; and erecting fencing, signage, and boardwalks to redirect visitor traffic, and removing informal trails at El Capitan Meadow. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Hydrologic/Geologic Resource Actions. Specific projects to protect and enhance the river’s hydrologic and geologic values that would occur within Segment 2 under Alternative 5 include: relocating unimproved Camp 6 parking; removing the Sugar Pine Bridge; placing large wood and constructed logjams along the base of Stoneman Bridge; and improving trail connectivity and routing in the vicinity of the Ahwahnee Bridge. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Under Alternative 5, actions to manage visitor use and facilities include a day-use traffic management system; additional parking, camping, and overnight accommodations; and a range of activities designed to complement and respect natural resources. Peak day use levels under Alternative 5 would be 8,954 PAOT, an increase of 8% over existing conditions.

Parking. The East Valley day use parking permit system proposed under Alternative 5 would manage private automobile access to the East Valley, thereby reducing crowding and congestion in Segment 2 on peak use days. Both regional transit and valley shuttle options would be expanded, and visitors would be encouraged to park outside of the park and take public transit into the valley. Vehicles driving into the valley would be subject to transportation fees, be directed to overflow parking in the West Yosemite Valley, and ultimately need a parking reservation. For some day visitors, taking a shuttle into the park would improve their experience because they would not be subject to transportation fees, parking in remote lots, or parking reservation requirements. For those who either need their vehicle to access camping or overnight lodging or simply want or need to have their vehicle, the East Valley day use parking permit system should improve the experience of driving in the park on peak days.

Day parking would increase by 5%, from 2,337 to 2,448 visitor parking spaces available in the valley, including the addition of a 100-car overflow parking garage in the West Yosemite Valley. This increase, in addition to the East Valley day use parking permit system, would reduce the number of vehicles circulating through the valley looking for parking. Transportation improvements, including a round-about at the intersection of Sentinel Road and Northside Drive, improved roadway alignment and intersection performance, and a pedestrian underpass at Yosemite Lodge, would result in less congestion and enhance pedestrian safety.

Although the total number of daily visitors to the park is only slightly reduced from existing numbers, the implementation of the East Valley day use parking permit system, additional parking spaces, and transportation system improvements would greatly improve the visitor experience. These improvements would lessen traffic jams; ensure that visitors entering the park have a place to park, thus eliminating unnecessary circling; and allow visitors to participate in scenic driving; and get to their ultimate destination sooner.

Overnight Accommodations. The amount of overnight lodging would remain essentially the same as existing conditions under Alternative 5, increasing from 1,034 units to 1,053 units. This increase would not meet the demand for overnight lodging during peak months, and some visitors would not be able to reserve lodging at the times they desire.

Camping. The number of campsites would increase from 466 to 739 sites, a 59% increase in the number of campsites in Segment 2. In addition to traditional campsites, new walk-in, RV, and groups sites would broaden camping opportunities for visitors. The overall increase would help meet the current unmet demand for campsites.

Commercial. Visitor-serving facilities would be reduced in Segment 2 under Alternative 5 and would be focused on serving immediate visitor needs for food and beverages. Grocery stores and dining

facilities would remain at Curry Village, Yosemite Village, Yosemite Lodge, and The Ahwahnee. The grocery store at Housekeeping Camp and some shopping facilities would also be removed. These actions, coupled with the removal of facilities common to Alternatives 2–6, would result in a visitor experience that is less focused on commercial activities. Some visitors would miss the additional opportunities for shopping, eating, and recreating. Others would see the removal of these facilities and services as an action in keeping with enhancing the natural character of the valley.

Recreational Activities. A wide variety of nature-based recreational activities, such as hiking, visiting key destinations, contemplation, rafting, and swimming, would continue as an integral part of the visitor experience. These activities are the reason most visitors come to Yosemite and would continue as popular activities. Because the total number of visitors would not noticeably change under Alternative 5, visitors engaged in these activities would likely experience crowded conditions during certain times of day, especially during the peak season.

Segment 2 Impact Summary: Actions to protect and enhance river values would result local, long-term, minor to moderate, beneficial impacts on visitor experience and recreation within Segment 2. Actions to manage user capacities, land use, and facilities would also have minor beneficial impacts on visitor experience and recreation within Segment 2.

Segment 3 and 4: Merced River Gorge and El Portal

Impacts of Actions to Protect and Enhance River Values

In addition to the actions common to Alternatives 2–6 in Segments 3 and 4, additional actions would improve and protect the oak habitat in Segment 3 which would improve the natural resources in this area and have a local, long-term, negligible beneficial effect on the visitor experience.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Boating. Alternative 5 would implement boating restrictions in Segments 3 and 4, limiting put-in and take-out locations and the number of boats per day to 10 per segment. This would reduce the ability of visitors to casually boat on the river.

Parking. The day parking capacity would be the same as under Alternative 1, with 180 spaces in Segment 3 and 214 spaces in Segment 4. Parking is not likely an issue for visitors in these segments.

Alternative 5 would add a 200-vehicle parking lot in El Portal, which would provide remote parking for valley visitors. This would be a valuable addition for those visitors who prefer to avoid the lines and permits required to access the valley but would not affect those who choose to recreate in Segments 3 and 4.

Segments 3 & 4 Impact Summary: Actions to protect and enhance river values would result in local, long-term, negligible, beneficial impacts on visitor experience and recreation within Segment 4. Actions to manage user capacities, land use, and facilities would have local, long-term, negligible, adverse impacts on visitor experience and recreation within Segments 3 & 4.

Segments 5, 6, 7, and 8: South Fork Merced River

Impacts of Actions to Protect and Enhance River Values

In addition to the resource actions common to Alternatives 2–6, 27 sites would be removed from the Wawona Campground to protect cultural resources and the 100-foot riparian buffer. Visitors who value improved resource conditions would find removal of these campsites beneficial to their experience and in keeping with this restoration-intensive alternative. Removal of these campsites would have a negative impact on the experience of those visitors for whom camping close to the South Fork Merced River is an important part of their experience of Yosemite.

Impacts of Actions to Manage User Capacity and Facilities

Recreation Facilities. The Wawona Golf Course, golf shop, and tennis courts would be retained under Alternative 5. This would be a beneficial decision for the relatively small number of golfers and tennis players, but an adverse impact on those who believe that golf is an inappropriate activity so close to the river. For most guests, tennis and golf do not have an effect on their visitor experience. The retention of these facilities is not in keeping with a visitor experience characterized by nature-based, river-dependent activities.

Removal of the Wawona stables would completely eliminate day rides from Segment 7. For visitors who participate in this activity, this action would negatively affect their visitor experience. However, a limited number of visitors participate in this activity, so its removal would not affect most visitors to Wawona.

Boating. Boating would be allowed in Segment 7 but regulations would limit put-in and take-out sites and the number of boats in each segment to five. This would negatively affect those visitors who are accustomed to unrestricted access in this segment.

Overnight Accommodations. The number of overnight lodging units at the Wawona Hotel would remain the same as under Alternative 1. Demand for overnight reservations would continue to exceed demand throughout the season. The removal of 13 sites from the Wawona Campground would result in a 14% reduction in the number of campsites. Demand frequently exceeds supply at this campground and removal of these sites, coupled with visitation levels that are equal to the current levels, would exacerbate this problem.

Parking. Total parking spaces in Wawona would remain at 290 spaces. This number is currently inadequate during peak times, and visitors would continue to experience crowding and congestion as they search for parking.

Total Visitation. Crowding and congestion occur in Wawona and along the South Fork Merced River during peak times and this would continue. Peak day use levels (PAOT) would increase over that of Alternative 1, from 1,295 to 1,606, primarily due to increased transit use.

Segments 5-8 Impact Summary: Actions to manage user capacities, land use, and facilities would have local, long-term, negligible to minor, beneficial impacts on visitor experience and recreation within Segments 5-8.

Summary of Impacts from Alternative 5: Enhanced Visitor Experiences and Essential Riverbank Restoration

The focus of Alternative 5 is on enhanced visitor experiences and essential riverbank restoration. Alternative 5 strikes a balance between restoration and visitor use and would provide a number of methods to manage crowding and congestion and improve the visitor experience. Restoration activities would be noticeable to visitors but less intense than the restoration proposed under Alternatives 2 and 3. In general, restoration actions improve the quality of natural resources and thus the overall visitor experience. Under Alternative 5, the extent of the restoration actions would be 197 acres, in addition to those restoration actions common to Alternatives 2–6. These actions are highly beneficial to resource conditions and river function and somewhat limit access to and availability of recreation and visitor services, and the overall visitor experience. Actions under Alternative 5 reduce recreational activities that are not directly resource based. These actions would reduce Merced Lake High Sierra Camp by 20%; maintain the current capacity of the Little Yosemite Valley wilderness zone and related wilderness permit numbers; eliminate bicycle rentals, commercial boating, stock use, tennis, and swimming pools; eliminate most nonriver-related visitor services; increase lodging 1% and camping 29%; and increase peak day use levels (PAOT) within the corridor by 9%. A traffic circle and a pedestrian underpass in the valley, as well as remote parking lot, would be added in El Portal to reduce congestion in the valley. Parking capacity would be increased by about 3%. These actions would improve the experience of visitors once they were within the Merced River corridor due to less crowding and congestion, and would also address the demand for more camping in the valley. Alternative 5 would allow access to approximately the same number of visitors as current conditions, but with congestion and crowding controls, most visitors would be able to gain access to the East Valley via private vehicle and the experiences it provides. Overall, with implementation of mitigation measure MM-VEX-1 and MM-VEX-2, as appropriate (see Appendix C), these actions would result in a corridorwide, long-term, minor, beneficial impact on access to and availability of recreation and visitor services and the overall quality of the visitor experience.

Cumulative Impacts from Alternative 5: Enhanced Visitor Experiences and Essential Riverbank Restoration

Cumulative effects on visitor experience as it relates to visitor services are based on analysis of past, present, and reasonably foreseeable future actions in the Yosemite region in combination with potential effects of the actions in Alternative 5. Cumulatively considerable projects would be the same as those identified for Alternative 2, and include only those that could affect visitor experience within the Merced River corridor or in the park vicinity.

Overall Cumulative Impact from Alternative 5: Enhanced Visitor Experiences and Essential Riverbank Restoration

The cumulative impacts of Alternative 5 management measures on visitor experience would generally be beneficial in Segments 1–8. Past and present visitor services improvements and upgrades would enhance visitor experience and reduce the existing stress on visitor facilities. Visitors would also benefit from past and present habitat and riverbank restoration and resource management projects and plans. As a result,

the cumulative impact of Alternative 5 management measures, in light of past, present, and reasonably foreseeable future projects, would be parkwide, long term, minor to moderate, and beneficial.

Environmental Consequences of Alternative 6: Diversified Visitor Experiences and Selective Riverbank Restoration

Corridorwide

Impacts of Actions to Protect and Enhance River Values

With the exception of the corridorwide actions common to Alternatives 2–6, there would be no additional actions corridorwide actions under Alternative 6 to protect and enhance river values.

Segment 1: Merced River Above Nevada Fall

Impacts of Actions to Protect and Enhance River Values

With the exception of the actions common to Alternatives 2–6, there would be no additional actions under Alternative 6 to protect and enhance river values in Segment 1.

Impacts of Actions to Manage Use and Facilities

Under Alternative 6, actions to manage visitor use and facilities are similar to Alternative 1 (No Action) and include:

- Retain Merced Lake High Sierra Camp with 60 beds;
- Retain Merced Lake Backpacker’s Camping Area for designated camping and replace flush toilets with composting toilets;
- Retain designated camping and infrastructure at Little Yosemite Valley Backpacker’s Camping Area;
- Retain designated camping at Moraine Dome;
- Little Yosemite Valley wilderness quota remains at 150 overnight visitors; and
- Increase in total daily visitation to Yosemite Valley of 7%.

Merced Lake High Sierra Camp. Visitors to Segment 1 would continue to have a wilderness-oriented experience, characterized by self-reliance and opportunities for solitude. The Merced Lake High Sierra Camp would remain at its present size (60 beds), benefitting the visitor whose values this experience. Those visitors who believe the High Sierra Camp site should be returned to wilderness, with little evidence of human-made facilities, would continue to be dissatisfied with the presence of the High Sierra Camp. The removal of the flush toilets and replacement with composting toilets would reduce the impact of this developed facility on the wilderness landscape.

Camping and Lodging. Little Yosemite Valley Backpacker’s Camping Area would be reduced. Designated camping would remain at Merced Lake Backpackers Camping Area and composting toilets would be installed. Moraine Dome Camping Area would retain its designated sites and would remain without facilities. Backpackers could also continue to camp away from the Merced River in dispersed sites throughout Segment 1. Some visitors would experience crowding and an unacceptable number of visitor encounters, which would impinge on the solitude they desire in the wilderness. Others would perceive the number of overnight visitors in Segment 1 as low. Retention of designated campsites would be beneficial to those visitors who appreciate minimal facilities as part of their wilderness experience. Some visitors, desiring a more primitive wilderness experience, would experience the designated camping areas and facilities as contrary to the wilderness experience.

Wilderness Capacity. Wilderness Zone capacities in Segment 1 would remain at 380 people (as under Alternative 1 (No Action)). The number of day visitors would remain at 350. As is currently the case, demand for overnight use permits in the wilderness would continue to exceed supply, leaving some visitors unable to secure a permit and thus unable to have the recreational experience they planned at the time they desired. However, Alternative 6, like Alternative, 1 would provide for the greatest number of wilderness permits and therefore provide wilderness access to the greatest number of visitors. Maintaining the existing wilderness capacity would likely have an adverse effect on those individuals who feel the wilderness should be much less crowded, with fewer visitor encounters. The number of visitor encounters in the wilderness would remain the highest of any action alternative and reduce opportunities for solitude in the wilderness. Crowding in the wilderness would be similar to present day.

Segment 1 Impact Summary: Actions to manage user capacities, land use, and facilities within Segment 1 would have local, long-term, negligible, adverse impacts on visitor experience and recreation within Segment 1.

Segment 2: Yosemite Valley

Impacts of Actions to Protect and Enhance River Values

Projects proposed in Segment 2 to protect and enhance river values involve removing buildings from the Yosemite Lodge area, and rerouting, revegetating, and constructing a boardwalk along a portion of the Valley Loop Trail. These projects would take several weeks to a few months to complete and would likely close these areas to visitors during this time. These actions would have a short term, local, minor adverse impact on the visitor experience due to construction impacts including noise, temporary resource disturbance.

Biological Resource Actions. Specific projects to protect and enhance the river’s biological values that would occur within Segment 2 under Alternative 6 include: removing fill and constructing a boardwalk over meadow and wet areas at Ahwahnee Meadows; installing culverts beneath Northside Drive; reconfiguring the Curry Orchard Parking lot; removing campsites and infrastructure from the 100-year floodplain and restoring 6.5 acres of floodplain and riparian habitat; and erecting fencing, signage, and boardwalks to redirect visitor traffic, and removing informal trails and selectively removing conifers at El Capitan Meadow. These actions would likely limit visitor access while these

areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Hydrologic/Geologic Resource Actions. Specific projects to protect and enhance the river's hydrologic and geologic values that would occur within Segment 2 under Alternative 6 include: relocating unimproved Camp 6 parking and placing large wood and constructed logjams along the bases of Stoneman, Sugar Pine, and Ahwahnee Bridges. These actions would likely limit visitor access while these areas are being restored. Construction activities resulting in truck congestion, noise and dust would negatively impact the visitor experience. Educating the visitor about ongoing restoration activities would be beneficial to the visitor experience. These actions are local, minor, short-term and adverse. Once these projects are completed, the resulting improvements to natural resources would be long term and beneficial.

Impacts of Actions to Manage User Capacity, Land Use and Facilities

Day use levels and maximum overnight capacities in Segment 2 under Alternative 6 would be the highest of any alternative. Under this alternative, peak day use (PAOT) would increase by 14%, from 8,272 to 9,449; while maximum overnight capacity would increase by 37%, from 6,564 to 9,006 people per night. To help manage this increase in visitation and ease crowding and congestion, a range of transportation management measures, including a possible East Valley day use parking permit system, would be implemented to ease crowding and congestion in Segment 2 on peak use days.

Transportation. Both regional transit and valley shuttle options would be expanded and visitors would be encouraged to park outside of the park and take public transit into the valley. Vehicles driving into the valley would be subject to transportation fees, be directed to overflow parking in the West Yosemite Valley, and ultimately require a parking reservation. In Segment 2, there would be a total of 2,598 day use parking spaces, an 11% increase over the spaces currently available. Within the valley, roundabouts would be added to control traffic flow and pedestrian underpasses would be constructed at Camp 6/Yosemite Village and Yosemite Lodge to improve traffic flow and visitor safety. These improvements would lessen traffic jams; assure that visitors entering the park have a place to park, thus eliminating unnecessary circling; and allow visitors to participate in scenic driving free of congestion, and get to their ultimate destination sooner.

For some day visitors, taking a shuttle into the park would improve their experience because they would not be subject to transportation fees, parking in remote lots, or parking reservation requirements. For those who either need their vehicle to access camping or overnight lodging or simply want or need to have their vehicle, the East Valley day use parking permit system would improve the experience of driving in the park on peak days.

Overnight Accommodations. The amount of overnight lodging in Segment 2 under Alternative 6 would increase 20% over Alternative 1, from 1,034 units to 1,248 units. This increase would not meet

the demand for overnight lodging during peak months, and some visitors would not be able to reserve lodging at the times they desire.

Camping. The number of campsites would increase from 466 to 739 sites, a 59% increase in the number of campsites and the most campsites of any alternative. In addition to traditional campsites, new walk-in, RV, and groups sites would broaden camping opportunities for visitors. The overall increase would help meet the current unmet demand for campsites.

Commercial. Visitor-serving facilities would be reduced in Segment 2 under Alternative 6 and would be focused on serving immediate visitor needs for food and beverages. Grocery stores and dining facilities would remain at Curry Village, Yosemite Village, Yosemite Lodge, The Ahwahnee, and Housekeeping Camp. Some retail facilities would also be removed. These actions, coupled with the removal of facilities common to Alternatives 2–6, would result in a visitor experience that is less focused on commercial activities. Some visitors would miss the additional opportunities for shopping, eating, and recreating. Others would see the removal of these facilities and services as an action in keeping with enhancing the natural character of the valley.

Recreation Facilities. A wide variety of nature-based recreational activities, such as hiking, visiting key destinations, contemplation, rafting, and swimming, would continue as an integral part of the visitor experience. These activities are the reason most visitors come to Yosemite and would continue to be popular activities. As the total number of visitors increase under Alternative 6, visitors engaged in these activities would likely experience crowded conditions during certain times of day, especially during the peak season.

Segment 2 Impact Summary: Actions to protect and enhance river values would result local, long-term, minor to moderate, beneficial impacts on visitor experience and recreation within Segment 2. Actions to manage user capacities, land use, and facilities would also have minor beneficial impacts on visitor experience and recreation within Segment 2.

Segment 3 and 4: Merced River Gorge and El Portal

Impacts of Actions to Protect and Enhance River Values

In addition to the actions common to Alternatives 2–6 in Segments 3 and 4, additional actions would improve and protect the oak habitat in Segment 3.

Impacts of Actions to Manage User Capacity and Facilities

Boating. Alternative 6 would implement boating restrictions in Segments 3 and 4, limiting put-in and take-out locations and limiting the number of boats per day to 10 per segment. This would reduce the ability of visitors to casually boat on the Merced River.

Total Visitors. Under Alternative 6, the number of visitors passing through Segments 3 and 4 is expected to remain constant with no change from Alternative 1.

Parking. The day parking capacity would be the same as under Alternative 1, with 180 spaces in Segment 3 and 214 spaces in Segment 4. Parking is not likely an issue for visitors in these segments. Segments 3 and 4 would continue to be characterized by its scenery, lack of crowds, and variety of water-based recreation opportunities.

Alternative 6 would add a 200-vehicle parking lot in El Portal, which would provide remote parking for valley visitors. This would be a valuable addition for those visitors who prefer to avoid the lines and permits required to access the valley but would not affect those who choose to recreate in Segments 3 and 4.

Segments 3 & 4 Impact Summary: Actions to protect and enhance river values would result in local, long-term, negligible, beneficial impacts on visitor experience and recreation within Segment 4. Actions to manage user capacities, land use, and facilities would have local, long-term, negligible, adverse impacts on visitor experience and recreation within Segments 3 & 4.

Segments 5, 6, 7, and 8: South Fork Merced River

Impacts of Actions to Protect and Enhance River Values

In addition to the resource actions common to Alternatives 2–6, 13 sites would be removed from the Wawona Campground to protect cultural resources and the 100-foot riparian buffer. Visitors who value improved resource conditions would find removal of these campsites beneficial to their experience and in keeping with this restoration-intensive alternative. Removal of these campsites would have a negative impact on the experience of those visitors for whom camping close to the South Fork Merced River is an important part of their experience of Yosemite.

Impacts of Actions to Manage User Capacity and Facilities

Recreation Facilities. The Wawona Golf Course, golf shop, and tennis courts would be retained under Alternative 6. This is a beneficial decision for the relatively small number of golfers and tennis players, but an adverse impact on those who believe that golf is an inappropriate activity so close to the river. For most guests, tennis and golf do not have an effect on their visitor experience. The retention of these facilities is not in keeping with a visitor experience characterized by nature-based, river-dependent activities.

Removal of the Wawona stables would completely eliminate day rides from Segment 7. For visitors who participate in this activity, this action would negatively affect their visitor experience. However, a limited number of visitors participate in this activity, so its removal would not affect most visitors in Wawona.

Boating. Boating would be allowed in Segment 7 but regulations would limit put-in and take-out sites and the number of boats to 10. This would negatively affect those visitors who are accustomed to unrestricted access, though the 10 boat restriction is twice as many boats as allowed under Alternative 5.

Overnight Accommodations. The number of overnight lodging units at the Wawona Hotel would remain the same as under Alternative 1. Demand for overnight reservations would continue to exceed

demand throughout the season. The removal of 13 sites from the Wawona Campground would result in a 14% reduction in the number of campsites. Demand frequently exceeds supply at this campground and removal of these sites, coupled with visitation levels that are equal to the current levels, would exacerbate this problem.

Parking. Total parking spaces in Wawona would remain at 290 spaces. This number is currently inadequate during peak times, and visitors would continue to experience crowding and congestion as they search for parking.

Total Visitation. The total number of visitors to the South Fork Merced River under Alternative 6 is expected to stay the same as under Alternative 1. Crowding and congestion occur in Wawona and along the South Fork Merced River during peak times and this would continue. Peak day use levels (PAOT) would increase over that of Alternative 1, from 1,295 to 1,606, primarily due to increased transit use.

Segments 5-8 Impact Summary: Actions to manage user capacities, land use, and facilities would have local, long-term, negligible to minor, beneficial impacts on visitor experience and recreation within Segments 5-8.

Summary of Impacts from Alternative 6: Diversified Visitor Experiences and Selective Riverbank Restoration

The focus of Alternative 6 is on diversified visitor experiences and selective riverbank restoration. Alternative 6 would achieve this, but not without having some impacts on visitor use and experience. Like Alternative 5, Alternative 6 also attempts to balance restoration and visitor use and provides a number of methods to manage crowding and congestion and improve the visitor experience. Restoration activities would be noticeable to visitors, but less intense than the restoration proposed under other alternatives. In general, restoration actions improve the quality of natural resources and thus the overall visitor experience. Under Alternative 6, the extent of the restoration actions is 170 acres, in addition to those restoration actions that are common to Alternatives 2–6, and presents the least restoration of any action alternative. These actions are highly beneficial to resource conditions and river function and slightly limit access to and availability of recreation and visitor services, and the overall visitor experience.

Actions under Alternative 6 would reduce recreational activities that are not directly resource-based. Under Alternative 6, Merced Lake High Sierra Camp would be retained; Little Yosemite Valley wilderness zone capacity and overnight wilderness permits would remain as under current conditions; bicycle rentals, commercial stock use, tennis, and swimming pool, and most nonriver-related visitor services would be eliminated; lodging would increase 18% and camping 46%; and peak day use levels (PAOT) would increase throughout the corridor by an average of 12%. A roundabout and two pedestrian underpasses in the valley, as well as remote parking lot in El Portal, would be added to address expanded visitation and reduce congestion in the valley. Total parking capacity would increase by 7%. These actions would improve the experience of visitors once they were within the Merced River corridor due to less congestion, and would also address the demand for more camping in the valley. Because Alternative 6 would increase visitor access and add congestion and crowding

controls, more visitors than under current conditions would be able to gain access to the East Valley via private vehicle and the experiences it provides. Overall, with implementation of mitigation measure MM-VEX-1 and MM-VEX-2, as appropriate (see Appendix C), these actions result in a corridorwide, long-term, moderate, adverse impact on access to and availability of recreation and visitor services and the overall quality of the visitor experience.

Cumulative Impacts from Alternative 6: Diversified Visitor Experiences and Selective Riverbank Restoration

Cumulative effects on visitor experience as it relates to visitor services are based on analysis of past, present, and reasonably foreseeable future actions in the Yosemite region in combination with potential effects of the actions under Alternative 6. Cumulatively considerable projects would be the same as those identified for Alternative 2, and include only those that could affect visitor experience within the Merced River corridor or in the park vicinity.

Overall Cumulative Impact from Alternative 6: Diversified Visitor Experiences and Selective Riverbank Restoration

The cumulative impacts of Alternative 6 management measures on visitor experience would generally be beneficial in Segments 1–8. Past and present visitor services improvements and upgrades would enhance visitor experience and reduce the existing stress on visitor facilities. Visitors would also benefit from past and present habitat and riverbank restoration and resource management projects and plans. As a result, the cumulative impact of Alternative 6 management measures, in light of past, present, and reasonably foreseeable future projects, would be parkwide, long term, minor to moderate, and beneficial.