



## Merced Wild and Scenic River Comprehensive Management Plan Record of Decision

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**Yosemite National Park**

National Park Service  
U.S. Department of the Interior



# **Merced Wild and Scenic River Comprehensive Management Plan**

**Record of Decision  
Section 7 Determination  
Wetland Statement of Findings  
Floodplain Statement of Findings  
Biological Opinion  
Programmatic Agreement**

**March 2014**

Cover photos:

Right: The Merced Wild and Scenic River reflects Yosemite Falls on a winter day. Photo copyright by Christine White Loberg

Top left: Park Ranger Erin Davenport talks to young visitors about archeological resources in Yosemite National Park. NPS photo

Center left: Park Ranger/Indian Cultural Demonstrator Ben Cunningham-Summerfield plays the flute in the Museum. NPS photo

Bottom left: Backpackers follow the Mist Trail across the Merced River. NPS photo by Jim Donovan

U.S. DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
**RECORD OF DECISION**  
**MERCED WILD AND SCENIC RIVER**  
**COMPREHENSIVE MANAGEMENT PLAN**

Yosemite National Park, California

## INTRODUCTION

The National Park Service (NPS) at Yosemite National Park has prepared this Record of Decision for the *Merced Wild and Scenic River Final Comprehensive Management Plan and Environmental Impact Statement (Final Merced River Plan/EIS)*. This document includes a brief description of the project background and objectives, a statement of the decision, a discussion of the basis for the decision, a summary of other alternatives considered, a description of the environmentally preferable alternative, a description of the measures that will be implemented to minimize or avoid environmental harm (including Wetland and Floodplain Statements of Findings), and an overview of public involvement and agency consultation.

Also attached, pursuant to NPS *Management Policies 2006*, is the park manager's determination of no impairment of park resources and values.

## BACKGROUND

Congress designated 122 miles of the Merced River as a Wild and Scenic River in 1987 (Public Law 100-149). The designation applies to the section of river extending from the headwaters in Yosemite National Park to the impoundment at Lake McClure, and includes lands managed by the NPS, U.S. Forest Service, and Bureau of Land Management. The National Park Service manages 81 miles of the Merced River, including sections of the main stem and South Fork located within park boundaries and the portion of the main stem that flows through the El Portal Administrative Site. The purpose of a Wild and Scenic River designation is to protect the free-flowing character, water quality, and outstandingly remarkable values of the river for the benefit and enjoyment of present and future generations.

The need for the *Final Merced River Plan/EIS* ties directly to the requirements of the Wild and Scenic Rivers Act (WSRA) which requires a comprehensive management plan for each designated river. To satisfy WSRA requirements, the *Final Merced River Plan/EIS* defines river boundaries and segment classifications; identifies actions needed to protect river values; determines the appropriate types and levels of development; establishes user capacities, and determines the kinds and amounts of use that are appropriate in the river corridor and consistent with park mandates.

In January 1997, a major flood caused extensive damage to facilities along the main stem of the Merced River. Many facilities in Yosemite Valley were flooded. The El Portal Road and the main sewer line from Yosemite Valley to the El Portal Wastewater Treatment Plant also sustained significant damage and required repair and rebuilding. The NPS used the rebuilding process as an opportunity to upgrade and widen the road, which was historically unsafe for travel and particularly dangerous for bus transit.

While flood repair was ongoing, a lawsuit was filed against the National Park Service challenging the adequacy of the environmental assessment used to support the reconstruction of the El Portal Road. At this time, the

NPS had initiated but not completed a comprehensive management plan for the Merced Wild and Scenic River corridor within its jurisdiction. The U.S. District Court determined that the absence of a river management plan hindered the agency's ability to ensure that projects in the river corridor adequately protected the Merced River. The district court's ruling on the lawsuit required the National Park Service to produce a comprehensive management plan for the Merced Wild and Scenic River by August 2000.

In August 2000, the NPS completed the first *Merced Wild and Scenic River Comprehensive Management Plan/Final Environmental Impact Statement (2000 Merced River Plan)*. Two organizations—Friends of Yosemite Valley and Mariposans for the Environment and Responsible Government (formerly Mariposans for Environmentally Responsible Growth)—sued the NPS in the U.S. District Court for the Eastern District of California alleging that the *2000 Merced River Plan* violated both WSRA and NEPA. The district court ruled in favor of the NPS on most issues, and the two plaintiff organizations appealed the case to the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit). On appeal, the Ninth Circuit reversed the opinion of the district court. Of particular importance, the Ninth Circuit found that the *2000 Merced River Plan* failed to adequately address user capacities. In its 2003 opinion, the Ninth Circuit stated that under WSRA, a comprehensive management plan must include “specific measurable limits on use” and that it must “deal with or discuss the maximum number of people that can be received” in a Wild and Scenic River corridor (*Friends of Yosemite Valley v. Norton*, 348 F.3d 789 (9<sup>th</sup> Cir. 2003)). The court also found that the NPS had improperly drawn the boundary for the El Portal segment of the river.

In June 2005, the NPS prepared the *Merced Wild and Scenic River Revised Comprehensive Management Plan/Supplemental Environmental Impact Statement (2005 Revised Merced River Plan)* in response to the Ninth Circuit opinion. In November 2005, the same plaintiffs again challenged the 2005 Revised Merced River Plan under WSRA and NEPA. In 2006, the district court found that the 2005 Revised Merced River Plan failed to address user capacity in accordance with the Ninth Circuit's 2003 opinion. The district court also concluded that the *2005 Revised Merced River Plan* failed to comply with NEPA because it did not have an adequate range of alternatives, was not a “self-contained” plan, and did not have a true No Action alternative.

The NPS appealed the district court's ruling to the Ninth Circuit. In 2008, the Ninth Circuit issued an opinion upholding the district court ruling. The court found that the *2005 Revised Merced River Plan* was “reactionary” because it did not describe an actual level of visitor use that would not adversely affect the ORVs of the Merced River. In the court's view, the *2005 Revised Merced River Plan's* “Visitor Experience and Resource Protection” framework failed to satisfy the user capacity mandate of WSRA because it did not compel management action before degradation occurred. The Ninth Circuit opinion also held that the plan's interim visitor use limits were based on current capacities, and that the NPS did not demonstrate how such limits would protect and enhance river values. Regarding NEPA, the court held that the range of actions in the alternatives was unreasonably narrow, that the plan should have been prepared as a single, comprehensive document, and that elements of the invalid *2000 Merced River Plan* should not have been included as part of the No Action alternative (*Friends of Yosemite Valley v. Kempthorne*, 520 F.3d 1024 (9<sup>th</sup> Cir. 2008)).

In fall 2008, the NPS entered into mediation with the plaintiffs in an effort to resolve the litigation and agree to a process and schedule for completing another version of the Merced River Plan. A court-mediated settlement agreement was executed September 29, 2009. The *2009 Settlement Agreement* directed that the Merced River Plan be completed by July 2013. More recently, the settlement agreement was revised to extend the deadline to March 31, 2014. The Settlement Agreement strictly limited the types of actions that the NPS could conduct prior to completion of the new plan. In general, the NPS could undertake only routine, intermittent, and operational actions within the corridor. The NPS could not construct new roads, parking spaces, bridges, large

structures, or overnight accommodations. The NPS also could not take actions that would pre-determine user capacity in any segment of the river.

This *Final Merced River Plan/EIS* complies with the Ninth Circuit's opinion, the terms of the Settlement Agreement and all relevant provisions of the Wild and Scenic Rivers Act. The plan also amends Yosemite National Park's 1980 *General Management Plan* (GMP). Specific changes to the GMP are identified in Appendix A of the *Final Merced River Plan/EIS*.

## DECISION (SELECTED ACTION)

### Summary

The *Final Merced River Plan/EIS* has been over 15 years in the making. As noted above, during this period of time, the NPS has not made any significant investments in infrastructure, transportation systems, visitor services or ecological restoration in the Merced River corridor or Yosemite Valley. As a result, Yosemite Valley, in particular, is in need of attention. Substantial improvements in both the visitor experience and the natural environment can now be achieved with a completed plan and the available revenue streams to immediately fund its implementation.

The National Park Service will implement Alternative 5, as presented in the February 2014 *Final Merced River Plan/EIS*, as the Selected Action with one modification (discussed below) concerning the former Superintendent's House and Garage (Residence 1).

Under Alternative 5, peak visitation could reach levels seen in recent years—approximately 20,100 people per day in East Yosemite Valley. A higher-quality visitor experience will be provided with increased camping options, improved traffic circulation, and a diversity of recreational opportunities. Essential riverbank restoration will further improve this experience. The ecological restoration program provided in Alternative 5—including a rigorous program of monitoring and adaptive management—will enhance the Merced River's outstandingly remarkable values and ensure that they are protected for future generations.

Under Alternative 5, future visitors to Yosemite Valley will see marked improvements in circulation, parking availability, and traffic flow. Coupled with enhancements to meadows, improvements to river access and extensive riverbank restoration, the visitor experience will be significantly improved. The visual distraction caused by substandard housing will be eliminated along with redundant retail services. Overall, the visitor will find a less cluttered and confused Yosemite Valley with ample experience to enjoy the river and its values without diminishing their quality.

West Yosemite Valley will retain its overall natural character, with limited facilities and visitor services provided. This peaceful setting will continue to serve as a destination for low-impact recreational activities such as hiking, rock climbing, photography, and wildlife viewing. Backcountry enthusiasts traveling through the Merced River corridor will find designated camping in several locations and have the option of staying at a smaller Merced Lake High Sierra Camp, continuing on to other High Sierra Camps, or exiting to Yosemite Valley.

Visitors to Wawona will continue to enjoy the historic Wawona Hotel, swimming pool, and tennis courts. Recreational activities in this location will include camping, golfing, swimming, picnicking, boating the South Fork Merced, and taking horseback day rides from the Wawona stables.

In addition to serving as a hub for park operations, the El Portal Administrative Site will provide remote parking to help alleviate traffic congestion in Yosemite Valley during the peak summer season. Moderate expansion of employee housing at this site will allow development to be removed from Yosemite Valley.

## Overall Goals for the Merced River Plan

The overall goal for the *Final Merced River Plan/EIS* is to provide for the public use and enjoyment of the Merced River while protecting and enhancing the values that led to its inclusion in the Wild and Scenic Rivers System. In accordance with Section 10(a) of WSRA, more specific goals of the plan are to:

***Protect and Enhance Ecological and Natural Resource River Values:*** Promote the ability of the Merced River to shape the landscape by reducing impacts to hydrological/geological processes, restoring floodplains and meadows, and protecting water quality.

***Provide Opportunities for Direct Connection to River Values:*** Support opportunities for people to experience and develop direct connections to the Merced River and its unique values as a place of cultural association, education, recreation, reflection, and inspiration.

***Establish a User Capacity Management Program:*** Establish a user capacity management program that provides for public use and enjoyment of the river resource while protecting and enhancing natural and cultural river values today and into the future.

***Determine Land Uses and Associated Developments:*** Provide clear direction on land uses, facilities, and services within the river corridor that are necessary for public use and provide for the protection of river values.

## MANAGEMENT COMPONENTS

The sections to follow include a brief description of the primary management components that are included in the *Final Merced River Plan/EIS* to meet the requirements of WSRA. Volume and page references are included to guide the reader to the detailed discussion of each topic within the planning documents.

### Boundary Delineation (Volume 1, page 3-1)

The Wild and Scenic Rivers Act (WSRA) requires federal agencies to establish river corridor boundaries for each federally administered river in the National Wild and Scenic Rivers System. In accordance with WSRA (Section 3[b]), boundaries may include an average of not more than 320 acres of land per mile, measured from the ordinary high-water mark on both sides of the river.<sup>1</sup> The NPS used U.S. Geological Survey 7.5-inch topographic quadrangle data to calculate a Wild and Scenic River corridor boundary that encompasses all land within a quarter-mile of the ordinary high-water mark of the Merced River, the maximum area allowed under WSRA.<sup>2</sup> This includes the land below the ordinary high-water mark, which is not included in the acreage limitation. The NPS applies this boundary consistently to the Merced River in Yosemite National Park and the

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<sup>1</sup> The U.S. Army Corps of Engineers defines the ordinary high water mark as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

<sup>2</sup> This acreage limitation does not constrain the protection of river values, which must be protected whether they are inside or outside the corridor boundary.



El Portal Administrative Site, including the main stem Merced River, South Fork Merced River, Red Peak Fork, Merced Peak Fork, Triple Peak Fork, and Lyell Fork.

The river corridor boundaries established in the *Final Merced River Plan/EIS* are based on the existing river channel. Although the river is a dynamic natural system, the boundaries depicted in the *Final Merced River Plan/EIS* maps will not be changed to account for every future fluctuation in the river channel. However, in the interest of allowing natural processes to prevail, the NPS will consider changing the delineation of river corridor boundaries if there is a major shift in the river channel. Boundaries may also be redrawn if significant new information regarding the river channel becomes available and the NPS's ability to protect and enhance the outstandingly remarkable values is inhibited. If changes are deemed necessary, an environmental compliance process will be initiated (including future opportunities for public involvement) and the *Final Merced River Plan/EIS* will be amended or updated as appropriate.

### **River Classifications (Volume 1, page 3-2)**

The segment classifications (wild, scenic, or recreational) for the Merced River are based on the level of development along the shorelines at the time of designation and after the subsequent removal of the Cascades Division Dam. Segments 1, 5, and 8 are located within the Yosemite Wilderness, have little or no evidence of human development, and are classified as "wild" river segments. Other segments that are largely primitive and undeveloped and accessible by road in some places (Segment 2B - West Yosemite Valley and Segment 3 - Merced Gorge) are classified as "scenic" segments. Segment 2A - East Yosemite Valley, Segment 4 - El Portal, and Segments 6 and 7 - Wawona and Wawona Impoundment, are classified as "recreational", reflecting the fact that they contain substantial evidence of human activity and are readily accessible by road.

### **Section 7 Determination (Volume 1, page 4-1)**

One of the policy objectives of the Wild and Scenic Rivers Act is to preserve rivers in their free-flowing condition, which is defined by the act to mean a river flowing in its natural condition without impoundment, diversion, straightening, rip-rapping, or other modifications of the waterway (16 USC Sections 1271 and 1286). To further this goal, the act includes a process for evaluating "water resources projects." Water resources projects, that is, those that are within the bed or banks of the Merced River and that affect the river's free-flowing condition, are subject to Section 7 of the Wild and Scenic Rivers Act (16 USC Section 1278). The National Park Service must complete a Section 7 determination on all proposed water resources projects to ensure that they do not directly and adversely affect the values for which the river was designated. The Selected Action includes a comprehensive process to ensure that all water resources projects are in compliance with the Wild and Scenic Rivers Act, including those taken by the NPS or other agencies above or below the designated portion of the Merced River or any of its tributaries.

Water resources projects found to have a direct and adverse effect on the values of this designated river will be redesigned and resubmitted for a subsequent Section 7 determination or abandoned. In the event that a project cannot be redesigned to avoid direct and adverse effects on the values for which the river was designated, the NPS will either abandon the project or will advise the Secretary of the Interior in writing and report to Congress in writing in accordance with Section 7(a) of the Act.

## Outstandingly Remarkable Values (Volume 1, Chapter 5)

Before a river can be designated Wild and Scenic, it must meet certain requirements for eligibility. One of the primary criteria for eligibility is the presence of outstandingly remarkable values (ORVs). The Wild and Scenic Rivers Act defines these values as those characteristics that make the river worthy of special protection. Such values can include scenery, recreation, fish and wildlife, geology, history, culture, and other similar values. The *Final Merced River Plan/EIS* describes the final ORVs for the main stem and South Fork of the Merced River (Table 1) that have been refined through successive iterations of river plans and planning processes.<sup>3</sup> In addition to the ORVs, the NPS must protect the river’s free-flowing condition and water quality. The ORVs, together with free-flow and water quality, are referred to as “river values” throughout the plan. For each river value, the plan includes a detailed assessment of the baseline condition and the associated management standard (i.e., specific condition to be managed for). A comprehensive monitoring and management program has been developed to manage all river values to ensure that conditions remain at (or superior to) the management standard, thereby preventing any river value from being adversely impacted or degraded. This monitoring program, more fully described Chapter 5 of the *Final Merced River Plan/EIS*, is an integral part of the Selected Action.

**TABLE 1: OUTSTANDINGLY REMARKABLE VALUES (ORVs) OF THE MERCED WILD AND SCENIC RIVER IN YOSEMITE**

<b>Outstandingly Remarkable Values of the Merced Wild and Scenic River in Yosemite National Park and the El Portal Administrative Site</b>
<b>Biological ORVs</b>
<b>Segments 1 and 5 – Merced River Above Nevada Fall and South Fork Merced River Above Wawona</b>
1. The Merced River sustains numerous small meadows and riparian habitat with high biological integrity.
<b>Segments 2A and 2B – Yosemite Valley</b>
2. The meadows and riparian communities of Yosemite Valley comprise one of the largest mid-elevation meadow-riparian complexes in the Sierra Nevada.
<b>Segments 7 and 8 – Wawona and South Fork Merced River below Wawona</b>
3. Sierra sweet bay ( <i>Myrica hartwegii</i> ) is a rare plant found on river banks of the South Fork Merced River.
<b>Geological/Hydrological ORVs</b>
<b>Segment 1 – Merced River Above Nevada Fall</b>
4. The upper Merced River canyon is a textbook example of a glacially-carved canyon.
<b>Segments 2A and 2B – Yosemite Valley</b>
5. The “Giant Staircase,” which includes Vernal and Nevada Falls, is one of the finest examples in the western United States of stair-step river morphology.
6. The Merced River from Happy Isles to the west end of Yosemite Valley provides an outstanding example of a rare, mid-elevation alluvial river.
<b>Segment 4 – El Portal</b>
7. The boulder bar in El Portal was created by changing river gradients, glacial history, and powerful floods. These elements have resulted in accumulation of extraordinarily large boulders, which are rare in such deposits.
<b>Cultural ORVs</b>
<b>Segments 2A and 2B – Yosemite Valley</b>
8. Yosemite Valley American Indian ethnographic resources include a linked landscape of specifically mapped traditional-use plant populations as well as the ongoing traditional cultural practices that reflect the intricate continuing relationship between indigenous peoples of the Yosemite region and the Merced River in Yosemite Valley.

<sup>3</sup> See Volume 3B: Appendix M of the *Final Merced River Plan/EIS* for a discussion of how the ORVs have evolved throughout the river planning process.

**TABLE 1: OUTSTANDINGLY REMARKABLE VALUES (ORVs) OF THE MERCED WILD AND SCENIC RIVER IN YOSEMITE**

<b>Outstandingly Remarkable Values of the Merced Wild and Scenic River in Yosemite National Park and the El Portal Administrative Site</b>	
<b>Cultural ORVs (continued)</b>	
<b>Segments 2A and 2B – Yosemite Valley (continued)</b>	
9.	The Yosemite Valley Archeological District is an unusually rich and linked landscape that contains dense concentrations of resources that represent thousands of years of human settlement.
10.	The Yosemite Valley Historic District represents a linked landscape of river-related or river-dependent, rare, unique or exemplary contributing resources that bear witness to the historical significance of the river system.
<b>Segment 4 – El Portal</b>	
11.	The El Portal Archeological District contains dense concentrations of resources that represent thousands of years of occupation and evidence of continuous, far-reaching traffic and trade. This segment includes some of the oldest deposits in the region and the archeological remains of the Johnny Wilson Ranch, a regionally rare historic-era American Indian Homestead.
<b>Segment 5 – South Fork Merced River Above Wawona</b>	
12.	This segment includes regionally rare archeological features representing indigenous settlement and use along the South Fork Merced River at archeological sites with rock ring features.
<b>Segments 5, 6, 7, and 8 – South Fork Merced River Above Wawona, Wawona Impoundment, Wawona, South Fork Merced River Below Wawona</b>	
13.	The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous far-reaching traffic and trade. Segment 7 includes the remains of the U.S. Army Cavalry Camp A.E. Wood documenting the unique Yosemite legacy of the African American Buffalo Soldiers and the strategic placement of their camp near the Merced River.
14.	The Wawona Historic Resources ORV includes one of the few covered bridges in the region and the National Historic Landmark Wawona Hotel complex, which is one of the largest existing Victorian hotel complex in a national park and one of the few remaining in the United States with this high level of integrity.
<b>Scenic ORVs</b>	
<b>Segment 1 – Merced River Above Nevada Fall</b>	
15.	Visitors to this Wilderness segment experience exemplary views of serene montane lakes, pristine meadows, slickrock cascades, and High Sierra peaks.
<b>Segments 2A and 2B – Yosemite Valley</b>	
16.	Visitors to Yosemite Valley experience views of some of the world’s most iconic scenery, with the river and meadows forming a placid foreground to towering cliffs and waterfalls.
<b>Segment 3 – The Merced Gorge</b>	
17.	The Merced River drops 2,000 feet over 14 miles, a continuous cascade under exemplary Sierra granite outcrops and domes.
<b>Segments 5 and 8 – South Fork Merced River Above and Below Wawona</b>	
18.	The South Fork Merced River passes through a vast area of exemplary and wild scenic beauty.
<b>Recreational ORVs</b>	
<b>Segment 1 – Merced River Above Nevada Fall</b>	
19.	Visitors to federally designated Wilderness in the corridor engage in a variety of river-related activities in an iconic High Sierra landscape, where opportunities for primitive and unconfined recreation, self-reliance, or solitude shape the experience.
<b>Segments 2A and 2B – Yosemite Valley</b>	
20.	Visitors to Yosemite Valley enjoy a wide variety of river-related recreational activities in the Valley’s extraordinary setting along the Merced River.

## Actions to Protect and Enhance River Values

Management actions in Alternative 5 will protect the Merced River's unique natural and cultural values through the restoration of 189 acres of meadow and riparian areas. Much of the area to be restored is within 100 feet of the river. Ecological restoration of riparian and meadow habitats will protect water quality, scenic views from the river, and traditionally used plant populations. Protection and enhancement of archeological sites and historic districts will allow future generations an opportunity to connect to Yosemite Valley's rich history and heritage.

Examples of how the Selected Action will protect and enhance river values include:

- Removing 6,048 linear feet of riprap.
- Reducing riverbank trampling and erosion by directing river access to resilient sandy beaches and sandbars, fencing sensitive riparian areas, and restoring native riparian vegetation.
- Mitigating the effects of trails and roads through meadows by re-routing trails, adding culverts to improve hydrologic connectivity, fencing restoration areas, and using boardwalks or other design features to direct and manage visitor use.
- Ecologically restoring portions of Backpackers Campground, North Pines Campground, Lower Pines Campground, and the former Upper and Lower River Campgrounds.
- Restoring a 150-foot riparian buffer at Abbieville and Trailer Village.
- Protecting culturally sensitive and riparian areas by removing 13 campsites at the Wawona Campground.

## Actions to Improve the Visitor Experience

Alternative 5 will provide visitors with an enhanced "sense of arrival" to the heart of Yosemite Valley by removing industrial and administrative functions in Yosemite Village, rededicating the area to visitor use, and fully integrating arrival points with pathways to interpretive services, restrooms, and food service. Families will enjoy expanded camping opportunities in East Yosemite Valley, with new walk-in, drive-in, and group camping sites provided at several locations. Recreational activities such as rafting, bicycling, and ice skating will continue, with rental facilities and services provided at locations outside of the river corridor. Boaters will be able to float new and challenging river reaches framed by views of El Capitan and Half Dome.

Examples of how the Selected Action will improve the visitor experience include:

- Increasing the campsite inventory in the river corridor (+36%) and in Yosemite Valley, specifically (+37%).
- Retaining and increasing available lodging in the river corridor (+3%) and in Yosemite Valley, specifically (+5%).
- Increasing the supply of parking available for Yosemite Valley day use (+8%).
- Expanding access to additional sections of the river for private boaters and limiting commercial boating to reduce crowding.
- Expanding picnicking and day-use opportunities at Yosemite Village, Church Bowl, and Happy Isles.
- Reducing traffic congestion while meeting ecological restoration goals by making strategic changes to the traffic circulation pattern and the location and size of day-use parking areas.

- Managing use in East Yosemite Valley by rerouting traffic at the El Capitan Traffic Diversion before reaching the user capacity thresholds established in the plan.
- Providing peak season shuttle service to Yosemite Valley from a new El Portal remote parking area.
- Supporting additional regional transit service, including a new route from Fresno to Yosemite Valley along Highway 41.

## OTHER ALTERNATIVES CONSIDERED

Also presented in the *Final Merced River Plan/EIS* are the following alternatives, which have not been substantially changed from those presented in the *Draft Merced River Plan/EIS*:

### Alternative 1: No Action

Under Alternative 1 (No Action), the NPS would not adopt a comprehensive management plan to protect and enhance river values or address user capacity and land use in the corridor. The two prior versions of the river plan would not be in effect because those plans were invalidated by the U.S. Court of Appeals for the Ninth Circuit in 2004 and 2008 respectively. Alternative 1 (No Action) would not satisfy the legal requirement to adopt a valid comprehensive river management plan for the Merced River corridor.

The river corridor would be one-quarter mile on either side of the ordinary high-water mark because WSRA provides for these default boundaries in the absence of agency-designated boundaries. The segment classifications would be the same as those in the 1982 National Rivers Inventory in which the river was designated as a part of the national Wild and Scenic Rivers System. There would be no Section 7 Determination Process. The outstandingly remarkable values would remain as articulated in Yosemite's 1996 *Draft Yosemite Valley Housing Plan*, with limited opportunities to enhance or improve upon their condition.

Ecological restoration actions would be limited to those that could be completed with a Categorical Exclusion in compliance with NEPA, and those identified in the 2009 Settlement Agreement. There would be no changes to existing facilities, transportation systems, or services and no established limit to the number of visitors or vehicles that would be allowed within the corridor. Park managers would continue to use an informal, labor-intensive approach to traffic management and parking.

### Alternative 2: Self-Reliant Visitor Experiences and Extensive Floodplain Restoration

The guiding principles of Alternative 2 would include ecological restoration within the 100-year floodplain to be accomplished by removing infrastructure that was not essential to resource-related recreation. The visitor experience would be more self-reliant, as fewer commercial services would be available. Visitor-use levels would be managed to allow for visitor experiences free of crowding and traffic congestion.

Management actions in Alternative 2 would:

- Restore 342 acres of meadow and riparian habitat.
- Slightly reduce the campsites inventory in all river segments (-8%) and in Yosemite Valley (-3%).
- Significantly reduce lodging inventory at the Merced Lake High Sierra Camp (-100%) and in Yosemite Valley (-46%).

- Reduce parking for Yosemite Valley day use (-23%).
- Minimize commercial services provided by the park's primary concessioner.
- Make significant changes to traffic circulation patterns in Yosemite Valley to accommodate ecological restoration goals.
- Establish a user capacity of 12,570 people at one time for Yosemite Valley, with peak visitation estimated at 13,900 visitors per day.
- Continue to manage overnight use through reservation systems for lodging and camping and the Wilderness permit system.
- Manage use in East Yosemite Valley through a mandatory day-use parking reservation system to be employed throughout the summer season.

### **Alternative 3: Dispersed Visitor Experiences and Extensive Riverbank Restoration**

The guiding principles of Alternative 3 would include restoration of large portions of the floodplain and the riparian area within 150 feet of the river. This alternative would accommodate the lowest peak visitor use levels and offer fewer commercial services and facilities. Visitor use levels would be managed to allow for dispersed visitor experiences free of crowding or congestion.

Management actions in Alternative 3 would:

- Restore 308 acres of meadow and riparian habitat.
- Reduce the campsite inventory in all river segments (-3%) and increase campsite inventory in Yosemite Valley (+2%).
- Reduce the lodging inventory in all river segments (-38%) and in Yosemite Valley (-40%).
- Reduce parking for Yosemite Valley day use (-32%).
- Minimize commercial services provided by the park's primary concessioner.
- Make significant changes to the traffic circulation pattern in Yosemite Valley to accommodate ecological restoration goals.
- Establish a user capacity of 12,800 people at one time for Yosemite Valley, with peak visitation estimated at 13,200 visitors per day.
- Continue to manage overnight use through the Wilderness permit system and reservation systems for lodging and camping.
- Manage use in East Yosemite Valley with a mandatory day-use parking reservation system to be employed throughout the summer season.

### **Alternative 4: Resource-based Visitor Experiences and Targeted Riverbank Restoration**

The guiding principles of Alternative 4 include restoration of portions of the floodplain and the riparian area within 150 feet of the river. This alternative accommodates a lower level of peak visitor use relative to that seen in recent years and provides only those commercial services and facilities that support resource-based visitor experiences. Increased camping opportunities are provided at the expense of some overnight lodging capacity.

Management actions in Alternative 4 would:

- Restore 225 acres of meadow and riparian habitat.
- Significantly increase the campsite inventory in all river segments (+37%) and in Yosemite Valley (+50%).
- Reduce the lodging inventory in all river segments (-20%) and in Yosemite Valley (-20%).
- Reduce parking for Yosemite Valley day use (-12%).
- Reduce commercial services provided by the park's primary concessioner from current levels.
- Make targeted changes to the traffic circulation pattern in Yosemite Valley to accommodate ecological restoration goals and reduce traffic congestion.
- Establish a user capacity of 16,200 people at one time for Yosemite Valley, with peak visitation estimated at 17,000 visitors per day.
- Continue to manage overnight-use capacity through reservation systems for lodging and camping, and through Wilderness permits.
- Manage use in East Yosemite Valley by strategically employing a day-use parking reservation system on the busiest days and times. At other times during the summer season, use would be managed by rerouting traffic at the El Capitan Traffic Diversion before reaching the user capacity thresholds established in the plan.

## **Alternative 6: Diversified Visitor Experiences and Selective Riverbank Restoration**

The guiding principles of Alternative 6 include limited restoration within 100 feet of the river and in meadow and riparian areas, infrastructure modification to improve the visitor experience in Yosemite Valley, and expansion of facilities and services to accommodate growth in peak daily visitation.

Management actions in Alternative 6 would:

- Restore 176 acres of meadow and riparian habitat.
- Significantly increase the campsite inventory corridorwide (+46%) and in Yosemite Valley (+59%).
- Increase the lodging inventory in the recreational river segment in Yosemite Valley (+21%)
- Increase parking for Yosemite Valley day-use (+11%).
- Expand facilities and services to accommodate growth in visitation.
- Reduce traffic congestion and improve traffic circulation through infrastructure improvements such as roundabouts and grade-separated pedestrian crossings.
- Establish a user capacity of 19,920 people at one time for Yosemite Valley, with peak visitation estimated at 21,800 visitors per day.
- Continue to manage overnight use through reservation systems for lodging and camping and the Wilderness permit system.
- Manage use in East Yosemite Valley by rerouting traffic at the El Capitan Traffic Diversion prior to reaching the user capacity thresholds established in the plan.

## PRELIMINARY OPTIONS CONSIDERED BUT DISMISSED

Federal agencies are required to rigorously explore and objectively evaluate a reasonable range of alternatives and briefly discuss the reasons for eliminating any alternative that is dismissed from further analysis (40 CFR 1502.14). As described in “Purpose and Need for the Final Merced River Plan/EIS” (Chapter 2), the scoping process for the plan sought to understand and consider input from the public, NPS staff, subject-matter experts, traditionally associated American Indian tribes and groups, and other federal, state, and local agencies as part of an extensive planning process for the *Final Merced River Plan/EIS*.

Chapter 2 of the *Final Merced River Plan/EIS* summarizes the types of comments received during the scoping process that were considered but dismissed. These included both individual actions and major themes for an alternative that were:

- Outside the scope of the plan.
- Already decided by law, regulation, or other higher-level decision.
- Not relevant to the decision to be made.
- Missing a valid cause and effect relationship.
- Associated with small effects relative to the decision to be made.
- Conjectural and not supported by scientific or factual evidence.
- Unreasonable or infeasible because they would be cost prohibitive, violate law or policy, or contribute to other resource concerns or hazards.
- Inconsistent with the facilities and services analysis criteria (see Chapter 7 of the *Final Merced River Plan/EIS*).

The following major themes for an alternative were considered but dismissed from further analysis, and therefore not considered in the range of alternatives in the *Final Merced River Plan/EIS*:

**The NPS should include an alternative that removes nearly all visitor services and facilities, employee housing, and administrative functions and conducts extensive restoration projects.**

*Rationale for Dismissal:* This concept for an alternative is inconsistent with both the National Park Service Organic Act and *Management Policies 2006*. Yosemite National Park receives over 4 million visitors annually, and designation of the Merced River as Wild and Scenic was intended to ensure access and enjoyment of the river resource for current and future generations.

The National Park Service Organic Act, which begins with the overarching mandate to preserve park resources in an unimpaired condition, also includes a mandate to provide for the enjoyment of park resources by this and future generations.<sup>4</sup> Visitor enjoyment of park resources, in part, is related to the types of activities and supporting facilities that are made available to park visitors. The range of activities that are appropriate in parks is broad and often includes common recreational activities such as boating, camping, biking, fishing, hiking, horseback riding, cross-country skiing, and rock climbing.<sup>5</sup> The *Management Policies 2006* for the National Park Service recognizes that many facilities, including overnight visitor use facilities and food services, may need to be provided inside parks when travel distances to similar facilities outside the park are too great to permit reasonable use, or when having to leave the park would substantially detract from the quality of the visitor experience.<sup>6</sup> Visitor support

<sup>4</sup> *Management Policies 2006*, Section 1.4.3.

<sup>5</sup> *Management Policies 2006*, Section 8.2.2.

<sup>6</sup> *Management Policies 2006*, Section 9.3.2.



and administrative facilities that are located inside park boundaries should be sited and designed to minimize impacts on resources, avoid natural hazards, and be accessible to persons with disabilities.

**The NPS should include an alternative that fully implements all the actions called for in the 1980 *General Management Plan* for Yosemite National Park, including the level of proposed camping and the elimination of private vehicles and tour buses.**

*Rationale for Dismissal:* General Management Plans serve as foundation-level planning documents for national park units. They provide guidance on the necessary conditions for visitors to understand, enjoy, and appreciate a park's significant resources, and they identify the kinds of visitor uses and development that are appropriate to maintaining a park's desired resource conditions.<sup>7</sup> The 1980 *General Management Plan* for Yosemite National Park (1980 GMP) was intended to resolve such questions and serves as the basic foundation for decision-making within the park. It announced five broad goals for the park: reclaim priceless beauty, allow natural processes to prevail, promote visitor understanding and enjoyment, markedly reduce traffic congestion, and reduce crowding. To effectuate these goals, the 1980 GMP specified a number of actions to reduce crowding and protect natural beauty and resources. Visitor facilities and commercial services that had become "intrusive" were to be reduced or relocated.

The Wild and Scenic Rivers Act (WSRA) directs river-managing agencies to prepare comprehensive management plans for each Wild and Scenic River. Because the Merced River is administered by the National Park Service, WSRA allows for the fulfillment of this requirement through "appropriate revisions" to the park's General Management Plan. Such revisions "shall assure that no development or use of park lands shall be undertaken that is inconsistent with the designation of such river segments" under WSRA.

The 1980 GMP predates the 1987 designation of the Merced River as Wild and Scenic. The NPS has revisited these proposed actions as part of the Merced River planning process to confirm whether specific decisions remained valid given the designation of the river corridor. Additionally, since 1980, new information regarding resource conditions and safety hazards has been learned; this was factored into the range of alternatives for the *Final Merced River Plan/EIS*. For example, the 1997 flood required a reconsideration of existing development within the floodplain, and rock fall events in 2008 forced the closure of developed areas, such as overnight lodging and employee housing at Camp Curry, that the 1980 GMP allowed to remain.

The 1980 GMP included a significant number of campsites in areas, including portions of the former Upper and Lower River Campgrounds, that are ecologically sensitive and now understood to be part of the biological river value in Yosemite Valley. The range of alternatives evaluates the maximum number of campsites that would still provide for the protection of river values. The NPS has determined that protection of biological river values requires the removal of existing campsites within 100 feet of the ordinary high-water mark. In addition, due to the geological/hydrological processes river value, new or redeveloped camping areas must be sited 150 feet from the ordinary high-water mark.

While the 1980 GMP stated that the NPS intended to curtail the use of private vehicles in the Valley, the immediate plan was to greatly reduce traffic by restricting automobile use to established capacities and encouraging visitors to leave their automobiles at remote parking areas with bus service to Yosemite Valley. Visitors would be able to drive their automobiles to overnight accommodations or

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<sup>7</sup> *Management Policies 2006*, Section 2.2.

one of the 1,271 parking spaces in day-use parking areas in Yosemite Valley, but once reaching their destination would use the shuttle system to access other parts of Yosemite Valley. Employees would be encouraged to carpool or use transit.

The transportation network required to support substantial reductions to automobile traffic from Yosemite Valley is infeasible, primarily due to cost, but also because of the impacts to visitors' experience and ability to access the park. Additional visitor use studies since the time of the 1980 GMP indicate that a high percentage of travelers to Yosemite National Park are on a longer trip within the Yosemite Region and often enter and exit the park through different entrance stations. Remote parking areas would be highly inconvenient for these types of day users. Ensuring access to Yosemite Valley and other parts of the park by way of private vehicle provides for a diversity of visitor experiences that are integral to developing direct connections with the river.

**The NPS should provide a visitation level higher than what Alternative 6 offers.**

*Rationale for Dismissal:* During the early stages of the planning process, very high use scenarios were examined, some projected to result in over 25,000 visitors per day to Yosemite Valley (Segments 2A and 2B). These scenarios produced unacceptable visitor densities at iconic attraction sites such as Yosemite Falls and Bridalveil Fall. Moreover, transportation modeling for Yosemite Valley showed that higher use scenarios could only be accommodated by widening (or adding) roads, which would adversely impact the Biological ORV. This exercise determined the "ultimate" capacity for Yosemite Valley and helped to define the range of reasonable alternatives developed for the *Final Merced River Plan/EIS*.

## BASIS FOR DECISION

### Overview

All of the action alternatives presented in the *Final Merced River Plan/EIS* have been designed to meet the requirements for a comprehensive management plan under WSRA. Accordingly, each alternative addresses "resource protection, development of lands and facilities, user capacities and other management practices." Moreover, a cornerstone of all action alternatives is the comprehensive restoration, monitoring, and management program that has been designed to ensure that the kinds and amounts of public use to be provided will not adversely impact or degrade river values. After establishing this foundational piece, the NPS then proceeded to further develop the alternatives to evaluate a range of visitor experiences; each consistent with the protection of river values.

The action alternatives vary in the kinds and amounts of public use provided, the type and location of infrastructure needed to support that use, and the mechanisms used to regulate and manage visitor activity. Considerations about public use include determining the amount of access to provide, allocating the limited space available in Yosemite Valley across competing land uses, and balancing the logistics and costs of transit with the changes to the transportation system needed to accommodate private vehicles. Finally, a plan must be realistic and achievable. Therefore, the cost of implementing the alternatives was carefully considered in this decision by considering the overall public benefit to be achieved with different levels of investment.

After reviewing the foreseeable environmental impacts of each alternative, the expressed purpose and need for federal action, and all public and agency comments, including comments on the *Merced Wild and Scenic River Draft Comprehensive Management Plan/DEIS*, Alternative 5 is the Selected Action. This alternative best complies with the Wild and Scenic Rivers Act, NPS management policies, the legislated purpose of Yosemite

National Park, and the statutory mission of the park to provide lasting protection for the natural and cultural treasures of Yosemite National Park while allowing for visitor use and enjoyment.

## Legal Framework

The *Final Merced River Plan/EIS* was developed within a complex legal framework. The Wild and Scenic Rivers Act states that the National Park Service shall administer rivers under its jurisdiction in accordance with the Wild and Scenic Rivers Act and the laws under which the National Park System is managed (16 U.S.C. Section 1281(c)). For rivers flowing through wilderness areas, the act also requires compliance with the Wilderness Act (16 U.S.C. Section 1281(b)). For either situation, in the case of conflict, the more restrictive law is to apply. The act also requires the NPS to coordinate the comprehensive management plan for the river with the park's General Management Plan (16 U.S.C. Section 1274(d)). In managing the river corridor within the park and the El Portal Administrative Site, the act requires the NPS to make “appropriate revisions to the general management plan” and to ensure that “such revisions shall assure that no development or use of park lands shall be undertaken that is inconsistent with the designation” of the Merced as a Wild and Scenic River (16 USC Section 1274(a)(62)).

The *General Management Plan* for the Park reflects the mandate of the National Park Service Organic Act, which applies to all units of the National Park System. The Organic Act established the National Park Service in order to “promote and regulate the use of parks.” The Organic Act defined the purpose of the national parks as “to conserve the scenery and natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The Organic Act still provides overall guidance for the management of Yosemite National Park, and the broad goals of the General Management Plan remain valid today.

In addition to park lands, the Merced River also flows through the El Portal Administrative Site, which is managed in accordance with the legislation that transferred land within the site to Yosemite National Park. The Administrative Site was established “in order that utilities, facilities, and services required in the operation and administration of Yosemite National Park may be located on such site outside the park” (16 U.S.C. Section 47-1). In keeping with these legislative purposes, the 1980 *General Management Plan* proposed to relocate many facilities from Yosemite Valley to El Portal.

In reaching a decision on the Selected Action, the National Park Service considered the multiple laws and policies that apply to lands within the river corridor, such as the Wild and Scenic Rivers Act, the National Park Service Organic Act, the Wilderness Act, the legislation establishing the El Portal Administrative Site and the park's General Management Plan. The National Park Service also carefully considered the substantial body of public comments received during the planning process.

## Protecting and Enhancing River Values

As with all action alternatives, Alternative 5 will protect and enhance the free-flowing condition and water quality of the Merced River and its outstandingly remarkable values. Research conducted specifically for the *Final Merced River Plan/EIS* supports the NPS conclusion that no river values are currently adversely impacted or degraded on a segment-wide basis; localized impacts are recognized and directly addressed by the Selected Action. Additionally, Alternative 5 includes a comprehensive restoration program with over 200 management actions to correct small-scale problems and avoid cumulative impacts. It also establishes a 150-foot riparian buffer as a setback for new development (and redevelopment) to reduce the potential for future riverbank erosion and sediment.

To ensure that river values remain protected, Alternative 5 establishes a set of measureable indicators to be used for monitoring the condition of each river value. Indicators were selected for their ability to provide insight into the integrity of the river value and provide early warning of change. Each river value has been assigned a management standard for its associated indicator(s), which represents the desired condition of the river value that is attainable given current trends and influences beyond the control of the NPS. All river values are currently in a condition that is better than that required by the associated management standard.

The same set of indicators was used to define the conditions associated with adverse impact and degradation. Relative to the condition represented by the management standard, the conditions of adverse impact and degradation represent a significant and sustained decline in the quality of the river value which is causing “substantial interference” with the public use and enjoyment of that value. Proactive management of river values to meet (or exceed) the management standard will ensure that such conditions will be avoided.

Proactive resource management is at the heart of the monitoring program included in the *Final Merced River Plan/EIS*. For each river value, at least two measurable “trigger points” have been established to signify the need for management intervention to ensure that conditions remain at (or exceed) the management standard. The trigger points provide an early warning of declining conditions and are paired with a list of management actions that must be implemented to arrest the trend. These actions are mandatory and have been designed to understand the forces driving change and respond with a course-correction at the earliest possible opportunity. In this way the *Final Merced River Plan/EIS* contains an active and aggressive program of river protection that responds to incremental change instead of waiting to repair the cumulative effects of unmitigated impacts with the attendant threat of adverse impact or degradation.

The action alternatives in the *Final Merced River Plan/EIS* vary primarily with regard to the extent of infrastructure to be removed from Yosemite Valley and, as a result, the amount of land that would be restored to natural conditions. At a minimum, all action alternatives would restore 176 acres of meadows and riparian areas and the Selected Action restores 13 additional acres. Alternatives 2 and 3 would remove a significant number of lodging units (both Yosemite Lodge and Housekeeping Camp) and all campsites that are within the 100-year floodplain (Alt 2) or within 150 feet of the river (Alt 3), allowing for the largest amount of acreage to be reclaimed. Additional gains would be achieved in Alternative 2 by removing substantial amounts of permanent employee housing. Alternative 4 would restore slightly more disturbed area than the Selected Action, mostly attributable to the removal of more than half of the existing units at Housekeeping Camp (discussed below). These changes in accommodations and associated parking greatly reduce public access to Yosemite Valley and are not essential for the protection of river values. Additionally, because of the extensive amount of replacement housing to be built in El Portal, Alternative 2 was considerably more expensive than the other action alternatives (with the exception of Alternative 6). Finally, Alternatives 2, 3, and 4 propose the removal of the road through Stoneman Meadow to improve the surface flow of water. Alternatives 5 and 6 propose engineering solutions to accomplish this objective.

Actions related to historic bridges and the former Superintendent’s House and Garage (Residence 1) also vary across the alternatives. Alternatives 2 and 3 would remove three historic bridges (Sugar Pine, Ahwahnee and Stoneman) and Alternative 4 would remove two (Sugar Pine and Ahwahnee). Alternatives 5 and 6 would retain all historic bridges for the near-term with immediate actions to include additional study of their hydrologic impacts and testing of alternative mitigation techniques, thus retaining these historic properties while actively exploring options to address the associated resource concerns.

With regard to Residence 1, Alternatives 2, 3, and 4 would remove these structures and relocate and rehabilitate them within the NPS historic housing area in Yosemite Valley. Alternative 6 would retain and rehabilitate Residence 1 in its current location, however, concerns about inadequate access and parking to support the public use of the facility would make it challenging to justify the investment.

As represented in the *Final Merced River Plan/EIS*, Alternative 5 would have removed Residence 1 from its current location by demolishing it. The Selected Action modifies Alternative 5 by removing Residence 1 from its current location within the river corridor either by demolition or relocation. Once the structures are removed, the building footprint will be restored to natural conditions. While this modification to Alternative 5 still causes an adverse effect to a historic property (under the National Historic Preservation Act), both the Yosemite Valley and Yosemite Village Historic Districts will continue to retain their significance and integrity.

The decision to remove these structures from their current location is based on: 1) direction in the Secretarial Guidelines to limit facilities in the river corridor to those that are necessary for public use; 2) concern about the radiating impacts to Cook's Meadow from social trails related to the presence of the structures; and 3) the likelihood of exacerbating congestion and crowding by promoting additional activity in the area without the land available to provide parking and an appropriate means of access. Suitable locations for Residence 1 within Yosemite Valley have not been identified, as developable space outside of the river corridor is extremely limited and already allocated to other visitor services and overnight accommodations. Co-locating the facility within existing housing areas introduces a potentially incompatible use and does not alleviate the concerns associated with providing adequate parking and public access. Finally, a public use for this facility has not been identified, regardless of its location, and this, along with the cost and logistical difficulties of moving it without damaging or destroying a number of black oak trees, were considerations in the original decision to demolish it.

## Traditional Family Experiences

Early in the planning process, several themes emerged from engagement with the public during workshops, webinars, and via written feedback. First, it is clear that people feel a strong, generational connection to Yosemite. This connection goes beyond an appreciation of the extraordinary scenic beauty of the park and the ability to experience a peaceful, natural setting. It includes a tremendous variety of shared family activities, such as camping, biking, and rafting, which provide life-long memories, traditions, and attachments to specific locations within the Merced River corridor. It also includes the traditional and cultural association of Native Americans with the Merced River and its resources, and the rich history of human influence throughout the corridor. This cultural connection runs deep and is shared by many.

Alternative 5 responds to the expressed desires of numerous stakeholders to increase the supply of campsites in Yosemite Valley, to provide more group camping and to provide a mix of drive-in, walk-in, and RV camping opportunities. Other alternatives propose additional camping, but do so at the expense of existing lodging (Alternative 4) or by placing development in West Yosemite Valley (Alternative 6). In contrast, the Selected Action will continue to manage West Yosemite Valley for dispersed recreation, minimal infrastructure, and self-reliant recreation—an approach that continues to receive strong public support.

Alternative 5 maintains the availability of raft and bicycle rentals inside Yosemite Valley and continues to provide a seasonally operated ice skating rink. All support facilities will be located outside of the river corridor thereby reducing the development footprint while continuing to make these activities easily accessible to visitors. With the exception of Alternative 6, all other action alternatives reduce access to these services by removing all rental operations.

Alternative 5 will remove a small portion of Housekeeping Camp to prevent further damage to infrastructure in areas frequently inundated by high water. However, the majority of these accommodations will remain in place and, together with the increase in camping, will provide the option of more affordable overnight lodging for visitors to Yosemite Valley. Alternatives 2, 3, and 4 remove all (or a substantial amount) of Housekeeping Camp, which significantly reduces the availability of low-cost lodging options. While Alternative 6 retains lodging and recreational

activities similar to the Selected Action, the cost of this alternative is nearly double that of Alternative 5 (\$411 million vs. \$210 million), largely due to the complete reconstruction and redevelopment of Yosemite Lodge.

## Transportation and Traffic Congestion

While visitor surveys consistently show a very high level of satisfaction with the visitor experience in Yosemite Valley, there are also indications that traffic congestion and crowding on peak days can detract from the quality of the experience and interfere with the use and enjoyment of river values. The action alternatives addressed this situation in different ways.

Alternative 5 proposes to strategically modify the transportation system, based on the recommendations of professional traffic engineers, by alleviating pedestrian-vehicle conflicts, redesigning failing intersections, and better delineating and managing day-use parking. Transportation models indicate the specific changes proposed in the Selected Action will improve the roadway level of service from “F” (failure) to “A” (free-flow) under the traffic load observed in times of peak season visitation. Alternative 6 employs similar system fixes; however, given the higher traffic volume associated with this alternative, new development in West Valley is required to successfully manage traffic flow. Neither Alternative 5 nor Alternative 6 would widen existing roadways or add new throughways to accommodate visitor use; both of these options would have adversely impacted the Biological ORV. The transportation system improvements proposed under these alternatives were largely confined to the existing areas of disturbance and allowed for transportation-related infrastructure to be pulled away from the river to provide for active restoration of riparian areas.

Alternatives 2, 3, and 4 address traffic congestion by limiting private vehicle access (and visitation) to a level at or below current roadway capacity. These limitations would require immediate implementation of a day-use parking reservation system for all or part of the peak summer season. All action alternatives support moderate increases in public transit to Yosemite. Alternatives 4, 5, and 6 propose a remote day-use parking lot in El Portal to help alleviate traffic congestion in Yosemite Valley.

## Employee Housing

The bulk of the employee housing located in Yosemite Valley is used to support the operations of the primary concessioner. As reported in the *Final Merced River Plan/EIS*, Alternative 1 (No Action) provides 1,151 concessioner employee beds in Yosemite Valley. A bit of clarification is needed to fully understand this figure and the implications for implementing of the Selected Action. A total of 1,151 beds are currently used by the concessioner (including housing outside of the river corridor but in support of Yosemite Valley operations). Of this, 164 beds were added to the housing stock as a temporary solution to the permanent closure of lodging and employee housing after the 2008 Curry Village rock-fall. In response to the immediate need for both guest accommodations and employee beds, the NPS worked with the concessioner to establish “temporary” housing and lodging in the form of tent cabins and modular structures. Many of these units remain in place today, pending the completion of the Merced River Plan, which determines the amount of housing to remain within Yosemite Valley.

While it was important for the *Final Merced River Plan/EIS* to disclose the total number of employee beds currently occupied (both temporary and permanent), the NPS did not consider the temporary component of the existing housing supply to be part of the environmental baseline or rely upon it to determine the amount of

housing needed for future operations.<sup>8</sup> In summary, 164 of the 1,151 beds currently provided in Yosemite Valley can be attributed to a temporary solution to replace housing lost within the Curry Village rock-fall hazard zone. The remaining 987 beds constitute the current permanent housing supply available to the concessioner. For purposes of comparison, the Selected Action will provide 1,025 permanent employee beds in Yosemite Valley and El Portal to support Yosemite Valley concessioner operations; an increase of 38 beds over existing conditions.<sup>9</sup> At 912 beds, Alternative 2 proposed the lowest total number of concessioner beds due to the substantial reduction in visitor services offered under this alternative. This alternative also relocates the most housing to El Portal (494 beds vs. 160 under Alternative 5), which comes at a cost of \$60 million for new El Portal housing; an increase of \$30 million relative to the cost of new El Portal housing in the Selected Action.

## Relationship to 1980 *General Management Plan*

Because the Merced River was designated Wild and Scenic in 1987, seven years after the 1980 *General Management Plan* (GMP) was published, the NPS was required to re-evaluate the actions called for in the GMP against the WSRA mandate to protect and enhance river values. In the case of the Merced, Congress specifically envisioned that the National Park Service would fulfill the comprehensive management plan requirements of the Act through “appropriate revisions” to the park’s General Management Plan and that such revisions “shall assure that no development or use of park lands shall be undertaken that is inconsistent with the designation of such river segments” under WSRA (16 USC Section 1274(a)(62)).

The 1980 *General Management Plan* (GMP) includes five broad goals for the park: reclaim priceless beauty, allow natural processes to prevail, promote visitor understanding and enjoyment, markedly reduce traffic congestion, and reduce crowding. These five goals remain valid today and helped to inform the choice of the Selected Action. While some of the details of the GMP and the Merced River Plan decisions regarding major public use facilities may differ, the overarching direction of Yosemite’s General Management Plan—to reduce the development footprint, limit commercial facilities, reduce traffic congestion, and refocus on protecting and enhancing natural and cultural resources—is wholly consistent with and reflected in the Selected Action. Specific amendments to the 1980 *General Management Plan* for Yosemite National Park from this decision can be found in Appendix A of the *Final Merced River Plan/EIS*.

Alternative 5 exhibits a high degree of consistency with the facility and development decisions in the GMP. For example, the Concessioner General Office and Garage and the Ahwahnee Tennis Courts are removed from the corridor in both plans. The GMP and Alternative 5 both reduce gift shop space in the Lodge and Village areas. The Curry Village Ice Rink is removed from its permanent location in both plans. Both plans pull campsite development back from the river, and both the GMP and Alternative 5 remove units from Housekeeping Camp in order to protect river values. In addition, both the Selected Action for the Merced River Plan and the GMP retain many facilities including park campgrounds, the Yosemite Lodge, Housekeeping Camp, Curry Village, the Ahwahnee Hotel, the Ahwahnee and Lodge swimming pools, the historic Wawona hotel complex (including its swimming pool and golf course), and many other major public-use facilities.

<sup>8</sup> “In the No Action alternative for the CMP, the NPS will not consider this temporary housing as part of the environmental baseline conditions; however, the CMP No Action alternative may note that temporary housing exists in these areas.” (Friends of Yosemite Valley et al. 2009, Section D.1, p. 13)

<sup>9</sup> Should the ROD for the CMP call for retaining or increasing the number of employee housing units, the temporary housing described in Appendix C would be systematically removed and replaced over time as funding is obtained to construct replacement housing and to complete any environmental compliance actions that are needed, unless the CMP ROD provides that some of the temporary housing described in Appendix C is suitable for continued use and occupancy by employees (Friends of Yosemite Valley et al. 2009, Section D.3, p. 13).

The Selected Action will revise the 1980 *General Management Plan* with regard to some public use facilities based on new information that arose following designation of the Merced Wild and Scenic River in 1987 and establishment of the Yosemite Wilderness in 1984. In particular, new information regarding resource conditions, natural hazards, changes in visitor use patterns, and further financial study, have rendered some GMP actions as impractical and infeasible. For example, the NPS has determined that it is not logistically or financially feasible to substantially eliminate private vehicle access to Yosemite Valley, as originally proposed in the GMP. However, as previously discussed, Alternative 5 achieves the GMP goal of “markedly reducing traffic congestion” by making other facilities decisions, including redesigning the transportation system and consolidating and delineating parking. The designation of the Merced as a Wild and Scenic River also placed limitations on the extent of development that was feasible for the El Portal administrative site and increased the cost associated with developing the land that remained available. These constraints limit the amount of employee housing that can feasibly be relocated from Yosemite Valley.

## Conclusion

None of the above components of the decision can work in isolation to define the “best” choice for the future of the Merced River corridor. A complex legal and social framework coupled with the river’s dynamic natural setting required a thoughtful look at the comprehensive vision portrayed in each alternative. The NPS selected Alternative 5 (the Selected Action) because it fully protects the outstandingly remarkable values of the Merced River while continuing to offer access and inspiration to millions of visitors each year. The Selected Action improves the “sense of arrival” to Yosemite Valley, facilitates access to and enjoyment of the Merced River, provides for continued family recreational experiences, and provides these advantages at a lower cost than comparable alternatives. Most importantly, the Selected Action has been shaped by substantial and sustained public involvement. Changes to the preferred alternative that were made between the *Draft and Final Merced River Plan/EIS*, such as the retention of rental equipment and ice skating in Yosemite Valley, modification to the overnight lodging proposed for Boys Town, retention and further study of Sugar Pine Bridge, and the elimination of development in West Valley, were the direct result of this public engagement.

With regard to the specific factors contained in Section 1274(d), the adoption of the Selected Action satisfies the WSRA requirements for a comprehensive management plan. The baseline condition for all river values has been documented and a desired condition has been established for each. A proactive management approach has been developed to maintain river value conditions at or above the desired condition with mandatory management actions to be implemented when a marginal decline in river value conditions is detected (Chapter 5: River Values and Their Management). In this way the *Final Merced River Plan/EIS* contains an active and aggressive program of river protection that responds to incremental change to arrest downward trends in conditions before they reach the point of adverse impact or degradation. This monitoring and management program is designed to be sensitive to changes in the condition of all river values, including changes caused by visitor use, and all aspects have been thoroughly peer-reviewed and revised accordingly prior to the issuance of the *Final Merced River Plan/EIS*.

Future development of lands and facilities would be limited to locations and uses as specified in the Selected Action. A comprehensive analysis of existing and proposed facilities included in the *Final Merced River Plan/EIS* (Chapter 7: Development of Lands and Facilities) provides the rationale for retaining certain facilities in the river corridor and concludes that none of the facilities provided in the Selected Action will cause adverse impact or degradation to any river value. Extensive ecological restoration will be conducted to ensure that river values are not only protected but enhanced with plan implementation.



User capacity has been addressed throughout the river corridor with different management approaches identified for each segment. For all river segments, the Selected Action sets “specific measurable limits on use” and provides for an “actual level of visitor use that will not adversely impact the Merced’s ORVs” (Chapter 6: User Capacity and Visitor Use Management)<sup>10</sup>. In particular, user capacity for East Yosemite Valley has been thoroughly addressed in the planning process and will be actively managed by diverting traffic when East Valley vehicle accumulation reaches a pre-identified target range (well before capacity has been reached). Resource protection, development of lands and facilities, and user capacity also would be managed pursuant to existing NPS authorities in the Code of Federal Regulations (Title 36), the Superintendent's Compendium, and general NPS policies, such as those pertaining to wilderness and fire management. The combination of these elements will enable the NPS to administer the river in a manner that protects and enhances all river values while allowing for appropriate levels of use and development.

## ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The Council on Environmental Quality (CEQ) regulations implementing NEPA (Code of Federal Regulations 40:1505.2) and the NPS NEPA guidelines require that “the alternative or alternatives which were considered to be environmentally preferable” be identified. Environmentally preferable is defined as “the alternative that would promote the national environmental policy as expressed in NEPA section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981).

Section 101 of NEPA states that:

It is the continuing responsibility of the Federal Government to . . .

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

The Selected Action (Alternative 5), on balance, best achieves these national environmental policy goals, and therefore is identified as the environmentally preferable alternative.

Alternative 5 (Selected Action) has been determined to be the alternative that has the greatest benefits to the biological and physical environment, while protecting, preserving, and enhancing historic, cultural, and natural resources. The Selected Action would achieve a balance between visitor use and resource protection by providing high-quality visitor experiences at near current visitation levels while achieving 189-acres of essential meadow and riparian restoration. Additionally, the Selected Action would restore essential riverbank areas within 100 feet of the river, adjacent to Yosemite Valley campgrounds (including some of Upper and Lower

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<sup>10</sup> Friends of Yosemite Valley v. Norton, 348 F.3d 789 (9th Cir. 2003)

River Campgrounds), and around Housekeeping Camp. The Selected Action would be more protective of historic and cultural resources than Alternatives 2, 3, and 4. All historic bridges would be retained along with numerous historic structures that are removed under other action alternatives (such as Housekeeping Camp units, lodging units at Yosemite Lodge, and tent cabins at Curry Village). Although Alternative 6 would retain Stoneman, Ahwahnee and Sugar Pine bridges, it would replace more historic structures with new development at Curry Village and the complete redevelopment of Yosemite Lodge. The Selected Alternative would attain the widest range of beneficial uses of the environment by providing a diversity of recreational opportunities, including boating access to all segments.

Alternative 1 (No Action) would provide for diversity and variety of individual choice; however, it would not best fulfill any of the other requirements. This would be particularly true in Yosemite Valley, where increasing amounts of visitor use and foot traffic would continue to affect ecologically sensitive meadow and riparian areas, archeological resources, scenic values, visitor experience, visitor safety, and park operations.

All of the action alternatives (Alternatives 2-6) would fulfill NEPA requirements through: continuation of existing wilderness and resource management policies, ecological restoration of fragile meadow and riparian areas, protection of water quality and archeological and historical resources, and conformance with existing requirements under Executive Order 13514 to improve the sustainability of NPS operations and facilities. The alternatives vary primarily in the proposed extent of riparian restoration in Yosemite Valley, the user capacities established, the diversity of recreational opportunities affected, and the kind and amount of overnight accommodations, parking facilities, and boating opportunities proposed.

Alternative 2 would have the most benefit to the biological and physical environment of the river due to the removal of three bridges and 6,664 linear feet of riprap. This alternative would ecologically restore the greatest number of acres through removal of roads, lodging and parking facilities, and infrastructure from meadows and other sensitive areas. Alternative 2 would also include extensive restoration of the 100-year floodplain adjacent to Valley campgrounds, including Upper and Lower River. It would include the removal of North Pines campground, Housekeeping Camp, Yosemite Lodge, and Tecoya housing. However, this alternative is the least protective of historic and cultural resources because of the removal of three historic bridges, the Wawona golf course, and historic lodging at the Merced Lake High Sierra Camp, Housekeeping Camp, Curry Village, and Yosemite Lodge. This alternative would limit the kinds and amounts of experiences available for visitors by reducing the number and variety of overnight accommodations, implementing a permit system for day-use parking, and restricting boating.

Alternative 3 would have significant benefits to the biological and physical environment, due to removal of three bridges and 6,135 linear feet of riprap. This alternative would include extensive restoration within 150 feet of the river. It also calls for the removal of Yosemite Lodge units in the 100-year floodplain, removal of roads through meadows, and major restoration of the Curry Orchard Parking Area. Similar to Alternative 2, this alternative would remove three historic bridges and the Wawona golf course. It would also reduce historic lodging at Merced Lake High Sierra Camp, Housekeeping Camp, Curry Village, and Yosemite Lodge, though not to the extent proposed in Alternative 2. Alternative 3 would make reductions to overnight accommodations, implement a day-use permit system, and place minor restrictions on boating.

Alternative 4 would have moderate benefits to the biological and physical environment, due to the removal of two bridges and 6,135 linear feet of riprap. This alternative would restore fewer acres than Alternatives 2 and 3, include partial restoration of Yosemite Valley meadows, and conduct ecological restoration within 150 feet of the river. Alternative 4 would be slightly more protective of historic and cultural resources than Alternatives 2 and 3 because Stoneman Bridge would be retained. Alternative 4 would attain a wider range of visitor opportunities through the replacement of the Merced Lake High Sierra Camp with a temporary pack camp, a

significant increase in camping opportunities, and fewer agency restrictions regarding boating.

Alternative 6 would provide outstanding, diverse recreational opportunities in the river corridor and would retain significant historic resources in all river segments. However, it would have the least benefit to the biological and physical environment due to having the fewest number of acres restored and the fewest linear feet of riprap removed.

In comparison, the Selected Action is designated the Environmentally Preferable Alternative because it furthers more of the national environmental policy goals than any of the other action alternatives. Specifically, it fulfills the responsibility of the National Park Service as a trustee of federal lands for future generations; assures that visitors, employees, and residents encounter safe and aesthetically pleasing surroundings; attains the widest range of beneficial uses without degrading the environment or posing risk to health and safety; preserves important historic, cultural, and natural aspects of our national heritage and environment, which supports diversity and individual choice; and achieves a balance between population and resource use while enhancing the quality of renewable resources.

## MEASURES TO MINIMIZE ENVIRONMENTAL HARM

The NPS places a strong emphasis on avoidance, minimization, and mitigation of adverse impacts under NEPA and adverse effects under the National Historic Preservation Act. To protect natural, cultural, and social resources and the quality of the visitor experience, mitigation measures will be implemented as part of the Selected Action as identified in Appendix A. Mitigation measures will occur prior to, during, and after implementation of all proposed actions. In addition, mitigation measures identified through consultation with the California State Historic Preservation Officer and traditionally associated American Indian tribes and groups are identified in the attached Programmatic Agreement, as required under 36 CFR Part 800.

Monitoring and enforcement programs will ensure proper and timely implementation of these measures. The NPS will obtain necessary federal and state permits required to undertake the actions described in the Selected Action; additional mitigation measures may be identified through those processes.

## PUBLIC AND INTERAGENCY INVOLVEMENT

On April 11, 2007, NPS published a *Federal Register* Notice of Intent to prepare an environmental impact statement. However, due to ongoing litigation and mediation efforts, public scoping was reopened with a subsequent *Federal Register* notice on June 30, 2009, and extended again in December 2013 to conclude on February 4, 2010. In total the NPS received 1,460 public responses (e.g., letters, faxes, emails, comment forms, and public meeting flip-chart notes). Committed to robust public involvement, the National Park Service released two preliminary alternatives concepts workbooks that were distributed for public review and comment prior to completion of the *Draft Merced River Plan/EIS*. Over 600 comments were received on the workbooks, which ultimately shaped the range of alternatives evaluated in the draft plan.

The *Draft Merced River Plan/EIS* was released January 25, 2013, followed by a 110-day review period which extended through April 30, 2013. Over 12 educational web-based meetings were hosted in February 2013, and on-site public meetings were held in March 2013. Public meetings were held in Yosemite Valley, El Portal, Wawona, Mariposa, Groveland, Oakhurst, and San Francisco. All meeting locations and dates were announced through social media, in local and regional newspapers, via the Yosemite electronic newsletter, on the park's web site (<http://www.nps.gov/yose/parkmgmt/mrp.htm>) and on the NPS Planning, Environment and Public

Comment website ([http://parkplanning.nps.gov/yose\\_mrp](http://parkplanning.nps.gov/yose_mrp)). Since 2007, the NPS hosted over 50 public meetings, 12 webinars, and has considered more than 30,000 public comments.

On Tuesday, July 9, 2013, a hearing by the House of Representatives Subcommittee on Public Lands and Environmental Regulation exposed for a larger national audience the conflicting public and political opinions being considered in this planning effort. Witnesses and committee members presented support for the following:

- Continuation of Yosemite Valley recreational and commercial services
- Replacement of campsites damaged during the 1997 flood and retention of campsites within the floodplain
- Protection of Sugar Pine Bridge and other historic resources
- Consideration of the park's diverse visitors including those with physical disabilities and those of limited economic means
- Exclusion of the 81 miles of the Merced River in Yosemite National Park from Wild and Scenic River designation
- Adoption of the No Action alternative

NPS Director Jonathan B. Jarvis acknowledged the diversity of perspectives regarding Yosemite and its future, though he also noted that the NPS was currently analyzing over 30,000 public comment letters that by-and-large support the preferred alternative as proposed in the draft plan.

NPS received a wide spectrum of public comments; a summary of key concerns follows:

- Facilities and Services: Retain commercially-operated visitor services (e.g., bike and raft rentals, commercial horseback day rides originating from Yosemite Valley, pools)/eliminate such visitor services
- Overnight Accommodations: Increase lodging/decrease lodging, increase camping (e.g., rebuild campgrounds damaged/removed following the 1997 flood), remove/relocate campsites near the river for ecological reasons, meet current camping demands and improve existing campgrounds
- Transportation Issues: Develop remote parking facilities outside of Yosemite Valley serviced by shuttles, enhance transit to make it a more convenient option, preserve access by private vehicle to Yosemite Valley, implement a day-use or parking reservation system or manage the number of vehicles that enter Yosemite Valley, provide real-time traffic information, increase reliance on bicycles as a mode of transit, and increase parking in Yosemite Valley to better meet the demand.
- User Capacity: Reduce user capacity to limit crowding/increase user capacity to allow for more access
- Socioeconomics: Concern for impact to local economies from reduction of commercial recreation
- Social Equity: Provide affordable visitor access, recreation opportunities, and overnight accommodations and address accessibility for families, the elderly, and people with disabilities
- Level of Development: Retain all existing facilities in their existing configuration, develop additional facilities (e.g., campgrounds, parking lots), remove existing development and increase restoration of scenic and natural resources, reduce the amount of development proposed (e.g., West Valley), and reduce the administrative footprint and re-allocate for visitor use.

- **Baseline Conditions:** Clarify the baseline resource conditions at the time of designation and provide additional analysis of changes in conditions between 1987 and present and use an alternate baseline year or use past facility inventories as the baseline for alternatives comparison.
- **Wilderness:** Remove the Merced Lake High Sierra Camp/expand the Merced Lake High Sierra Camp, limit or eliminate stock use in wilderness/no additional restrictions on stock use in wilderness.
- **Natural Resources:** Increase restoration and increase protection for special-status species; greater enhancement of meadows, riparian areas, and the free-flowing condition of the river
- **Cultural Resources:** Opposition to constructing an underpass at Yosemite Lodge due to cultural sensitivity, include the entire Yosemite Valley Historic District in the Yosemite Valley Historic Resources ORV, assess condition through both historic integrity and condition assessments, consider loss of a contributing resource in the condition assessment, and retain Sugar Pine Bridge and the Superintendent's House and Garage (Residence 1).

## Consultation with American Indian Tribes and Groups

### *Traditionally Associated American Indian Tribes and Groups*

The NPS consulted with traditionally associated American Indian tribes and groups throughout the development and implementation of the *Final Merced River Plan/EIS*. Yosemite National Park currently maintains consultation relationships with seven American Indian tribes and groups that claim traditional cultural association with park lands and resources. This includes five federally recognized American Indian tribes (Bridgeport Paiute Indian Colony of California, Bishop Paiute Tribe, North Fork Rancheria of Mono Indians of California, Picayune Rancheria of the Chukchansi Indians, and the Tuolumne Band of Me-Wuk Indians), and two American Indian groups (American Indian Council of Mariposa County, Inc. [also known as the Southern Sierra Miwuk Nation] and the Mono Lake Kutzadikaa). Consultation with federally recognized American Indian tribes takes place on a government-to-government basis.

In December 2009, Yosemite requested tribal participation in development of the Merced Wild and Scenic River Plan. The NPS formally requested information from traditionally associated American Indian tribes and groups for the protection of traditional cultural resources and historic properties with traditional cultural or religious significance. Consultation included regularly scheduled and special meetings, as well as site visits. Comments received from traditionally associated American Indian tribes and groups have been considered throughout the planning process. The NPS will continue to conduct formal and informal consultations with traditionally associated American Indian tribes and groups about proposed NPS plans and actions that have the potential to affect the treatment, use, and access to cultural and natural resources with documented or potential cultural meaning for those groups.

American Indian tribes and groups have also been consulted during the development of the Merced River Plan programmatic agreement. Please refer to "NHPA Assessment of Adverse Effects for the Merced Wild and Scenic River Comprehensive Management Plan" (Appendix J) in the *Final Merced River Plan/EIS* for a comprehensive list of all meetings, site visits, and transmitted material for review and comment, in addition to a summary of comments received from the traditionally associated American Indian tribes and groups.

## Consultation with State and Federal Agencies

### *U.S. Army Corps of Engineers*

The Clean Water Act (Public Law 92-500) requires federal land agencies to consult with the U.S. Army Corps of Engineers (Army Corps) regarding wetlands in the vicinity of proposed projects. The NPS consulted with the Army Corps regarding the *Final Merced River Plan/EIS*, wetlands delineation, and permit requirements necessary to implement proposed actions in the plan, in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The NPS will serve as the lead agency on behalf of the U.S. Army Corps of Engineers for consultation with the SHPO, discussed below.

### *NPS Water Resources Division*

The NPS Water Resources Division has provided guidance and reviewed both the draft and final Floodplain and Wetland Statements of Findings (Appendices D and O, respectively) for both the *Draft* and *Final Merced River Plan/EIS*. NPS park staff worked with the NPS Water Resources Division to ensure technical adequacy and Servicewide consistency.

The Wetland Statement of Findings for the Selected Action affirms that there would be approximately 2.73 acres of wetland impacts associated with two projects: the redesign of the Yosemite Village Day-use Parking Area and redevelopment of West of Yosemite Lodge Parking. Construction activity at the Yosemite Village Day-use Parking Area would impact 1.22 acres of palustrine emergent wetland and 0.38 acre of riverine intermittent wetland. Construction activities at the West of Yosemite Lodge Parking Area would impact approximately 1.13 acres of riverine intermittent wetlands. Losses to wetlands will occur through site clearing, filling, grading, and subsequent development. Compensation for 1.22 acres of palustrine emergent wetland impacts will take place near the Yosemite Village Day-use Parking area. The existing day-use parking area will relocate slightly north, farther away from the Merced River, and palustrine emergent wetland restoration will take place in the south end of the existing parking lot. Compensation for 1.51 acres of riverine intermittent wetland impacts will take place near the Upper and Lower River Campgrounds area.

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

Ongoing consultation with the USFWS was conducted during preparation of both the *Draft* and *Final Merced River Plan/EIS*. The NPS initiated informal consultation with the USFWS on August 11, 2010. Updated special-status species lists were obtained from the USFWS on June 6, 2011, and again on April 27, June 27, and October 18, 2012 and October 21, 2013. The USFWS reviewed the Biological Assessment and issued a Biological Opinion based on an assessment of the proposed actions in the final preferred alternative. The NPS will continue to update the list of federally endangered or threatened species every 90 days throughout project implementation, and will continue consultation as necessary should new species or critical habitat become listed in the project area.

### *U.S. Geological Survey*

The expertise of the U.S. Geological Survey (USGS) was instrumental in developing a comprehensive study of rock-fall hazard and risk in Yosemite Valley, a research study commissioned to inform this planning effort and guide park management. Information from this study informed land use management decisions, specifically the placement of facilities within Yosemite Valley. The internationally peer-reviewed *Quantitative Rock-fall Hazard and Risk Assessment for Yosemite Valley, Yosemite National Park, California* report (April 2012) can be found on

the park's website at <http://www.nps.gov/yose/naturescience/rockfall.htm>. The USGS was provided with review copies of the *Draft Merced River Plan/EIS* and with a copy of the *Final Merced River Plan/EIS* as part of the consultation process.

### ***U.S. Forest Service***

The U. S. Forest Service (USFS) manages the 29 miles of Merced Wild and Scenic River segments from the El Portal Administrative Site boundary to the northwest boundary of the Sierra National Forest under the 1991 U.S.F.S. *South Fork and Merced Wild and Scenic River Implementation Plan*. The USFS was provided with review copies of the *Draft* and *Final Merced River Plan/EIS*.

### ***U.S. Bureau of Land Management***

The U.S. Bureau of Land Management (BLM) manages the 12 miles of Merced Wild and Scenic River segments from the northwest boundary of the Sierra National Forest to Lake McClure under the 1991 *Merced Wild and Scenic River Management Plan*. The BLM was provided with review copies of the *Draft* and *Final Merced River Plan/EIS*, and has participated in numerous workshops and meetings throughout the planning process.

### ***Advisory Council on Historic Preservation***

Yosemite initiated consultation with ACHP in May 2008 by notifying the agency that the park intended to prepare an environmental impact statement (EIS) for the Merced Wild and Scenic River Comprehensive Management Plan. Responding to the evolution of complexity in the plan and the public involvement efforts, in a letter dated August 28, 2012, in accordance with 36 CFR 800.2(b)(1), the ACHP formally notified the NPS that they would participate in the Section 106 review process for the Merced River Plan. The ACHP has been central to the development of the Merced River Plan programmatic agreement. Please refer to “NHPA Assessment of Adverse Effects for the Merced Wild and Scenic River Comprehensive Management Plan” (Appendix J) for a comprehensive list of all meetings, site visits, and transmitted material for review and comment in addition to a summary of comments received from the ACHP.

### ***California State Historic Preservation Officer***

In June 2007, the NPS initiated consultation with the SHPO by notifying the agency that the park intended to prepare an environmental impact statement (EIS) for the Merced Wild and Scenic River Comprehensive Management Plan. Further consultation with the SHPO in June, July, and August of 2012 determined that the standard four-step process outlined in 36 CFR Part 800 would be a more appropriate consultation process for this complex planning effort. The SHPO has been central to the development of the Merced River Plan programmatic agreement. Please refer to “NHPA Assessment of Adverse Effects for the Merced Wild and Scenic River Comprehensive Management Plan” (Appendix J) for a comprehensive list of all meetings, site visits, and transmitted material for review and comment, in addition to a summary of comments received from the SHPO. The NPS will serve as the lead agency on behalf of the U.S. Army Corps of Engineers for consultation with the SHPO.

### ***State Water Resources Control Board and Central Valley Regional Water Quality Control Boards***

The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards

(RWQCBs) are the regulatory boards within California's Environmental Protection Agency that derive their authority from Section 401 of the Clean Water Act and Section 13020 of the California Water Code.

Yosemite is under the jurisdiction of regional board 5, Central Valley, and therefore consults with and obtains necessary permits and/or certifications for construction activities from that board. If required, the NPS will obtain all required permits issued by the RWQCB, file appropriate notifications, and prepare Storm Water Pollution Prevention Plans in advance of any construction activities.

## **Local Governments**

### ***Gateway Communities***

Local governments from gateway and neighboring communities have been extensively involved throughout the development of the *Draft* and *Final Merced River Plan/EIS*. Stakeholders from gateway communities have been invited to public planning workshops, and Yosemite has attended quarterly Yosemite Gateway Partners meetings throughout the planning process. Official representatives from county boards of supervisors and other local government representatives have attended public and internal meetings and workshops related to the plan, and have provided comment during various phases of the planning process.

The Yosemite National Park superintendent, planning division chief, project managers, planners, and representatives from the Superintendent's Office of Public Involvement and Outreach also presented updates on the plan at gateway planning commission meetings, boards of supervisors meetings, and meetings of various community organizations interested in the planning effort.

## **Park Communities**

### ***El Portal***

The El Portal Town Planning Advisory Committee (EPTPAC) acts as an advisory body to the Mariposa County Planning Commission for the purpose of providing community input to the NPS on planning issues in the El Portal Administrative Site. The EPTPAC meets regularly with representatives from the Superintendent's Office and participated in many of the public meetings, webinars, and comment periods during the planning process for the Merced River Plan.

### ***Wawona***

The Wawona Town Planning Advisory Committee (WTPAC) acts as an advisory body to the Mariposa County Planning Commission for the purpose of developing a specific plan for the Wawona Community Planning Area. The WTPAC meets regularly with representatives from the Superintendent's Office and participated in many of the public meetings, webinars, and comment periods during the planning process for the Merced River Plan. In January 2012, the Wawona Town Area Plan was jointly adopted by the Mariposa County Board of Supervisors and the NPS. This specific plan regulates all of the privately owned land within Section 35, Township 4 South, Range 21 East, Mount Diablo Base and Meridian, much of which is within the Merced Wild and Scenic River corridor.



## CONCLUSION

When taking into account the requirements of the Wild and Scenic Rivers Act, in conjunction with other legal requirements, Alternative 5 provides the most comprehensive and effective method among the alternatives considered for meeting Yosemite National Park's management objectives and for meeting the national environmental policy goals. The Selected Action, as reflected in the analysis contained in the environmental impact statement, would allow the NPS to protect and enhance river values while providing for the public use and enjoyment of those values. All aspects of the Selected Action will be undertaken and monitored under the direction of the Superintendent, Yosemite National Park, beginning as soon as practicable.



Christine S. Lehnertz, Regional Director

Pacific West Region, National Park Service



Date

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## APPENDIX A: MEASURES TO MINIMIZE HARM

The National Park Service (NPS) places a strong emphasis on avoidance, minimization, and mitigation of adverse impacts under the National Environmental Policy Act, and adverse effects under the National Historic Preservation Act (NHPA). To protect water quality, free-flowing condition, outstandingly remarkable values and the myriad of natural and socio-cultural resources within the river corridor; the following summarizes the measures to minimize harm that will be implemented as part of the Selected Action for tiered compliance, design and construction related activities.

A detailed description of these measures was published as Appendix C: Mitigation Measures in the Final Merced River Plan / EIS. However additional measures have been included in the table below as a result of consultation efforts. Specifically, since publication of the final plan:

- The United States Fish and Wildlife Service issued a Biological Opinion for the Final Merced River Plan / EIS on March 24, 2014, indicating specific measures for the long-horned elderberry beetle; and,
- Stipulations resulting from the Section 106 Compliance process in accordance with the NHPA have been agreed to by the NPS, the State Historic Preservation Office, and the Advisory Council on Historic Preservation and executed through the 2014 *Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for the Merced Wild and Scenic River Comprehensive Management Plan*; and,
- More specific wetland compensation measures have been developed through consultation with the Water resources Division of the National Park Service.

**TABLE 1. MEASURES TO MINIMIZE HARM**

PHASE	MEASURE	RESPONSIBILITY
Consultation with American Indians	The NPS and traditionally-associated American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.	National Park Service and traditionally-associated American Indian tribes and groups
Section 106 Compliance	For projects/actions assigned to Category 1 in Exhibit 4 of the 2014 Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for the Merced Wild and Scenic River Comprehensive Management Plan the NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities.	National Park and traditionally-associated American Indian tribes

PHASE	MEASURE	RESPONSIBILITY
Section 106 Compliance	<p>For projects/actions assigned to Category 2 in Exhibit 5 of the 2014 Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for the Merced Wild and Scenic River Comprehensive Management Plan the NPS would continue consultation with the SHPO, ACHP, traditionally-associated American Indian tribes and groups and other consulting parties (including the public), consistent with 36 CFR § 800.5 to minimize or mitigate adverse effects and shall seek ways to resolve adverse effects through project-specific agreements per 36 CFR § 800.6(b) and(c).</p> <ul style="list-style-type: none"> <li>a) The NPS will initiate consultation for Category 2 project-specific agreements via correspondence from the Park Superintendent to the signatory and concurring parties of this agreement in advance of project implementation.</li> <li>b) A description of the adverse effects to historic properties that are associated with the project and a general schedule for project completion will be provided with this initial communication.</li> <li>c) The goal of continued consultation on Category 2 actions will be agreement among the consulting parties on the minimization and mitigation measures to be included in the Memorandum of Agreement for each project.</li> </ul>	National Park Service, SHPO, ACHP, traditionally-associated American Indian tribes
Section 106 Compliance	Identification, evaluation, and assessment of effects to be determined for projects/actions assigned to Category 3 in Exhibit 6 of the 2014 <i>Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for the Merced Wild and Scenic River Comprehensive Management Plan.</i>	National Park Service
Section 35 Coordination	The National Park Service will continue a collaborative planning process for the community of Wawona with the Wawona Town Planning Advisory Committee, the Mariposa County Planning Commission, and the Mariposa County Board of Supervisors. Although ultimate responsibility for regulating land uses in federal and private lands in Wawona will remain with the National Park Service and Mariposa County, respectively, the National Park Service will strive, to the maximum extent possible, to coordinate land use planning in Wawona with Mariposa County and the Wawona Town Planning Advisory Committee. It is the intent of the National Park Service that any development within Section 35 would be compatible in character, density, and scale to existing residential and commercial development.	National Park Service and Wawona Town Planning Advisory Committee
Pre-project planning	All road projects funded through the Federal Lands Transportation Program shall be completed cooperatively per the agreements established between the National Park Service and the Federal Highway Administration.	National Park Service and the Federal Highway Administration
Subsequent Wetland Statements of Finding	As site-specific information becomes available at a level of detail needed to fully and accurately disclose anticipated impacts on wetland habitats, processes, functions, and values, subsequent WSOFs for all other actions in the <i>Merced Wild and Scenic River Comprehensive Management Plan Record of Decision (2014)</i> will be developed.	National Park Service
Design	In accordance with the National Park Service's Denver Service Center's Workflows, the standard business practices outlining the requirements for general, predesign, schematic design, design development, and construction documents shall be followed ( <a href="http://www.nps.gov/dscw/design.htm">www.nps.gov/dscw/design.htm</a> )	National Park Service
Construction	In accordance with the most current version of Yosemite National Park's Division 1 Specifications (also referred to as General Requirements for Construction), the standard business practices outlining the requirements for Summary of Work; Seismic Requirements; Definition of Bid Items; Project Meetings; Critical Path Method Construction Schedule; Project Schedules (small and large projects); Submittal Procedures; Submittals; Natural, Cultural, and Physical Resources Protection; Storm Water Pollution Prevention Measures; Accident Prevention; Reference Standards; Contractor Quality Control; Temporary Services and Controls; Field Support Offices; Traffic Control; Product Substitutions and Variations; Material and Equipment Handling and Storage; Field Engineering; Project Closeout; Operation and Maintenance Data; and, System Start, Demonstration and Training shall be incorporated into all construction requirements documents (plans and specifications).	National Park Service

APPENDIX A  
MEASURES TO MINIMIZE HARM

PHASE	MEASURE	RESPONSIBILITY
Yosemite National Park Design Guidelines	<i>A Sense of Place: Design Guidelines for Yosemite National Park</i> shall be followed to ensure that park facilities are designed to be compatible with the existing resources.	National Park Service
Yosemite National Park Lighting Guidelines	<i>Yosemite National Park Lighting Guidelines</i> shall be followed to ensure that all exterior lighting in the park is designed to mitigate light pollution and to preserve the natural darkness as much as possible.	National Park Service
Elderberry Longhorn Beetle Habitat Protection Zone	Adhere to “Proposed Conservation Measures” outlined in the March 24, 2014, Biological Opinion on the Draft Merced Wild and Scenic River Comprehensive Management Plan and Environmental Impact Statement, Yosemite National Park, and the Threatened Valley Elderberry Longhorn Beetle. Furthermore, The National Park Service shall minimize the potential for harm, harassment, or killing of valley elderberry longhorn beetle resulting from project related activities by implementing the conservation measures as described in the Description of the Proposed Action of the Biological Opinion. The National Park Service will plant 174 elderberry seedlings and 101 associated native plants within 1.53-acres at the Greenemeyer Sand Pit in the El Portal Administrative Site.	National Park Service
Design Approvals	All final construction documents (plans and specifications) will be approved by the Park Superintendent prior to implementation.	National Park Service
Pre-Construction	In accordance with the National Park Service’s Denver Service Center’s Workflows, the standard business practices outlining the requirements for a SharePoint Project Website, Permits, Accident Prevention & Blasting Safety Plans, Division 01 Management Plans, Baseline Construction Schedule, the Schedule of Values and the Pre-Construction Conference shall be followed ( <a href="http://www.nps.gov/dscw/design.htm">www.nps.gov/dscw/design.htm</a> ).	National Park Service
Construction	In accordance with the National Park Service’s Denver Service Center’s Workflows, the standard business practices outlining the requirements for Submittals, Coordination, Documentation, Tracking, Modifications, Beneficial Occupancy & Milestone Inspections, Closeout Submittals, and Substantial Completion shall be followed ( <a href="http://www.nps.gov/dscw/design.htm">www.nps.gov/dscw/design.htm</a> ).	National Park Service
Wetland Compensation	In accordance with the Wetland Statement of Findings for the 2014 Merced Wild and Scenic River Comprehensive Management Plan construct new wetland habitat for the following projects: <ul style="list-style-type: none"> <li>• <b>Palustrine Emergent Wetland.</b> Wetland loss (1.22 acres) will result from redesign of the Yosemite Village Day-use Parking Area. Compensation for 1.22 acres of palustrine emergent wetland impacts will take place near the Yosemite Village Day-use Parking area. The existing day-use parking area will relocate slightly north, farther away from the Merced River, and palustrine emergent wetland restoration will take place in the south end of the existing parking lot.</li> <li>• <b>Riverine Intermittent Wetland.</b> Wetland loss (1.51 total acres) will result from redevelopment of West of Yosemite Lodge Parking (1.13 acres) and redesign of the Yosemite Village Day-use Parking Area (0.38 acre). Wetland restoration compensation will total 1.51 acres. Compensation for 1.51 acres of riverine intermittent wetland impacts will take place near the proposed Upper and Lower River Campground area.</li> </ul>	National Park Service
Inadvertent Discovery of Historic Properties or American Indian Human Remains	In accordance with the 2014 <i>Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for Merced Wild and Scenic River Comprehensive Management Plan</i> ; protocols and requirements for Inadvertent Discovery of Historic Properties or American Indian Human Remains shall be incorporated into all construction requirements documents (plans and specifications).	National Park Service
Post-Construction	In accordance with the National Park Service’s Denver Service Center’s Workflows, the standard business practices outlining the requirements for the Construction Contractor’s Performance Evaluation, Draft Completion Reports (Fixed Assets), and Demobilizing Field Office (s) shall be followed ( <a href="http://www.nps.gov/dscw/design.htm">www.nps.gov/dscw/design.htm</a> ).	National Park Service

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## APPENDIX B: DETERMINATION OF NON-IMPAIRMENT

### DETERMINATION OF NON-IMPAIRMENT

*NPS Management Policies* (2006), Section 1.4.1, states that the most important statutory directive for the National Park Service is provided by interrelated provisions of the NPS Organic Act of 1916 (16 U.S. Code, Section 1) and the NPS General Authorities Act of 1970 (16 U.S. Code Section 1A-1), including 1978 amendments to the latter law.

The fundamental purpose of the national park system . . . begins with a mandate to conserve park resources and values. This mandate is independent of the separate prohibition on impairment and applies all the time with respect to all park resources and values, even when there is no risk that any park resources or values may be impaired. NPS managers must always seek ways to avoid, or to minimize to the greatest extent practicable, adverse impacts on park resources and values. However, the laws [also] give the Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, so long as the impact does not constitute impairment of the affected resources and values.

The fundamental purpose of all parks also includes providing for the enjoyment of park resources and values by the people of the United States . . . Congress, recognizing that the enjoyment by future generations of the national parks can be ensured only if the superb quality of park resources and values is left unimpaired, has provided that when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant. This is how courts have consistently interpreted the Organic Act. (*NPS Management Policies* Section 1.4.3)

Section 1.4.4 therefore directs park managers to leave park resources and values unimpaired, even though the agency is delegated general management authorities that can result in impacts to resources and values within parks. Impairment of park resources and values is not permitted unless an activity is specifically provided for by legislation that established a park, or by acts of Congress that subsequently affected operation or land use within the park.

NPS managers are authorized to apply professional judgment in determining whether an impact will harm the integrity of park resources and values, including opportunities that might otherwise be intended to promote the enjoyment of park resources and values. Managers are given discretionary authority based upon consideration of how specific park resources and values would be affected; the severity, duration and timing of an impact; direct and indirect effects of the impact; cumulative and secondary effects of the impact in question. (*NPS Management Policies*, Section 1.4.5)

*NPS Management Policies* acknowledge that an impact to park resources or values may occur without causing impairment. An impact is most likely to constitute impairment when conservation of resources and values are:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park;
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact is less likely to constitute impairment when it is the unavoidable result of an action that is required to preserve or restore the integrity of park resources or values, and its effects cannot be further mitigated. Impacts may result from the activities of park visitors, NPS administrative staff, concessioners and contractors, though

such activities may not be deemed to cause impairment. Impairment might result from sources or activities outside a park.

Park resources and values are broadly defined by *NPS Management Policies*, Section 1.4.6, as:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

*NPS Management Policies*, Section 1.4.7, requires that prior to approval of the Final Merced River Plan/EIS, NPS managers consider whether impacts from the plan could lead to impairment of park resources and values. This impairment determination serves that purpose.

NPS managers have determined that Final Merced River Plan/EIS satisfies the requirements of the National Environmental Policy Act of 1969. Relevant scientific and scholarly studies, advice and insight offered by subject-matter-experts and a robust public involvement process shaped the plan. In addition, the NPS engaged in an extensive Section 106 process with federal and state agencies, traditionally-associated American Indian tribes and groups and other interested parties in accordance with the National Historic Preservation Act.

In addition to a substantial body of pre-existing and newly-initiated research that was specifically intended to assess resources and values, the Final Merced River Plan/EIS was prepared to include a monitoring program with indicators and standards to ensure that activities will not lead to impairment of park resources and values, or degradation of any river values.

*NPS Management Policies*, Subsection 1.4.7.1, defines unacceptable impacts as having thresholds that are not always readily apparent. Park managers are directed to prohibit or prevent uses that have the potential to cause unacceptable impacts, and to evaluate existing and proposed uses to determine whether their impacts on park resources and values are acceptable. *NPS Management Policies* suggest that impacts would be clearly unacceptable when associated with activities or uses that:

- are inconsistent with a park's purposes or values, or;
- impede the attainment of a park's desired future conditions for natural and cultural resources as identified through the park's planning process, or;
- create an unsafe or unhealthful environment for visitors or employees, or;
- diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or;



- unreasonably interfere with:
  - park programs or activities, or
  - an appropriate use, or
  - the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park
  - NPS concessioner or contractor operations or services.

## DESCRIPTION OF PARK PURPOSE AND SIGNIFICANCE

In 1864, the U.S. Congress passed landmark legislation that granted to the State of California the Yosemite Valley and the Mariposa Grove of Big Trees (Act of June 30, 1864, 13 Stat., 325). Both were set aside “. . . for public use, resort, and recreation . . . inalienable for all time.”

In 1987, the 100th Congress and President Reagan added the Merced River in Yosemite National Park to the nation’s inventory of Wild and Scenic Rivers (Public Law 100-149, an amendment to 16 USC 1271-1287). The legislation pertained to:

*The main stem from its sources (including Red Peak Fork, Merced Peak Fork, Triple Peak Fork, and Lyell Fork) on the south side of Mount Lyell in Yosemite National Park to a point... [near] the confluence with Bear Creek, consisting of approximately 71 miles, and the South Fork of the river from its source near Triple Peak Divide in Yosemite National Park to the confluence with the main stem, consisting of approximately 43 miles . . . Revisions to the general management plan for the park shall assure that no development or use of park lands shall be undertaken that is inconsistent with the designation of such river segments ...*

## AMENDING THE 1980 YOSEMITE GENERAL MANAGEMENT PLAN

The GMP includes five over-arching management goals:

- Reclaim priceless natural beauty
- Markedly reduce traffic congestion
- Allow natural processes to prevail
- Reduce crowding
- Promote visitor understanding and enjoyment

These over-arching goals remain intact but are refined by the Merced River Plan. Appendix A of the Final Merced River Plan/EIS was prepared to comprehensively demonstrate how the 1980 *Yosemite General Management Plan* (GMP) will be revised by the Merced River Plan to meet the Wild and Scenic Rivers Act. Specifically, revisions to the GMP focus on Management Objectives, Land Management Zoning, Parkwide Policies and Programs, and Developed Area Plans. The four primary components of the Merced River’s comprehensive management plan that play a role in these adjustments include the River Corridor Boundary and Segment Classifications, River Values and Their Management, Visitor Use and User Capacity Management, and Development of Lands and Facilities.

## **NON-IMPAIRMENT DETERMINATIONS FOR THE SELECTED ALTERNATIVE**

Under guidelines promulgated by the NPS National Leadership Council, Memorandum L7615(2310), dated October 31, 2011, non-impairment determinations must include specific discussion for each impacted resource that is analyzed in detail within the Final Merced River Plan/EIS with an explanation as to why the selected action's impacts will not result in impairment. Impact statements and conclusions should be supported by specific information regarding the magnitude, extent, timing, duration, context, intensity, and other characteristics of impacts.

Impairment findings pertain only to park resources and values, so impairment determinations are not necessary for visitor experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, or similar topics or concerns. These impact topics are not generally considered to be park resources or values according to the Organic Act. The impact topics that are evaluated for purposes of this impairment determination are as follows:

### **Geology and Soils**

The selected action does nothing to materially affect the geological formations for which the park is world renowned. Plan implementation will not require the import or removal of substantial amounts of rock or other earth products. Park soils will be minimally affected where restoration efforts or parking area improvements are planned as imported fill material is removed from previously-developed areas and re-deposited where needed. The NPS will deploy signage, fencing, and formal access points to direct visitors to established routes and trails, and away from sensitive soils and habitats. Visitor use impacts on soils in sensitive areas may continue to occur during periods of peak visitation. The selected action would therefore result in short-term, minor, adverse impacts from construction and grading, and long-term, minor, beneficial impacts with respect to soil resources in the Merced River corridor.

A thorough evaluation of air quality is presented in Volume 2A, Chapter 9 of the Final Merced River Plan/EIS, pages 9-7 to 9-38, and 9-59 to 9-56.

### **Hydrology, Floodplains and Water Quality**

The Selected Action will have long-term, negligible to minor, beneficial impacts on hydrology. Restoration actions will decompact soil and restore meadow and riparian areas, thus retaining more water on park lands. The removal of impervious surfaces will increase infiltration and partially restore the natural hydrologic regime in a detectable manner. Actions to restore riverbanks and to re-induce natural vegetation and large wood will add roughness and complexity to the Merced River, restoring hydrologic processes in a detectable manner.

The Selected Action will have long-term, minor, beneficial impacts on water quality. Denuded riparian and meadow vegetation will be restored and informal trails limited, leading to reduced erosion. River restoration will help stabilize eroded areas and reduce fine sediment in a detectable manner. Construction activities associated with restoration have the potential to adversely affect water quality over the short term, but would be mitigated to a negligible level by instituting mitigation measures.

The Selected Action will have long-term, negligible to minor, beneficial and adverse impacts on floodplains. The Merced River will be reconnected its floodplain through restoration actions, resulting in a long-term, minor, beneficial impact on floodplains. Actions associated with in-river restoration would add roughness and

complexity to the river, partially reconnecting the river to its floodplain, and creating a long-term, negligible, beneficial impact on the floodplain.

A thorough evaluation of hydrology, floodplains and water quality is presented in Volume 2A, Chapter 9 of the Final Merced River Plan/EIS, pages 9-73 to 9-118, and 9-148 to 9-159.

## **Vegetation and Wetlands**

The Selected Action will restore approximately 189 acres of vegetation, including 37.98 acres of wetlands, in conjunction with actions proposed across the broader range of alternatives. Some native vegetation and potentially jurisdictional wetlands would be lost through the secondary effects of actions intended to manage visitor use and facilities. The selected action will have long-term, moderate, beneficial impacts on vegetation in the Merced River corridor. Restoration actions will restore meadow and riparian areas, improve and restore hydrologic function and restore ecological integrity throughout the corridor, remove and restore informal trails, and direct the public onto established trails and river access points. These actions are elements of a comprehensive strategy to reduce existing adverse impacts on meadow, wetland, and riparian vegetation. Existing natural resource management actions, such as the removal of nonnative invasive plants, will continue. Notable actions under the selected action include:

- restricting recreational use of rivers and riverbanks to reduce riverbank erosion
- removing, restoring, relocating, or repurposing park facilities to efficiently utilize park facilities and reduce the built environment within the park; some facilities would be built to accommodate visitors or employees
- managing total visitors to the park and visitor demands for day parking space, lodging, and camping space
- removing facilities within 100 feet of the Merced River and restoring riverbanks, meadows, and riparian habitat
- enhancing meadow, riparian, and river hydrologic function, complexity, and connectivity improving the geological and hydrological processes, complexity, and water quality of the Merced River

The Selected Action provides for restoration of meadow, riparian, and riverbank habitats in Yosemite Valley (Segment 2) by removing many flood-prone facilities that are located within 100 feet of the Merced River; repurposing park facilities to improve efficiency; maintaining existing use levels; and providing adequate lodging, camping, and parking space for visitors and employees. Adverse impacts from these actions will be associated with active construction or ecological restoration, and will be local, short-term, and minor or negligible. There will be local, long-term, moderate, adverse impacts on vegetation communities from construction of some facilities. Visitor use will remain somewhat consistent with current levels, and vegetation will be affected in areas where visitor activity is greatest (e.g., Curry Village, east Yosemite Valley). The long-term effect of all of these measures will have a moderate, beneficial impact on vegetation communities as habitats are restored and habitat fragmentation is reduced.

A thorough evaluation of vegetation and wetlands is presented in Volume 2A, Chapter 9 of the Final Merced River Plan/EIS, pages 9-171 to 9-230, and 9-278 to 9-294.

## Wildlife

The Selected Action will improve habitat conditions for fish and wildlife, including actions targeted to improve habitat quality for aquatic, riparian-dependent, and meadow-dependent fish and wildlife where these habitats are near or adjacent to existing developments and high visitor use areas. The selected action includes measures to enhance the ecological complexity of riparian and aquatic habitat in targeted areas, to promote channel free flow, to improve water quality, and to reduce erosion and scouring. When combined with restoration actions common to all the alternatives, up to approximately 189 acres of meadow, riparian, black oak woodland, valley oak woodland, coniferous forest, broadleaved forest, and floodplain habitats will be enhanced or restored, benefiting fish and wildlife habitat in the Merced River and in the adjacent land corridor. Notable actions include the following:

- remove facilities in targeted areas near the Merced River and restore riverbanks, meadows, and riparian habitat
- restore riparian vegetation in certain areas such as El Capitan moraine
- restrict recreational access to rivers and riverbanks to reduce riverbank erosion
- remove, restore, relocate, or repurpose park facilities to efficiently use park facilities and reduce the built environment in the park; some facilities would be built to accommodate visitors or employees
- manage total visitors to the park and visitor demands for day parking space, lodging, and camping space
- enhance meadow, riparian, and river hydrologic function, complexity, and connectivity
- improve the free flow, complexity, and water quality of the Merced River

Some wildlife habitats may be lost by actions intended to improve visitor use and facilities. Human-related pressures to wildlife and wildlife habitat in Segment 2 may increase compared to current conditions. The management of parking areas (reducing informal parking) and overnight use will reduce ongoing impacts caused by human disturbance. In addition, construction activities in parking and campground areas will result in both short-term and long-term, local, adverse impacts on wildlife. Adverse impacts associated with restoration activities will be limited to the construction or restoration phase and will be local, short term, and minor or negligible. Collective long-term impacts of restorative measures and construction of new facilities located outside of the floodplain and sensitive habitats will be minor and beneficial to fish and wildlife as habitats are restored and the quality, quantity, and integrity of habitat in the Merced River corridor is improved. These impacts will be most prominent in areas of high human use, such as Yosemite Valley and Wawona.

A thorough evaluation of wildlife is presented in Volume 2A, Chapter 9 of the Final Merced River Plan/EIS, pages 9-311 to 9-348, and 9-384 to 9-396.

## Special-status Species

The Selected Action will address existing adverse impacts on habitats for special-status species, including actions intended to improve habitat quality for aquatic, riparian-dependent, and meadow-dependent special-status species where these habitats are near or adjacent to existing developments and high visitor use areas. The NPS will implement measures to restore the ecological integrity of riparian, meadow, and aquatic habitat in targeted areas, increase channel free flow, improve water quality, and reduce erosion and scouring. Notable actions include the following:

- limit the recreational use of rivers and riverbanks to reduce riverbank erosion
- remove, restore, relocate, or repurpose park facilities to efficiently use park facilities and reduce the built environment within the park; some facilities would be built to accommodate visitors or employees
- manage total visitors to the park and visitor demands for day parking space, lodging, and camping space
- remove facilities within 100 feet of the Merced River and restore riverbanks, meadows, and riparian habitat
- enhance meadow, riparian, and river hydrologic function, complexity, and connectivity
- improve the free flow, complexity, and water quality of the Merced River

The Selected Action proposed restoration of meadow, riparian, and riverbank habitats in Yosemite Valley; removing many facilities that are located within 100 feet of the river and are jeopardized by flooding; repurposing park facilities to improve efficiency of use; maintaining existing usage levels; and providing adequate lodging, camping, and parking space for visitors and employees. Adverse effects from these actions would be associated with the active construction or restoration phase and would be local, short term, and minor or negligible. Local, long-term, negligible, adverse impacts would be realized on habitats for special-status species from construction of some facilities. When combined, the long-term effect of all of these measures would be a moderate, beneficial impact on special-status species as habitats are restored and fragmentation and indirect detriments to habitat are reduced. These effects would be most pronounced in areas of high human use such as Yosemite Valley and Wawona.

Implementation of a comprehensive ecological restoration program to restore natural processes to the Merced River corridor, in combination with extensive site-specific restoration, will result in long-term, moderate, beneficial impact on special-status species habitat. These measures will improve hydrologic connectivity of meadows and floodplains to the river; enhance habitat complexity in riparian, meadow and aquatic areas; reduce human and pack stock-related disturbances; and reduce nonnative species and conifer intrusion of sensitive habitats. Adverse effects related to the construction phase of these actions will be local, short term, and minor or negligible.

The selected action will have no effect on the following federally listed and candidate species: Sierra Nevada bighorn sheep and whitebark pine. The selected action may affect, but would not be likely to adversely affect, the Yosemite toad, Sierra Nevada yellow-legged frog, California wolverine, and Pacific fisher.

Selected action items in Segment 4 have the potential to cause indirect or direct impacts on elderberry shrubs, including possible removal of shrubs. Direct or indirect impacts on valley elderberry longhorn beetle habitat would result in local, long-term, minor, adverse impacts on this beetle species. To minimize and avoid potential effects where possible, NPS will implement avoidance and mitigation measures outlined in the 1999 USFWS *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*; these include specific procedures for transplanting, requirements to plant additional seedlings or cuttings and associated native species, protective measures, maintenance, and reporting.

A thorough evaluation of special-status species is presented in Volume 2A, Chapter 9 of the Final Merced River Plan/EIS, pages 9-409 to 9-484, and 9-536 to 9-553.

## **Air Quality**

Mitigation measures for the selected action and other applicable actions would reduce potential short-term, adverse impacts associated with construction emissions to the extent feasible. Even after mitigation, short-term,

negligible to minor, adverse impacts from construction would be anticipated. Under long-term operations, reduced housing or lodging will result in a proportional reduction in area source emissions (e.g., from consumer products, associated maintenance, propane combustion for heating/cooling). Better management of total daily visitor and administrative use and capacity and will result in a regional and local, long-term, negligible, beneficial impact for ROG emissions owing to reduced on-road vehicles in the park. Increased bus operations will result in regional and local, long-term, negligible adverse impact for NOx emissions. Regional impacts to AQRVs (such as pine injury from ozone and visibility) will be similar to existing conditions, but the local impact to lichen along roadways would be long-term, negligible, and adverse due to increased nitrogen deposition. A greater number of potential campfires associated with increased campsites in Yosemite Valley, however, will result in a potentially local, long-term, minor, adverse impact owing to particulate emissions.

A thorough evaluation of air quality is presented in Volume 2A, Chapter 9 of the Final Merced River Plan/EIS, pages 9-629 to 9-651, and 9-670 to 9-676.

## Scenic Resources

The Selected Action will improve the appearance of riverbanks, meadows, and riparian vegetation, and remove some human-made structures and paved or graded areas. Views from scenic vista points will be improved by removing encroaching or overly-abundant conifer trees from foreground areas. These actions will improve the scenic quality of restoration areas and views of the river and meadows in the vicinity of restoration areas. New facilities or structures are proposed in established areas of prior development, will be design according to NPS design guidelines and evaluative processes and would not result in overall reduced scenic quality. Visitor use capacity management would be implemented, allowing the NPS to manage visitor density to existing levels and to limit the potential for impacts on natural resources. With implementation of mitigation measures, the selected action would result in local, long-term, minor, beneficial impacts on scenic resources.

A thorough evaluation of scenic resources is presented in Volume 2B, Chapter 9 of the Final Merced River Plan/EIS, pages 9-683 to 9-704, and 9-718 to 9-723.

## Historic Buildings, Structures and Cultural Landscapes

Under the Selected Action, a select number of contributing resources within the Yosemite Valley Historic District would be removed and specific locations would be redesigned that would result in adverse effects to certain historic properties. However, the NPS has deemed these consequences to be acceptable because of the substantial benefits to biological resources. Moreover, while some effects to historic properties are adverse, these effects do not rise to the level of impairment because as with any cultural system, change is inherent within the Yosemite Valley landscape and Yosemite Valley Historic District's significance would be retained because the themes of outdoor recreation, tourism, and conservation, and the preservation of scenic places through their development as public parks will still be conveyed.

Additionally, the 2014 *Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for the Merced Wild and Scenic River Comprehensive Management Plan* (PA) requires additional project-specific information in order to determine whether adverse impacts can be avoided to historic properties. Project-specific information includes both identification and evaluation efforts (to determine presence or absence of historic properties that could incur direct impacts), as well as, assessments of effect to determine the degree of impacts should they be absolutely necessary.

Furthermore, the active program of maintenance of historic buildings and structures would continue and all new or redevelopment actions would adhere to the design guidelines for Yosemite National Park. Ecological and scenic value restoration actions in Segment 2 would enhance the cultural landscape which contributes to the historic setting of these resources.

Specifically, the Selected Action will remove and/or realign some contributing resources (tennis courts, historic ditches, and the Valley Loop Trail) resulting in long-term, negligible, adverse impacts; however, restoration of contributing resources (meadows) will result in a long-term, beneficial impact. The restoration of the contributing resource (El Capitan Meadow) will result in a long-term, beneficial impact.

Additionally, abutments for the former historic Happy Isles footbridge will be removed along with the gauging station at Pohono Bridge, resulting in long-term, negligible, adverse impacts. Actions to restore highly impacted riverbanks between Clark and Sentinel Bridges would have no impacts on contributing resources. Proposed actions to address localized hydrologic impacts through engineered log jams and riverbank restoration and conducting further studies and identify mitigation measures for success would result in no impact.

The restoration of historic views and vistas would result in long-term, beneficial impacts to contributing resources.

**Merced Lake High Sierra Camp** – Portions of contributing resources in the Merced Lake High Sierra Camp Historic District will be removed, resulting in a long-term, moderate, adverse impact.

**Curry Village** – Contributing resources and new infrastructure (lodging at Boys Town and redesigned parking area at Huff House), and the redesign of a contributing resource (Curry Orchard) will result in long-term, negligible to moderate, adverse impacts.

**Yosemite Village and Housekeeping Camp** – The Ahwahnee tennis court will be removed and the parking area expanded at the Ahwahnee Hotel. Non-contributing temporary employee housing, Concessioner Headquarters and Concessioner Garage will be removed. The Yosemite Valley Group Utility Building (Fort Yosemite) will be modified for other purposes. These actions will result in long-term, negligible to minor adverse impacts to the historic districts. Removal of a minimal number of contributing resources at Housekeeping Camp and Residence 1 will result in long-term, minor, adverse impacts. Removal of non-contributing resources (temporary housing) would result in no impacts, and redesign of the non-historic parking area, realignment of a section of a contributing resource (Northside Drive) and minimal new infrastructure (traffic circle) within the historic district will result in long-term, minor, adverse impacts.

**Yosemite Lodge and Camp 4 Campgrounds** – Added infrastructure in the vicinity of the Camp 4 Historic Site and within the Yosemite Valley Historic District will result in long-term, minor, adverse impacts. Removal of employee housing, both non-contributing and contributing, would result in long-term, negligible, adverse impacts. Retaining the current number of lodging units will have no impact, while construction of a new parking area and employee housing within the Yosemite Valley Historic District will result in long-term, minor to moderate, adverse impacts.

**El Portal** – Added employee housing in existing residential and community areas will involve the construction of infrastructure adjacent to historic properties or within a historic district, resulting in long-term, moderate, adverse impacts. Construction of a remote parking area in the Abbieville/Trailer Village will result in long-term, moderate, adverse impacts.

**Wawona** – RV dump station relocation and Wawona Campground connections to the existing Wastewater Treatment Plant will result in long-term, minor, adverse impacts. Construction of the Wildland Fire Facility and rehabilitation or removal of historic properties within the NPS Maintenance Area will result in long-term, minor, adverse impacts. Retaining commercial day-rides at the Wawona Stables and relocating the public stock

campground to the NPS Maintenance Area will cause no impact to the Pioneer Yosemite History Center Historic District.

In Summary, the Selected Action will not result in impairment of **historic structures or cultural landscapes** (identified, eligible and listed *National Register* properties) because avoidance, minimization and/or mitigation measures would be instituted to resolve adverse effects, in consultation with the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, traditionally-associated American Indian tribes and groups, and other interested parties (consulting parties). While some adverse effects to historic properties could occur, these effects will not impair the resource to the point that the parks purpose cannot be fulfilled. The PA outlines the necessary Section 106 Consultation steps to be taken to resolve adverse effects, which will require additional consultation and Memorandum of Agreements. The goal of continued consultation will be agreement among the consulting parties on avoidance, minimization and mitigation of adverse effects. Furthermore, the parks will continue to preserve cultural resources; therefore, there is no reason to suspect that implementation of the selected alternative will pose a risk of impairment to the parks cultural resources.

A thorough evaluation of historic buildings, structures and cultural landscapes is presented in Volume 2B, Chapter 9 of the Final Merced River Plan/EIS, pages 9-1015 to 9-1055, and 9-1090 to 9-1100.

## Archeological Resources

Components of the Selected Action have a potential to result in minor and major impacts on sub-surface prehistoric and historic-era archeological resources through construction activities and facilities removal. Under the Selected Action, a select number of archeological resources within the Yosemite Valley, El Portal and Wawona Archeological Districts have the potential to be adversely effected. However, the NPS has deemed these consequences to be acceptable because of the substantial benefits to biological resources. Moreover, while some effects to archeological resources are adverse, these effects do not rise to the level of impairment because overall each archeological district's significance would be retained because their ability to yield important information about prehistoric life ways and / or their significance to local American Indian communities would endure.

Additionally, the 2014 *Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for the Merced Wild and Scenic River Comprehensive Management Plan* (PA) requires additional project-specific information in order to determine whether adverse impacts can be avoided to archeological resources. Project-specific information includes both identification and evaluation efforts (to determine presence or absence of archeological resources that could incur direct impacts), as well as, assessments of effect to determine the degree of impacts should they be absolutely necessary.

Related actions could result in short-term exposure of site soils to erosional forces, displacement of artifacts, and diminished integrity of horizontal and vertical site patterning. Mitigation measures will delineate the process by which a site could be tested, characterized, and addressed through a treatment plan if site avoidance is not possible. Mitigation measures provide for an archeological monitor to be present for minimally invasive construction and restoration. Mitigation measures describe the process by which unanticipated discoveries will be handled so as to reduce or avoid disturbances to previously unknown sites.



The Selected Action will result in long-term, beneficial impacts on known archeological sites by limiting visitor activities that can damage sites, restoring areas that have sustained impacts from inappropriate uses, or stabilizing site surfaces through revegetation and restoration.

Actions in the West Valley (Segment 2B) predominantly include restoration actions that will result in impacts to the Yosemite Valley Archaeological District and Merced Canyon Travel Corridor. In the East Valley, impacts will include those to the Yosemite Valley Archaeological District and other archaeological sites.

In Summary, the Selected Action will not result in impairment of **archeological resources** (identified, eligible and listed *National Register* properties) because avoidance, minimization and/or mitigation measures would be instituted to resolve adverse effects, in consultation with the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, traditionally-associated American Indian tribes and groups, and other interested parties (consulting parties). While some adverse effects to historic properties could occur, these effects will not impair the resource to the point that the parks purpose cannot be fulfilled. The PA outlines the necessary Section 106 Consultation steps to be taken to resolve adverse effects, which will require additional consultation and Memorandum of Agreements. The goal of continued consultation will be agreement among the consulting parties on avoidance, minimization and mitigation of adverse effects. Furthermore, the parks will continue to preserve cultural resources; therefore, there is no reason to suspect that implementation of the selected alternative will pose a risk of impairment to the parks cultural resources.

A thorough evaluation of archeological resources is presented in Volume 2B, Chapter 9 of the *Final Merced River Plan/EIS*, pages 9-1111 to 9-1137, and 9-1166 to 9-1179.

## **American Indian Traditional Cultural Resources**

The NPS is aware that historic properties of religious and cultural significance to traditionally-associated American Indian tribes and groups are located on ancestral lands now encompassed by Yosemite National Park and the El Portal Administrative Site and has already determined that these historic properties may be adversely affected.

Under the Selected Action, historic properties of religious and cultural significance to traditionally-associated American Indian tribes and groups have the potential to be adversely effected. However, the NPS and traditionally-associated American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.

Should adverse effects be unavoidable, the NPS has deemed these consequences to be acceptable because of the substantial benefits to biological resources. Moreover, while some effects to historic properties with traditional religious and cultural significance could be adverse, these effects do not rise to the level of impairment because overall the traditional cultural resources would continue to represent relatively contiguous and interrelated places that are inextricably and traditionally linked to the history, cultural identity, beliefs, and behaviors of contemporary and traditionally-associated American Indian groups.

Additionally, the 2014 *Programmatic Agreement Among the National Park Service at Yosemite National Park, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding Compliance with Section 106 of the National Historic Preservation Act for the Merced Wild and Scenic River Comprehensive Management Plan* (PA) requires additional project-specific information in order to determine whether adverse impacts can be avoided to historic properties with traditional religious and cultural significance. Project-specific information includes both identification and evaluation efforts (to determine presence or absence of these resources that could incur direct impacts), as well as, assessments of effect to

determine the degree of impacts should they be absolutely necessary. The selected action has the potential to cause minor and major adverse impacts on known American Indian traditional cultural resources from actions such as site restoration, construction, and facilities removal. Such activities will result in short-term or long-term changes to the site setting, destruction of native vegetation, damage or destruction to archeological resources with traditional cultural and religious significance, changes to important views, or disruption from visitor use or obstructed access. The NPS will consult with representatives from traditionally associated American Indian tribes and groups to find design solutions for specific actions and to minimize short-term impacts and avoid long-term impacts on traditional-use plant population areas, resources of religious and cultural significance, ethnographic village locations, and other significant sites. The Selected Action includes restoration actions that will result in impacts to known ethnographic village sites, and traditional use areas of religious and cultural significance, and archeological resources in Segment 2A (East Valley), and impacts to known ethnographic village sites and traditional use areas in Segment 2B (West Valley).

The selected action will result in long-term, beneficial impacts on known American Indian traditional cultural resources, either through restrictions on types or amounts of visitor use that can cause damage, restrict access, or influence the setting of traditional sites, or restoration of traditional-use plant population areas.

In Summary, the Selected Action will not result in impairment of American Indian traditional cultural resources (identified, eligible and listed *National Register* properties) because avoidance, minimization and/or mitigation measures would be instituted to resolve adverse effects, in consultation with the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, traditionally-associated American Indian tribes and groups, and other interested parties (consulting parties). While some adverse effects to historic properties could occur, these effects will not impair the resource to the point that the parks purpose cannot be fulfilled. The PA outlines the necessary Section 106 Consultation steps to be taken to resolve adverse effects, which will require additional consultation and Memorandum of Agreements. The goal of continued consultation will be agreement among the consulting parties on avoidance, minimization and mitigation of adverse effects. Furthermore, the parks will continue to preserve cultural resources; therefore, there is no reason to suspect that implementation of the selected alternative will pose a risk of impairment to the parks cultural resources.

A thorough evaluation of archeological resources is presented in Volume 2B, Chapter 9 of the Final Merced River Plan/EIS, pages 9-1181 to 9-1189, and 9-1232 to 9-1242.

## FINDING

The *Merced Wild and Scenic River Comprehensive Management Plan* establishes a river boundary and segment classifications, identifies and evaluates river values, including their condition at the time of designation and present-day, prescribes a visitor use and user capacity management program, analyzes land uses and facilities, and includes other required elements of a comprehensive management plan as guided by the Wild and Scenic Rivers Act and relevant case law. The analysis contained in the Chapter 5, River Values and their Management, and Chapters 3 and 9 of the Plan clearly demonstrate that the Selected Action will not result in unacceptable impacts as exemplified by *NPS Management Policies*, Section 1.4.7.1.

In adopting the Selected Action, consistent with *NPS Management Policies* Section 1.4.7.2, the agency finds that park resources and values will be passed on to future generations in a condition that is as good as, or better than, the conditions that exist today. Through the Selected Action, the NPS will undertake actions that help to restore the ecological vitality of the Merced River corridor and other park resources that have been damaged or

compromised in the past. Restoration activities will be guided by the natural and cultural resource-specific actions and monitoring protocols that are included in the Final Merced River Plan/EIS.

All elements of the Selected Action are appropriate for accomplishing ecological restoration of lands in the Merced River corridor, and for accommodating visitor use that will be sufficiently limited by a user capacity program. There are no foreseeable impacts that would result in unacceptable impacts to any park resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the 1980 *Yosemite General Management Plan* or other relevant NPS planning documents as being a significant resource.

Based upon the analysis contained in the Final Merced River Plan/EIS, by the science and scholarship evidenced therein, upon the advice from subject-matter experts with relevant knowledge and experience, and considering the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the Selected Action.

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**SECTION 7 DETERMINATION  
FOR THE MERCED WILD AND SCENIC RIVER  
COMPREHENSIVE MANAGEMENT PLAN**

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# SECTION 7 DETERMINATION FOR THE MERCED WILD AND SCENIC RIVER COMPREHENSIVE MANAGEMENT PLAN

## INTRODUCTION

Eighty-one miles of the Merced River (including the South Fork of the Merced River) within Yosemite National Park and the El Portal Administrative Site were designated as a Wild and Scenic River in 1987, in order to protect the river's free-flowing condition and to protect and enhance its unique values for the benefit and enjoyment of present and future generations (NPS 2013). This designation gives the Merced River special protection under the Wild and Scenic Rivers Act (WSRA). Section 7(a) of WSRA requires managing agencies to conduct a rigorous and consistent process to protect the free-flowing condition of the Merced River when a proposed *water resources project*<sup>1</sup> triggers a review, as described in Chapter 4 of the *Merced Wild and Scenic River Final Comprehensive Management Plan and Environmental Impact Statement (Merced River Plan)*.

The Selected Action in the *Merced River Plan* proposes several federally funded actions that would be located within the bed and banks of the Merced River or its tributaries, triggering additional review under section 7(a) of the Wild and Scenic Rivers Act. These proposed actions within the bed and banks of the Merced River are: (1) remove riverbank riprap, corridorwide; (2) place large wood in Segment 2; (3) remove Happy Isles Bridge footings and gauging station in Segment 2; (4) complete riparian restoration in Segment 2; (5) restore Greenemeyer Sand Pit in Segment 4; (6) maintain Wawona impoundment but remove abandoned infrastructure in Segments 6/7; and (7) complete riparian restoration in Segment 7.

Actions within the bed and banks of the river require a different standard and evaluative process than actions proposed on tributaries to the river, per the guidelines provided by the *Wild and Scenic Rivers Act, Section 7 Technical Report* of the Interagency Council (IWSRCC 2004). This Section 7 Determination evaluates actions within the bed and banks for their potential to have direct and adverse effects on free-flowing condition, water quality, and outstandingly remarkable values. This is known as the “direct and adverse effect” standard. Actions that would take place on tributaries to the Merced River are evaluated for their potential to either invade or diminish the scenic, recreational, fish, or wildlife values of the wild and scenic river. There are no actions that are proposed to take place in tributaries to the Merced River under the Merced River Plan. Therefore, no “invade or diminish” analysis has been conducted.

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<sup>1</sup> A water resources project is any dam, water conduit, powerhouse, transmission line, or other works project under the Federal Power Act, or other developments, that would affect the free-flowing character of a wild and scenic or congressionally authorized study river. In addition to projects licensed by the Federal Energy Regulatory Commission, water resources project may include dams, water diversions, fisheries habitat and watershed restoration, bridges and other roadway construction/reconstruction projects, bank stabilization projects, channelization projects, levee construction, boat ramps, fishing piers, and activities that require a section 404 permit from the U.S. Army Corps of Engineers.

## AUTHORITY

The authority for this determination is found in section 7(a) of the Wild and Scenic Rivers Act (Public Law 90-542, as amended, 16 United States Code [USC] 271-1278). Section 7 states that:

*No department or agency of the United States shall assist by loan, grant, license or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration.*

## PART I. PROPOSED WATER RESOURCE PROJECTS WITHIN THE MERCED RIVER CORRIDOR

### Methodology

Proposed actions within the river corridor will be evaluated as follows for their potential to have direct and adverse effects on free-flowing condition, water quality, and the outstandingly remarkable values identified for the river using the following process, as adopted from Interagency Council guidelines (2004 IWSRCC):

- Define the context of the project – purpose and need, geographic location, duration, magnitude and extent of proposed activities, and relationship to past and future management activities:
  - Determine whether the proposed activity would directly alter within-channel conditions.
- Describe the position of the proposed activity relative to the streambed and streambanks. Describe likely changes in active channel location; channel geometry, channel slope, channel form, water quality, and navigation of the river. Address the magnitude and spatial extent of the effects.
- Determine whether the proposed activity would directly alter riparian and/or floodplain conditions:
  - Describe the position of the proposed activity relative to the riparian area and floodplain. Analyze likely changes in vegetation (composition, age structure, quantity, or vigor), relevant soil properties (compaction, percent bare ground), relevant floodplain properties (width, roughness, bank stability, susceptibility to erosion). Address the magnitude and spatial extent of effects on riparian/floodplain attributes.
- Determine whether the proposed activity would directly alter upland conditions:
  - Describe the position of the project relative to uplands. Analyze likely changes in vegetation, soils, or relevant hydrologic properties (e.g., drainage patterns or the character of surface and subsurface flows).
- Evaluate and describe likely changes in on-site conditions that would alter existing hydrological processes:
  - These processes include the ability of the channel to change course, re-occupy former segments, or inundate its floodplain; streambank erosion potential, sediment routing and deposition; or debris loading; amount and timing of flows surface and subsurface flow characteristics; flood storage; aggradation/degradation of the channel.
- Evaluate and describe likely changes in on-site conditions that would alter existing biological processes:

These processes include reproduction, vigor, growth and/or succession of streamside vegetation; nutrient cycling; fish spawning or rearing; riparian dependent avian species needs; amphibian/mollusk needs; and native species diversity.

- Address potential off-site or indirect effects of the proposed activity.
- Compare the project analysis to management goals:
  - Identify the effects of the project on management goals relative to free flow, water quality, riparian area and floodplain conditions, Outstandingly Remarkable Values (ORVs), and river segment classification.
- Based on the analysis, determine the effects of the proposed activity on the river's free flowing conditions, water quality, and ORVs.

## **Project Description**

A complete description of Alternative 5 (Selected Action): Enhanced Visitor Experience and Essential River Bank Restoration is presented in Chapter 8. River segments and their classifications are defined in detail in Chapter 3. Briefly, Segment 1 refers to the Merced River upper watershed above Yosemite Valley; Segments 2A and 2B refer to Yosemite Valley (east and west, respectively); Segment 4 refers to El Portal; Segments 6 and 7 refer to Wawona; the term, "corridorwide" refers to all segments as applicable. Chapter 5 includes a complete description of the ORVs for the Merced River.

The final Selected Action proposes the following actions within the bed and banks of the Merced River.

### **(1) Corridorwide Riprap Removal**

Remove riprap from at least 6,135 linear feet of riverbank in various locations to restore natural processes. Replace riprap with riparian vegetation and revegetate river banks with riparian species in various locations along 3,400 linear feet. Along 2,300 linear feet, use bioengineering techniques where riverbank stabilization is necessary for infrastructure protection.

### **(2) Yosemite Valley Placement of large wood (Segment 2A)**

Large wood, including logjams, would be placed into river banks and the river channel. A total of eight log jams would be constructed between Clark's Bridge and Sentinel Bridge, in order to address river widening and low channel complexity. Installation of large wood would be used to enhance riparian habitat and provide additional channel complexity, and also to provide structure for eroded riverbanks. Large wood would also be placed so as to lessen scouring from bridge abutments, as relevant, using brush layering and placing engineered log jams. Note that all historic bridges would be retained under the Selected Action. In order to mitigate for the hydrologic effects of retaining Sugar Pine, Ahwahnee, and Stoneman bridges, large wood would be placed along the riverbanks to minimize scouring upstream of each bridge.

### **(3) Remove former Happy Isles Footbridge footings and Pohono Gauging Station (Segments 2A and 2B)**

Bridge footings from the former Happy Isles footbridge would be removed. Outdated facilities and infrastructure at the Pohono gauging station would also be removed – specifically, the gauge building would be removed from within the bank and beds of the river.

**(4) Yosemite Valley Riparian Restoration (Segments 2A and 2B)**

Campsites within the ordinary highwater mark at Lower Pine Campground would be removed. River access would be directed to sandy beaches and sandbars, which are more resilient to disturbance; formal access sites would be designated. Sensitive riparian areas would be fenced off and restored with native vegetation. Signage would be used to protect sensitive riparian areas in the vicinity of North Pines Campground, Upper and Lower River Campgrounds, and Housekeeping Camp. Lodging and other facilities currently located within the ordinary high water mark at Housekeeping Camp would also be removed, with restoration of native riparian habitat. Localized riverbank restoration would be completed using brush layering techniques to repair localized riverbank erosion. These areas would also be closed from public access. Riverbanks to be addressed include those near Backpackers Camp and the Lower Pines and North Pines Campgrounds; Housekeeping Camp; the Yosemite Lodge beach access; the Swinging Bridge, Sentinel Beach, and Cathedral Beach picnic areas, and Devil's Elbow; the riverside areas between Pohono Bridge and the El Portal Road/Big Oak Flat Road intersection; and along the Valley Loop Trail. Also restore 10.9 acres of riparian habitat at the site of former Pine and Oak units at the Yosemite Lodge and wellness center.

**(5) Restoration of Greenemeyer Sand Pit in El Portal (Segment 4)**

Greenemeyer Sand Pit is a former mine operation area. It contains fill material that prevents seasonal inundation and regeneration of riparian plants. Ecological restoration would remedy this issue via removal of fill and recontouring.

**(6) Wawona Impoundment and Water Conservation Plan (Segments 6 and 7)**

The current water intake (Wawona Impoundment) and existing water collection and distribution system would be retained. The abandoned infrastructure in the South Fork side channel that dewateres the associated terrace would be removed.

**(7) Wawona Riparian Restoration (Segment 7)**

Portions of the Wawona Campground would be ecologically restored. Campsites located within 100-feet of the ordinary highwater mark would be removed and/or relocated.

**(8) Corridorwide Water Quality Enhancement Actions**

The Wawona Water Conservation Plan would continue to be implemented to the minimum flows for the South Fork is achieved during the dry season. The pack trail from Concessioner Stables in Yosemite Valley to Happy Isles would be rerouted away from the river's edge and the area restored to natural conditions. Odger's Bulk Fuel Storage Facility in El Portal would be removed from the 500-year floodplain. The Yosemite Village Day-use Parking Area would be redesigned and 150-feet north of the ordinary highwater mark and the meadow and floodplain communities restored. Stormwater run-off mitigation measures would be incorporated into parking area design. The Upper Pines RV dump station in Yosemite Valley would be relocated to a site between Curry Village and the Campgrounds, at least 150-feet from the ordinary highwater mark. Similarly, the Wawona RV dump station would be relocated from the Wawona Store Area to the Wawona Campground, at least 150-feet from the ordinary highwater mark. The Wawona Campground would be connected to the Wawona Wastewater Treatment Plant. Two formal picnic areas in

Wawona would delineate river access points. Riverbank restoration actions would address accelerated riverbank erosion and potential sediment loading.

## **Analysis**

The effects of the proposed water resources actions within the Merced River corridor are outlined in Table 1.

TABLE 1 EFFECTS OF THE PROPOSED WATER RESOURCES ACTIONS WITHIN THE MERCED RIVER CORRIDOR

(1) Corridorwide Riprap Removal	(2) Placement of Large Wood in Yosemite Valley	(3) Remove Happy Isles footbridge footings and Pohono Gauging Station	(4) Yosemite Valley Riparian Restoration	(5) Restoration of Greenemeyer Sand Pit in El Portal	(6) Wawona Impoundment and Wawona	(7) Wawona Riparian Restoration	(8) Corridorwide Water Quality Enhancement
<b>Effects on Within-Channel Conditions</b>							
Existing riprap interferes with natural hydrologic processes, interfering with the free-flowing condition of the river. The action would restore the river channel to a more natural configuration.	Placement of large wood would help to address historic bank widening, reductions in channel complexity due to the historic removal of large wood, and restore natural stream processes. Large wood would also help to deflect erosive flows away from sensitive areas, reduce scour, and promote desirable sediment deposition.	Removing the gauging station infrastructure would remove existing impediments from the river channel that currently interfere with the alluvial river process.	Removal of the campground loop, lodging and other facilities within the bed and banks of the river at Lower Pine campground would provide limited benefit to the free-flowing condition of the river. Restoration within the riparian corridor and outside of the channel is not likely to alter within-channel attributes such as active channel location, channel geometry, slope, or form.	The action would restore the river channel margins and floodplain to a natural configuration.	The action would result in continued operation of the existing water collection system (diversion at 0.59 cubic feet per second or less than 10% of total discharge), but would remove abandoned infrastructure, thereby locally enhancing the free-flowing condition of the river.	Removal of campsites from within 100 feet of bed and banks of river would reduce bankside erosion and help to restore natural river processes.	Retaining the current water collection system, implementing water conservation measures to ensure minimum flows, connecting the Wawona Campground to the Wastewater Collection System, and riverbank restoration would address seasonal water quality concerns and accelerated riverbank erosion and potential sediment loading.
<b>Effects on Riparian and Floodplain Conditions</b>							
Existing rip-rap prevents some flood flows from reaching portions of the floodplain. The action would restore natural floodplain processes and allow establishment of riparian vegetation.	Placement of large wood would reduce the potential for accelerated streambank erosion and help to provide a foundation to establish natural riparian vegetation along the riverbank.	Riparian and floodplain conditions would be largely unaffected.	Riverbank restoration would reduce existing erosion. The action would also support enhancement of riparian structure and quantity, and help to return riparian and floodplain areas to more natural conditions.	Existing fill at the sand pit prevents high flows from reaching adjacent riparian areas. Recontouring will allow flooding of these areas, and will support regeneration of riparian vegetation.	Riparian and floodplain conditions would be largely unaffected.	The action would allow establishment of riparian vegetation, enhancing floodplain habitat and potentially enhancing water quality parameters such as turbidity.	Rerouting trails, restoring natural conditions, removing infrastructure from floodplain and from within 150-feet from the ordinary highwater mark, addressing stormwater run-off, and delineating use areas would restore natural floodplain and riparian conditions.
<b>Effects on Upland Conditions</b>							
Upland conditions would be largely unaffected.	Upland conditions would be largely unaffected.	Upland conditions would be largely unaffected.	Upland conditions would be largely unaffected.	Upland conditions would be largely unaffected.	Upland conditions would be largely unaffected.	Upland conditions would be largely unaffected.	Upland conditions would be largely unaffected.

**TABLE 1 EFFECTS OF THE PROPOSED WATER RESOURCES ACTIONS WITHIN THE MERCED RIVER CORRIDOR**

<b>(1) Corridorwide Riprap Removal</b>	<b>(2) Placement of Large Wood in Yosemite Valley</b>	<b>(3) Remove Happy Isles footbridge footings and Pohono Gauging Station</b>	<b>(4) Yosemite Valley Riparian Restoration</b>	<b>(5) Restoration of Greenemeyer Sand Pit in El Portal</b>	<b>(6) Wawona Impoundment and Wawona</b>	<b>(7) Wawona Riparian Restoration</b>	<b>(8) Corridorwide Water Quality Enhancement</b>
<b>Effects on Existing Hydrological/Geological Processes and Biological River Values</b>							
The action would restore natural hydrologic processes within the river in localized areas where riprap removal would occur.	Placement of large wood would help to enhance riparian habitat and in channel habitat, by providing additional channel complexity and providing structure for eroded riverbanks.	The action would remove existing structures that interfere with flow and the existing river bank, and would result in a localized, negligible benefit on hydrological and biological processes.	The action would remove existing facilities that minimally interfere with the natural flow of the river. The action would also support restoration and enhancement of existing biological resources, and would benefit hydrological processes as noted above.	The action would restore the ability of the river to inundate riparian areas at the Greenemeyer Sand Pit site, thereby supporting riparian vegetation growth and natural floodplain function.	Continued diversion would constitute a negligible adverse impact on hydrology; however, removal of abandoned infrastructure would have a localized and negligible benefit to the free flowing condition of the river.	The action would reduce the potential for accelerated streambank erosion, and help to enhance riparian vegetation and habitat.	Same as the actions that restore natural floodplain and riparian conditions.
<b>Off-site Changes</b>							
None	None	None	Limited numbers of camp sites will be removed within 100-feet of the ordinary highwater mark at North Pines (-14) and Lower Pines (-5) Campgrounds	None	None	A limited number of camp sites will be removed within 100-feet of the ordinary highwater mark at Wawona Campground (-13).	None
<b>Comparison with Management Goals</b>							
Consistent with goals to protect and enhance the hydrological/geological processes.	Consistent with goals to protect and enhance the hydrological/geological processes.	Consistent with goals to protect and enhance the hydrological/geological processes.	Consistent with goals to protect and enhance the hydrological/geological processes, and to establish riparian vegetation.	Consistent with goals to protect and enhance the hydrological/geological processes, and to establish riparian vegetation.	Consistent with goals to protect and enhance the hydrological/geological processes.	Consistent with goals to protect and enhance the hydrological/geological processes, and to establish riparian vegetation.	Consistent with goals to protect and enhance water quality and enhance the hydrological/geological processes.

**TABLE 1 EFFECTS OF THE PROPOSED WATER RESOURCES ACTIONS WITHIN THE MERCED RIVER CORRIDOR**

<b>(1) Corridorwide Riprap Removal</b>	<b>(2) Placement of Large Wood in Yosemite Valley</b>	<b>(3) Remove Happy Isles footbridge footings and Pohono Gauging Station</b>	<b>(4) Yosemite Valley Riparian Restoration</b>	<b>(5) Restoration of Greenemeyer Sand Pit in El Portal</b>	<b>(6) Wawona Impoundment and Wawona</b>	<b>(7) Wawona Riparian Restoration</b>	<b>(8) Corridorwide Water Quality Enhancement</b>
<b>Effects on Outstandingly Remarkable Values</b>							
<p>The action would enhance free-flowing condition of the river, and would contribute to a minor beneficial impact on hydrology. The action would also contribute to a moderate beneficial impact on riparian plant communities and special status species, a minor beneficial impact on scenic resources. The action would not affect cultural or archaeological resources, or recreational access to the area.</p>	<p>In this segment, Placement of large wood would provide benefit to special status species and biological resources values, and would not affect cultural or archaeological resources, scenic resources, or recreational access to the area, but would enhance the quality of visitor experience.</p>	<p>In this segment, the action would enhance the free-flowing condition of the river, and would contribute negligible benefits to biological resources values. Other ORVs would not be affected.</p>	<p>In this segment, the action would provide benefit to special status species, vegetation, and wildlife within affected areas, and would enhance the free-flowing condition of the river. The action would limit recreational access in certain areas, but would otherwise enhance the quality of visitor experience due to restoration to a natural condition. Restoration would benefit archaeological and cultural resources by limiting visitor trampling and reducing displacement of artifacts and vandalism.</p>	<p>In this segment, the action would enhance free-flowing condition of the river, and would provide benefit to riparian biological resources values including vegetation, wildlife, and special status species. Restoration would result in a benefit to scenic resources and would enhance the quality of visitor experience. The action would not affect recreation or cultural or historic resources.</p>	<p>The action would result in continued negligible interference with the free-flowing condition of the river, but would enhance the free-flowing condition by removing existing in-river infrastructure. The action would not affect other ORVs.</p>	<p>In this segment, the action would provide benefit to special status species, vegetation, and wildlife within affected areas, and would enhance the free-flowing condition of the river. The action would limit recreational access in certain areas, but would otherwise enhance the quality of visitor experience due to restoration to a natural condition.</p>	<p>The actions to enhance water quality similarly would protect and enhance the biological and hydrological / geological processes river values. No some locations special consideration will be taken to avoid adverse effects to archeological resources and other components of cultural river values.</p>



## SECTION 7 DETERMINATION

The Merced Wild and Scenic River Plan includes actions to: (1) remove riverbank riprap, corridorwide; (2) place large wood in Segment 2; (3) remove Happy Isles Bridge footings and gauging station in Segment 2; (4) complete riparian restoration in Segment 2; (5) restore Greenemeyer Sand Pit in Segment 4; (6) maintain Wawona impoundment but remove abandoned infrastructure in Segments 6/7; (7) complete riparian restoration in Segment 7; and (8) enhance water quality corridorwide. These actions are consistent with management goals to protect and enhance free-flowing condition, water quality, and the biological and hydrological/geological processes outstandingly remarkable values including.

In conjunction with Appendix C: Mitigation Measures published in the Final Merced River Plan/EIS, the National Park Service has determined that these actions within the river corridor will not have direct and adverse effects on free-flowing condition, water quality, and/or outstandingly remarkable values of the Merced River.

  
Recommended by Don L. Neubacher, Superintendent Date 3/27/14

  
Approved by Chris Lehnertz, Regional Director Date 3/31/2014

## REFERENCES

Interagency Wild and Scenic Rivers Coordinating Council. (IWSRCC)

2004 Wild and Scenic Rivers Act: Section 7 Technical Report.

National Park Service (NPS)


2013 Administrative draft *Merced Wild and Scenic River Final Comprehensive Management Plan and Environmental Impact Statement*. Accessed December 12, 2013.

**WETLAND STATEMENT OF FINDINGS  
FOR THE MERCED WILD AND SCENIC RIVER  
COMPREHENSIVE MANAGEMENT PLAN**

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**WETLAND STATEMENT OF FINDINGS  
FOR THE MERCED WILD AND SCENIC RIVER  
COMPREHENSIVE MANAGEMENT PLAN**

Recommended

 3/20/14  
Date


Don L. Neubacher, Superintendent, Yosemite National Park

Certified for Technical Adequacy and Servicewide Consistency

 3/26/14  
Date

Forrest Harvey, Chief National Park Service Water Resources Division

Approved

 3/31/2014  
Date

Christine S. Lehnertz, Pacific West Regional Director

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# WETLAND STATEMENT OF FINDINGS FOR THE MERCED WILD AND SCENIC RIVER COMPREHENSIVE MANAGEMENT PLAN

## INTRODUCTION

The *Merced Wild and Scenic River Final Comprehensive Management Plan and Environmental Impact Statement (Final Merced River Plan/EIS)* is a comprehensive land use plan for the Merced River corridor in Yosemite National Park and the El Portal Administrative Site. This Wetland Statement of Findings (WSOF) addresses two of the actions called for in the plan that are expected to have direct impacts on wetlands. These two actions rely on this Record of Decision as the final National Environmental Policy Act (NEPA) documentation. The specific actions addressed in this WSOF are:

- Redesign of the Yosemite Village Day-use Parking Area
- Construction of the West of Yosemite Lodge Parking Area

This WSOF characterizes the wetland resources that occur within the two project areas, describes the impacts the project will likely have on wetland resources, and documents the steps the National Park Service (NPS) will take to avoid, minimize, and compensate for wetland impacts. As site-specific information becomes available at a level of detail needed to fully and accurately disclose anticipated impacts on wetland habitats, processes, functions, and values, subsequent WSOFs for all other actions in the *Final Merced River Plan/EIS* will be developed.

## PURPOSE OF THIS WETLAND STATEMENT OF FINDINGS

This WSOF is included in this Record of Decision to meet the obligations of Executive Order 11990 (Protection of Wetlands), Director's Order 77-1: Wetland Protection, and National Park Service Procedural Manual 77-1: Wetland Protection (2012). Directors Order #77-1: Wetland Protection, Part 2.5 states:

Actions proposed by the NPS that have the potential to have adverse impacts on wetlands will be evaluated through the National Environmental Policy Act (NEPA) planning and compliance process. Regardless of the associated NEPA compliance pathway (environmental assessment, environmental impact statement, or categorical exclusion), a "Statement of Findings" documenting compliance with this Director's Order and Procedural Manual #77-1 will be completed for proposed actions that would result in adverse impacts on wetlands.

The NPS Procedural Manual #77-1: Wetland Protection, Section 5.3.4 (3) states:

"...A draft EIS that identifies a preferred alternative that will have adverse impacts on wetlands must be accompanied by a separately identifiable draft WSOF that explains why an alternative with such impacts was chosen and that meets the other requirements identified in Section 5.3.5..."

The purpose of this Wetland Statement of Findings is to review the *Final Merced River Plan/EIS* in sufficient detail to:

- Avoid, to the extent possible, the short-and long-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.
- Describe the effects on wetland values associated with the Selected Action.

- Provide a thorough description and evaluation of mitigation measures developed to achieve compliance with Executive Order 11990 (Protection of Wetlands) and NPS Procedural Manual 77-1: Wetland Protection.
- Ensure “no net loss” of wetland functions or values.
- Wetland Classification System

The NPS classifies and maps wetland habitats using a system developed by wetland ecologists for the U.S. Fish and Wildlife Service (USFWS) known as the Cowardin classification system (Cowardin et al. 1979). Wetlands, as defined in the Cowardin system, are transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water (Cowardin et al. 1979).

Under this classification system, wetlands must have one or more of the following attributes:

- **Hydrophytic vegetation.** The land predominantly supports hydrophytes, at least periodically. Hydrophytes are plants that grow in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.
- **Hydric soil.** The substrate is predominantly undrained hydric soils. Hydric soils are wet long enough to periodically produce anaerobic conditions.
- **Wetland hydrology.** The substrate is saturated with water or covered by shallow water at some time during the growing season of each year.

The NPS uses these three wetland parameters to define wetlands for the purpose of compliance with NPS mandates, Executive Order 11990 (Protection of Wetlands), and other laws and regulations. Wetlands are delineated and designated a wetland under NPS management when all three parameters are met. The NPS also considers the area of a river or drainage channel (from the top of bank to the bottom of a bank) as a riverine wetland under NPS management.

## THE SELECTED ACTION

This WSOF considers the wetland impacts associated with actions described in the *Final Merced River Plan/EIS* at the Yosemite Village Day-use Parking and West of Yosemite Lodge Parking.

### *Yosemite Village Day-use Parking*

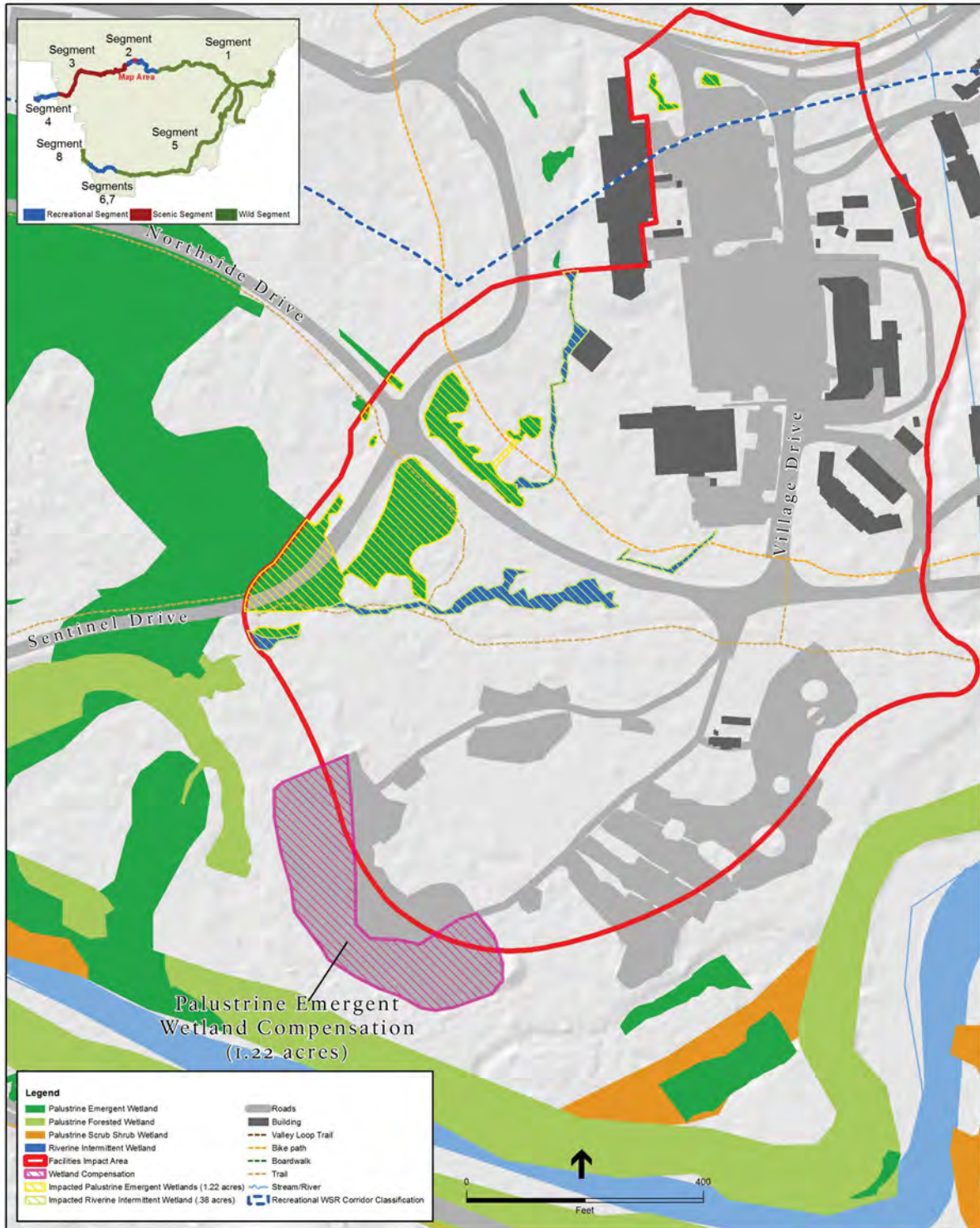
Under the Selected Action, the NPS will redesign the existing Yosemite Village Day-use Parking area and restrict all development to at least 150 feet away from the river’s ordinary high-water mark (Figure 1). The redesigned parking area will provide 750 parking spaces and a new comfort station. Northside Drive will be realigned to the south edge of the parking area where it will connect with Sentinel Drive and continue west. A new three-way intersection will be constructed connecting Sentinel Drive with the re-routed Northside Drive and the shuttle bus road into the Village. A roundabout will be constructed at the Village Drive/Northside Drive intersection to improve traffic flow. The Concessioner General Office, Valley Garage, and Art Activity Center will be removed.

Construction activities at the Yosemite Village Day-use Parking area will result in direct, temporary and permanent losses of about 1.6 acres of federally protected wetlands. There will be an estimated 1.22 acres of direct impact to palustrine emergent wetlands adjacent to the Northside Drive and Sentinel Crossover intersection with new road and parking alignment. There will be an estimated 0.38 acres of direct impact to riverine intermittent wetlands flowing through the area. <sup>1</sup>

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<sup>1</sup> Wetland data were obtained primarily from site-specific wetland delineations performed by qualified wetland specialists (NPS 2003). The U.S. Army Corps of Engineers verified the wetland delineation at the Yosemite Village Day-use Parking Area on Oct. 31, 2003.





Final Merced River Plan/EIS, 210436

SOURCE: NPS, 1997, 2006, 2010, 2011

Figure 1. Wetland Impacts and Compensation at Yosemite Village

The NPS will continue efforts to avoid and minimize wetland impacts throughout the design and construction phase of the project. The most recent conceptual drawings for this area illustrate refinements with considerably reduced wetland impacts (Figure 2). As these recent drawings are conceptual, this WSOF analyzes the worst-case scenario for the area, as illustrated in Figure 1.

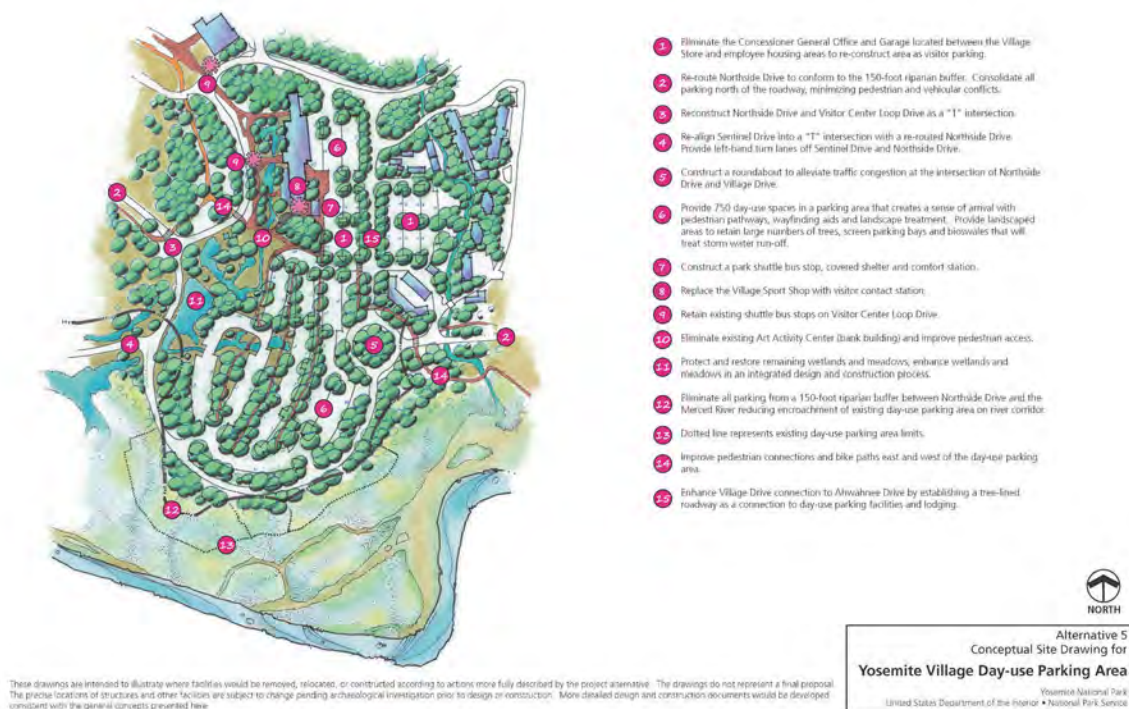
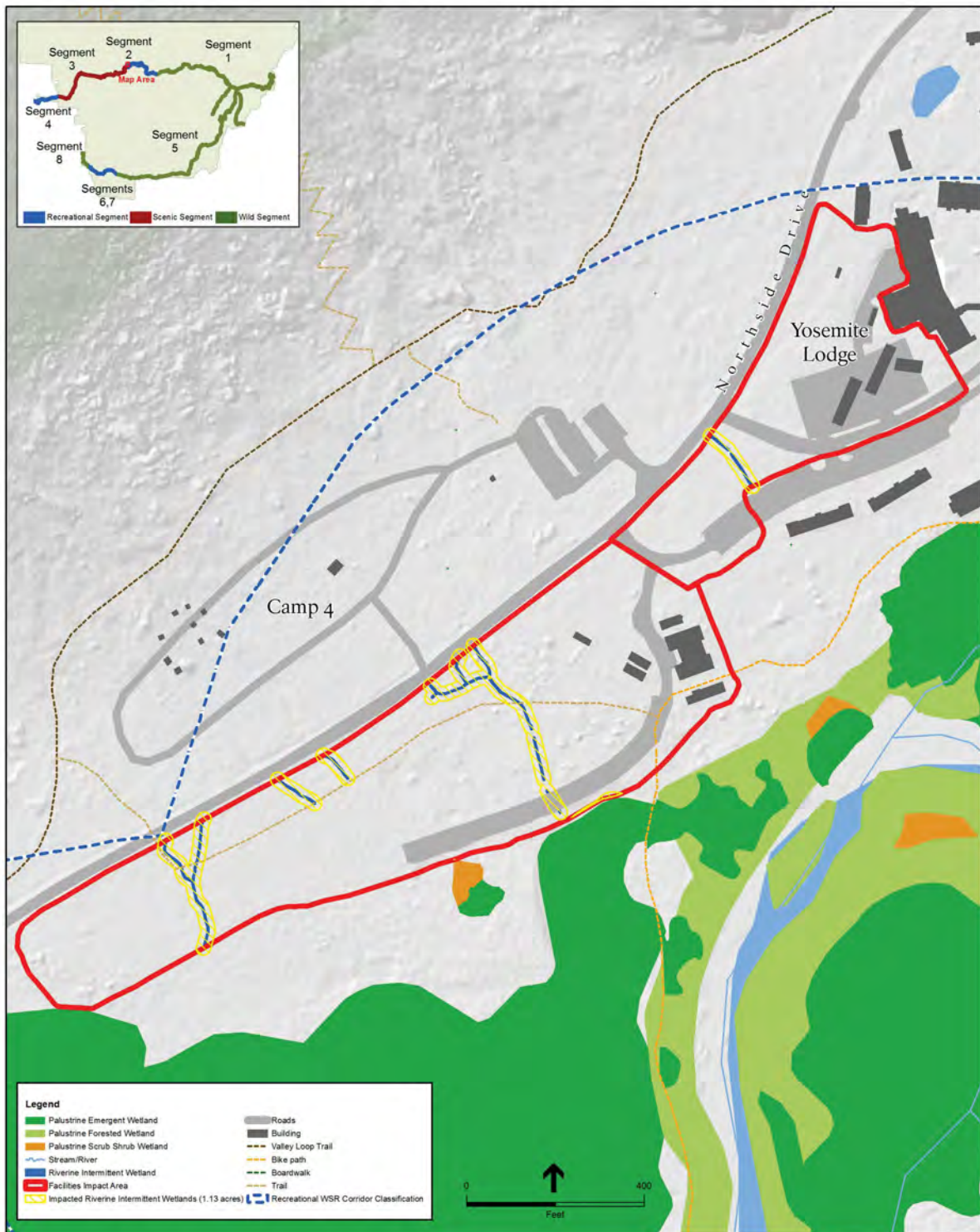


Figure 2. Conceptual Site Drawing for Yosemite Village Day-use Parking Area

### West of Yosemite Lodge Parking Area

Under the Selected Action, the NPS would redevelop an area west of Yosemite Lodge that was previously a site for employee dormitories until the structures were demolished due to flood damage. Currently, the site accommodates tour bus parking. Under the Selected Action, the NPS will redevelop the parking area to provide parking spaces for 300 day-use visitors and 22 buses (Figure 3). Additional pedestrian pathways and utility corridors would connect the parking area to trails, destinations, and other visitor services.

Construction activities at the West of Yosemite Lodge Parking Area would impact approximately 1.13 acres of riverine intermittent wetlands that carry flows during and after storm events. These intermittent wetlands are likely to sustain adverse impacts during redevelopment of the parking area.



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Figure 3. Wetland Impacts at Yosemite Lodge

SOURCE: NPS, 1997, 2006, 2010, 2011

## ALTERNATIVES CONSIDERED

This section describes the overall alternatives considered in the *Final Merced River Plan/EIS* followed by a specific description of alternatives considered for the two project level planning areas addressed in this document. The NPS considered a total of five action alternatives and one No Action Alternative. The range of alternatives considered include the No Action Alternative (Alternative 1), Self-Reliant Visitor Experience and Extensive Floodplain Restoration (Alternative 2), Dispersed Visitor Experience and Extensive Riverbank Restoration (Alternative 3), Resource-based Visitor Experience and Targeted Riverbank Restoration (Alternative 4), Enhanced Visitor Experience and Essential Riverbank Restoration (Alternative 5- Selected) and Diversified Visitor Experiences and Selective Riverbank Restoration (Alternative 6).

### *Alternative 1*

Alternative 1 provides a baseline from which to compare impacts from Alternatives 2 through 6. Alternative 1 may not necessarily be less damaging to wetlands because it does not include numerous restoration actions included in Alternative 5 (Selected). Alternative 1 does not meet the purpose and need of the project or fulfill the requirements of the Wild and Scenic Rivers Act.

### *Alternative 2*

The guiding principles of Alternative 2 would maximize the restoration of the 100-year floodplain by removing infrastructure not essential to resource-related recreation, and creating a more self-reliant visitor experience where less commercial services are available. Visitor-use levels would be managed with a permit system for day-use parking to allow for visitor experiences free of crowding or congestion. Alternative 2 would restore approximately 342 acres of vegetation. This alternative includes large-scale wetland restoration actions including removal of the road through Stoneman Meadow, removal of Northside Drive through Ahwahnee Meadow, the removal of roadside parking along Yosemite Valley meadows, removal of all lodging structures and subsequent ecological restoration of Housekeeping Camp, and the restoration of Wawona Golf Course to meadow habitat.

Though Alternative 2 may have been more protective of wetland functions or values, it was not selected by the NPS because it did not meet the objectives for visitor access, experience, and recreation for the plan. It is the least protective of historic and cultural resources because of the removal of three historic bridges, the Wawona golf course, and historic lodging at the Merced Lake High Sierra Camp, Housekeeping Camp, Curry Village, and Yosemite Lodge. This alternative would limit visitor choice by reducing the inventory and mixture of overnight accommodations, implementing a permit system for day-use parking, and restricting boating. A day-use permit system is necessary under this alternative to balance user capacity and resource use at current peak visitation levels.

### *Alternative 3*

The guiding principles of Alternative 3 would restore large portions of the floodplain and the riparian area within 150 feet of the river. This alternative would accommodate much lower maximum visitor use levels than today, and offers fewer commercial services and facilities. Visitor use levels would be managed to allow for dispersed visitor experiences free of crowding or congestion by implementing a day-use permit system. Alternative 3 would restore approximately 308 acres of vegetation. This alternative includes robust wetland restoration actions including removal of the road through Stoneman Meadow, removal of Northside Drive through Ahwahnee Meadow, removal of parking within the 10-year floodplain at the Yosemite Village Day-use

Parking Area, the removal of roadside parking along Yosemite Valley meadows, and the restoration of Wawona Golf Course to meadow habitat.

Though Alternative 3 may have been more protective of wetland functions or values, it was not selected by the NPS because it did not meet the objectives for visitor access, experience, and recreation for the plan.

Alternative 3 would reduce overnight accommodations, implement a day-use permit system, and place minor restrictions on boating. A day-use permit system would be necessary under this alternative to balance user capacity and resource use at current peak visitation levels.

#### ***Alternative 4***

The guiding principles of Alternative 4 include restoration of portions of the floodplain and the riparian area within 150 feet of the river. This alternative focuses on providing only commercial services and facilities that facilitate resource-based visitor experiences. It would accommodate lower maximum visitor use levels than today, with a large increase in overnight camping capacity and moderate decreases in the overnight lodging capacity. Alternative 4 would restore approximately 225 acres of vegetation. This alternative includes targeted wetland restoration actions including removal of the road through Stoneman Meadow, removal of parking within the proposed riparian buffer (the land within 150 feet of the river) at the Yosemite Village Day-use Parking Area, and removal of roadside parking along Yosemite Valley meadows. This alternative would restore fewer acres than Alternatives 2 and 3, include partial restoration of Yosemite Valley meadows, and conduct ecological restoration within 150 feet of the river.

Alternative 4 was not selected by the NPS because it did not meet the objectives for visitor access, experience, and recreation for the plan. It is slightly more protective of historic and cultural resources than Alternatives 2 and 3 because it would retain Stoneman Bridge. Alternative 4 would attain a wider range of visitor opportunities through the replacement of the Merced Lake High Sierra Camp with a temporary pack camp, a significant increase in camping opportunities, and fewer agency restrictions regarding boating.

#### ***Alternative 6***

The guiding principles of Alternative 6 include limited restoration within 100 feet of the river and in meadow and riparian areas, infrastructure improvements to accommodate growth in peak daily visitation in Yosemite Valley, and expansion of facilities and services to allow for diversified visitor experiences. Alternative 6 would restore approximately 176 acres of vegetation. This alternative includes focused wetland restoration actions including removal of parking within the riparian buffer (within 150 feet of the river) at the Yosemite Village Day-use Parking Area, and the removal of roadside parking along Yosemite Valley meadows. Alternative 6 was not selected by the NPS because it did not meet the objectives for restoration, visitor access, experience, and recreation for the plan as well as Alternative 5 (Selected). It would have the least benefit to the biological and physical environment due to having the fewest number of acres restored and the fewest linear feet of riprap removed.

### **Alternatives Considered for the Yosemite Village Day-use Parking Area Site**

**Alternative 2** – Under Alternative 2 at the Yosemite Village Day-use Parking Area, all parking development within the 10-year floodplain would be removed, and the parking area would be re-developed to provide a total of 550 spaces. The re-design of the area would include removal of buildings and focusing all parking and visitor use north of a re-routed Northside Drive, outside of the 10-year floodplain. The re-design of the parking area

would impact both palustrine emergent and riverine intermittent wetlands, but would provide for a larger restoration area between the river and the parking area than Alternative 5 (Selected). A day-use permit system would be necessary under this alternative to balance user capacity and resource use at current peak visitation levels.

**Alternative 3** – Under Alternative 3 at the Yosemite Village Day-use Parking Area, all parking development within the 10-year floodplain would be removed, and the parking area would be re-developed to provide a total of 550 spaces. The re-design of the area would include removal of buildings and focusing all parking and visitor use north of a re-routed Northside Drive, outside of the 10-year floodplain. The re-design of the parking area would impact both palustrine emergent and riverine intermittent wetlands, but would provide for a larger restoration area between the river and the parking area than Alternative 5 (Selected). A day-use permit system would be necessary under this alternative to balance user capacity and resource use at current peak visitation levels.

**Alternative 4** – Under Alternative 4 at the Yosemite Village Day-use Parking Area, all parking development within the 150-foot riparian buffer along the Merced River would be removed, and the parking area would be re-developed to provide a total of 750 spaces. The re-design of the area would remove buildings, re-design the intersection at Northside and Village Drive, and construct a new access road from Sentinel Drive to the parking area. The re-design of the parking area and circulation would impact both palustrine emergent and riverine intermittent wetlands, and would provide for a restoration area between the river and the parking area similar to what is called for in Alternative 5 (Selected).

**Alternative 6** – Under Alternative 6 at the Yosemite Village Day-use Parking Area, all parking development within the 150-foot riparian buffer along the Merced River would be removed, and the parking area would be re-developed to provide a total of 850 spaces. The re-design of the area would remove buildings, re-design the intersection at Northside and Village Drive to provide a roundabout, construct a pedestrian underpass for visitor access to Yosemite Village, and construct a new access road from Sentinel Drive to the parking area. The re-design of the parking area and circulation would impact both palustrine emergent and riverine intermittent wetlands, and would provide for a restoration area between the river and the parking area similar to what is called for in Alternative 5 (Selected). This parking and transportation configuration would have the fewest number of wetland acres restored.

## **Alternatives Considered for the West of Yosemite Lodge Parking Area Site**

**Alternative 2** – Under Alternative 2, the entire area southwest of Yosemite Lodge would be re-developed for parking and camping, and the lodging buildings would be removed. In this vicinity, the NPS would construct 104 walk-in campsites, 191 car parking spaces, and 15 tour bus parking spaces. The redevelopment of this area would impact both palustrine emergent and riverine intermittent wetlands. The impact to riverine intermittent wetlands would potentially be lesser than what is proposed under Alternative 5 (Selected) but the impacts to the palustrine emergent wetland at Leidig Meadow would be significant. A day-use permit system is necessary under this alternative to balance user capacity and resource use at current peak visitation levels.

**Alternative 3** – Under Alternative 3, the area southwest of Yosemite Lodge would be re-developed for visitor and tour bus parking. The NPS would construct 150 day use parking spaces at Yosemite Lodge Day-use Parking area and construct 15 tour bus parking spaces. The re-development of this area would impact riverine intermittent wetlands, though this impact would be slightly less than what is proposed under Alternative 5 (Selected) because the areal extent of re-development would be smaller. A day-use permit system is necessary under this alternative to balance user capacity and resource use at current peak visitation levels.

**Alternative 4** – Under Alternative 4, the area southwest of Yosemite Lodge would be re-developed for visitor parking, tour bus parking, and RV camping. The NPS would construct 150 day use parking spaces at Yosemite Lodge Day-Use Parking area, construct 15 tour bus parking spaces just west of this location, and construct a RV loop with 20 campsites to the southwest of the bus parking area. The redevelopment of this area would impact both palustrine emergent and riverine intermittent wetlands. The impact to riverine intermittent wetlands would be similar to what is proposed under Alternative 5 (Selected) but the impacts to the palustrine emergent wetland at Leidig Meadow would be significant.

**Alternative 6** – Under Alternative 6, the area southwest of Yosemite Lodge would be re-developed for visitor parking, tour bus parking, and RV camping. The NPS would construct 300 day use parking spaces at Yosemite Lodge Day-use Parking area, construct 15 tour bus parking spaces just west of this location, and construct a RV loop with 20 campsites to the southwest of the bus parking area. The redevelopment of this area would impact both palustrine emergent and riverine intermittent wetlands. The impact to riverine intermittent wetlands would be similar to what is proposed under Alternative 5 (Selected) but the impacts to the palustrine emergent wetland at Leidig Meadow would be the most significant under Alternative 6 due to the larger areal extent of the proposed development area.

## **Non-wetland Alternatives to the Selected Action**

The purpose of the *Final Merced River Plan/EIS* is to provide a comprehensive management plan for the protection of the Merced River's free-flowing condition, water quality, and the values that make the river worthy of designation in the National Wild and Scenic River System. There are no alternatives to the proposed action that could be located outside the floodplain or wetland and aquatic habitat of the Merced River corridor, as the plan is focused upon protection and enhancement of riverine and aquatic habitats.

## **IMPACTS OF THE SELECTED ACTION ON WETLANDS**

### **Yosemite Village Day-use Parking Area**

The hydrology of wetlands in this area is influenced primarily by runoff from canyon walls and alluvial fans to the north and south of the delineation area, and by recharge of the shallow groundwater aquifer above the delineation area. In the Yosemite Village area, surface runoff collects in small intermittent stream channels, some of which appear to be altered by humans.

**Riverine intermittent (0.38 acre impacted)** – Riverine intermittent wetlands in the project area are drainage channels that carry water from Yosemite Valley cliff walls toward the main stem of the Merced River. These drainages often have a non-soil substrate that is saturated and/or covered by shallow water at some time during the growing season. These wetlands are typically narrow and encompass the lowest portion of creek beds. The riverine intermittent wetlands in this area are highly fragmented and altered (by deepening) to drain water more effectively.

**Palustrine emergent wetland (1.22 acres impacted)** – These wetland habitats include montane meadows and seeps. Grasses, sedges, rushes, and perennial herbs are the dominant vegetation. Wetland soils in these areas are generally deep and peaty, remaining saturated year-round or on a seasonal basis. These wetland systems are primarily driven by ground-water; those that exist in swales and topographic depressions also receive substantial surface water inputs.

Affected palustrine emergent wetlands radiate from the intersection of Northside Drive and Sentinel Crossover

(Figure 1). The wetlands are bisected and surrounded by roads and infrastructure. Portions of the affected wetlands are altered and deepened to quickly carry water from the Yosemite Valley cliff walls toward the Merced River. Some of the flows are channeled into culverts to pass under roads. Overall, the wetlands to be impacted are low-functioning, fragmented, altered, and concentrated into a high traffic zone in one of the most highly utilized areas of Yosemite Valley.

## West of Yosemite Lodge Parking Area

**Riverine intermittent (1.13 acres impacted)** – These wetlands carry flows from Yosemite Valley cliffs toward the Merced River during and after storm events, when sheet flows channelize into culverts under Northside Drive. They may carry runoff into the delineation area and lose their defined channel in the delineation area, causing the runoff to spread as sheet flow and percolate into soils. Some drainages are interrupted by culverts placed under abandoned roadbeds or by demolition materials that fill portions of the channel. These drainages often have a non-soil substrate that is saturated and/or covered by shallow water at some time during the growing season. Very little wetland vegetation is found in these areas because of the intermittent nature of the flows within the drainage channels. These riverine intermittent wetlands are altered by past demolition activity and roadside culvert cleaning, and are low-functioning. Demolition debris such as ground asphalt spills into the wetlands in several areas.

## Functions and Values of Affected Wetlands

### *Palustrine Emergent Habitats*

**Biotic Functions.** In general, the relatively dense layer of herbaceous vegetation of palustrine emergent wetlands provides a variety of benefits for many wildlife species, including a large proportion and diversity of invertebrates. Recent wildlife surveys focused on specific wildlife taxa with a known sensitivity to ecosystem disturbance. This survey (Cardno Entrix 2011) found one reptile, no amphibians, no invasive aquatic species, 35 bird species, one invasive bird species, and six bat species in this reach of the Merced River. Meadow communities provide foraging habitat for raptors and perennial range habitat for deer to bed and forage. They provide nesting and perching habitat for several species of birds, and leaf litter provides habitat for smaller animals.

Palustrine emergent wetlands in Yosemite Valley play a critical role in the Merced River ecosystem. High spring flows create wet areas in side channels, low-lying wetlands, meadows, and cutoff channels. These areas support the concentration of organic matter, nutrients, microorganisms, and aquatic invertebrates throughout the relatively dry summer. When the flush of winter or spring flooding occurs, this stored aquatic biomass is washed into the main river channel, forming the base of the aquatic food chain.

**Hydrologic Functions.** In general, palustrine habitats play an important role in flood attenuation and sediment retention. In addition, wetlands located below roads and other developed areas may serve to retain sediment and degrade nutrients before the runoff enters downstream systems.

**Cultural Values.** Meadows and riparian areas contribute to the historic character of the Yosemite Valley cultural landscape. The Yosemite Valley historic district boundaries include the meadows and other natural features that historically have been painted, photographed, and described as the Yosemite Valley landscape. While meadows are fewer in number and smaller in size than they were during the significant period, they remain characteristic landscape features. A history of intensive use



and management (in some cases), as well as the iconic significance of the meadows as elements of Yosemite scenery (in all cases), make the Yosemite meadows contributing sites in the historic district.

**Research/Scientific Values.** Palustrine habitats, particularly emergent wetlands, provide rich opportunities for scientific research. Climate change, development, and vegetation management practices have caused changes in plant communities in the meadows. Such changes may be reflected in the floodplain sediments through charcoal debris and the pollen record, which may be amendable to scientific study.

**Economic Values.** For the reasons listed above, the palustrine habitats could provide significant economic value for flood protection, biological resources, and tourism.

### **Riverine Habitats**

**Biotic Functions.** Intermittent channels provide a seasonal water source for wildlife and invertebrates. Because the unconsolidated shore habitats lack vegetation and usually lack water, they may not provide significant habitat or food sources for wildlife.

**Hydrologic Functions.** Intermittent channels are periodic water sources and therefore provide less function; however, they nevertheless contribute streamflow maintenance, water supply, erosion control, sediment retention, water purification, and detrital export to downstream systems.

**Cultural Values.** Because Native Americans are known to have focused some activities along streams, riverine habitats may provide archaeological value. Visitors to the park enjoy the Merced River and engage in activities such as swimming, boating, fishing, and photography. The seasonal water flow and seasonal lack of vegetation in the intermittent channels limit the aesthetic value of these habitats.

**Research/Scientific Values.** The riverine habitats may provide opportunities for research in groundwater-vegetation relationships and in the effectiveness of riparian habitat restoration techniques.

**Economic Values.** For the reasons listed above, the riverine habitats could provide significant economic value for flood protection, biological resources (in particular fisheries), and tourism.

## **Summary of Wetland Impacts**

**TABLE 1: SUMMARY OF WETLAND IMPACTS**

<b>Wetland Type</b>	<b>Yosemite Village Day-use Parking Area</b>	<b>West of Yosemite Lodge Parking</b>	<b>Total</b>
Palustrine Emergent	1.22	0	1.22
Riverine Intermittent	0.38	1.13	1.51
TOTAL	1.6	1.13	2.73

Overall, there would be a total of 2.73 acres of wetland impacts associated with two projects associated with the redesign of the Yosemite Village Day-use Parking Area and redevelopment of West of Yosemite Lodge Parking. Construction activity at the Yosemite Valley Day-use Parking Area would impact 1.22 acres of palustrine emergent wetland and 0.38 acre of riverine intermittent wetland. Construction activities at the West of Yosemite Lodge Parking Area would impact approximately 1.13 acres of riverine intermittent wetlands. Losses to wetlands will occur through site clearing, filling, grading, and subsequent development.

Construction activities such as grading and excavation may also generate indirect impacts to wetlands. These activities can generate loose, erodible soils, resulting in temporary erosion off-site to adjacent wetlands and decreases in water quality due to sedimentation. Other indirect impacts may include modifications to flow, circulation, hydroperiod, or other aspects of the hydrologic regime. Implementation of best management practices, mitigation measures, and avoidance of wetlands during construction where possible will reduce short-term construction related impacts.

Ecological restoration actions designed to restore wetland, stream, riparian, and other aquatic habitats and processes may be excepted from Statement of Findings and compensation requirements, per the NPS Procedural Manual #77-1: Wetland Protection. For this reason, the NPS considers the full suite of ecological restoration actions in the Selected Action in all segments of the Merced River corridor as excepted actions, and they will not be considered further in this document (except when described for wetland compensation). Ecological restoration actions in the Selected Action of the *Final Merced River Plan/EIS* are expected to cause less than a cumulative total of 0.25 acres of new, long-term adverse impacts on natural wetlands.

## JUSTIFICATION

Impacts associated with the Yosemite Village Day-use Parking will occur in conjunction with road re-alignment and parking relocation, including construction of a traffic round-about. Transportation-related changes will allow the NPS to relocate the Yosemite Village Day-use Parking farther from the Merced River, allowing for ecological restoration of palustrine emergent wetlands directly influenced by Merced River processes. The action will relieve traffic congestion in the area. Traffic simulation models developed for this planning effort and ongoing traffic monitoring identified this area as one of the primary flaws in the existing transportation system in Yosemite Valley. Poor road design and a high volume of vehicles and pedestrian traffic in this area result in substantial traffic delays, especially during the afternoon hours. These impacts may radiate throughout east Yosemite Valley during peak visitation periods. Addressing traffic congestion in east Yosemite Valley is an action evaluated in the *Final Merced River Plan/EIS* to manage user capacity and protect river values in the Merced River corridor, as required by the Wild and Scenic Rivers Act.

The palustrine emergent wetlands restored in the southern part of the Yosemite Village Day-use Parking area will replace low-functioning wetlands with higher-functioning wetlands, as they will be directly adjacent to the Merced River and subject to more frequent flooding and other river processes. The restored wetlands will link into a larger connected wetland, and they will be less fragmented than the existing wetlands.

The West of Yosemite Lodge Parking area will also address traffic congestion issues in Yosemite Valley and allow the Yosemite Village Day-use Parking to be relocated farther away from the Merced River.

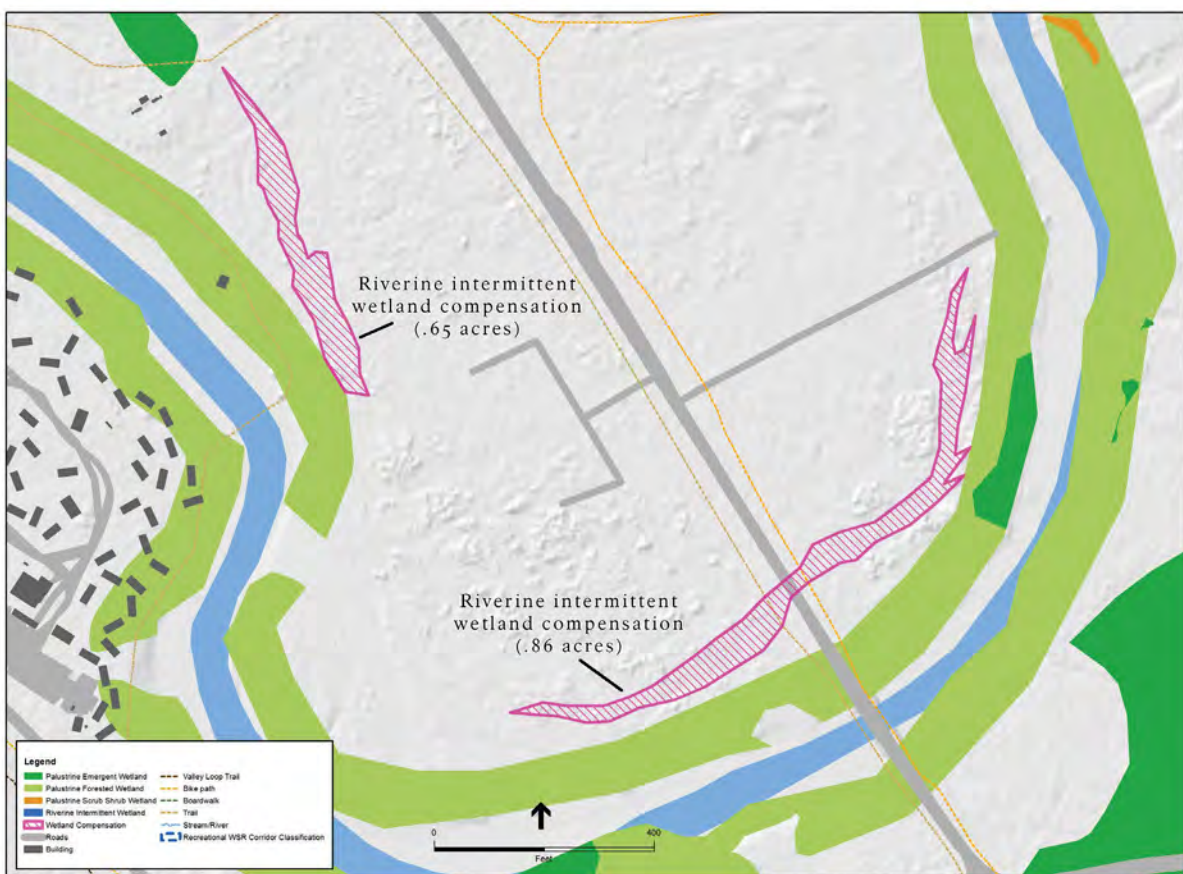
## COMPENSATION

New wetland impacts or wetland losses that remain after efforts to avoid and minimize impacts must be offset through wetland compensation. The wetland impacts that require compensation in this WSOF are:

- **Palustrine Emergent Wetland.** Wetland loss (1.22 acres) will result from redesign of the Yosemite Village Day-use Parking Area. Wetland restoration compensation will total 1.22 acres.
- **Riverine Intermittent Wetland.** Wetland loss (1.51 total acres) will result from redevelopment of West of Yosemite Lodge Parking (1.13 acres) and redesign of the Yosemite Village Day-use Parking Area (0.38 acre). Wetland restoration compensation will total 1.51 acres.

Compensation for 1.22 acres of palustrine emergent wetland impacts will take place near the Yosemite Village Day-use Parking area. The existing day-use parking area will relocate slightly north, farther away from the Merced River, and palustrine emergent wetland restoration will take place in the south end of the existing parking lot (Figure 1). Restoration will take place concurrent to construction at Yosemite Village Day-use Parking Area (paid for out of project funding).

Compensation for 1.51 acres of riverine intermittent wetland impacts will take place near the proposed Upper and Lower River Campground area. Upper and Lower River Campground was removed after the 1997 flood and it will be replaced in a much smaller footprint, farther away from the Merced River. Wetland restoration will take place in part of the former campground near the Merced River. Figure 4 illustrates the location of the riverine intermittent wetland restoration site. This wetland compensation will take place immediately after construction of the West of Yosemite Lodge Parking Area (which is scheduled to take place before redesign of the Yosemite Village Day-Use Parking Area), or as a stand-alone restoration project prior to construction



SOURCE: NPS, 1997, 2006, 2010, 2011

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**Figure 4. Wetland Compensation at Upper and Lower River Campground**

at Yosemite Lodge area. The wetland compensation will be funded out of project funds.

Wetlands will be restored in areas that were once part of a contiguous wetland complex that traversed Yosemite Valley adjacent to the Merced River. All wetland impacts and compensation will take place in the same geomorphic reach of the Merced River. This river reach has high sinuosity, a 0.09% gradient, wide floodplains, and large meadows in the floodplain on either side of the channel. Historic maps and photos from the early days of Yosemite National Park document the former wetlands in the area and provide an information

source for site-specific wetland characteristics. Imported fill will be removed and hydric soils will be exposed. Historic maps (1919) with 2-foot contours will serve as a basis to recreate wetland topography. Restoration specialists expect seasonal flooding to re-work and refine topography. Local, native wetland plants (from plugs, propagules, containers, or seed) will be planted per their preferred distance to the water table. Plants that prefer deeper areas closest to the water table include *Scirpus microcarpus*, *Carex vesicaria*, and *C. senta*. Mid-range wetland plants include a suite of sedge species such as *C. lanuginosa*, *C. angustata*, *C. athrostachya*, and *Helenium bigelovii*. Upper level wetland plants in this vicinity include *Juncus* sp., *Solidago canadensis*, *S. californica*. Container plants will be planted at an average density of 12-15 inches on center. Seed will be applied with broadcast seeding methods. Invasive plants will be removed on a regular basis. The area will be fenced and protected to allow native vegetation to become established.

Regular monitoring will take place to assess the success of restoration efforts, and additional planting will take place as needed. All U.S. Army Corps of Engineer permits and water quality certifications will be in place prior to implementation. Additional monitoring will take place at the one- and five-year mark, or as prescribed in permits.

The existing wetlands in the West of Yosemite Lodge Parking area are impacted by past demolition activity and demolition debris. Existing wetlands at the Yosemite Village Day-use Parking are fragmented by roads and infrastructure, and altered by previous efforts to direct wetland flows. The restored palustrine emergent and riverine intermittent wetlands will have less fragmentation and greater wetland connectivity with other wetlands in the area and the Merced River. Regular flooding from the Merced River and surface flows will inundate the area. Biotic wetland functions (such as provision of wetland species habitat) and hydrologic functions (such as flood attenuation and retention of sediment) will be enhanced. The wetlands will continue to provide rich opportunities for scientific research, including research into best techniques and models for shallow wetland restoration. Compensation will take place at a 1:1 ratio and there will be no net loss of wetlands.

## DESIGN OR MODIFICATIONS TO MINIMIZE HARM TO WETLANDS

The NPS (and its contractors) will implement the following mitigation measures, as appropriate, prior to, during, and/or after construction activities. Specific tasks will include, but are not limited to, the following:

### Hydrology and Water Quality

- Contractor shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) that designates construction best management practices to be used to control the sources of fine sediment and to capture and filter it before entering the river. The SWPPP shall define the characteristics of the site, identify the type of construction that will be occurring, and describe the practices that will be implemented to control erosion and the release of pollutants in stormwater. At a minimum, the SWPPP shall address the following, as applicable:

#### *Stabilization Practices*

- The stabilization practices to be implemented shall specify the intended stabilization practices, which may include one or more of the following: temporary seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, erosion control mats, protection of trees, preservation of mature vegetation, etc. On the daily CQC Report, the Contractor shall record the dates when the major grading activities occur, (e.g., clearing and grubbing, excavation, embankment, and/or

grading); when construction activities temporarily or permanently cease on a portion of the site; and when stabilization practices are initiated. Unless otherwise directed by the Contracting Officer for the reasons below (i.e., unsuitable conditions or no activity for less than 21 days), stabilization practices shall be initiated as soon as practicable, in any portion of the site where construction activities have temporarily or permanently ceased, but no more than 14 calendar days after the activities cease.

- Unsuitable Conditions - Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by unsuitable conditions caused by the weather, stabilization practices shall be initiated as soon as practicable after conditions become suitable.
- No Activity for Less Than 21 Days - Where construction activity will resume on a portion of the site within 21 days from when activities ceased (e.g., the total time period that construction activity is temporarily ceased is less than 21 days), then stabilization practices do not have to be initiated on that portion of the site by the 14th day after construction activity temporarily ceased.

### ***Structural Practices***

- The Contractor shall implement structural practices to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices shall be implemented in a timely manner during the construction process to minimize erosion and sediment runoff. Location and details of installation of structural practices shall be depicted on the construction drawings.

### ***Silt Fences***

- The Contractor shall provide silt fences as a temporary structural practice to minimize erosion and sediment runoff. Silt fences shall be properly installed to effectively retain sediment immediately after completing each phase of work where erosion would occur in the form of sheet and rill erosion (e.g. clearing and grubbing, excavation, embankment, and grading). Silt fences shall be installed in the locations indicated on the drawings or as needed based on Contractor operations. Final removal of silt fence barriers shall be upon approval by the Contracting Officer.
- Silt fences shall extend a minimum of 16 inches above the ground surface and shall not exceed 34 inches above the ground surface. Filter fabric shall be from a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are unavoidable, filter fabric shall be spliced together at a support post, with a minimum 6-inch overlap, and securely sealed. A trench shall be excavated approximately 4 inches wide and 4 inches deep on the upslope side of the location of the silt fence. The 4-inch by 4-inch trench shall be backfilled and the soil compacted over the filter fabric. Silt fences shall be removed upon approval by the COR.

### ***Straw Bales***

- Straw bales are not authorized for use in storm water control in Yosemite National Park as they have the potential to introduce exotic species into the Park environment.

***Diversion Dikes***

- Diversion dikes shall have a maximum channel slope of 2 percent and shall be adequately compacted to prevent failure. The minimum height measured from the top of the dike to the bottom of the channel shall be 18 inches. The minimum base width shall be 6 feet and the minimum top width shall be 2 feet. The Contractor shall ensure that the diversion dikes are not damaged by construction operations or traffic. Diversion dikes shall be located as shown on the drawings or as needed based on Contractor operations. Location of diversion dikes shall be fully coordinated with cultural and natural environmental protection requirements described in Section 01355, Natural, Cultural, and Physical Resources Protection.

***Filter Fabric***

- The geotextile shall comply with the requirements of ASTM D 4439, and shall consist of polymeric filaments that are formed into a stable network such that filaments retain their relative positions. The filament shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of ester, propylene, or amide, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistance to deterioration due to ultraviolet and heat exposure. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature range of 0 to 120 degrees F. The filter fabric shall meet the following requirements:

**FILTER FABRIC FOR SILT SCREEN FENCE**

<u>Physical Property</u>	<u>Test Procedure</u>	<u>Strength Requirement</u>
Grab Tensile	ASTM D 4632	100 lbs. min.
Elongation (%)		30 % max.
Trapezoid Tear	ASTM D 4533	55 lbs. min.
Permittivity	ASTM D 4491	0.2 sec <sup>-1</sup>
AOS (U.S. Std Sieve)	ASTM D 4751	20-100

**Silt Fence Stakes and Posts**

- The Contractor may use either wooden stakes or steel posts for fence construction. Wooden stakes utilized for silt fence construction, shall have a minimum cross section of 2 inches by 2 inches when hardwood is used and 4 inches by 4 inches when softwood is used, and shall have a minimum length of 5 feet. Steel posts (standard "U" or "T" section) utilized for silt fence construction, shall have a minimum weight of 1.33 pounds per linear foot and a minimum length of 5 feet.

**Identification Storage and Handling**

- Filter fabric shall be identified, stored and handled in accordance with ASTM D 4873.

***Maintenance***

- The Contractor shall maintain the temporary and permanent vegetation, erosion and sediment control measures, and other protective measures in good and effective operating condition by performing routine inspections to determine condition and effectiveness, by restoration of destroyed vegetative cover, and by repair of erosion and sediment control measures and other

protective measures. The following procedures shall be followed to maintain the protective measures.

- Silt fences shall be inspected in accordance with the below paragraph, Inspections. Any required repairs shall be made promptly. Close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting. Should the fabric on a silt fence decompose or become ineffective, and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits shall be removed when deposits reach one-third of the height of the barrier. When a silt fence is no longer required, it shall be removed with approval of COR. The immediate area occupied by the fence and any sediment deposits shall be shaped to an acceptable grade.
- Diversion dikes shall be inspected in accordance with the below paragraph, Inspections. Close attention shall be paid to the repair of damaged diversion dikes and necessary repairs shall be accomplished promptly. When diversion dikes are no longer required, they shall be shaped to an acceptable grade.

### ***Inspections***

- The Contractor shall inspect disturbed areas of the construction site, areas used for storage of materials that are exposed to precipitation that have not been finally stabilized, stabilization practices, structural practices, other controls, and area where vehicles exit the site at least once every 7 calendar days and within 24 hours of the end of any storm that produces 0.5 inches or more rainfall at the site. Where sites have been finally stabilized, such inspection shall be conducted at least once every month.
- Disturbed areas and areas used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the Storm Water Pollution Prevention Plan shall be observed to ensure that they are operating correctly. Discharge locations or points shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles exit the site shall be inspected for evidence of offsite sediment tracking.
- For each inspection conducted, the Contractor shall prepare a report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Storm Water Pollution Prevention Plan, maintenance performed, and actions taken. The report shall be furnished to the COR within 24 hours of the inspection as a part of the Contractor's daily CQC Report. A copy of the inspection report shall be maintained on the job site.

### **Wetlands**

- Delineate wetlands and apply protection measures during construction. Wetlands shall be delineated by qualified National Park Service staff or certified wetland specialists and clearly marked prior to work. Perform activities in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.
- The Contractor shall adhere at all times to the conditions of U.S. Army Corps of Engineers Nationwide Permit No. 33, Temporary Construction, Access and Dewatering, with the following conditions as a minimum:

- All work will be subject to the Standard and Technical Conditions of the Certification of the California Regional Water Quality Control Board, a copy which will be provided to the Contractor.
- Work in streambeds is to be performed in periods of low water conditions. Contractor shall monitor stream flow conditions and weather forecasts at all times during the course of the work. During thunderstorms or other intense rain conditions, streambeds at Yosemite can fill rapidly.
- Re-grade and restore disturbed areas to preexisting contours to maintain drainage patterns.
- The Contractor shall fence construction areas adjacent to aquatic habitats to prohibit the movement of aquatic species into the construction area and to control siltation and disturbance in aquatic habitats.
  - The Contractor shall salvage and reuse wetland soils as fill to the maximum extent possible.
  - The Contractor shall use trench plugs where designated on the drawings in wetland areas to prevent changes to natural flow patterns.
  - During dewatering, intakes shall be completely screened with wire mesh not larger than 5 millimeters to prevent aquatic species from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction.
  - Access routes to and through work locations in the meadows and wetlands shall be planked with 1 1/8” plywood, stabilization mats or other method approved by the contracting officer.

Refer to Appendix C: Mitigation Measures of the *Final Merced River Plan/EIS* for a complete list of resource-specific mitigation measures applicable to Alternative 5 (Selected). The Selected Action has been designed to mitigate harmful effects to wetlands. The *Final Merced River Plan/EIS* includes programmatic actions that will require preparation of a subsequent statement of findings for specific projects.

## CONCLUSION

There will be a total of 2.73 acres of wetland impacts associated with redesign of the Yosemite Village Day-use Parking Area and redevelopment of West of Yosemite Lodge Parking as described in the *Final Merced River Plan/EIS*. Wetland impacts will take place in 1.22 acres of palustrine emergent wetland and 1.51 acres of riverine intermittent wetland. To compensate, the NPS will restore 1.22 acres of palustrine emergent wetland in what is now part of the parking lot at the Yosemite Village Day-use Parking area. The NPS will restore 1.51 acres of riverine intermittent wetland at the Upper and Lower Rivers Campground site. Wetland restoration compensation will take place at a 1:1 ratio. There will be no net loss of wetlands.

The NPS has determined that there is no practicable alternative that could be located outside the floodplain or wetland habitat. Mitigation and compliance with regulations and policies to prevent impacts to water quality, wetland functions, and wetland values will be strictly adhered to during and after construction. The NPS finds the actions to be consistent with the policies and procedures of Executive Order 11990 for the protection of wetlands and NPS Director’s Order #77-1: Wetland Protection, including the “no-net-loss of wetlands” policy.



**FLOODPLAIN STATEMENT OF FINDINGS  
FOR THE MERCED WILD AND SCENIC RIVER  
COMPREHENSIVE MANAGEMENT PLAN**

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FLOODPLAIN STATEMENT OF FINDINGS  
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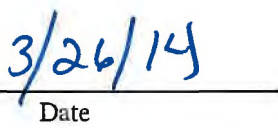
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Don L. Neubacher, Superintendent, Yosemite National Park

  
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Date

Certified for Technical Adequacy and Servicewide Consistency:

  
\_\_\_\_\_  
Forrest Harvey, Chief, Water Resources Division


  
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Date


Concurred

  
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Scott Pardue, Regional Safety Officer

  
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Date

Approved

  
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Christine S. Lehnertz, Director, Pacific West Region

  
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Date

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# FLOODPLAIN STATEMENT OF FINDINGS FOR THE MERCED WILD AND SCENIC RIVER COMPREHENSIVE MANAGEMENT PLAN

This Floodplain Statement of Findings is included in this document for public review to meet the obligations of Executive Order 11988: Floodplain Management, Director's Order #77-2: Floodplain Management (2003), and the NPS Procedural Manual 77-2: Floodplain Management (update 2004).

## INTRODUCTION

The National Park Service (NPS) has prepared the *Merced Wild and Scenic River Final Comprehensive Management Plan Environmental Impact Statement (Final Merced River Plan /EIS)* to provide direction and propose specific actions to protect and enhance ecological and natural resource values of the Merced Wild and Scenic River, support opportunities for visitors to experience and develop direct connections to the Merced River, institute a visitor-use management program, and provide clear direction on land uses and associated developments in the river corridor. It is based on the broad goals of the *1980 General Management Plan for Yosemite National Park*.

The purpose of this Floodplain Statement of Findings is to review the *Final Merced River Plan/EIS* in sufficient detail to:

- Provide an accurate and complete description of the flood hazard assumed by implementation of the proposed action (without mitigation)
- Provide an analysis of the comparative flood risk among alternatives
- Describe the effects on floodplain values associated with the proposed action
- Provide a thorough description and evaluation of mitigation measures developed to achieve compliance with Executive Order 11988:Floodplain Management, Director's Order 77-2, and Procedural Manual 77-2: Floodplain Management

## Floodplains and Floodplain Extent

Flood hazard areas regulated by the NPS include the 100-year floodplain (1% annual chance of inundation), the 500-year floodplain (0.2% chance of annual inundation), and the Extreme Floodplain (largest magnitude flood possible at a site). According to the NPS Director's Order 77-2 (Floodplain Management), for any proposed action that is found to be in the applicable regulatory floodplain, the NPS must prepare a floodplain assessment, known as a Statement of Findings, in accordance with NPS Procedural Manual 77-2: Floodplain Management.

The best available data were used to determine the extent of existing floodplain boundaries and water surface characteristics of the Merced River, as documented in the FEIS. Floodplains have not been defined within the Merced River above Nevada Fall (including Little Yosemite Valley), nor within the Merced Gorge.

## GENERAL CHARACTERISTICS OF FLOODING IN THE AREA

Flooding along the Merced River can be generally categorized as one of two general types: (1) *spring floods* include flooding that occurs as a result of spring and summer snowmelt and associated runoff; (2) *Winter floods* or *rain on snow events* include those that occur during the late fall and winter (September through April) primarily as a result of intense rainfall or rainfall on snow. From 1916 through 1989, 124 of 140 recorded high flows on the Merced River in Yosemite Valley were spring floods that occurred in response to spring or early summer snowmelt conditions (NPS 1991). Only about 10% of total floods in the park are winter floods or rain on snow events. However, these events are responsible for the highest floods recorded, especially where warm heavy rains fall on snow in higher elevations. Frazil ice, while less common, is another cause of flooding within the park. Frazil ice occurs within waterfalls, and is generated by ice crystals at the base of a waterfall when air temperature drops to below freezing. Frazil ice can be many feet thick, which can cause localized impoundments and other flooding.

At the beginning of the wet season the ground is extremely dry, and about 3 to 5 inches of precipitation is required to satisfy the retention storage capacity of the soil before any significant runoff occurs. Later in the season, when the ground may be very wet and there may be a moderate snow cover at the higher elevations, heavy rainfall over the basin can cause large flood runoff. An intense storm with a high freezing level may also result in flood runoff from almost the entire basin, with as much as 2 inches of snowmelt augmenting the rainfall, based on historic measurements. Most of the runoff from the Merced River basin occurs from November through July (Madej et al. 1994).

Well-functioning floodplains provide an array of natural resource values within the Park, including habitat for vegetation and wildlife, periodic disturbance to habitats within floodplains (which can support ecological value and spatial diversity in habitat), dissipation of flood energy by allowing flood waters to spread across a floodplain area, benefits to waterway hydrologic processes including fluvial transport mechanisms and river geomorphic processes, and groundwater recharge in areas where soils are sufficiently pervious. Key floodplains in the study area include the broad floodplains of Yosemite Valley, Little Yosemite Valley, El Portal, and Wawona.

The discussion of flooding along the Merced River is divided among the following segments:

### Segment 1: Merced River above Nevada Fall

The Merced River floodplain in the remote areas above Nevada Fall has not been defined. Steep topography limits the floodplain in the upper canyon areas. High-elevation tributaries (e.g., Merced Peak Fork and Triple Peak Fork) are sparsely vegetated with scattered patches of alpine riparian scrub and alpine willow thickets. Within Little Yosemite Valley, the floodplain likely encompasses most of the valley floor; however, the 100-year floodplain has not been mapped. Here, the river meanders across its floodplain, creating oxbow lakes and meander cutoffs. As the river descends and the gradient becomes gentler, lodgepole pines, aspens (*Populus tremuloides*), willows (*Salix spp.*), and alders (*Alnus spp.*) become more prevalent. Willows often colonize where point bars form (at the margins of, or within, the river channel). Riparian species often intergrade with coniferous forest at or near the river's upper banks (NPS 1997a; Sawyer et al. 2009).

Although 100-year floodplain has not been mapped in this area, it is assumed that the Merced Lake High Sierra Camp is located within the existing floodplain.



## Segments 2A and 2B: Yosemite Valley

Yosemite Valley has a well-developed, relatively wide floodplain that is confined by steep valley walls. The Merced River in Yosemite Valley has a relatively mild slope, with an average of 0.1%. In the middle reach of the river in Yosemite Valley, downstream of Clark's Bridge to the El Capitan moraine, the river flows through a shallow channel approximately 100 to 300 feet wide.

Riparian areas in Yosemite Valley are characterized by broadleaf deciduous trees, such as white alder (*Alnus rhombifolia*), black cottonwood (*Populus trichocarpa*), big-leaf maple (*Acer macrophyllum*), white fir, and willow species. Riparian areas within Yosemite Valley are rich in species diversity and structure. Riparian vegetation is regularly disturbed by the deposition and removal of soil and the force of floodwaters. Plants in this zone colonize newly formed river-edge deposits readily. The distribution of riparian communities varies with soil saturation and frequency of disturbance. For example, big-leaf maple riparian forests grow on moist gravelly soils in protected spots on alluvial soils bordering streams, whereas sandbar willow woodlands occur on point and mid-channel bars that are washed over annually by spring floods (NPS 1994). In Yosemite Valley, the character of the floodplain varies in different locations due to local hydraulic controls. From Clark's Bridge to Housekeeping Camp in the east Valley, the river floods areas outside the main channel with shallow swift flows that cut across meander bends. Near Yosemite Lodge and downstream to the El Capitan moraine, flood waters back up against the dense vegetation and tend to be deep, low velocity, and low energy. From the El Capitan moraine downstream, the river channel is steeper and confined in the narrow river canyon, the floodplain is narrow, and flow velocities are high.

In 1879, large boulders were blasted to deepen and widen the river gap through the El Capitan moraine, which lowered the base level of the Merced River by 4 to 5 feet (Milestone 1978). As a result, the extent and frequency of flooding in the upstream meadows was reduced, possibly leading to drier conditions and the loss of historic wetlands.

Regular flooding and subsequent deposition of alluvial sediments have been instrumental in the formation of Yosemite Valley. Flooding continues to support a variety of natural processes in Yosemite Valley, such as deposition of flood-borne sediment; channel avulsion (i.e., abandonment of an old river channel and the creation of a new one); and the development of complex channel patterns and valuable riparian and wetland habitat. The largest document events occurred in 1937, 1950, 1955, and 1997, with peak discharges measured in the range of 22,000 to 25,000 cubic feet per second at Pohono Bridge. These floods were the result of rain-on-snow events. Several large undocumented events also occurred during the 1860s and 1870s.

The January 1997 flood was the largest recorded flood within the park with a peak discharge of 10,000 cubic feet per second at Happy Isles and 25,000 cubic feet per second at Pohono Bridge (Eagan 1998). The flood inundated roads, picnic areas, park offices, and lodging units. It caused extensive damage to NPS facilities, including roads, bridges, buildings, and Yosemite Valley's electric, water, and sewer systems. The flood also altered natural features and caused downed trees, movement of landslide talus into streams, channel erosion, and substantial changes in channel morphology (NPS 1997b). This flood was estimated to have a recurrence interval of 90 years (NPS 1997b), or about a 1.1% chance of occurring in any given year.

The deposition and removal of soil and the force of flood waters in Segment 2 regularly disturb riparian vegetation. The park has historically cleared large wood from the Merced River to improve flow (to reduce flooding hazard), prevent bank erosion that might compromise park infrastructure, for visitor safety, to remove hazards to commercial rafting, and for aesthetic reasons. Since 1993, it has been park policy to allow large wood in the Merced River to remain, sometimes with some manipulation in its placement, unless it causes a serious safety concern or threatens infrastructure.

Facilities located within the 100-year floodplain within this segment include (generally moving from east to west) portions of the Upper Pines Campground area including a recreational vehicle dump station, a portion of Lower Pines Campground including four restrooms, most of North Pines Campground including four restrooms and a lift station, a portion of Backpackers Campground, and most of the Curry Stables and the 49 associated employee housing units and community kitchen. Additionally, most of the Housekeeping Camp area including lodging units, showerhouses and restrooms, grocery store, and other structures, the Lower River Amphitheatre, the proposed Upper and Lower River Campgrounds, and the Yosemite Village Day-use Parking Area are located in the 100-year floodplain. The Lower Tecoya Dormitories A, B, C, D, E, F and the Laundry Building, in addition to two Concessioner apartment buildings and associated garages and sheds, eight single-family residences, the Concessioner General Office, the Concessioner Garage, the Volunteer Fire Station, Lost and Found, security buildings are all in the 100-year floodplain. In the vicinity of the Yosemite Lodge area, structures within the 100-year floodplain include Superintendent's House (Residence 1) and Garage, the Yosemite Creek sewage lift station, groundwater wells near Yosemite Creek, and four lodging buildings at the Yosemite Lodge in addition to three housing buildings near Yosemite Lodge (Thousands Cabins). In West Yosemite Valley, the Swinging Bridge Picnic Area, the Sentinel Beach Picnic Area, the Yellow Pine Administrative Campground, the Cathedral Beach Picnic Area, and the gaging station near Pohono Bridge are in the 100-year floodplain.

Over the past two decades, the National Park Service has implemented numerous efforts to restore the underlying natural processes that sustain Yosemite Valley riparian habitats. These efforts include, invasive plant eradication, fencing off sensitive areas, and increasing inundation levels through restoration of natural drainage patterns. A more detailed description of past and present restoration projects is included in the *Merced River and Riparian Vegetation Assessment* (Cardno ENTRIX 2011) and the *Assessment of Meadows in the Merced River Corridor* (Ballenger et al. 2011). These efforts have been successful in improving the overall condition of riparian areas throughout Yosemite Valley. However, these reports also identify a number of persisting stressors on the Valley's riparian ecosystems, such as roads, parking areas, structures, campgrounds, and informal trails.

### **Segments 3 and 4: Merced River Gorge and El Portal**

From the location of the former Cascades Diversion Dam downstream to the Foresta Bridge and the western boundary of the El Portal Administrative Site, the river channel is steep and confined to a narrow river gorge. In this area, the floodplain is narrow and flow velocities are very high. The Merced River Gorge is a unique display of lower elevation habitat. It is lined with a narrow band of riparian vegetation along the river, bordered by a dense mosaic of chaparral and foothill woodland communities (chaparral/oak woodland zone) on the steep canyon walls.

The Merced River channel in El Portal can shift during large floods, including movement of large boulders that define the channel. One hundred-year discharge of the Merced River in El Portal is estimated to be 32,800 cubic feet per second (PBS&J 2011). Flooding has been an important aspect of the development of riparian communities along the Merced River and its tributaries that intersect drier adjacent vegetation types of El Portal. Within this area, El Portal Road and small levees alter the floodplain by restricting flow during flood events and forming a barrier to channel migration. Facilities located within the 100-year floodplain within this segment include the embankment/levee between El Portal Market and Gas Station and the river, Odger's Bulk Fuel Storage Facility, the AT&T building, a water valve station, NatureBridge office and employee housing building, the old Wastewater Treatment Plant, portions of Abbeville/Trailer Village employee housing area, and the administrative parking area between Foresta Road and the Merced River at the National Park Service's

Warehouse and Administrative Complex. As with certain points within Yosemite Valley, this infrastructure has impacted floodplain habitats.

In the El Portal area, riparian sites occur along tributaries of the Merced River, on flat topographical shaded terraces above the river, in backwater channels, and in areas where runoff from upland sites collects in natural depressions. Native Oregon ash (*Fraxinus latifolia*) and willows occur in the wetter areas, as well as orchard components in some locations. Foothill pines and valley oaks tend to dominate the drier terraces adjacent to riparian sites.

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

The floodplain in Wawona along the South Fork is an elongated alluvial valley. In this area, the river meanders through a large floodplain meadow, and the channel can shift laterally during large floods. Upstream of the Big Creek confluence, the average annual flow was 174 cubic feet per second between 1958 and 1968, as measured at the Wawona gaging station, with an estimated maximum flow of 15,000 cubic feet per second in December 1955. The 100-year discharge of the South Fork Merced River is estimated to be 19,700 cubic feet per second (PBS&J 2011).

In the portions where the gradient is gentlest, riparian vegetation (willows and alders) becomes more prevalent. Willows often colonize sandbars that are deposited at the margins of or within the river channel. In this area, the riparian corridor resembles the riparian corridor seen along the Merced River as it flows through Yosemite Valley. Also found in this area is Sierra sweet bay (*Myrica hartwegii*), a shrub endemic to the Sierra Nevada. In Yosemite National Park, Sierra sweet bay is found at the average high water line of the South Fork Merced River downstream from Wawona and along Big Creek (NPS 2012). The NPS (2002) considers Sierra sweet bay a sensitive species, and the California Native Plant Society (CNPS Rank 4.3) identifies the plant as being of limited distribution.

Facilities located within the 100-year floodplain within this segment include portions of the Pioneer Yosemite History Center, the Wawona Covered Bridge, South Fork Wawona Picnic Area, a portion of the Wawona Campground, the Yosemite Transportation Company office, utility buildings, the Ranger Station, and a bakery building. As with certain points within Yosemite Valley, this infrastructure has impacted floodplain habitats. In addition, trampling of riparian vegetation and associated erosion also occurs in this area, resulting from use in the vicinity of the Wawona Store and Gas Station area and the Wawona Campground.

## SELECTED ACTION

The *Final Merced River Plan/ EIS* includes an evaluation of six alternatives including five action alternatives, each of which will implement a series of management actions within the Merced Wild and Scenic River corridor. Each action alternative addresses issues relevant to protection and enhancement of river values, user capacity management, and land use and facilities. Alternative 5: *Enhanced Visitor Experience and Essential Riverbank Restoration* has been identified as the Selected Action. This alternative is characterized by restoring riparian areas within 100 feet of the ordinary high water mark. To improve geologic and hydrologic conditions, Alternative 5 includes the potential removal of Sugar Pine Bridge and reestablishing channel complexity in East Yosemite Valley. Alternative 5 includes restoration of 189 acres within the river corridor, including removing existing campsites within 100-feet of the ordinary highwater mark, Housekeeping Camp lodging units within the ordinary high water mark, informal trails in meadows and wetland areas, and roadside parking adjacent to meadows. In terms of recreation, limited private boating will be allowed by permit on river stretches within all

segments. Under Alternative 5, peak daily visitation within Yosemite Valley will be slightly reduced (20,100) as compared to peak visitation at present (20,900). Additional temporary and overflow parking areas will be located in Abbieville/Trailer Village in El Portal to alleviate traffic congestion on busy peak summer days.

## Existing Structures Proposed in the Floodplain

The NPS Director's Order 77-2 and Procedural Manual 77-2 consider the evaluation of actions that may be grouped into the following three categories:

- Class I Actions – include administrative, residential, warehouse and maintenance buildings, and nonexempted (overnight) parking lots
- Class II Actions – those that will create “an added disastrous dimension to the flood event.” Class II actions include schools, clinics, emergency services, fuel storage facilities, large sewage treatment plants, and structures such as museums that store irreplaceable records and artifacts.
- Class III Actions – Class I or Class II Actions that are located in high hazard areas such as those subject to flash flooding.

The regulatory floodplain for Class I actions is the 100-year floodplain. The following existing structures proposed in the study area’s regulatory floodplain constitute Class I Actions:

- Housekeeping Camp; Backpackers, Upper River, Lower River, Lower Pines, and North Pines campgrounds; portions of Ahwahnee Row and Tecoya housing area, the Concessioner General Office and Garage, select Yosemite Lodge buildings, and associated infrastructure.

The following existing structures located in the study area’s regulatory floodplain constitute Class II Actions:

- Odger’s Fuel Storage Facility (main tanks are outside of the 500-year floodplain, other facilities with less than 40,000 gallon per day capacity are located within the 500-year floodplain), El Portal Gas Station, and the El Portal Wastewater Treatment Plant (500-year floodplain).

There are no Class III actions in the study area.

## Proposed Actions

Under the Selected Action, the following actions will be located within floodplains and will either have a net beneficial impact on floodplains, or will not affect floodplain function. Therefore, the following actions are not discussed further within this document:

- Removal of conifer seedlings and saplings from meadows
- Reinstitution of low intensity/high frequency fire as an ecological process
- Installation of logjams and large wood management
- Placement of large wood (including large trees with root wads) between Ahwahnee and Stoneman bridges which will increase roughness in the river as well as channel complexity
- Establishing a riparian buffer that includes a restriction on new development or redevelopment of existing facilities within 150 feet of the ordinary high water mark
- Meadow restoration at Ahwahnee, El Capitan, Leidig, Cooks, Slaughterhouse, Bridalveil, and Stoneman meadows

Under the Selected Action, the following facilities will be removed from the floodplain. Removal of these existing structures from the floodplain represents a net beneficial impact. Therefore, removal of these facilities is not discussed further within this document:

- NPS Volunteer Office
- Concessioner General Office and Concessioner Garage
- 34 units from within the ordinary high water mark at Housekeeping Camp
- Abandoned infrastructure such as remnant pavement associated with the former Upper and Lower River Campgrounds
- Campsites within 100 feet of the ordinary high water mark at Backpacker's Camp, Lower Pines, and North Pines Campgrounds
- Possible removal of Sugar Pine Bridge and the associated road berm; alternatively, additional placement of large wood and logjams will be deployed. Determination of removal versus other mitigation will be made by a separate study of river hydrology in the vicinity of Sugar Pine Bridge.
- Imported rock/concrete/asphalt/soil at Greenmeyer sandpit
- Superintendent's House (Residence 1) and Garage
- Housing units at the Yosemite Lodge
- Odger's Bulk Fuel Storage Facility. This facility is presently in use and provides important storage and distribution capacity for fuel within the area. The existing tanks are located outside of the floodplain, while remaining facilities are located within the 500-year floodplain. The facility will be removed from the floodplain.
- Old Wastewater Treatment Plant in El Portal

Under the Selected Action, the following facilities will remain or could be placed in the floodplain. Rationale for leaving these facilities within the floodplain, associated risk, and proposed mitigation or management strategies for these facilities are discussed subsequently:

- Merced River above Nevada Fall:
  - Merced Lake High Sierra Camp
- Yosemite Valley:
  - Ahwahnee Row Houses
  - Tecoya Dorms and other Concessioner Housing in the vicinity of Indian Creek (apartments and single-family residences)
  - Yosemite Lodge area facilities including overnight units and associated parking, laundry building, lost and found, the security building, and the Concessioner Valley Fire House, Yosemite Creek Sewage Lift Station, groundwater wells near Yosemite Creek, four lodging buildings at Yosemite Lodge, in addition to three housing buildings near Yosemite Lodge (Thousand Cabins), and the Yosemite Chapel
  - Housekeeping Camp, with 232 units, shower houses, restrooms, grocery store, and laundry facilities; Yosemite Valley Campgrounds including North Pines, Backpackers, portions of Lower Pines, Upper Pines, and Yellow Pines Administrative Campgrounds, plus new camping facilities (30 walk-in and 2 group camp sites) at Upper and Lower River Campgrounds and near Upper Pines Campground

- Concessioner Stable
- Yosemite Village Day-Use Parking Area and Rerouting of Northside Drive to south of the Yosemite Village Day-Use Parking Area
- Lower River Amphitheater
- West Valley picnic areas
- Gaging Station near Pohono Bridge
- Merced River Gorge and El Portal:
  - Facilities near Old El Portal including the AT&T Building, NatureBridge office and employee housing, and a water valve station
  - El Portal Market building
  - El Portal Gas Station
  - Administrative parking area between Foresta Road and the Merced River at the National Park Service’s Warehouse and Administrative Complex
  - Embankment/levee between El Portal Market and Gas Station and the river
  - Portions of Abbieville/Trailer Village employee housing area
- South Fork Merced River:
  - Yosemite transportation Company office
  - Historic facilities including the Wawona Covered Bridge and portions of the Pioneer Yosemite History Center
  - Utility buildings
  - Ranger Station
  - Bakery building
  - Portions of the Wawona Campground and the South Fork Wawona Picnic Area

## **RATIONALE FOR CONTINUED USE OF THE FLOODPLAIN**

To the extent practicable and appropriate, the Selected Action includes the removal of existing facilities to outside of the 100-year floodplain, and does not propose to place new facilities in the floodplain that will interfere with floodplain function or that will cause or exacerbate flood related hazards. However, the NPS was not able to develop a feasible alternative that involved removal of all existing facilities from the 100-year floodplain. Key constraints that prevent the removal of additional facilities from the 100-year floodplain center on a lack of available land area that is not located in a floodplain or rockfall hazard zone. The following provides additional information and details regarding existing development that will remain in the floodplain with implementation of the Selected Action.

## Existing and Proposed Development that will Remain or be Located in the Floodplain in the Selected Action

### *Merced River above Nevada Fall*

**High Sierra Camp Reduction to 11 Units.** Removal of existing facilities will result in a net benefit to floodplains, and beneficial effects are not discussed further. Remaining facilities (11 units) are presumed to be located within the 100-year floodplain based on their proximity to the river, although floodplains have not been delineated. The remaining facilities will not be removed because they provide a unique experience to visitors within the area.

### *Yosemite Valley*

**Ahwahnee Row Houses.** These houses will not be removed because they are important contributing elements to the Yosemite Valley cultural landscape, are contributors to the Yosemite Village Historic District, and their removal or demolition will result in an adverse effect on this historic resource. Therefore, these facilities will not be removed.

**Tecoya Dorms and Other Concessioner Housing in the Vicinity of Indian Creek (apartments and single-family residences).** The Tecoya dorms are a part of the National Register listed Yosemite Valley Historic District, and their removal or demolition, as well as that of concessioner housing, will result in an adverse effect to this historic resource. Therefore, these facilities will not be removed.

**Yosemite Lodge Area Facilities including overnight units, parking, laundry building, lost and found, security building, Yosemite Creek Sewage Lift Station, groundwater wells near Yosemite Creek, four lodging buildings at Yosemite Lodge, three housing buildings near Yosemite Lodge (Thousand Cabins), and Yosemite Chapel.** These buildings facilities within the Yosemite Lodge complex and the day use parking lot are located within the 100-year floodplain. These will not be removed under the Selected Action. Existing facilities that are located within the floodplain are adjacent to areas that are above or outside of the floodplain, including most of the Yosemite Lodge complex. These facilities are important contributing elements to the Yosemite Valley cultural landscape, provide unique experience and access for visitors, provide lodging and/or critical facilities services to the area, and therefore will not be removed.

**Housekeeping Camp (232 units, shower houses, restrooms, grocery store, laundry facilities).** These units and facilities are available seasonally, and the area is closed for overnight use in the winter, when most high-flow winter flooding events have occurred. In the Selected Action all but 34 units at Housekeeping Camp will remain in the floodplain along with other existing structures located on site, for a total of 232 units remaining. These facilities have a unique function within Yosemite Valley and provide a unique experience to visitors – opportunity for a rustic camping experience with “developed camping shelters” that eliminate the need to purchase a large amount of camping equipment. Also, these facilities will be closed during periods of high flood risk, and there will be sufficient time to evacuate visitors in the unlikely event that evacuation will be necessary. Therefore, these facilities will not be removed.

**Yosemite Valley Campgrounds (North Pines, Backpackers, portions of Lower Pines, Upper Pines, and Yellow Pines Administrative Campground, plus new camping facilities (30 walk-in and 2 group camp sites) at Upper and Lower River Campgrounds and near Upper Pines Campground).** To preserve the floodplain values in areas close to the river while still preserving the unique visitor experiences afforded by these campgrounds, existing units within these campgrounds that are located within 100 feet of the high water mark will be removed. However, other existing campsites that are located within the larger floodplain area will

not be removed, and new walk-in camping opportunities will be provided at Upper River Campground and near Upper Pines Campground. These campgrounds are/will be closed during the winter, when most high flow winter or rain-on-snow flooding events have historically occurred. There will be sufficient time to evacuate visitors in the unlikely event that evacuation will be necessary. These facilities provide or will provide unique visitor experiences and will be closed during periods of high risk. Therefore, they will not be removed.

**Curry Stable.** The concessioner stable supports commercial day rides along pack stock trails in the area, and also offers High Sierra Camp rides. Thus the Concessioner stable supports unique visitor experience including horseback access to the High Sierra Camp, as well as other portions of the park. During a potential flood event, the facility could be closed or readily evacuated in order to avoid potential hazards.

**Yosemite Village Day-use Parking Area and Rerouting of Northside Drive.** These facilities will continue to serve as the primary day-use parking area for Yosemite Valley and serves to access Yosemite Village, and Northside Drive will be rerouted to provide improved service to the area. Design measures for these facilities will be implemented to minimize potential effects on floodplains. Maintaining the parking lot and rerouting Northside Drive will preserve unique visitor experiences afforded by parking access and enhanced vehicle access to the area. Therefore, these facilities will not be removed.

**Lower River Amphitheater.** The Lower River Amphitheater supports unique visitor experience within the Yosemite Valley, ranging from children's theater opportunities to weekly religious services. The amphitheater includes bench seating and a limited stage area. Maintaining the facility will preserve these and other unique visitor experiences associated with the facility, and the facility could be evacuated quickly in the event of a potential flood event. Therefore, the amphitheater will not be removed.

**West Valley Picnic Areas.** Picnic areas in Yosemite Valley, including the western valley, including the Swinging Beach Picnic Area the Sentinel Beach Picnic Area, and the Cathedral Beach Picnic Area support visitor access to these areas, affording scenic views and encounter with these unique natural areas. These picnic areas present minimal obstruction to flood flows, and will either be closed during seasonal flooding periods, or could be easily evacuated in the event of a flood event. Therefore, these facilities will not be removed.

**Gauging Station near Pohono Bridge.** The existing gaging station supports measurement and monitoring of river levels in this area. Due to the nature of the facility, which collects data on river stage, the facility must be located within the floodplain in order to collect the needed data. Therefore, this facility will not be removed.

### ***Merced River Gorge and El Portal Watershed***

**Facilities near Old El Portal (AT&T Building, NatureBridge office and employee housing, water valve station).** These facilities are presently in use. NatureBridge is an official park partner, and helps the NPS to achieve its mission, while AT&T provides communications support services. Additionally, the NatureBridge facility is on the list of classified structures and is an important cultural resource. The existing water valve station is critical to the function of existing infrastructure within the area. As an unmanned station, the facility does not represent a substantial risk to humans. The indicated buildings will continue to be utilized by employees, but could be easily and rapidly evacuated in the event of a potential flood. Therefore, these facilities will not be removed from the floodplain.

**El Portal Market Building.** This facility is presently in use and provides key services within the El Portal area. The facility will continue to be used by employees and visitors. However, because it is located in close proximity to the edge of the 100-year floodplain, it could be evacuated easily in the event of a potential flood. This facility will not be removed from the floodplain.



**El Portal Gas Station.** This facility is presently in use and provides important refueling capacity within the area, and supports visitor use within the park and area. The facility will not be removed from the floodplain.

**Administrative Parking Area (between Foresta Road and the Merced River at the National Park Service's Warehouse and Administrative Complex).** This existing parking structure provides parking facilities in support of adjacent buildings and services, and is currently in use by the National Park Service. In the event of a potential flood, this area could be evacuated easily and rapidly. The facility will not be removed from the floodplain.

**Temporary El Portal Special Park Uses Trailers.** These facilities are considered temporary until uses can be redesignated to other areas or facilities. In the interim, the trailers remain in use and in support of Park services. In the event of a potential flood, the facilities could be easily evacuated. These facilities will not be removed from the floodplain.

**Embankment/Levee between El Portal Market and Gas Station and the Merced River.** This existing embankment provides partial control of high water flows in this area. While the facility does not effectively protect against 100-year flooding, it does provide some degree of protection during lesser potential flood events. The facility is unmanned. This facility provides critical support to adjacent infrastructure, and will not be removed.

**Portions of the Abbeville/Trailer Village Employee Housing Area.** The Abbeville/Trailer Village housing area is currently in use in support of staff. As noted, only portions of the area are located within the floodplain, and the margin of the floodplain is located in close proximity to these areas. Therefore, affected areas could be easily evacuated in the event of a potential flood. These facilities will not be removed.

### ***South Fork Merced River***

**Yosemite Transportation Company Office.** This facility is currently in use and supports operations and management of transportation services and transportation infrastructure within the Park. The facility is located in close proximity to the margin of the floodplain, and could be easily evacuated in the event of a potential flood. Therefore, the facility will not be removed from the floodplain.

**Historic Facilities (Wawona Covered Bridge, portions of the Pioneer Yosemite History Center).** These facilities will not be removed because they are important contributing elements to the Yosemite Valley cultural landscape. Their removal or demolition will result in an adverse effect on historic resources. Therefore, these facilities will not be removed.

**Utility Buildings.** The existing utility buildings are critical to the function of existing infrastructure within the area. Unmanned, potential flooding of the facilities does not represent a substantial risk to humans. Therefore, the facility will not be removed from the floodplain.

**Ranger Station and Bakery Building.** These facilities are currently in use and provide useful or required services within the area. They are located in relatively close proximity to the margin of the floodplain, and could be easily evacuated in the event of a potential flood. Therefore, these facilities will not be removed from the floodplain.

**Wawona Campground and the South Fork Wawona Picnic Area.** Portions of these areas are located within the floodplain. These facilities result in only minor to minimal interference with potential flood flows, are currently in use, could be easily evacuated or closed in the event of a potential flood, and afford unique camping and picnicking experiences in the Wawona area. These facilities will not be removed from the floodplain.

## DESCRIPTION OF SITE-SPECIFIC FLOOD RISK

### Merced River above Nevada Fall

Floods of consequence along the Merced River above Nevada Fall, including Little Yosemite Valley and the upper canyon, always occur with some warning, although flood conditions may occur more immediately than in the Yosemite Valley downstream. Risks to humans can typically be mitigated by warning and evacuation.

**High Sierra Camp Reduction to 11 Units.** Remaining units will presumably be subject to periodic inundation during 100-year flood events. During a major flood event, these units could become inundated with floodwaters. This could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans related to potential risk of inundation. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the camp facilities during intermittent flood events. Flooding of sufficient depth could damage existing facilities and result in minor and intermittent additional maintenance requirements to repair flood damage.

### Yosemite Valley

In Yosemite Valley, the character of flooding varies in different locations because of local hydraulic controls. From Clark's Bridge to Housekeeping Camp in the east Valley, the Merced River floods areas outside the main river channel with shallow, swift flows that cut across meander bends. Near Yosemite Lodge and downstream to the El Capitan moraine, flood waters back up against the moraine and dense vegetation. Flood waters in this area are of low velocity and significant depths. At Housekeeping Camp, velocities are relatively higher with lower depths.

The historic discharge in the river, measured at the Pohono Bridge gaging station, has ranged from a high of about 25,000 cubic feet per second to a low of less than 10 cubic feet per second. The mean daily discharge rate is about 600 cubic feet per second. The following discussion provides information about potential risks of continued floodplain use for each of the facilities that will remain within the floodplain.

**Ahwahnee Row Houses.** Flooding within Yosemite Valley including in the area of the Ahwahnee Row Houses requires a prolonged period of intense rain for at least 24 hours to create flood conditions. During a major flood event, the Ahwahnee Row Houses could become inundated with floodwaters. This could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans related to potential risk of inundation. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the row houses during intermittent flood events. Flooding of sufficient depth could damage existing facilities and result in minor and intermittent additional maintenance requirements to repair flood damage.

**Tecoya Dorms and Other/Concessioner Housing in the Vicinity of Indian Creek (apartments and single-family residences).** As discussed previously, flooding within Yosemite Valley including in this area requires a prolonged period of intense rain for at least 24 hours to create flood conditions. During a major flood event, these facilities could become inundated with floodwaters. This could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans related to potential risk of

inundation. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the housing during intermittent flood events. Flooding of sufficient depth could damage existing facilities and result in minor and intermittent additional maintenance requirements to repair flood damage.

**Yosemite Lodge Area Facilities including overnight units, parking, laundry building, lost and found, security building, Yosemite Creek Sewage Lift Station, groundwater wells near Yosemite Creek, four lodging buildings at Yosemite Lodge, three housing buildings near Yosemite Lodge (Thousand Cabins), and Yosemite Chapel.** As discussed previously, flooding within Yosemite Valley including in the area of Yosemite Lodge requires a prolonged period of intense rain for at least 24 hours to create flood conditions. Also, these existing facilities that are located within the floodplain are located close to the edge of the 100-year floodplain. Therefore, water depth during a 100-year flood event is expected to be relatively shallow. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans related to potential risk of inundation. However, given the nature of flooding in the Yosemite Valley, which has a relatively slow onset with sufficient time for warning and evacuation, it is anticipated that evacuation of these facilities could be completed easily. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the facilities during intermittent flood events. Flooding of sufficient depth could damage existing facilities and result in minor and intermittent additional maintenance requirements to repair flood damage.

**Housekeeping Camp (232 units, shower houses, restrooms, grocery store, laundry facilities).** Facilities at housekeeping camp are available seasonally, and are closed for overnight use during the winter, the period when most major precipitation based flooding events occur. When flooding within Yosemite Valley does occur, it requires a prolonged period of intense rain for at least 24 hours to create flood conditions, which provides sufficient time for evacuation. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans related to potential risk of inundation. However, risk of interference with human activities is limited due to winter period closure of Housekeeping Camp. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the grounds during intermittent flood events. Flooding of sufficient depth or velocity could damage existing facilities and result in minor and intermittent additional maintenance requirements to repair flood damage.

**Yosemite Valley Campgrounds (North Pines, Backpackers, portions of Lower Pines, Upper Pines, and Yellow Pine Administrative Campground, plus new camping facilities (30 walk-in and 2 group camp sites) at Upper and Lower River Campgrounds and near Upper Pines Campground).** Facilities at other campgrounds that are or will be located within the floodplain are closed for overnight use during the winter, the period when most major precipitation based flooding events occur. When flooding within Yosemite Valley does occur, it requires a prolonged period of intense rain for at least 24 hours to create flood conditions, which provides sufficient time for evacuation. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, risk of interference with human activities is limited due to winter period closure of the campgrounds. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor

disruptions to flood flows and floodplain hydrology during flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the campgrounds during intermittent flood events. Flooding of sufficient depth or velocity could damage existing facilities and result in minor and intermittent additional maintenance requirements to repair flood damage.

**Curry Stable.** Flooding events are most likely to occur within this area during the winter, wherein flooding requires a prolonged period of intense rain for at least 24 hours to create flood conditions. This provides sufficient time for evacuation of the area. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. Additionally, potential flood events will require evacuation of any animals located at the facilities, if present. It is anticipated that sufficient time will be available in order to enable evacuation of humans and animals in the event of a potential flood. With respect to natural resource values, the existing stables will interfere somewhat with flood flows, but will not be anticipated to result in a substantial backup of water or constriction of the floodway, such that major deleterious effects will be generated during a flood event. During a flood event, the facilities could sustain damage, depending upon the depth of flooding, thereby requiring additional maintenance and upkeep following a flood event.

**Yosemite Village Day-use Parking Area and Rerouting of Northside Drive.** Flooding events are most likely to occur within this area during the winter, wherein flooding requires a prolonged period of intense rain for at least 24 hours to create flood conditions. This provides sufficient time for evacuation of the area. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. With respect to natural resource values, the parking lot and roadway will be reconstructed so as to minimize interference with floodplains, and will not include the construction of any major buildings or other facilities that will interfere with flood flows. Additionally, the parking area will be designed to handle periodic inundation, thereby minimizing erosion and other potential damage to parking facilities that could otherwise occur as a result of flooding.

**Lower River Amphitheater, Upper River Campground, and Lower River Campground.** Flooding events are most likely to occur within this area during the winter, wherein flooding requires a prolonged period of intense rain for at least 24 hours to create flood conditions. While visitors and staff will utilize this facility, use will be transitory, due to the nature of the facility. This, combined with a relatively extended period of warning for flooding in the area provides sufficient time for evacuation of the area. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, such risks will be avoided by evacuation. With respect to natural resource values, the existing facilities will interfere only minimally with flood flows, and will not result in a major construction or interference. During a flood event, the facilities could sustain minimal damage, depending upon the depth of flooding, thereby requiring additional maintenance and upkeep following a flood event.

**West Valley Picnic Areas.** Similar to other areas of the Yosemite Valley, flooding events are most likely to occur within this area during the winter, wherein flooding requires a prolonged period of intense rain for at least 24 hours to create flood conditions. Picnic areas are used for short periods by Park visitors. Therefore, along with a relatively extended period of warning for flooding in the area, it is anticipated that sufficient time for evacuation of the area will be available in the event of a potential flood. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation.

However, risks to humans will be avoided by evacuation. With respect to natural resource values, the existing facilities will interfere somewhat with flood flows, but will not be anticipated to result in a substantial backup of water or constriction of the floodway, such that major deleterious effects will be generated during a flood event. During a flood event, the facilities could sustain minimal to minor damage, depending upon the depth of flooding, thereby requiring additional maintenance and upkeep following a flood event.

**Guaging Station near Pohono Bridge.** Flooding in this area will occur in a manner that is similar to the other facilities noted above – primarily during winter flood events. The gaging station is small in extent and does not present a major interference with natural flood flows. Additionally, the facility is unmanned and will not require evacuation. During a flood event, it is anticipated that the facility will sustain only minimal potential damage as a result of flooding.

## **Merced River Gorge and El Portal**

The El Portal area is located in an extremely high energy, bedrock-controlled reach with little high floodplain suitable for development. Due to high flood velocities, infrastructure and developments must be located above flood levels or be massively armored. Evacuation of flood-prone areas should be mandatory during flood events of any appreciable size.

**Facilities near Old El Portal (AT&T Building, NatureBridge office and employee housing, water valve station), as well as the El Portal Market Building and the El Portal Gas Station.** These facilities are subject to year-round use, and are located near the margin of the floodplain. Therefore, flood water depths within these areas are expected to be minor to moderate, with areas suitable for evacuation located within a few hundred feet or less. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, it is anticipated that sufficient warning will be available to enable evacuation. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during major flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the facilities during intermittent flood events. Flooding of sufficient depth or velocity could damage existing facilities, while floating debris could result in damage to structures and facilities. Flood flows in this area are generally anticipated to be faster-moving than within the Yosemite Valley, which could exacerbate potential for damage to buildings and facilities, while floating debris could result in damage to structures and facilities. Damage will require maintenance and repair once flood flows recede.

**Administrative Parking Area (between Foresta Road and the Merced River at the National Park Service's Warehouse and Administrative Complex).** The parking area is subject to year-round use, and is located near the margin of the floodplain. Similar to other facilities in this area, suitable evacuation areas are located within a few hundred feet of the facility. During a major flood event, the parking lot could become inundated with floodwaters. Inundation could interfere with human access and use of the area, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, it is anticipated that sufficient warning will be available to enable evacuation. With respect to natural resource values, continued presence of the facilities within the floodplain will minimally interfere with flood flows and floodplain hydrology during major flood events. With respect to investment values, continued presence of the facilities within the floodplain could result in periodic inundation of the lot during intermittent flood events. However, only minimal damage is anticipated to result from such events.

**Embankment/Levee between El Portal Market and Gas Station and the Merced River.** This unoccupied facility is subject to inundation during major flood events. Hazardous conditions for humans are not anticipated as a result of flooding of the embankment. In the event of a major flood event with fast moving waters, the facility could sustain minor to moderate damage due to erosive forces. With respect to natural resource values, the embankment will continue to interfere with natural flood flows along the river, resulting in a continued deleterious effect on floodplain processes. With respect to investment values, the facility could sustain damage during a flood event, which will require maintenance and repair following the event. However, the facility also provides partial protection to nearby buildings, including the gas station and store, and its presence is likely to reduce potential damage to those buildings, especially during flood events that are smaller than 100-year events.

**Abbeville/Trailer Village Employee Housing Area.** Portions of this area are subject to flooding during a 100-year event, as noted previously. These facilities are located near the margin of the floodplain. Similar to other facilities in this area, suitable evacuation areas are located within a few hundred feet of the facilities, and it is anticipated that the facilities will be evacuated in advance of an anticipated flood. During a major flood event, housing areas as well as limited areas of parking and RV campsites could become inundated with floodwaters. Inundation could interfere with human access and use of the area, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, it is anticipated that sufficient warning will be available to enable evacuation. Additionally, if flood waters are sufficiently high and fast moving, the facilities could potentially sustain flood damage. With respect to natural resource values, continued presence of the facilities within the floodplain will interfere with flood flows and floodplain hydrology during major flood events, but will not cause major disruptions or constrictions of natural flood flows. Parking areas will not interfere with flood flows. With respect to investment values, continued presence of the facilities within the floodplain could result in periodic inundation and damage to the housing areas during flood events, This could result in need for minor to extensive repairs following each flood event.

## **South Fork Merced River**

Floods of consequence in Wawona along the South Fork always occur with some warning. It takes a prolonged period of intense rain for at least 24 hours to create flood conditions. Risks to humans can typically be mitigated by warning and evacuation.

**Historic Facilities (Wawona Covered Bridge, portions of the Pioneer Yosemite History Center).** These facilities are subject to year-round use. Like other facilities at Wawona, these historic facilities are located within several hundred feet of the margin of the floodplain. Areas suitable for evacuation are located in adjacent areas, just outside of the floodplain. During a major flood event, these facilities could become inundated or partially inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, the facilities will be evacuated in the event of a potential or anticipated flood, thereby avoiding effects on humans. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor to moderate disruptions to flood flows and floodplain hydrology during major flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the facilities during intermittent flood events. Flooding of sufficient depth or velocity could damage existing facilities, while floating debris could result in damage to structures and facilities, requiring additional repair and maintenance.

**Yosemite Transportation Company Office.** The Transportation Company Office is subject to year-round use. The facility is located within several hundred feet of the margin of the floodplain. Areas suitable for evacuation are located in Wawona, just outside of the floodplain. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. With respect to natural resource values, continued presence of the facilities within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during major flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the facilities during intermittent flood events. Flooding of sufficient depth or velocity could damage existing facilities, while floating debris could result in damage to structures and facilities, requiring additional repair and maintenance.

**Utility Buildings.** These facilities could become inundated during a major flood event. Direct consequences to humans will be minimal, because the facilities are unmanned, and will not require evacuation. With respect to natural resource values, continued presence of the buildings within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during major flood events. With respect to investment values, continued presence of the utility buildings within the floodplain will result in periodic inundation of the facilities during intermittent flood events. Flooding of sufficient depth or velocity could damage existing facilities, while floating debris could result in damage to structures and facilities, requiring additional repair and maintenance.

**Ranger Station and Bakery Building.** The ranger station and bakery building are subject to year-round use, and are located within several hundred feet of the margin of the floodplain. Areas suitable for evacuation are located in adjacent parts of Wawona, just outside of the floodplain. During a major flood event, these facilities could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, the facilities will be evacuated in the event of a potential or anticipated flood, thereby avoiding such risks. With respect to natural resource values, continued presence of the buildings within the floodplain will result in continued minor disruptions to flood flows and floodplain hydrology during major flood events. With respect to investment values, continued presence of the facilities within the floodplain will result in periodic inundation of the facilities during intermittent flood events. Flooding of sufficient depth or velocity could damage existing facilities, while floating debris could result in damage to structures and facilities, requiring additional repair and maintenance.

**Wawona Campground and the South Fork Wawona Picnic Area.** Like other facilities noted for Wawona that will remain in the floodplain, the campground and picnic area are located in close proximity to the floodplain margin. Therefore, suitable evacuation areas are located within several hundred feet of these facilities. During a major flood event, the campground and picnic area could become inundated with floodwaters. Inundation could interfere with human access and use of the facilities, and could cause potentially hazardous conditions for humans due to potential risk of inundation. However, the facilities will be evacuated in the event of a potential or anticipated flood, thereby avoiding such risks. With respect to natural resource values, the existing campgrounds and picnic areas are expected to cause only very minimal interference with flood flows and floodplain hydrology, and will not substantially interfere with or redirect flood flows. With respect to investment values, continued presence of the campground and picnic area within the floodplain will result in periodic inundation of the facilities during intermittent flood events. Flooding of sufficient depth or velocity could cause minor damage existing facilities, requiring additional repair and maintenance.

## DESIGN OR MODIFICATIONS TO MINIMIZE HARM TO FLOODPLAIN VALUES OR RISKS TO LIFE AND PROPERTY

### General Mitigation

The design of all new structures or substantial improvements to existing structures will incorporate requirements and methods for minimizing flood damage, as contained in the National Flood Insurance Program “Floodplain Management Criteria for Flood-Prone Areas” (CFR 44, 60.3) and in accordance with any local, county, or state requirements for flood-prone areas. Furthermore, park staff will maintain an active flood evacuation plan. The plan details responsibilities of individual park employees for advanced preparedness measures; removing or securing park property; records and utility systems; monitoring communication; and conducting rescue and salvage operations. New roadways and traffic circles will be designed to minimize interference with floodplains by avoiding areas within floodplains, to the extent practicable, and by adhering to NPS, local, county, and state requirements for the construction of roadways within floodplains. Thus, impacts on the site’s resources will be minimized and avoided. The proposed floodplain related facilities upgrades that will occur under the Selected Action (discussed above) will also support reduced flood risk and reduced potential for inundation of facilities during flood events, as compared to the No Action Alternative.

### Site-Specific Mitigation – No Subsequent Statement of Findings Necessary

Merced River above Nevada Fall: High Sierra Camp Reduction to 11 Units.

- Plans will be made for timely and safe evacuation of people the remaining units in times of rising water. These areas will be evacuated prior to major storm events that could potentially produce flooding, based on ongoing monitoring within the Park. Therefore, risks to humans will be mitigated by monitoring of storm or potential storm conditions, warning, and evacuation as warranted.
- In order to minimize potential damage to facilities located within the floodplain, prior to an anticipated flood event, removable facilities that could be damaged by flooding will be removed and stored outside of the floodplain.
- No mitigation is available to offset the potential minor effects of these facilities on floodplain hydrology during flooding events; however, associated effects will be minor.

Yosemite Valley: Ahwahnee Row Houses, Tecoya Dorms, Yosemite Lodge and parking, Housekeeping Camp Lodging Units, and Other Campgrounds (North Pines, Backpackers, Lower Pines, Yellow Pine Administrative Campground, Lower River Campground, and Upper River Campground), Yosemite Chapel, and the Yosemite Village Day-use Parking Area

- Plans will be made for timely and safe evacuation of people from the Ahwahnee Row houses, Tecoya Dorm/Ahwahnee Row Housing, Yosemite Lodge, Housekeeping Camp, affected campgrounds, and other affected facilities in times of rising water. These areas will be evacuated prior to or during the early phases of major storm events that could potentially produce flooding, based on ongoing monitoring within the Park. Therefore, risks to humans will be mitigated by monitoring of storm or potential storm conditions, warning, and evacuation as warranted. Given that flooding within Yosemite Valley occurs with at least 24 hours of warning, these facilities could be easily evacuated in the event of an anticipated flood.
- In order to minimize potential damage to facilities located within the floodplain, prior to an anticipated flood event, removable facilities that could be damaged by flooding will be removed and stored outside of the floodplain.



- No mitigation is available to offset the potential minor effects of these facilities on floodplain hydrology during flooding events; however, associated effects will be minor.

Merced River Gorge and El Portal Watershed: Water valve station, El Portal Market building, Nature Bridge buildings, El Portal gas station.

- Plans will be made for timely and safe evacuation of people from the El Portal Market building the Nature Bridge buildings, the fuel storage facility, and gas station. The pump station is unmanned, and therefore evacuation of the pump station will not be required. These areas will be evacuated prior to or during the early phases of major storm events that could potentially produce flooding within the area, based on ongoing monitoring within the Park. Therefore, risks to humans will be mitigated by monitoring of storm or potential storm conditions, warning, and evacuation as warranted. Evacuation will be facilitated by the very close proximity of roadways and other facilities that are located outside of the floodplain. Thus, these facilities could be easily evacuated in the event of an anticipated flood.
- In order to minimize potential damage to facilities located within the floodplain, prior to an anticipated flood event, any removable facilities that could be damaged by flooding will be removed and stored outside of the floodplain. Minor and localized armoring may also be installed so as to minimize potential damage from debris and floodwaters. Residual flood damage will require intermittent minor repairs to the affected facilities.
- No mitigation is available to offset the potential minor effects of these facilities on floodplain hydrology during flooding events; however, associated effects will be minor

South Fork Merced River: Yosemite Transportation Company office, two cabins, historic jail, utility buildings, Ranger Station, RV/Parking, and a bakery building

- Plans will be made for timely and safe evacuation of people from these facilities in times of rising water. These areas will be evacuated prior to or during the early phases of major storm events that could potentially produce flooding, based on ongoing monitoring within the Park. Therefore, risks to humans will be mitigated by monitoring of storm or potential storm conditions, warning, and evacuation as warranted. Given that flooding within the vicinity of Wawona occurs with at least 24 hours of warning, and that areas suitable for evacuation are located in the adjacent areas of Wawona, these facilities could be easily evacuated in the event of an anticipated flood.
- In order to minimize potential damage to facilities located within the floodplain, prior to an anticipated flood event, any removable facilities that could be damaged by flooding will be removed and stored outside of the floodplain. Minor and localized armoring may be also installed so as to minimize potential damage from debris and floodwaters. Residual flood damage will require intermittent minor repairs to the affected facilities.
- No mitigation is available to offset the potential minor effects of these facilities on floodplain hydrology during flooding events; however, associated effects will be minor.

## Site-Specific Mitigation – Subsequent Statement of Findings Necessary

None Warranted

### CONCLUSION

The Selected Action will substantially reduce potentially hazardous conditions associated with flooding by removing existing campground sites within 100-feet of the ordinary high water mark. Facilities that will be

removed from highly flood-prone areas include lodging units at Housekeeping Camp, abandoned infrastructure at Upper and Lower River Campgrounds, and removal of campsites at Backpackers Camp, Lower Pines, and North Pines Campground. The Selected Action will also prohibit new development within 150 feet of the ordinary high water mark of the Merced River. The Selected Action will also involve removal of housing units at the Yosemite Lodge which are currently located within the floodplain. Removal of these facilities from the vicinity of the ordinary high water mark and/or the floodplain will reduce existing effects of these facilities on floodplain hydrology, and will support increased safety and reduced flood related hazards for park employees and visitors.

The Selected Action will also include removal and mitigation of existing obstructions along the river including Odger’s Bulk Fuel Storage Facility and the Old Wastewater Treatment Plant in El Portal. Sugar Pine Bridge will be removed contingent on the results of a separate hydrologic study, which will evaluate the extent to which the bridge affects river flows under existing conditions. If the bridge is determined to exceed a certain threshold, it will be removed. Otherwise, large wood (including large trees with root wads) will be deployed upstream and in the vicinity of the bridge, in order to offset the hydrologic effects of the existing bridge. If the bridge is removed, channel complexity will be substantially improved in Yosemite Valley and thereby lessen existing floodplain effects of other existing bridges. These changes will also support minimization of existing floodplain and flooding effects along the Merced River. If the bridge is not removed, installation of logs and logjams along the Merced River could result in minor increases in flooding in select localized areas; however, such effects are anticipated to be minimal and locally beneficial.

The National Park Service has determined that the following structures must remain within the regulatory floodplain (no practicable alternatives to this action):

Merced River above Nevada Fall—High Sierra Camp

Yosemite Valley—Ahwahnee Row and Tecoya Dorms, Yosemite Lodge facilities and parking areas that are located within the floodplain, Yosemite Chapel, Housekeeping Camp, and campgrounds including North Pines, Backpackers, Lower Pines Yellow Pine Administrative Campground, Lower River Campground, Upper River Campground, Yosemite Chapel, and Yosemite Village Day-use Parking Area

Merced River Gorge and El Portal Watershed—water valve station, El Portal Market building, Nature Bridge buildings, and El Portal gas station

South Fork Merced River— Yosemite Transportation Company office, two cabins, historic jail, utility buildings, Ranger Station, RV/parking, and a bakery building. These facilities are not within areas subject to frequent flooding, and with the early warning system and evacuation plan in use, the risk to human safety will be minimized.

The National Park Service concludes that the Selected Action will reduce the impacts of potentially hazardous conditions associated with flooding in the study area. Implementation of the proposed actions along with compliance with regulations and policies to prevent impacts to floodplain values and loss of property or human life will be strictly adhered to during and after the construction. Individual permits with other federal and cooperating state and local agencies will be obtained prior to construction activities. No long-term adverse impacts will occur from the proposed actions. Therefore, the National Park Service finds the Selected Action to be acceptable under Executive Order 11988 for the protection of floodplains.

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# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office  
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Sacramento, California 95825-1846

In Reply Refer To:  
08ESMF00-2014-F-0299

MAR 24 2014

### Memorandum

To: Park Superintendent, Yosemite National Park, National Park Service, California

From: <sup>65</sup> *[Signature]*  
Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California

Subject: Biological Opinion on the Draft Merced Wild and Scenic River Comprehensive Management Plan and Environmental Impact Statement, Yosemite National Park, and the Threatened Valley Elderberry Longhorn Beetle

This is in response to your January 24, 2013, request for consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Draft Merced Wild and Scenic River Comprehensive Management Plan and Environmental Impact Statement (Plan) in Yosemite National Park, California. At issue are the effects of the proposed action on the threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This document is issued under the authority of the Endangered Species Act of 1973, as amended (16 USC § 1531 *et seq*)(Act).

The Service concurs with the National Park Service's determination that the proposed project may affect, but is not likely to adversely affect the endangered Sierra Nevada Distinct Population Segment of the bighorn sheep (*Ovis canadensis*). This determination was based upon a lack of suitable habitat for this species in the action area.

This biological opinion is based on: (1) *Merced Wild and Scenic River Draft Comprehensive Management Plan and Environmental Impact State Volume 2B: Chapters 9 (continued)-13*, (DEIS) dated January 13, 2013, that was prepared by the National Park Service; (2) *Appendix N Biological Assessment Biological Assessment on the Draft Merced River Plan/EIS* (Biological Assessment) dated November 2012 that was prepared by the National Park Service; and (3) other information available to the Service.

### Consultation History

- January 24, 2013 The Service received the request for formal consultation, Draft Merced River Plan / EIS, and Biological Assessment from the National Park Service.
- March 19, 2014 The Service sent a draft project description to the National Park Service.
- March 20, 2014 The Service received comments on the draft project description from the National Park Service.

## BIOLOGICAL OPINION

### Description of the Proposed Action

The following project description was provided by the National Park Service with minor modifications for reasons of clarity provided by the Service. The Merced River Plan project is a comprehensive plan for the protection of the Merced River within Yosemite National Park and the El Portal Administrative Site. The Plan was prepared by the National Park Service.

The National Park Service is proposing to protect and further restore locally-impacted areas of the Merced River to its natural free-flowing condition and encourage resource-based recreational and educational opportunities along the river corridor. The Plan will contribute to subsequent planning that would manage human crowding through design, relocation, or removal of specific facilities and by setting use limits, dispersing visitor impacts, and establishing other measures to protect river resources. The Plan also proposes to reduce traffic congestion by identifying optimal road locations and facilities, parking areas, turnouts, and other transportation facilities in the river corridor. Some of these functions would be moved to the El Portal Administrative Site in the western boundary of Yosemite National Park.

In El Portal, forty campsites (some with RV hook-ups) would be incorporated into the redesign of the Abbieville/Trailer Village Area, adjacent to the new El Portal remote parking area. All redevelopment would be located outside of the 150-foot riparian buffer. A new remote visitor day-use parking area, accommodating 300 vehicles, would be provided at the Abbieville site. The parking area would support day-use access to Yosemite Valley and be serviced by a Valley shuttle. Employee housing would be added to the El Portal Village Center (12 beds) in Rancheria Flat (130 beds), and in the disturbed footprint of Odger's bulk fuel storage facility after it is removed from the floodplain (18 beds). All new units would be located outside of the 100-year floodplain. These units would be added to replace housing removed from Yosemite Valley.

### *Proposed Conservation Measures*

The National Park Service proposes to avoid and minimize effects to the valley elderberry longhorn beetle by implementing the following measures:

1. All staff and construction personnel involved with the El Portal portion of the Plan will attend a mandatory Worker Environmental Awareness Training Program delivered by a Service-approved biologist prior to working on the project site. The program will focus on the conservation measures that are relevant to employee's personal responsibility and will include an explanation as how to best avoid take of the valley elderberry longhorn beetle. The program will include an explanation of Federal laws protecting these listed species as well as the importance of compliance with this biological opinion. The documentation of the training, including sign-in sheets, will be kept on file and will be available to the Service on request.
2. Staff and construction personnel involved with the El Portal portion of the Plan will be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.
3. A Service-approved biologist(s) will be on-site during any activities that have the potential to adversely affect the valley elderberry longhorn beetle.

4. A Service-approved biologist will be present during all construction-related activities in sensitive habitats. If a valley elderberry longhorn beetle is discovered during these activities, the Service-approved biologist will halt all work within 100 feet of the species and immediately contact the Service to determine how to proceed.
5. Prior to construction at the El Portal portion of the Plan, Environmentally Sensitive Areas will be delineated using high-visibility orange construction fencing installed along the perimeter of the work areas to clearly delineate the extent of the construction area. The specific project plans will show the locations where fencing will be installed. The plans will also define the fencing installation procedure. The project's special provisions package will provide clear language regarding acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within sensitive areas.
6. No more than 20 calendar days prior to any ground disturbance at the El Portal portion of the Plan, pre-construction surveys will be conducted by a Service-approved biologist for the elderberry plants where suitable habitat was identified. These surveys will consist of walking surveys of the project limits and accessible adjacent areas within at least 50 feet of the project limits
7. Vegetation clearing will be limited throughout the El Portal portion of the Plan to the non-nesting season (September 1–January 31) for birds to the extent possible. Vegetation removal work outside this window will be preceded by preconstruction nest clearance surveys.
8. Within the El Portal portion of the Plan, vegetation will be cleared only where necessary and will be cut approximately 4 inches above soil level except in areas that will be excavated for construction. This will allow plants that reproduce vegetatively to resprout after construction. All cleared vegetation will be removed from the project footprint to prevent attracting animals to the project site.
9. Within the El Portal portion of the Plan, all slopes or unpaved areas temporarily disturbed by construction activities will be reseeded with locally collected native grasses and shrubs to stabilize and prevent erosion at least three calendar days prior to a forecasted rain event. The temporarily disturbed areas will be restored to pre-project conditions to the maximum extent practicable. Where disturbance includes the removal of trees, locally collected native species will be replanted.
10. Within the El Portal portion of the Plan, construction access, staging, storage, and parking areas will be located outside of designated Environmentally Sensitive Areas. Access routes and the number and size of staging and work areas will be limited to the minimum necessary to construct the El Portal portion. Routes and boundaries of roadwork will be clearly marked prior to initiating construction or grading.
11. All food and food-related trash items will be enclosed in sealed trash containers and removed completely from the site at the end of each day.
12. The National Park Service will install bio-swales and bio-filtration where appropriate in areas adjacent to habitat of the valley elderberry longhorn beetle to avoid and minimize sediment loading and point source pollutants.

13. Within the El Portal portion of the Plan, stormwater pollution prevention plans (SWPPPs) and erosion control best management practices will be developed and implemented to minimize any wind- or water-related erosion and will be in compliance with the requirements of the Regional Water Quality Control Board. The design staff will include provisions in construction contracts for measures to protect areas containing habitat for the valley elderberry longhorn beetle. Protective measures will include, at a minimum, those listed below.
  - a. No discharge of pollutants from vehicle or equipment cleaning will be allowed into any valley elderberry longhorn beetle habitat, storm drains or water courses.
  - b. Vehicle and equipment fueling and maintenance operations will be at least 50 feet away from valley elderberry longhorn beetle habitat and water courses, except at established commercial gas stations or established vehicle maintenance facilities.
  - c. Concrete waste and water from curing operations will be collected in washouts and will be disposed of and not allowed into valley elderberry longhorn beetle habitat or water courses.
  - d. Spill containment kits will be maintained onsite at all times during construction operations and/or staging or fueling of equipment.
  - e. Dust control measures will include use of water trucks and organic tackifiers to control dust in excavation-and-fill areas, covering temporary access road entrances and exits with rock (rocking), and covering of temporary stockpiles when weather conditions require.
  - f. Silt fences, coir rolls, or straw wattles will be installed along or at the base of slopes during construction to capture sediment.
14. All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils, or solvents, and a Spill Response Plan will be prepared.
15. If requested before, during, or upon completion of groundbreaking and construction activities, the National Park Service will ensure that the Service, California Department of Fish and Wildlife, and/or their designated agents can, immediately and without delay, access and inspect the project site for compliance with the proposed project description, conservation measures, and terms and conditions of the biological opinion, and to evaluate project effects on listed species and their habitat.
16. The following measures are intended to avoid and minimize direct and indirect effects to valley elderberry longhorn beetle.
  - a. The National Park Service will prohibit the use of insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant in the buffer areas or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or more in diameter at ground level.



- b. The National Park Service will implement replacement plantings and associated native plantings as described in Table 1 at a 1.53-acre habitat conservation area located at the Greenmeyer Sand Pit in Yosemite National Park.

Table 1. Minimization ratios based on location, stem diameter of affected elderberry plants at ground level, and presence or absence of exit holes.

Location	Stem Diameter (inches)	Exit Holes Present (No/Yes)	Number of Stems	Elderberry Seedling Ratio	Elderberry Seedling Plantings	Associated Native Plant Ratio	Associated Native Plantings
Non-riparian	1-3	N	33	1:1	33	1:1	33
		Y	11	2:1	22	2:1	22
	3-5	N	8	2:1	16	1:1	8
		Y	5	4:1	20	2:1	10
	> 5	N	10	3:1	30	1:1	10
		Y	8	6:1	48	2:1	16
Riparian	1-3	N	1	2:1	2	1:1	1
		Y	0	4:1	0	2:1	0
	3-5	N	1	3:1	3	1:1	1
		Y	0	6:1	0	2:1	0
	> 5	N	0	4:1	0	1:1	0
		Y	0	8:1	0	2:1	0
<b>Total</b>			<b>77</b>		<b>174</b>		<b>101</b>

- c. 124 elderberry shrubs are located within areas of potential development or management activities in El Portal. These shrubs will be fenced and flagged, when appropriate, to avoid adverse effects during construction activities.

### Action Area

The action area is defined in 50 CFR § 402.02, as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” For the proposed action, the action area includes: (1) all lands associated within the approximately 28,037-acre Merced River corridor within Yosemite National Park and the El Portal Administrative Site, and (2) lands within 100 feet of the El Portal Administrative Site subjected to project-related construction, noise, vibration, runoff, and fugitive dust.

### Analytical Framework for the Jeopardy and Adverse Modification Analysis

#### *Jeopardy Determination*

The following analysis relies on four components to support the jeopardy determination for the valley elderberry longhorn beetle: (1) the *Status of the Species*, which evaluates the species’ range wide condition, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of the species in the action area, the factors responsible for that condition, and the role of the action area in the species’ survival and recovery; (3) the *Effects of the Action*, which determines the direct and indirect effects of the proposed Federal action and the effects of any interrelated or interdependent activities on the species; and (4) *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on the species.

In accordance with the implementing regulations for section 7 and Service policy, the jeopardy determination is made in the following manner: the effects of the proposed Federal action are evaluated in the context of the aggregate effects of all factors that have contributed to the species' current status and, for non-Federal activities in the action area, those actions likely to affect the species in the future, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the species in the wild.

The following analysis places an emphasis on using the range-wide survival and recovery needs of the valley elderberry longhorn beetle and the role of the action area in providing for those needs as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

### **Status of the Species**

Refer to *Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) 5-Year Review: Summary and Evaluation* (Service 2006b) for status and life history information. This document can be downloaded from the world wide web at: [http://ecos.fws.gov/docs/five\\_year\\_review/doc779.pdf](http://ecos.fws.gov/docs/five_year_review/doc779.pdf).

### **Environmental Baseline**

The action area is located within the current range of the valley elderberry longhorn beetle. There are known occurrences of valley elderberry longhorn beetle within the vicinity of the action area (California Department of Fish and Wildlife 2014a, 2014b). The Biological Assessment identified the listed beetle's host plant, 124 elderberry shrubs with stems one inch or greater in diameter at ground level, in the action area as potential habitat. Exit holes made by the animal were found in 11 of these shrubs. Therefore, the Service has determined that the valley elderberry longhorn beetle is reasonably certain to occur within the action area because of the biology and ecology of the animal, and the presence of suitable habitat.

### **Effects of the Proposed Action**

The Plan would affect the valley elderberry longhorn beetle and its habitat during construction of buildings, roads and other facilities in the El Portal area of Yosemite National Park. The Service generally considers when there is an adverse effect to an elderberry shrub with stems 1 inch in diameter or greater at ground level there is a concomitant adverse effect to any valley elderberry longhorn beetles in that shrub. Adverse effects would result in take through directly killing or injuring any valley elderberry longhorn beetles in the shrub, and through harm and harassment resulting from loss of or disturbance to habitat that affects the species' essential life functions

Thirty-seven of the 124 elderberry shrubs that provide suitable habitat for the valley elderberry longhorn beetle within the action area will be directly affected by the Plan when they are removed and transplanted.

The infill in Old El Portal will affect nine elderberry shrubs with stems one inch or greater in diameter at ground level; the development at Rancheria Flat will affect 16 elderberry shrubs with stems one inch or greater in diameter at ground level; and the development at Trailer Village/Abbeville will affect 12 elderberry shrubs with stems one inch or greater in diameter at ground level.

Transplantation of the 37 elderberry shrubs may cause them to die, experience stress, or become unhealthy due to changes in soil, hydrology, microclimate, or associated vegetation. This may reduce their quality as habitat for the valley elderberry longhorn beetle, or impair their production of habitat-quality stems in the future. Eggs, larvae, or pupae of the valley elderberry beetle within or associated with these shrubs could be injured or killed. Branches containing larvae may be cut, broken, or crushed as a result of the transplantation process. The National Park Service proposes to plant 174 elderberry seedlings and 101 associated native plants within 1.53-acres at the Greenemeyer Sand Pit in Yosemite National Park (see Table 1). The proposed preservation of suitable elderberry habitat, along with the plantings of new elderberry seedlings and associated natives will minimize the effects of the permanent loss of and disturbance to the valley elderberry longhorn beetle considered in this biological opinion. The actions described in the Conservation Measures will reduce, but not eliminate, the potential for these effects. However, the Plan will ultimately improve the status of the valley elderberry longhorn beetle in Yosemite National Park because the transplanted elderberry shrubs and the associated plantings will provide protected habitat for the species at the Greenemeyer Sand Pit.

### **Cumulative Effects**

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. We are not aware of any future non-Federal actions.

The average temperature in the United States has risen by approximately 1.5° Fahrenheit since 1895; more than 80% of this increase has occurred since 1980 (International Panel on Climate Change 2001, 2007; Adger *et al.* 2007; Carey 2012; U.S. Global Change Research Program 2013). There is an international scientific consensus that most of the warming observed is the result of human activities (U.S. Global Change Research Program 2013; International Panel on Climate Change 2001, 2007; Adger *et al.* 2007), and that it is due to increasing concentrations of greenhouse gases (carbon dioxide, methane, nitrous oxide, and others) in the global atmosphere from burning fossil fuels and other human activities (Cayan *et al.* 2005; Adger *et al.* 2007). The temperatures in the United States will continue to rise, with the next few decades projected to see another 2°F to 4°F of warming in most areas. The amount of warming by the end of this Century is projected to closely correspond to the cumulative global emissions of greenhouse gases up to that time, ranging from 3°F to 10°F depending upon the level of emissions after the year 2050 (U.S. Global Change Research Program 2013). There are multiple mechanisms by which global warming may push already imperiled species closer or over the edge of extinction. Global warming increases the frequency of extreme weather events, such as heat waves, droughts, and storms (International Panel on Climate Change 2001, 2007; California Climate Action Team 2006; Lenihan *et al.* 2003; Carey 2012; U.S. Global Change Research Program 2013). As the global climate continues to rise, terrestrial habitats are moving northward and upward, but in the near future, range contractions or extinctions of some species are more likely than simple northward or upslope shifts. Since climate change threatens to disrupt annual weather patterns, it will result in a loss of habitats, food, or increased numbers of predators, parasites, and diseases. Ongoing global climate change (Anonymous 2007; Inkley *et al.* 2004; Adger *et al.* 2007; Kanter 2007; U.S. Global Change Research Program 2013) is highly likely to imperil the valley elderberry longhorn beetle, and the resources, including the riparian areas, necessary for its survival.

## Conclusion

After reviewing the current status of the valley elderberry longhorn beetle, the environmental baseline for the action area; the effects of the Merced River Plan Project and the cumulative effects; it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of this listed species. We based this determination on the following: (1) pre-construction surveys will be conducted for the valley elderberry longhorn beetle and its habitat; (2) a Service-approved biologist will monitor all activities for compliance with this biological opinion; and (3) effects to the valley elderberry beetle will be addressed by implementing appropriate conservation measures, including transplantation of affected elderberry shrubs.

## INCIDENTAL TAKE STATEMENT

Section 9(a)(1) of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened fish and wildlife species without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, movement, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including movement, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be implemented by the National Park Service so that they become binding conditions of any grant or permit issued by the National Park Service as appropriate, in order for the exemption in section 7(o)(2) to apply. The National Park Service has a continuing duty to regulate the activity covered by this Incidental Take Statement. If the National Park Service: (1) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document; and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the National Park Service must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

### Amount or Extent of Take

The Service expects that incidental take of the valley elderberry longhorn beetle will be difficult to detect or quantify because the life cycle of the beetle and its small body size make discovery of a dead specimen unlikely, losses may be masked by seasonal fluctuations in numbers or other causes, and the species occurs in habitat that makes them difficult to detect. It is not possible to make an accurate estimate of the number of valley elderberry longhorn beetles that will be harassed, harmed, injured, or killed as a result of construction activities. In instances when take is difficult to detect, the Service often estimates take relative to the number of elderberry stems, 1 inch or greater in diameter, that are lost or degraded as a result of the action. Therefore, the Service estimates that all valley elderberry longhorn beetles inhabiting the 77 stems of 1 inch or

greater in the 37 identified elderberry shrubs in the action area may be harassed, harmed, injured, or killed, as a result of the proposed action.

### **Effect of the Take**

The Service has determined that the level of anticipated take for the valley elderberry longhorn beetle is not likely to jeopardize the continued existence of this species.

### **Reasonable and Prudent Measures**

The following reasonable and prudent measures are necessary and appropriate to minimize the effect of the proposed action on the valley elderberry longhorn beetle. The National Park Service will be responsible for implementation of and compliance with these measures:

1. The National Park Service will minimize the effect of take to the valley elderberry longhorn beetle.

### **Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, the National Park Service shall ensure compliance with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are nondiscretionary.

1. The following *Terms and Condition* implement *Reasonable and Prudent Measure* one (1):
  - a. The National Park Service shall minimize the potential for harm, harassment, or killing of valley elderberry longhorn beetle resulting from project related activities by implementing the conservation measures as described in the Description of the Proposed Action of this Biological Opinion.

### **Reporting Requirements**

The National Park Service shall report to the Service any information about take or suspected take of listed wildlife species. The National Park Service must notify the Service via an e-mail or telephone message within 24 hours of receiving such information. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and photographs of the specific animal. The individual animal shall be preserved, as appropriate, and held in a secure location until instructions are received from the Service regarding the disposition of the specimen or the Service takes custody of the carcass. The Service contacts are the Coast-Forest Division Chief in the Sacramento Fish and Wildlife Office at (916) 414-6600, and the Resident Agent-in-Charge of the Service's Law Enforcement Division at (916) 414-6660.

The National Park Service shall submit a post-construction compliance report prepared by the on-site biologist to the Sacramento Fish and Wildlife Office within sixty (60) calendar days of the date of the completion of the project. This report shall detail (i) dates that construction occurred; (ii) pertinent information concerning the success of the project in meeting compensation and other conservation measures; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on the valley elderberry longhorn beetle, if any; (v) occurrences of incidental take to any listed species, if any; and (vi) other pertinent information.

## CONSERVATION RECOMMENDATIONS

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Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that can be implemented to further the purposes of the Act, such as preservation of endangered species habitat, implementation of recovery actions, or development of information and data bases. The Service requests notification of the implementation of any conservation recommendations in order to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats. We propose the following conservation recommendations:

1. The National Park Service should encourage or require the use of appropriate species of locally collected California native plants in the restoration or enhancement of native species diversity and ecosystem functions at Yosemite National Park.

## REINITIATION--CLOSING STATEMENT

This concludes formal consultation on the Merced River Plan Project. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

If you have any questions regarding this biological opinion for the Merced River Plan Project, please contact Chris Nagano, Senior Scientist of our Endangered Species Program, at the letterhead address or at telephone (916) 414-6600.

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**PROGRAMMATIC AGREEMENT REGARDING  
COMPLIANCE WITH SECTION 106 OF THE NATIONAL  
HISTORIC PRESERVATION ACT FOR THE  
MERCED WILD AND SCENIC RIVER  
COMPREHENSIVE MANAGEMENT PLAN**

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**PROGRAMMATIC AGREEMENT AMONG  
THE NATIONAL PARK SERVICE AT YOSEMITE NATIONAL PARK, THE  
CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND THE  
ADVISORY COUNCIL ON HISTORIC PRESERVATION REGARDING  
COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC  
PRESERVATION ACT FOR THE MERCED WILD AND SCENIC RIVER  
COMPREHENSIVE MANAGEMENT PLAN (MERCED RIVER PLAN)**

**WHEREAS**, 81 miles of the Merced River and South Fork Merced River in Yosemite National Park were designated a National Wild and Scenic River in 1987 under the Wild and Scenic Rivers Act (Public Law 100-149) for possessing “outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values” (16 USA 1271); and

**WHEREAS**, the Wild and Scenic River Act (1968 as amended) requires the development of a Comprehensive Management Plan for Wild and Scenic Rivers, the National Park Service (NPS) has prepared a *Merced Wild and Scenic River Final Comprehensive Management Plan and Environmental Impact Statement* (Final Merced River Plan/EIS) pursuant to the Wild and Scenic Rivers Act and the National Environmental Policy Act (NEPA) (1969 as amended); and

**WHEREAS**, during the next approximately 20 years, NPS plans to carry out the program of management and improvement projects in the Final Merced River Plan/EIS pursuant to the Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271-1287) and the Organic Act (1916) (39 Stat. F35), thereby making the Final Merced River Plan/EIS subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. 470f, and its implementing regulations, 36 CFR § 800; and

**WHEREAS**, the NPS, in accordance with 36 CFR Part 800, has consulted with the State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (ACHP), and traditionally-associated American Indian tribes and groups, and other consulting parties regarding this undertaking; and

**WHEREAS**, this Programmatic Agreement (PA) shall not invalidate previous existing agreements (Exhibit 1); and

**WHEREAS**, the Advisory Council on Historic Preservation has chosen to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

**WHEREAS**, the NPS has consulted with the following traditionally-associated, federally-recognized American Indian tribes that attach religious and cultural significance to historic properties affected by the undertaking: the North Fork Rancheria of Mono Indians of California, the Picayune Rancheria of the Chukchansi Indians, the Bishop Paiute Tribe, the Bridgeport Indian Colony, and the Tuolumne Band of Me-Wuk Indians, and has invited them to sign this PA as concurring parties; and

**WHEREAS**, the NPS has consulted with the following traditionally-associated American Indian groups that attach religious and cultural significance to historic properties affected by the undertaking: the American Indian Council of Mariposa County, Inc. (also known as the Southern Sierra Miwuk Nation), and the Mono Lake Kutzadika<sup>a</sup>, and has invited them to sign this PA as concurring parties; and

**WHEREAS**, pursuant to 36 CFR § 800.2 (c)(5), the National Trust for Historic Preservation and the Historic Bridge Foundation have requested consulting party status, have participated in the consultations,

and the NPS has invited them to sign this (PA) as concurring parties; and

**WHEREAS**, between 2007 (the start of the planning process) and 2013, Yosemite National Park conducted scoping efforts for the Merced River Plan undertaking and has notified the public through *Federal Register* Notices and an extensive public outreach efforts per 36 CFR § 800.8(c).1.iv; and

**WHEREAS**, NPS has determined in consultation with consulting parties, that the program of actions for the undertaking will have a range of effects on historic properties, including adverse effects.

**WHEREAS**, NPS has determined in consultation with traditionally-associated American Indian tribes and groups that certain known actions within the program of undertakings will affect historic properties of religious and cultural significance to tribes and groups, and the NPS will consider tribal views and concerns consistent with NPS management policies, through Government-to-Government consultation and careful review of tribal concerns when making decisions; and

**WHEREAS**, not all consulting parties to this PA agree with the NPS's Selected Action with regard to the demolition of Superintendent's House (Residence 1) and its Garage; however, these parties have participated fully in the consultation process and, by signing this PA, will continue consulting to resolve the adverse effect associated with demolition to ensure that the mitigation measures developed are appropriate to the loss of this historic property; and

**NOW, THEREFORE**, Yosemite National Park, the SHPO, and the ACHP agree that the undertaking shall be implemented in accordance with the following stipulations.

## **PURPOSE OF THIS AGREEMENT**

This programmatic agreement (PA) supplements 36 CFR Part 800 and the 2008 *Programmatic Agreement Among the National Park Service (U.S. Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act* herein referred to as 2008 Nationwide PA and attached as (Exhibit 2). This PA recognizes the extensive consultation to date among the NPS, SHPO, ACHP, traditionally-associated American Indian tribes and groups, and other consulting parties in accordance with 36 CFR, § 800.1 – 5. The extent of adverse effects will require continued consultation to resolve those effects; there are a number of actions that will require future identification, evaluation and assessment of effects of the Merced River Plan undertaking and consultation will continue prior to implementation of those actions. Therefore, this agreement outlines a process for actions which signatory parties have agreed will result in No Historic Properties Affected, No Adverse Effect, or Adverse Effect.

## **APPLICABILITY**

This PA only applies to the Merced River Plan undertaking as described in Section I.V. A. and is not intended to establish a process for all consultation, review, and compliance activities within the Merced River corridor.

The terms in 36 CFR § 800.16 "Definitions" are applicable throughout this PA.

## **I. Responsibilities, Qualifications, and Training**

In addition to 36 CFR § 800.2 and Stipulation I.A of the 2008 Nationwide PA, the following responsibilities of the National Park Service apply to this programmatic agreement:

### **A. Park American Indian Liaison**

The Yosemite National Park (YOSE) American Indian Liaison will serve as the Superintendent's designated representative in government-to-government consultations with tribal groups. The YOSE American Indian Liaison will provide day-to-day staff support for Section 106 consultation with traditionally-associated American Indian tribes and groups and serve as a liaison communicating tribal concerns, suggestions, and recommendations to park subject matter specialists, other NPS offices, and others involved in the implementation of the undertaking.

## **II. Consultation**

In addition to 36 CFR § 800.1 – 6 and Stipulation II.A of the 2008 Nationwide PA, the following consultation provisions apply to this programmatic agreement:

### **A. Participation of traditionally-associated American Indian tribes and groups**

The federal government has a unique legal relationship with American Indian tribes set forth in the Constitution of the United States, treaties, statutes, and court decisions. This relationship is further informed and guided by Executive Orders and NPS agency management policies, which underscore the important relationship that traditionally-associated American Indians have with park lands and resources. The NPS is aware that historic properties of religious and cultural significance to American Indian tribes and groups are located on ancestral lands now encompassed by Yosemite National Park.

Consultations with Indian tribes will be conducted in a sensitive manner, respectful of tribal sovereignty, and recognizing the Government-to-Government relationship between the NPS and tribes. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities.

The NPS has already determined that historic properties with religious and cultural significance to traditionally-associated American Indian tribes and groups within the APE may be adversely affected and the NPS will continue to consult with traditionally-associated American Indian tribes and groups on all project categories throughout the implementation of the MRP.

## **III. Streamlined Review Process**

There are no additional provisions proposed beyond the Streamlined Review process set forth in the 2008 Nationwide PA.

## **IV. Standard Review Process**

In addition to 36 CFR § 800.3 – 6 and Stipulation IV of the 2008 Nationwide PA, the following criteria provisions apply to this programmatic agreement regarding the use of the standard review process:

## **A. Defining the Merced River Plan undertaking and Identifying Consulting Parties**

The Merced River Plan undertaking was presented as Alternative 5: Enhanced Visitor Experience and Essential River Bank Restoration (agency-preferred) in the Final Merced River Plan /EIS which addresses protection and enhancement of river values, visitor use and user capacity management, and land use and development within the river corridor. A substantial portion of these actions are directly related to river value protection and enhancement. Many actions in Merced River Plan undertaking affirm the retention of existing infrastructure (buildings, structures, and sites), visitor and commercial services, and administrative functions that were not evaluated in the Section 106 Report. However, a complete list of actions for Alternative 5 can be found in Appendix K of the Final Merced River Plan/EIS.

Planning for the Merced River Plan undertaking has been carried out in consultation with state, federal, and local agencies; and traditionally-associated American Indian tribes and groups. Consistent with 36 CFR § 800.3(b) and 36 CFR § 800.8, the review process for Section 106 of the National Historic Preservation Act was initially coordinated with the National Environmental Policy Act (NEPA) public participation process on the Draft Merced River Plan/EIS. However, the consulting parties have continued to engage in rigorous Section 106 compliance efforts independent of the NEPA process as described in Appendix J: National Historic Preservation Act Assessment of Effects for the Final Merced River Plan /EIS.

## **B. The Area of Potential Effect (APE)**

The NPS has determined that the Area of Potential Effect (APE) for the Merced River Plan undertaking, in consultation with the consulting parties, as defined in 36 CFR § 800.16(d), as 1.5 miles on each side of the Merced River's ordinary high water mark and includes the entirety of the known archeological and historic districts (Exhibit 3).

Should revision of the APE become necessary to address actions in the Merced River Plan undertaking, NPS shall notify the consulting parties and seek comments on proposed revision(s).

## **C. Assessment of Effects on Historic Properties**

The NPS has determined in consultation with SHPO, ACHP, traditionally-associated American Indian tribes and groups, and other consulting parties that two categories of actions regarding assessment of effects will be guided by this PA for Section 106 compliance during implementation of the Merced River Plan undertaking:

### **I. Category 1 – No Historic Properties Affected or No Adverse Effect**

To evaluate the Merced River Plan undertaking, the NPS used the information on known historic properties to make determinations of effect where possible. As such, numerous actions have adequate information so that the extent of effects is clear and the historic properties affected are known.

Exhibit 4 presents a table of actions in the Merced River Plan undertaking that have been determined, based on known historic properties and clear action descriptions – in consultation with SHPO, ACHP, traditionally-associated American Indian tribes and groups, and other consulting parties – to result in either “No Historic Properties Affected” or “No Adverse Effect” and shall be implemented without further review or consultation with ACHP and SHPO. The NPS and American Indian tribes and groups will continue to collaborate on resources management and



historic preservation activities.

## II. Category 2 – Adverse Effect

Exhibit 5 presents a table of actions in the Merced River Plan undertaking that have been determined, based on known historic properties and clear action descriptions – in consultation with SHPO, ACHP, traditionally-associated American Indian tribes and groups, and other consulting parties – to result in an “Adverse Effect” that cannot be avoided.

Therefore, the NPS would continue consultation with the SHPO, ACHP, traditionally-associated American Indian tribes and groups and other consulting parties (including the public), consistent with 36 CFR § 800.5 to minimize or mitigate adverse effects and shall seek ways to resolve adverse effects through project-specific agreements per 36 CFR § 800.6(b) and(c).

- a. The NPS will initiate consultation for Category 2 project-specific agreements via correspondence from the Park Superintendent to the signatory and concurring parties of this agreement in advance of project implementation.
- b. A description of the adverse effects to historic properties that are associated with the project and a general schedule for project completion will be provided with this initial communication.
- c. The goal of continued consultation on Category 2 actions will be agreement among the consulting parties on the minimization and mitigation measures to be included in the Memorandum of Agreement for each project.

## III. Category 3 Actions–Identification, Evaluation and Assessment of Effects to be Determined

Exhibit 6 presents a table of actions in the Merced River Plan undertaking that have been determined, based on known historic properties and clear action descriptions – in consultation with SHPO, ACHP, traditionally-associated American Indian tribes and groups, and other consulting parties – to necessitate future identification, evaluation and/or assessment of effects determinations will be guided by 36 CFR Part 800 and the 2008 Nationwide PA.

### D. Annual Report and Meeting

The NPS will report annually-regarding the Merced River Plan undertaking to the SHPO, ACHP, traditionally-associated American Indian tribes and groups. The annual report will provide an update on identification, evaluation, assessment of effects determinations, and implementation of actions. If requested by a signatory party, an annual meeting will be scheduled with all consulting parties to discuss the annual report and any other issues of interest regarding the undertaking.

## V. National Historic Landmarks

There are no additional provisions proposed for National Historic Landmarks set forth in 36 CFR § 800.10 and the 2008 Nationwide PA.

## **VI. Inadvertent Discoveries**

The provisions set forth in the 2008 Nationwide PA and 36 CFR 10 (Native American Graves and Repatriation Act) shall be followed, with the following exceptions:

- a. Notification and response will occur within two (2) working days rather than 48 hours
- b. NPS notification to SHPO and traditionally-associated American Indian tribes and groups will include a proposed schedule for assessing eligibility and development of treatment recommendations.

### **A. American Indian Human Remains**

NPS shall ensure that any American Indian burials or American Indian human remains, funerary objects, sacred objects and objects of cultural patrimony discovered during implementation of an undertaking, archeological fieldwork, or other actions, are treated with appropriate respect and according to federal law, including, but not limited to, the Native American Graves Protection and Repatriation Act, Public Law 101-601 (NAGPRA) and its implementing regulations (36 CFR § 10, Native American Graves and Repatriation Act Regulations). Actions described herein do not constitute compliance with provisions of NAGPRA.

If objections are raised by any Indian Tribe regarding treatment of human remains or cultural items as defined under NAGPRA, the objection shall be resolved in accordance with NAGPRA. NPS shall notify the SHPO and the ACHP of any such dispute if so requested by involved tribes.

## **VII. Emergency Actions**

There are no additional provisions proposed for Emergency Actions as set forth 36 CFR § 800.12 or the 2008 Nationwide PA.

## **VIII. Review and Monitoring of PA Implementation**

There are no additional provisions proposed for Review and Monitoring of PA Implementation as set forth in the 2008 Nationwide PA.

## **IX. Subsequent Agreements**

There are no additional provisions proposed for Subsequent Agreements as set forth in the 2008 Nationwide PA.

## **X. Dispute Resolution**

There are no additional provisions proposed for Dispute Resolution as set forth in the 2008 Nationwide PA or 36 CFR §800.6.

## **XI. Termination**

In addition to Stipulation XI of the 2008 Nationwide PA, the following provisions for monitoring and

termination apply to this programmatic agreement:

Any Signatory may terminate this PA by providing thirty (30) day notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event the PA is terminated, the NPS will comply with 36 CFR Part 800 with regard to individual undertakings otherwise covered by this PA.

## **XII. Severability**

There are no additional provisions proposed for Severability as set forth in the 2008 Nationwide PA.

## **XIII. Anti-Deficiency Act Statement**

There are no additional provisions proposed for Anti-Deficiency Act Statement set forth in the 2008 Nationwide PA.

## **XIV. Additional Provisions Unique to this PA**

The following additional provisions apply to this PA.

### **A. Duration of this PA**

The duration of this PA is twenty (20) years from the date of its execution or until the Merced River Plan undertaking is complete, whichever is shorter. Five (5) years after the date of executing this PA, and every five (5) years thereafter for the duration of the PA, NPS shall consult with SHPO, ACHP, and traditionally-associated American Indian tribes, and groups who are consulting parties to review the sufficiency of the PA and consider potential amendments of its terms, as appropriate.

If implementation of the undertaking is not completed by the expiration date of this PA, the NPS shall consult with the Signatories (SHPO and ACHP), to determine if the PA should be allowed to expire or should be extended through amendment. Unless NPS, SHPO, and ACHP agree on an extension, the PA shall automatically terminate 20 years from the date of execution and have no further force or effect.

### **B. Amendments**

Any Signatory may request that this PA be amended, whereupon the Signatories will consult in accordance with 36 CFR § 800.14(b). Where the Signatories cannot agree on executing an amendment, the matter shall be addressed pursuant to Stipulation X, Dispute Resolution. Any amendment agreed upon will be executed in the same manner as the original agreement.

### **C. Hydrological Study for Sugar Pine Bridge**

The Merced River Plan undertaking retains all historic bridges for the immediate future. To address the localized impacts that have been attributed to Sugar Pine Bridge, the NPS will initiate a study to assess the merits of various long-term bridge management strategies. The NPS will consult with the signatory and concurring parties to this agreement with regard to the content and structure of the study, including the development of the criteria for success in mitigating hydrologic impacts and the array of alternative

mitigation techniques to be tested.

## **EXECUTION**

Execution of this PA and implementation of its terms evidences that NPS has afforded the ACHP and SHPO a reasonable opportunity to comment on the undertaking and its effects on historic properties, that NPS has taken into account the effects of the undertaking on historic properties, and has satisfied its responsibilities under Section 106 of the NHPA and applicable implementing regulations for the undertaking.

## **EXHIBITS**

**Exhibit 1:** Existing Programmatic and Cooperative Agreements among the National Park Service and Consulting Parties

**Exhibit 2:** Programmatic Agreement among the National Park Service (U.S. Department of the Interior) the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act

**Exhibit 3:** Map of Area of Potential Effect

**Exhibit 4:** Category 1 – No Historic Properties Affected or No Adverse Effects

**Exhibit 5:** Category 2 – Adverse Effects

**Exhibit 6:** Category 3 – Identification, Evaluation, and Assessment of Effects to be Determined

## SIGNATORIES

National Park Service, Yosemite National Park



Don L. Neubacher, Superintendent

Date:

3/20/14

California State Historic Preservation Officer

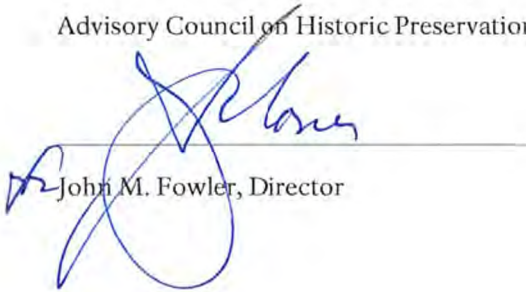


Carol Rowland-Nawi, Ph.D., State Historic Preservation Officer

Date:

3-21-14

Advisory Council on Historic Preservation



John M. Fowler, Director

Date:

3/28/2014

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## CONCURRING PARTIES

American Indian Council of Mariposa County, Inc. (aka Southern Sierra Miwuk Nation)

\_\_\_\_\_  
Lois Martin, Chairperson Date: \_\_\_\_\_

Bishop Paiute Tribe

\_\_\_\_\_  
Dale Delgado Jr., Chair Date: \_\_\_\_\_

Bridgeport Paiute Indian Colony

\_\_\_\_\_  
John Glazier, Chair Date: \_\_\_\_\_

Mono Lake Kutzadika<sup>a</sup>

\_\_\_\_\_  
Charlotte Lange, Chair Date: \_\_\_\_\_

North Fork Rancheria of Mono Indians of California

\_\_\_\_\_  
Elaine Bethel-Frink, Chair Date: \_\_\_\_\_

Picayune Rancheria of the Chukchansi Indians

\_\_\_\_\_  
Reggie Lewis, Chair Date: \_\_\_\_\_

Tuolumne Band of Me-Wuk Indians

\_\_\_\_\_  
Kevin Day, Chair Date: \_\_\_\_\_

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Concurring Parties Continued:

National Trust for Historic Preservation

\_\_\_\_\_  
Anthony Veerkamp, Field Director

Date: \_\_\_\_\_

Historic Bridge Foundation

\_\_\_\_\_  
Kitty Henderson, Executive Director

Date: \_\_\_\_\_

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## **EXHIBIT 1 – EXISTING PROGRAMMATIC AND COOPERATIVE AGREEMENTS AMONG THE NATIONAL PARK SERVICE AND CONSULTING PARTIES**

**This PA shall not be construed to supersede or contravene the provisions of the following:**

1. Programmatic Agreement Between the National Park Service, Yosemite National Park and the California State Historic Preservation Officer Regarding the Ahwahnee Hotel National Historic Landmark Comprehensive Rehabilitation Program (2011)
2. Memorandum of Agreement Between the National Park Service and the California State Historic Preservation Officer Regarding the Curry Village Rock Fall Hazard Zone Mitigation (2011)
3. Programmatic Agreement Among the National Park Service (Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act (2008)
4. Programmatic Agreement Among the National Park Service at Yosemite, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations, and Maintenance, Yosemite National Park (1999) Cooperative agreements to collaborate on resources management and historic preservation activities, including but not limited to the following currently in effect:
  1. Cooperative Agreement Between the National Park Service, Yosemite National Park and the American Indian Council of Mariposa County (also known as the Southern Sierra Miwuk Nation) (2004)
  2. Cooperative Agreement Between the National Park Service, Yosemite National Park and the North Fork Rancheria of Mono Indians (2010)
  3. Cooperative Agreement Between the National Park Service, Yosemite National Park and the Tuolumne Band of Me-Wuk Indians (2006)

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**EXHIBIT 2 – PROGRAMMATIC AGREEMENT AMONG THE NATIONAL  
PARK SERVICE (U.S. DEPARTMENT OF THE INTERIOR) THE ADVISORY  
COUNCIL ON HISTORIC PRESERVATION AND THE NATIONAL  
CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS FOR  
COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC  
PRESERVATION ACT**

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**PROGRAMMATIC AGREEMENT AMONG THE  
NATIONAL PARK SERVICE  
(U.S. DEPARTMENT OF THE INTERIOR),  
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,  
AND THE NATIONAL CONFERENCE OF STATE HISTORIC  
PRESERVATION OFFICERS FOR COMPLIANCE WITH SECTION 106  
OF THE NATIONAL HISTORIC PRESERVATION ACT**

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**PROGRAMMATIC AGREEMENT AMONG THE  
NATIONAL PARK SERVICE  
(U.S. DEPARTMENT OF THE INTERIOR),  
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,  
AND THE NATIONAL CONFERENCE OF STATE HISTORIC  
PRESERVATION OFFICERS FOR COMPLIANCE WITH SECTION 106  
OF THE NATIONAL HISTORIC PRESERVATION ACT**

**WHEREAS**, the National Park Service (NPS) plans for, operates, manages, and administers the National Park System (System) and is responsible for identifying, preserving, maintaining, and interpreting the historic properties of the System unimpaired for the enjoyment of future generations in accordance with the 1916 National Park Service Organic Act, the NPS Management Policies (2006), and applicable NPS Directors Orders; and

**WHEREAS**, the operation, management, and administration of the System entail undertakings that may affect historic properties (as defined in 36 CFR Part 800), which are therefore subject to review under Sections 106, 110(f) and 111(a) of the National Historic Preservation Act as amended (NHPA) (16 USC 470 *et seq.*) and the regulations of the Advisory Council on Historic Preservation (ACHP) (36 CFR Part 800); and

**WHEREAS**, the NPS has established management policies, director's orders, standards, and technical information designed for the identification, evaluation, documentation, and treatment of historic properties consistent with the spirit and intent of the NHPA; and

**WHEREAS**, the NPS has a qualified staff of cultural resource specialists to carry out programs for historic properties; and

**WHEREAS**, the purpose of this Programmatic Agreement (PA) is to establish a program for compliance with Section 106 of the NHPA and set forth a streamlined process when agreed upon criteria are met and procedures are followed; and

**WHEREAS**, signature and implementation of this PA does not invalidate park-, Region-, or project-specific memoranda of agreement (MOA) or programmatic agreements negotiated for Section 106 purposes prior to the effective date of this PA; and

**WHEREAS**, Federally recognized Indian Tribes are recognized by the U.S. government as sovereign nations in treaties and as unique political entities in a government-to-government relationship with the United States; and

**WHEREAS**, the NPS has conducted a series of "listening" meetings with Indian Tribes, has requested the input of a number of Native Advisors in the process of preparing this PA, and has held consultation meetings with Federally recognized Indian Tribes, Native Hawaiian organizations, and other parties on the content of the PA; and

**WHEREAS**, 36 CFR 800.2 (c)(2)(i)(A) and (B) provide for consultation with Indian Tribes on the same basis as the State Historic Preservation Officer (SHPO) when an undertaking will occur on or affect historic properties on tribal lands; and

**WHEREAS**, in accordance with 36 CFR 800.14(b)(2)(iii), a PA shall take effect on tribal lands only when the designated representative of the tribe is a signatory to the agreement; and

**WHEREAS**, for those parks located partly or wholly within tribal lands, the NPS has invited the applicable Tribal Historic Preservation Officer (THPO) or Indian Tribe to sign this PA as an Invited Signatory; and

**WHEREAS**, the NPS has consulted with the NCSHPO and the ACHP regarding ways to ensure that NPS operation, management, and administration of the Parks provide for management of the Parks' historic properties in accordance with the intent of NPS policies, director's orders and Sections 106, 110, 111, and 112 of the NHPA.

**NOW, THEREFORE**, the NPS, the NCSHPO, the ACHP, and the signatory tribes mutually agree that the NPS will carry out its Section 106 responsibilities with respect to operation, management, and administration of the Parks in accordance with the following stipulations.

#### **PURPOSE AND NEED**

NPS park operations, management, and administration require a large number of low-impact or repetitive activities on a daily basis that have the potential to affect properties listed in or determined eligible for the National Register of Historic Places and require consultation under Section 106. This PA provides an efficient process for compliance with Section 106 for daily NPS park operations, management, and administration activities. It establishes two processes for Section 106 review: a "streamlined" review process for designated undertakings that meet established criteria and a "standard" review process for all other undertakings. This PA also provides programmatic procedures and guidance for other activities related to the Section 106 compliance process, including identification of resources, consultation, and planning.

The NPS shall ensure the following measures are implemented.

#### **I. RESPONSIBILITIES, QUALIFICATIONS, AND TRAINING**

The following sections list the responsibilities and required qualifications for those individuals responsible for implementing this PA.

**A. Responsibilities**

1. Director, National Park Service

The Director has policy oversight responsibility for the agency's historic preservation program. The Director, through the Deputy Director for Operations, executes this PA for the NPS and provides policy level oversight within the NPS to ensure that stipulations of the PA are met.

2. Associate Director for Cultural Resources

The Associate Director for Cultural Resources (ADCR) provides national leadership for policy implementation through establishing standards and guidance for managing cultural resources within the Parks. The ADCR works with the NPS regions and parks to ensure and support compliance with the stipulations of this PA and provides accountability to the signatories of this PA with regard to its implementation. The ADCR is responsible for working with Regions and Parks to develop and fund training needs related to Section 106 and the implementation of the PA. The ADCR in cooperation with the regions and parks, is responsible for issuing a guidance document for this agreement within 12 months of its execution. At the time of execution of this PA, the ADCR also holds the title of Federal Preservation Officer (FPO).

3. Regional Directors

The Regional Director is the line manager for all Superintendents within his/her region. The Regional Director is responsible for policy oversight, strategic planning, and direction for parks and programs within the region and reports to the Director through the NPS Deputy Director for Operations. Review and support of Park and Superintendent implementation of this PA and training to achieve Section 106 compliance is the responsibility of the Regional Director.

4. Regional Section 106 Coordinators

The Regional Section 106 Coordinators work with parks and other NPS offices to provide support for Section 106 compliance and implementation of this PA. The Regional Section 106 Coordinators provide guidance materials and technical assistance for implementing the PA and assist the parks to meet the training, reporting, and consultation requirements of the PA.

5. Superintendents

Superintendents are the responsible agency officials as defined in 36 CFR 800.2(a) for purposes of Section 106 compliance and the implementation of this PA.

Each Superintendent shall do the following within his/her park:

- a. Designate a Park Section 106 Coordinator and a Cultural Resource Management (CRM) Team meeting the necessary qualifications;
- b. Develop and maintain relationships with Federally recognized Indian Tribal governments and Native Hawaiian organizations (if applicable);
- c. Develop and maintain relationships with SHPOs/THPOs;
- d. Ensure early coordination among the Section 106 Coordinator, the CRM Team, and other park and regional staff, concessioners, park partners, neighboring communities, groups affiliated with park resources, and others in the planning of projects and activities that may affect historic properties;
- e. Ensure that Section 106 consultation with the SHPO/THPO and other consulting parties is initiated early in the planning stages of any given undertaking, when the widest feasible range of alternatives is available for consideration;
- f. Ensure that the Park Section 106 Coordinator, CRM Team Members and the park cultural resources staff receives the NHPA training needed to carry out their responsibilities. Provide opportunities for other involved staff to receive NHPA training as funding and opportunities permit.

#### 6. Park Section 106 Coordinator

The Park Section 106 coordinator provides day-to-day staff support for Section 106 activities and serves as liaison among park personnel, the NPS Regional Office, NPS Centers, and others involved in undertakings. The coordinator makes recommendations to the Superintendent regarding the appropriate course of action under this PA, including whether a project constitutes a Section 106 undertaking.

#### 7. Cultural Resource Management (CRM) Team

The CRM Team shall provide expertise and technical advice to the Superintendent and the Park Section 106 Coordinator for purposes of Section 106 compliance and implementation of this PA.

### **B. Qualifications**

#### 1. Park Section 106 Coordinator

The Superintendent shall designate at least one (1) person to act as the park's Section 106 Coordinator, whose Section 106 responsibilities are specified, as appropriate. The designee may be chosen from the park staff, other NPS parks, NPS archeological and preservation centers, and the NPS Regional Office. The Park Section 106 Coordinator shall have an appropriate combination of professional training and/or experience to effectively carry out the responsibilities of the position.

## 2. Cultural Resource Management (CRM) Team

The Superintendent shall designate a CRM Team with expertise to fulfill and implement the requirements of this PA, whose Section 106 responsibilities are specified, as appropriate.

- a. Subject matter experts chosen must be appropriate to the resource types found in the park. Therefore, the number of individuals who comprise the CRM Team is not static and will be appropriate to include all necessary disciplines. Multi-disciplinary reviews of proposed undertakings are recommended.
- b. CRM Team members may be on the park staff or in other parks, or from NPS Regional Offices, NPS Centers, Federally recognized Indian Tribes, Native Hawaiian organizations, or elsewhere in the public or private sector.
- c. CRM Team members who are federal employees shall meet the qualifications for the applicable discipline as defined in Appendix E to NPS-28: Cultural Resource Management Guideline. CRM Team members who are representing Federally recognized Indian Tribes may be traditional cultural authorities, elders, and others experienced in the preservation of tribal culture. All other CRM team members, who are not federal employees or representing a Federally recognized Indian Tribe, must meet the Professional Qualification Standards in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

### C. Training

Periodic training on Section 106 compliance issues and the provisions of this PA is needed to maintain an understanding of the requirements of each. Such training may be accessed through the NPS, the ACHP, SHPOs/THPOs, Indian Tribes, Native Hawaiian organizations, other Federal or state agencies or private industry. Training may be in a classroom setting, electronic media, meetings, or other formats that allow for the conveyance of information. The NPS Washington Office, in consultation with the NPS parks, regions, and training centers, will work with the ACHP and NCSHPO to establish options for training in accordance with this PA, within 12 months from the time of execution of this PA.

1. All Superintendents and Section 106 coordinators will be notified of the opportunity to receive training on the provisions of this programmatic agreement once it has been made available by the NPS Washington Office. The NPS ADCR will work with the Regional 106 coordinators to accomplish this training throughout the Regions and parks within 12 months of its availability.
2. Superintendents will report on Section 106 training received by Superintendents and park staff as part of the biennial report (Section VIII.B of this agreement).

## **II. CONSULTATION**

### **A. Consultation with Federally Recognized Indian Tribes and, THPOs, and Native Hawaiian Organizations**

Government-to-government consultation with Federally recognized Indian Tribes and consultation with Native Hawaiian organizations shall occur at the Superintendent level and be initiated during planning and prior to undertaking an activity, program or project that may affect historic properties of significance to Federally recognized Indian tribes or Native Hawaiian organizations. Maintaining an on-going consultative relationship with THPOs and/or staff of Federally recognized Indian Tribes and Native Hawaiian organizations is essential.

#### **1. Consultation on Undertakings off Tribal Lands**

Superintendents shall identify, compile a list of, and consult with Federally recognized Indian Tribes, THPOs and Native Hawaiians that are known to have aboriginal lands within the park boundaries, assert an interest in historic properties within the park boundaries, or have lands or interest in lands adjacent to the park.

- a. Such consultation will be in accordance with 36 CFR 800.2(c)(2)(ii), NPS Director's Order 75A: Public Engagement and Public Involvement, and with Sections III and IV of this PA.
- b. Each Superintendent, with the assistance of park and Regional Office ethnographers, will be responsible for identifying aboriginal lands within the park boundary, working cooperatively with the appropriate Federally recognized Indian Tribes and Native Hawaiian organizations.
- c. Superintendents, in consultation with the Park Section 106 Coordinator and the CRM Team, shall establish a process and develop consultation agreements, where appropriate, that provide for early coordination between the park and Federally recognized Indian tribes, THPOs, and/or Native Hawaiian organizations in identification and evaluation of historic properties and the planning of projects and activities that may affect historic properties.
- d. Identification and evaluation of historic properties on aboriginal lands must be based upon consultation with the appropriate traditionally associated communities.

#### **2. Consultation on Undertakings on Tribal Lands**

For those undertakings that either occur on tribal lands or will otherwise have the potential to affect historic properties on tribal lands, including cumulative impacts from collectively significant actions taking place over a period of time, the Superintendent shall consult with that tribe on the same basis as he or she consults with the SHPO.

- a. Where the Tribe has assumed the SHPO's responsibility for Section 106 pursuant to Section 101(d)(2) of the NHPA, the Superintendent shall consult with the THPO in lieu of the SHPO, except as provided for in Section 101(d)(2)(D)(iii).
- b. Where the Tribe has not assumed the SHPO's responsibility for Section 106, the Superintendent shall consult with the Tribe's designated representatives in addition to and on the same basis as the SHPO. The Tribe shall have the same rights of consultation and concurrence as the SHPO.

3. **Applicability of this PA on Tribal Lands**

When a park is located partly or wholly within the boundaries of tribal lands, and the tribe has not signed this PA as an Invited Signatory, any undertaking that may occur on those tribal lands shall require consultation with the Tribe and/or THPO in accordance with 36 CFR Part 800, and the provisions of this PA are not applicable.

A tribe may sign this PA by written notification to the Director of such intent, signed by the THPO, Indian tribe, or a designated representative of the tribe. Once such a written and signed notification is received by the Director, the provisions of this PA will be applicable to undertakings occurring on those lands where a park is located partly or wholly within the boundaries of that particular tribe's tribal lands.

4. **Development of Agreements to Facilitate Government-to-Government Consultation with Federally recognized Indian Tribes and Consultation with Native Hawaiian Organizations**

Development of consultation protocols, memoranda of agreement and programmatic agreements is encouraged. Such agreements may be negotiated between Superintendents and Federally recognized Indian Tribes, THPOs, or Native Hawaiian organizations and may be independent of or supplement this PA. For example, such agreements may be specific to a project, plan, or park activity, or may set forth specific consultation protocols between the park and a specific tribe or group of Native peoples. Superintendents will provide an informational copy of all agreements to the Regional Section 106 Coordinator and to the ACHP and appropriate SHPO/THPO in accordance with 36 CFR 800.2(c)(2)(ii)(E).

**B. Consultation with SHPOs**

Consultation with SHPOs on projects reviewed in accordance with the Standard Review Process will occur in accordance with the procedures set forth in Section IV of this PA. Consultation with SHPOs on implementation of this PA will occur biennially in accordance with Section VIII of this PA.

**C. Consultation with Local Governments and Applicants for Federal Assistance, Licenses, Permits, and Other Approvals**

Where appropriate, the Superintendent shall actively seek the views and comments of local governments and certified local governments. Those seeking Federal assistance, licenses, permits, or other approvals are entitled to participate as a consulting party as defined in 36 CFR 800.2(c)(4) and will be consulted, as applicable.

**D. Consultation with the Public**

Superintendents will consult with interested members of the public.

**E. General Consultation Provisions**

1. Section 110 Inventory of Historic Properties

The parks implement a program to identify, evaluate, and, when appropriate, nominate historic properties to the National Register of Historic Places in accordance with Section 110(a)(2)(d) of the NHPA. Research and testing of all types of historic properties for purposes of identification and evaluation must be limited to the minimum necessary to obtain the required inventory and evaluative information. Early coordination on the identification and evaluation of historic properties should be undertaken with Federally recognized Indian Tribes or Native Hawaiian organizations, as appropriate, utilizing tribal knowledge and expertise wherever applicable. Knowledge and data from appropriate sources of expertise should be utilized, including SHPOs, local governments, Indian Tribes, Pacific Islanders, and national and local professional and scientific organizations. Inventory records should be periodically reviewed and updated, as necessary, to ensure data on historic properties, including condition information, is current, and any previous evaluations of significance remain accurate.

2. Information Sharing: Historic Property Inventories

Parks, NPS Regional Offices, NPS Centers, and SHPOs will share information with each other regarding inventories of historic properties and historic contexts developed, as well as other reports and research results related to historic properties in the parks, whenever such studies become available. In addition, parks, NPS Regional Offices, and NPS Centers will make such information available to interested Federally recognized Indian Tribes, THPOs, and Native Hawaiian organizations. Federally recognized Indian Tribes who are signatories to this PA will, likewise, make such information available to NPS parks and Regional Offices, as appropriate. Information will be shared with the understanding that sensitive information will be withheld by the recipient of the information from public disclosure pursuant to Section 304 of NHPA and other applicable laws. Procedures for information sharing and format for information (i.e. electronic, hard copy, etc.) should be agreed upon between the parties.



3. Notification of Park Section 106 Coordinator

The National Park Service will provide contact information on Section 106 coordinators to Indian Tribes, SHPOs/THPOs, and Native Hawaiian organizations for each park through the Regional Office from the Regional 106 Coordinator within six months of this PA and updated biennially.

4. Review and comment on guidance and training documents

The ADCR will consult with the ACHP and NCSHPO in the development of training materials and guidance for this PA.

**F. Development of Agreements to Facilitate Consultation**

Development of consultation protocols, memoranda of agreement, and programmatic agreements is encouraged. Such agreements may be negotiated between Superintendents and organizations or governments and may be independent of or supplement this PA. For example, such agreements may be specific to a project, plan, or park activity, or may set forth specific consultation protocols between the park and a specific group, state, or local government. Superintendents will provide an informational copy of all agreements to the Regional Section 106 Coordinator and to the ACHP and appropriate SHPO/THPO in accordance with 36 CFR 800.2(c)(2)(ii)(E).

**III. STREAMLINED REVIEW PROCESS**

Where the Park Section 106 Coordinator determines the following criteria are met for a proposed undertaking, no further consultation is required unless otherwise specifically requested by the SHPO/THPO, Federally recognized Indian Tribe(s) or Native Hawaiian organization(s), or the ACHP.

**A. Criteria for Using the Streamlined Review Process**

All of the following criteria must be met in order to use the Streamlined Review Process:

1. The proposed undertaking must be an activity eligible for streamlined review, listed in Section III.C of this PA. These undertakings shall be known as "streamlined activities" for purposes of reference and replace the term "nationwide programmatic exclusions" set forth in the 1995 Programmatic Agreement between the NPS, the ACHP, and the NCSHPO; and
2. Identification and evaluation of all types of historic properties within the project area of potential effect (APE) must have been previously undertaken, sufficient to assess effects on those resources (with the exception of V.C (16)). Identification and evaluation of historic properties of religious and cultural significance to Indian tribes and Native Hawaiian organizations must be based upon consultation

with those entities. All properties within the APE must have previously been evaluated for eligibility to the National Register of Historic Places and the SHPO/THPO must have concurred with the eligibility determination. Inventory records should be periodically reviewed and updated, as necessary, to ensure data on historic properties, including condition information, is current, and any previous evaluations of significance remain accurate; and

3. The Section 106 Coordinator, in consultation with appropriate members of the CRM Team must have reviewed the project and certified that the effects of the proposed undertaking on historic properties on or eligible for the National Register will *not be adverse* based on criteria in 36 CFR 800.5, including consideration of direct, indirect, and cumulative effects. The Effect Finding must be "No Historic Properties Affected" or "No Adverse Effect".

## **B. Streamlined Review Process**

1. *Evaluate Whether the Proposed Undertaking is Eligible for Streamlined Review:* The Park Section 106 Coordinator, in consultation with appropriate members of the CRM Team, determines whether the proposed undertaking is an activity listed as an undertaking eligible for streamlined review in Section III.C of this PA. If not, compliance for the undertaking must be accomplished through the Standard Review Process, outlined in Section IV of this PA.
2. *Identify the Undertaking's Area of Potential Effect (APE):* The Park Section 106 Coordinator, in consultation with members of the CRM Team with expertise in the appropriate discipline(s), determines the project's APE, taking into account direct, indirect, and cumulative effects.
3. *Identify Historic Properties within APE:* The Park Section 106 Coordinator, in consultation with members of the CRM Team with expertise in the appropriate discipline(s), identifies the location, number, and significance of historic properties within the APE. If properties are located within the APE that have not yet been documented or evaluated for eligibility for the National Register of Historic Places, or if the SHPO/THPO has not yet concurred with the eligibility determination, compliance for the undertaking must be accomplished through the Standard Review Process, outlined in Section IV of this PA.
4. *Evaluate Effect of Undertaking on Historic Properties in APE:* The Park Section 106 Coordinator, in consultation with members of the CRM Team with expertise in the appropriate discipline(s), evaluates the effect of the proposed undertaking and cumulative effects on historic properties, applying the Criteria of Adverse Effect set forth in 36 CFR 800.5(a)(1)
5. *Document Streamlined Review Process:* If, after following steps one through four (1-4) listed above, the Park Section 106 Coordinator determines no historic properties are within the APE, or the proposed undertaking would result in a

determination of “no historic properties affected” or “no adverse effect”, no further consultation is required. The Park Section 106 Coordinator shall document the determination as follows:

- a. The Streamlined Review process will be documented using the NPS “Assessment of Actions Having an Effect on Cultural Resources” form, or another appropriate format. Parks are encouraged to use Servicewide automated project planning and tracking systems, such as the NPS Planning, Environment and Public Comment (PEPC) system, to track and document Section 106 compliance activities.
- b. Documentation will include the comments of each member of the CRM Team involved in the review process and the signature of the Superintendent. Electronic signatures are acceptable.
- c. Documentation will be permanently retained by the Park Section 106 Coordinator for review by consulting parties and to facilitate the preparation of the Annual Report.
- d. Annual Report: An annual report of all undertakings reviewed using the Streamlined Review process will be prepared by the Park Section 106 Coordinator, using existing and readily available data sources and reporting systems such as the NPS Planning, Environment and Public Comment (PEPC) system, for transmittal to the SHPO/THPO.

### **C. Undertakings Eligible for Streamlined Review**

1. **Preservation Maintenance and Repair of Historic Properties:** The Streamlined Review Process is intended to be used for:

- Mitigation of wear and deterioration of a historic property to protect its condition without altering its historic character;
- Repairing when its condition warrants with the least degree of intervention including limited replacement in-kind;
- Replacing an entire feature in-kind when the level of deterioration or damage of materials precludes repair; and
- Stabilization to protect damaged materials or features from additional damage.

Use of the Streamlined Review Process is limited to actions for retaining and preserving, protecting and maintaining, and repairing and replacing in-kind, as necessary, materials and features, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards) and the accompanying guidelines.

Emergency stabilization, including limited replacement of irreparably damaged features or materials and temporary measures that prevent further loss of historic

material or that correct unsafe conditions until permanent repairs can be accomplished, may use the Streamlined Review Process. For archeological sites and cultural landscapes, the Streamlined Review Process may also be used for work to moderate, prevent, or arrest erosion.

If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

The Streamlined Review Process may be used for routine repairs necessary to continue use of a historic property, but it is not intended to apply to situations where there is a change in use or where a series of individual projects cumulatively results in the complete rehabilitation or restoration of a historic property. If an approved treatment plan exists for a given historic property (such as a historic structure report, cultural landscape report, or preservation maintenance plan), the proposed undertaking needs to be in accordance with that plan. This streamlined activity includes the following undertakings, as well as others that are comparable in scope, scale, and impact:

- a. Removal of non-historic debris from an abandoned building.
- b. Cleaning and stabilizing of historic structures, features, fences, stone walls, plaques, and cannons using treatment methods that do not alter or cause damage to historic materials.
- c. Repainting in the same color as existing, or in similar colors or historic colors based upon an approved historic structure report, cultural landscape report, or a historic paint color analysis.
- d. Removal of non-historic, exotic species according to Integrated Pest Management principles when the species threatens cultural landscapes, archeological sites, or historic or prehistoric structures.
- e. Energy improvements limited to insulation in the attic or basement, and installation of weather stripping and caulking.
- f. In-kind repair and replacement of deteriorated pavement, including, but not limited to, asphalt, concrete, masonry unit pavers, brick, and stone on historic roads, paths, trails, parking areas, pullouts, etc.
- g. Repair or limited in-kind replacement of rotting floorboards, roof material, or siding. Limited in-kind replacement refers to the replacement of only those elements of the feature that are too deteriorated to enable repair, consistent with the Standards.
- h. In-kind replacement of existing gutters, broken or missing glass panes, retaining walls, and fences.

2. Rehabilitation and/or Minor Relocation of Existing Trails, Walks, Paths, and Sidewalks: The Streamlined Review Process may be used for undertakings proposed on existing non-historic trails, walks, paths, and/or sidewalks that are

located within previously disturbed areas and do not exceed the depth of the previous disturbance. The Streamlined Review Process may also be used for undertakings proposed on existing historic trails, walks, paths, and/or sidewalks, provided that the proposed undertaking is conducted in accordance with an approved treatment plan (such as a historic structure report, cultural landscape report, or preservation maintenance plan).

If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

This streamlined activity includes the following undertakings, as well as others that are comparable in scope, scale, and impact:

- a. In-kind regrading, graveling, repaving, or other maintenance treatments of all existing trails, walks and paths within existing disturbed alignments.
- b. Minor realignment of trails, walks, and paths where the ground is previously disturbed as determined by a qualified archeologist.
- c. Changing the material or color of existing surfaces using materials that are recommended in an approved treatment plan or in keeping with the cultural landscape.
- d. Construction of water bars following the recommendations of an approved treatment plan or in keeping with the cultural landscape.

3. Repair/Resurfacing/Removal of Existing, Roads, Trails, and Parking Areas:

The Streamlined Review Process may be used as follows:

- a. Existing roads, trails, parking areas, and associated features that have been determined not eligible for the National Register in consultation with the SHPO/THPO, may be repaired or resurfaced in-kind or in similar materials as long as the extent of the project, including staging areas, is contained within the existing surfaced areas. The repair or resurfacing cannot exceed the area of the existing road surface and cannot exceed the depth of existing disturbance.
- b. Existing roads, trails, parking areas, and associated features, that have been determined eligible for the National Register in consultation with the SHPO/THPO, may be repaired or resurfaced in-kind. The project, including staging areas, cannot exceed the area of the existing surface and cannot exceed the depth of existing disturbance.
- c. Existing surfaced areas may be expanded or new surfaces constructed if the extent of new surfacing can be demonstrated to occur on land that has been disturbed by prior excavation or construction and has been shown not to contain buried historic properties. New or expanded surface may not be

an addition to, or continuation of, existing surfaces that are listed in or eligible for the National Register and all project activities, including staging areas, must be located in non-historic areas to be eligible for streamlined review.

- d. Existing surfaced areas may be removed if the surfaced area is not a historic property, it is not located within a historic property and all project activities, including staging areas, will occur on land that has been disturbed by prior excavation or construction and has been shown not to contain buried historic properties.

4. Health and Safety Activities: The Streamlined Review Process may be used for health and safety activities that do not require the removal of original historic elements or alteration of the visual character of the property or area.

If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

This streamlined activity includes the following undertakings, as well as others that are comparable in scope, scale, and impact:

- a. Sampling/testing historic fabric to determine hazardous content, e.g. lead paint, asbestos, radon.
- b. Limited activities to mitigate health and safety problems that can be handled without removal of historic fabric, surface treatments, or features that are character-defining elements, or features within previously disturbed areas or areas inventoried and found not to contain historic properties.
- c. Testing of soil and removal of soil adjacent to buried tanks, provided the project does not exceed the area of existing disturbance and does not exceed the depth of existing disturbance, as determined by a qualified archeologist.
- d. Removal of oil or septic tanks within previously disturbed areas or areas inventoried and found not to contain historic properties.
- e. Removal of HAZMAT materials within previously disturbed areas or areas inventoried and found not to contain historic properties.
- f. Safety activities related to black powder regulations.
- g. Replacement of septic tanks and systems in previously disturbed areas, or areas inventoried and found not to contain historic properties.
- h. Common pesticide treatments.
- i. Removal of both natural and anthropogenic surface debris following volcanic activity, tropical storms, hurricanes, tornados, or similar major weather events, provided removal methods do not include ground disturbance or otherwise cause damage to historic properties.

5. Routine Grounds Maintenance: The Streamlined Review Process may be used for routine grounds maintenance activities. If an approved treatment plan exists for a given historic property (such as a historic structure report, cultural landscape report, or preservation maintenance plan), the proposed undertaking needs to be in accordance with that plan.

If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

This streamlined activity includes the following undertakings, as well as others that are comparable in scope, scale, and impact:

- a. Grass replanting in same locations with approved species.
- b. Woodland and woodlot management (including tree trimming, hazard tree removal, thinning, routine removal of exotic species that are not a significant component of a cultural landscape, stump grinding).
- c. Maintaining existing vegetation on earthworks, trimming trees adjacent to roadways and other historic roads and trails.
- d. Routine maintenance of gardens and vegetation within cultural landscapes with no changes in layout or design.
- e. Routine grass maintenance of cemeteries and tombstones with no tools that will damage the surfaces of stones (i.e. weed whips).
- f. Trimming of major specimen trees needed for tree health or to address critical health/safety conditions.
- g. Routine roadside and trail maintenance and cleanup with no ground disturbance.
- h. Planting of non-invasive plant species in non-historic areas.
- i. Removal of dead and downed vegetation using equipment and methods that do not introduce ground disturbance.
- j. Replacement of dead, downed, overgrown, or hazard trees, shrubs, or other vegetation with specimens of the same species.
- k. Replacement of invasive or exotic landscape plantings with similar non-invasive plants.
- l. Routine lawn mowing, leaf removal, watering, and fertilizing.
- m. Routine orchard maintenance and pruning.

6. Battlefield Preservation and Management: The Streamlined Review Process *may be used only if* the park has approved planning documents (General Management Plan, cultural landscape report, treatment plan) that specify preservation and management protocols for the subject battlefield.

If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

Consistent with that plan(s), activities include:

- a. Maintenance and preservation work limited to retaining, protecting, repairing, and replacing in-kind materials and features that contribute to the National Register significance of the battlefield landscape.
- b. Earthworks maintenance to prevent erosion and ensure preservation of existing profile, based on current and accepted practices identified in "Sustainable Military Earthworks Management" found on the NPS Cultural Landscape Currents website.
- c. Removal of hazard trees with no ground disturbance and with use of stump grinding provided the grinding is limited to the diameter of the stump and a depth of no greater than 6 inches.
- d. Repairing eroded or damaged sections of earthworks in-kind following archeological documentation and recordation in appropriate NPS inventory and management databases resulting in complete, accurate, and reliable records for those properties.
- e. Maintaining a healthy and sustainable vegetative cover.

7. Hazardous Fuel and Fire Management: The Streamlined Review Process *may be used only if* the park has an approved fire management plan or forest management plan.

If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

Following completion of activities under this section, post-burn inspection and monitoring should be conducted by a qualified archeologist to ensure no archeological sites were impacted or previously unknown sites revealed.

Consistent with the approved fire management plan or forest management plan, this streamlined activity includes the following undertakings, as well as others that are comparable in scope, scale, and impact:

- a. Removal of dead and downed vegetation, outside of historic districts, cultural landscapes, and archeological sites, using equipment and methods that do not introduce ground disturbance beyond documented natural or historic disturbance.



- b. Removal of dead and downed vegetation, as well as trees and brush located within historic properties, if the vegetation does not contribute to the significance of the historic property and equipment and methods are used that do not introduce ground disturbance beyond documented natural or historic disturbance.
  - c. Forest management practices, including thinning of tree stands, outside of historic districts, cultural landscapes, and archeological sites, using equipment and methods that do not introduce ground disturbance beyond documented natural or historic disturbance.
  - d. Restoration of existing fire line disturbances, such as hand lines, bulldozer lines, safety areas, helispots, and other operational areas.
  - e. Slope stabilization, to include reseeding with native seeds, replanting with native plants and/or grasses, placement of straw bales, wattles, and felling of dead trees when the root ball is left intact and in situ.
8. Installation of Environmental Monitoring Units: The Streamlined Review Process may be used for the placement of small-scale, temporary or permanent monitoring units, such as weather stations, termite bait stations, water quality, air quality, or wildlife stations, in previously disturbed areas, as determined by a qualified archeologist, or areas inventoried and found not to contain historic properties. Borings must be limited to pipes less than 2 inches in diameter and surface samples to less than 12 inches in size and minimal in number.
9. Maintenance or Replacement of Non-Historic Utility Lines, Transmission Lines, and Fences: If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

This streamlined activity includes the following undertakings, as well as others that are comparable in scope, scale, and impact:

- a. Maintenance or replacement of buried linear infrastructure in previously disturbed areas. The area of previous disturbance must be documented by a qualified archeologist and must coincide with the route of the infrastructure in its entirety.
- b. Replacement of non-historic materials, provided the undertaking will not impact adjacent or nearby historic properties and is not located in a historic property, or visible from an above-ground historic property.
- c. Maintenance or replacement of infrastructure, such as old water distribution systems, that has been determined to be not eligible for the National Register, in consultation with the SHPO/THPO.
- d. Maintenance of above-ground infrastructure.

- e. Replacement of above-ground infrastructure provided the undertaking is not located in a historic property or visible from an above-ground historic property.
- f. Enhancement of a wireless telecommunications facility, including the updating of mechanical equipment, provided the activities do not involve excavation nor any increase to the size of the existing facility.

10. Erection of Signs, Wayside Exhibits, and Memorial Plaques: If an approved treatment plan exists for a given historic property (such as a historic structure report, cultural landscape report, or preservation maintenance plan), the proposed undertaking needs to be in accordance with that plan. If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.

This streamlined activity includes the following undertakings, as well as others that are comparable in scope, scale, and impact:

- a. Replacement of existing signage in the same location with similar style, scale and materials.
- b. New signs that meet NPS standards, e.g. at entrance to the park or related to the park's interpretive mission, provided the sign is not physically attached to a historic building, structure, or object (including trees) and the sign is to be located in previously disturbed areas or areas inventoried and found not to contain historic properties.
- c. Replacement of interpretive messages on existing signs, wayside exhibits, or memorial plaques.
- d. Small developments such as paved pads, benches, and other features for universal access to signs, wayside exhibits, and memorial plaques in previously disturbed areas or areas inventoried and found not to contain historic properties.
- e. Temporary signage for closures, repairs, detours, safety, hazards, etc. in previously disturbed areas or areas inventoried and found not to contain historic properties.
- f. Memorial plaques placed within established zones that allow for such placement.

11. Culvert Replacement: The Streamlined Review Process may be used when culvert replacement will occur within existing cut and fill profiles, and:

- a. The existing culvert and/or associated road, rail bed, or cultural landscape has been determined not eligible for the National Register, either individually or as a contributing element to a historic district or cultural landscape, in consultation with the SHPO/THPO; or

- b. The existing culvert is less than 50 years old.

12. Reburial of Human Remains and Other Cultural Items Subject to the Native American Graves Protection and Repatriation Act (NAGPRA): The Streamlined Review Process may be used for the reburial of human remains and other cultural items subject to NAGPRA. The Streamlined Review Process may only be used when:

- a. The reburial is in previously disturbed areas and does not introduce ground disturbance beyond documented disturbance; or
- b. The reburial is in previously inventoried areas found to not contain historic properties.

Any reburial in NPS-administered areas must be in conformance with NPS policies on cemeteries and burials including cultural resource policies.

13. Meeting Accessibility Standards in Historic Structures and Cultural Landscapes: The Streamlined Review Process may only be used for the following undertakings intended to meet accessibility standards:

- a. Reconstruction or repair of existing wheel chair ramps and sloped walkways provided the undertaking does not exceed the width or depth of the area of previous disturbance.
- b. Upgrading restroom interiors in historic structures within existing room floor area to achieve accessibility, unless the historic features and/or fabric of the restroom contribute to the historic significance of the structure.

14. Mechanical, Electrical and Plumbing Systems: The Streamlined Review Process may be used as follows for activities related to mechanical, electrical, and plumbing systems. Such systems may include HVAC systems, fire detection and suppression systems, surveillance systems, and other required system upgrades to keep park lands and properties functional and protected.

- a. Park areas, landscapes, buildings, and structures that have been determined not eligible for the National Register in consultation with the SHPO/THPO, may undergo installation of new systems or repair/upgrading of existing systems in accordance with the Streamlined Review Process.
- b. Properties that have been determined eligible for the National Register in consultation with the SHPO/THPO may undergo limited upgrading of mechanical, electrical, and plumbing systems. However, the Streamlined Review Process may not be used for the installation of new systems or complete replacement of these systems. If proposed activities include the removal of original historic elements or alter the visual character or the property's character-defining materials, features, and spaces, then the Streamlined Review Process may not be used.

- c. If the project activities include ground disturbance, archeological monitoring may be appropriate throughout the ground disturbing activities, in accordance with any recommendation of the CRM Team. When monitoring is recommended, members of any appropriate Federally recognized Indian Tribes or Native Hawaiian organizations may be invited to participate in monitoring.
15. Acquisition of Lands for Park Purposes: The Streamlined Review Process may be used for the acquisition of land for park purposes, including additions to existing parks. The second criterion for use of the Streamlined Review Process (identification and evaluation of all types of historic properties within the project APE; see Section III.A.2) does not apply to this activity, provided the acquisition does not include any further treatment or alteration of properties, since access to land for inventory and evaluation prior to NPS acquisition may be limited. Any known or potential historic properties on the land acquired should be protected from demolition by neglect. Pursuant to 36 CFR 800.5(a)(2)(vi), demolition by neglect constitutes an adverse effect. If any undertakings are proposed in conjunction with the acquisition that have the potential to affect historic properties, the Streamlined Review Process may not be used.
  16. Leasing of Historic Properties: The Streamlined Review Process may be used provided all treatment of historic properties proposed in relation to the leasing action is consistent with undertakings eligible for Streamlined Review, set forth in Section III.C of this PA. The Streamlined Review Process may not be used where there is a change of use or where a series of individual projects cumulatively results in the complete rehabilitation or restoration of a historic property.

#### **D. Adding to List of Undertakings Eligible for Streamlined Review**

Any proposed additions or revisions to the list of undertakings eligible for streamlined review must be developed through a region-, state- or park-specific Programmatic Agreement and pursuant to 36 CFR 800.14(b). The Regional Director or Superintendent, as appropriate, will develop such agreements with SHPOs/THPOs, in consultation with Federally recognized Indian Tribes and the ACHP or others, as appropriate. If such an agreement is developed by the Superintendent, s/he will notify the Regional Director. Regional Directors will report the development of supplemental, region-, state-, or park-specific programmatic agreements to the Director on an annual basis. The NPS FPO will maintain records on supplemental agreements and provide annual notification of any such agreements to all signatories to this agreement.

#### **IV. STANDARD REVIEW PROCESS**

All undertakings that do not qualify for streamlined review as described in Section III above, will be reviewed in accordance with 36 CFR Part 800. Superintendents are responsible for compliance with these regulations. Compliance may also be accomplished through park- and/or project-specific programmatic agreements. Specific activities required will be undertaken by the

Park Section 106 Coordinator, in consultation with appropriate members of the CRM Team. Parks are encouraged to use Servicewide automated project planning and tracking systems, such as the NPS Planning, Environment and Public Comment (PEPC) system, to track and document Section 106 compliance activities and to make such automated systems accessible to compliance partners, including SHPOs/THPOs, Federally recognized Indian Tribes, Native Hawaiian organizations, and/or the ACHP. If a park executes a MOA or PA with consulting parties to resolve adverse effects, the Superintendent will provide an informational copy of the agreement to the Regional Section 106 Coordinator.

## **V. NATIONAL HISTORIC LANDMARKS**

The NHPA provides heightened protection for designated National Historic Landmarks (NHLs) through Section 110(f) and the NHPA's implementing regulations (36 CFR 800.10). Specifically, the NHPA requires that Federal agencies shall, to the maximum extent possible, undertake planning and actions necessary to minimize harm to any NHL that may be directly and adversely affected by an undertaking.

Where the other criteria as listed in Section III.A are met, proposed undertakings that may affect a designated NHL may follow the Streamlined Review Process. Where preliminary planning activities indicate that a proposed undertaking has the potential to have an adverse effect on an NHL, prior to initiating a formal consultation process, the Superintendent will initiate an internal review process in accordance with NPS Management Policies to determine alternatives to avoid or minimize the adverse effects and to assess the possibility of impairment.

## **VI. INADVERTENT DISCOVERIES**

In the event that historic properties are inadvertently encountered during an undertaking for which review has been previously conducted and completed under Section III or Section IV of this PA, or through other events such as erosion or animal activity, the Superintendent will notify the SHPO/THPO, Federally Recognized Indian Tribe(s), and or Native Hawaiian organization, as appropriate, within 48 hours, or as soon as reasonably possible. The Superintendent in consultation with the Section 106 Coordinator and the appropriate members of the CRM Team, will make reasonable efforts to avoid, minimize, or mitigate adverse effects on those historic properties in consultation with the SHPO/THPO, Federally recognized Indian Tribe (s), and/or Native Hawaiian organization (s), as appropriate. If human remains or other cultural material that may fall under the provisions of NAGPRA are present, the Superintendent will comply with NAGPRA and ARPA. The Superintendent will ensure that any human remains are left in situ, are not exposed, and remain protected while compliance with NAGPRA, ARPA, or other applicable federal, state, and/or local laws and procedures is undertaken.

## **VII. EMERGENCY ACTIONS**

Emergencies are those actions deemed necessary by the Superintendent as an essential and immediate response to a disaster or emergency declared by the President, a tribal government, or the Governor of a State, or another immediate threat to life or property. Emergency actions are only those actions required to resolve the emergency at that time and they are limited to undertakings that will be started within thirty (30) days after the emergency has been declared. Such emergency actions will be consistent with the NPS Environmental Safeguards Plan for All-Hazards Emergencies and any other approved servicewide emergency response plans. The Superintendent will notify the SHPO/THPO within 24 hours of the declared emergency or as soon as conditions permit.

## **VIII. REVIEW AND MONITORING OF PA IMPLEMENTATION**

The purpose of the PA review and monitoring process is to ensure NPS protection of historic properties in its stewardship. This is accomplished through the review of undertakings that were completed during the reporting period, review of programmed undertakings, review of implementation of the PA, and review of completion of training requirements.

### **A. Superintendents Biennial Review and Monitoring Meeting**

In order to foster cooperative relations, each Superintendent will, at a minimum, invite consulting parties to a review meeting every two years (biennial), with the first meeting initiated within six months of the signing of this PA by all parties. If all parties agree that such a meeting is not necessary at that time, the meeting may be waived. However, Superintendents shall remain responsible for initiating biennial meetings in subsequent years. More frequent meetings may be appropriate based on specific park circumstances and therefore an alternative meeting schedule may be established, if mutually agreed upon by the parties.

1. Meetings may be conducted in any mutually agreeable location and/or format, including in- person, video conferencing or teleconferencing.
2. The primary invitees to each park's biennial review and monitoring meeting will include the applicable SHPO/THPO, Federally recognized Indian Tribes, and Native Hawaiian organizations with an interest in that park's properties. Superintendents may also consider inviting other interested parties, including Pacific Islanders, concessioners, lessees, friends groups, historic societies, or gateway communities, as appropriate.
3. Superintendents may instead choose to meet individually with some parties, particularly those that have strong interest in specific historic properties.
4. Attendance and meeting minutes will be recorded and distributed to all invited parties after the conclusion of the meeting.

5. Specific discussion items may include the following:
  - a. Any documentation pursuant to this PA.
  - b. Any inventories of historic properties developed in the previous two years, or opportunities for future inventory and research, as well as other reports and research results related to historic properties.
  - c. Programmed undertakings that are scheduled, or are likely to be scheduled, for the next two fiscal years.
  - d. Provisions of this PA as well as any project- or program-specific Memoranda of Agreement or Programmatic Agreements.
  - e. Training received by park staff during the reporting period and opportunities for cooperative training arrangements.
  - f. Names of and contact information for the Park Section 106 Coordinator and the CRM Team Members.

**B. Superintendents Reporting to NPS Regional Directors**

In order to inform park program review and potential ACHP evaluation of PA implementation, Superintendents will report biennially to Regional Directors on implementation of the PA. The Biennial Report shall include the streamlined review data prescribed in Section III B of this PA, training completed and basic data demonstrating compliance with the provisions of this PA as outlined in the guidance document for this agreement (Section I.A.2). ACHP, SHPOs, or THPOs may request hard copies of biennial reports.

**C. Park Section 106 Program Review by NPS Regional Directors, SHPOs, THPOs, and the ACHP**

1. The Regional Director may, at his/her discretion, initiate a review of a park's implementation of this PA. The ACHP, either at its own discretion, or upon request of a Federally recognized Indian Tribe, SHPO/THPO, or Native Hawaiian organization, may at any time raise with the appropriate Regional Director any programmatic or project matters where they wish the Regional Director to review a Park Superintendent's Section 106 decisions. The Regional Director will consult with the ACHP, and the Regional Director shall provide a written response to the ACHP, and where applicable, the SHPO or THPO, that documents the outcome of the consultation and the resolution. The Regional Director has the option to suspend a park's use of this PA, and subsequently reinstate it as appropriate.
2. Documentation of NPS Section 106 reviews not already provided to SHPOs, THPOs, and the ACHP will be available for review by the ACHP and the appropriate SHPO/THPO upon request. Individual SHPOs/THPOs who wish to review this documentation are responsible for specifying scheduling, frequency, and types of undertakings of concern to them.

#### **D. NPS Regional Directors Reporting to the Director of the NPS**

Regional Directors will report biennially to the Director on implementation of this PA within his/her region. Each Regional Biennial Report will be submitted within six (6) months following receipt of Park Biennial Reports by the Regional Director as required in Section VIII.B of this PA. A hardcopy of the biennial reports will be sent to the ACHP and upon request from a SHPO or THPO.

#### **IX. SUBSEQUENT AGREEMENTS**

A. Upon execution of this PA, Superintendents are encouraged to evaluate their park's programs and discuss with SHPOs/THPOs, Federally recognized Indian Tribes, Native Hawaiian organizations, and/or the ACHP ways to develop supplemental programmatic agreements for park undertakings that would otherwise require numerous individual requests for comments.

B. Development of programmatic agreements specific to a project, plan, or park may be negotiated between Superintendents and SHPOs/THPOs, Federally recognized Indian Tribes, Native Hawaiian organizations, the ACHP, and/or other consulting parties where appropriate, pursuant to 36 CFR 800.14(b), and may be independent of or supplement this PA. Superintendents will provide an informational copy of all agreements to the Regional Section 106 Coordinator.

C. Memoranda of agreement developed to resolve adverse effects for specific projects shall be negotiated between Superintendents and SHPOs/THPOs, Federally recognized Indian Tribes, Native Hawaiian organizations, and/or the ACHP, pursuant to 36 CFR 800.6(c), and shall be independent of this PA. Superintendents will provide an informational copy of all agreements to the Regional Section 106 Coordinator.

#### **X. DISPUTE RESOLUTION**

A. Should disputes arise, the Superintendent, SHPO/THPO, and/or the ACHP will consult with the objecting parties to resolve the objection. All work that is the subject of the dispute will stop until the dispute is resolved in accordance with the procedures in this section. If the dispute cannot be resolved, all documentation relevant to the dispute will be forwarded to the parties named above. If the SHPO/THPO objects to a Park Superintendent's decision, the information will be forwarded to the Regional Director. If the National Park Service objects to the SHPO/THPO's opinion, the information will be forwarded to the ACHP. If the Regional Director cannot resolve a SHPO/THPO objection, the Regional Director will forward to the ACHP relevant documentation not previously furnished to the ACHP and notify the Director of the dispute. Within thirty (30) days after receipt of all pertinent documentation, the ACHP will either:



1. Provide the Regional Director with a recommendation, with an information copy provided to the Director, which the Regional Director will take into account in reaching a final decision regarding the dispute; or
2. Notify the Regional Director that it will comment to the Director pursuant to the provisions of 36 CFR 800.7 and proceed to comment. Any ACHP comment provided in response to such a request will be taken into account by the NPS with reference to the subject of the dispute.

B. In the event the ACHP does not respond within thirty (30) days of receipt of all pertinent documentation, the Regional Director may proceed with his or her recommended resolution.

C. At the request of any individual, agency, or organization, the ACHP may provide the NPS with an advisory opinion regarding the substance of any finding, determination, or decision made in accordance with this PA or regarding the adequacy of the NPS' compliance with Section 106 and this PA.

## **XI. MONITORING AND TERMINATION**

A. The NPS will convene a meeting of the signatories to this PA within two (2) years of execution of the PA and as needed thereafter, to review implementation of the terms of this PA and determine whether revisions or amendments are needed. Meetings may be conducted in any mutually agreeable location and/or format, including in-person, video conferencing, or teleconferencing. If revisions or amendments are needed, the parties will consult in accordance with 36 CFR 800.14.

B. This PA may be amended when such an amendment is agreed to in writing by all signatories. When major revisions are proposed to NPS policies that will affect the manner in which the NPS carries out its Section 106 responsibilities, the signatories shall consult to determine whether an amendment to this PA is needed. Any amendments will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

C. Any party to this PA may terminate it by providing ninety (90) days notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination by any Federally recognized Indian Tribe signatory will be limited to termination of this PA on the tribal lands of the subject tribe. In the event of termination, the NPS will comply with 36 CFR Part 800 with regard to individual undertakings otherwise covered by this PA.

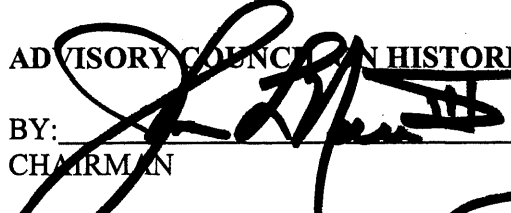
## **XII. SEVERABILITY**

A. If any section, subsection, paragraph, sentence, clause, or phrase in this PA is, for any reason, held to be unconstitutional or invalid or ineffective, such decision shall not affect the validity or effectiveness of the remaining portions of this PA.

B. If any section, subsection, paragraph, sentence, clause, or phrase in this PA is, for any reason, held to be unconstitutional or invalid or ineffective, the signatories shall consult to determine whether an amendment to this PA is needed.

**XIII. ANTI-DEFICIENCY ACT STATEMENT**

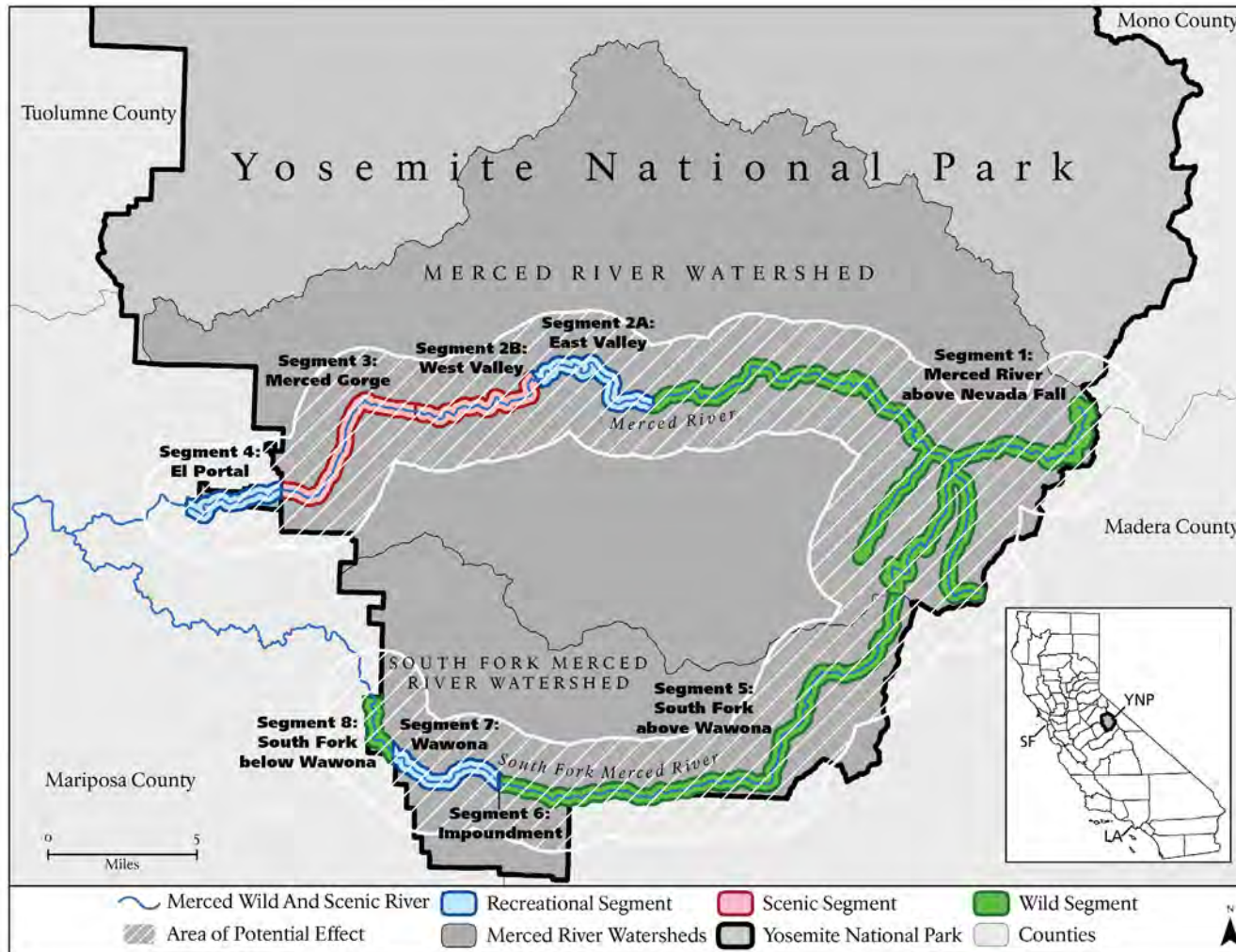
The stipulations of this Agreement are subject to the provisions of the Anti-Deficiency Act (31 U.S.C. 1341 (1998)). If compliance with the Anti-Deficiency Act alters or impairs NPS ability to implement the stipulations of this Agreement, NPS will consult in accordance with the dispute resolution, amendment or termination stipulations as specified in Sections X and XI of this PA.

**ADVISORY COUNCIL ON HISTORIC PRESERVATION**  
BY:  DATE: 11/14/08  
CHAIRMAN

**NATIONAL PARK SERVICE**  
BY: Mary A. Roman DATE: 11/14/08  
DIRECTOR

**NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS**  
BY: Jay D. Vogt DATE: 11-14-2008  
PRESIDENT

EXHIBIT 3 – MAP OF AREA OF POTENTIAL EFFECT



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**EXHIBIT 4 – CATEGORY 1: NO HISTORIC PROPERTIES AFFECTED OR NO ADVERSE EFFECT**

**TABLE 1: CATEGORY 1 ACTIONS – NO HISTORIC PROPERTIES AFFECTED OR NO ADVERSE EFFECT**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
1	Ahwahnee Meadow, Cook’s Meadow; The Ahwahnee Hotel NHL; Valley Loop Trail (CA-MRP-1425H), 1920s	RES-2-069 RES-2-073 RES-2-083 RES-2-157 RES-2-091 RES-2-100 RES-2-144 RES-2-145	Various Scenic Vista Management Actions. (See Appendix H)	Selectively clear foreground to maintain views from inside building and surroundings.	No Adverse Effects to contributing meadow resources because actions are considered to be historic preservation actions designed to improve the condition of these historic views and vistas.
2	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-075 RES-2-081 RES-2-097 RES-2-115 RES-2-118 RES-2-120 RES-2-123 RES-2-130 RES-2-131	Various Scenic Vista Management Actions. (See Appendix H)	Selectively thin conifers (trees up to 60” in diameter) to maintain views from inside buildings.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
3	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-156	Conifer encroachment in meadows	Manually or mechanically remove conifer seedlings and saplings from meadows and black oak communities in Yosemite Valley. Restore low-intensity, high frequency fire as an ecological process. Restore hydrologic processes where possible.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
4	None	NONE	Re-introduce Declining Amphibian and Reptile Species	In accordance with NPS policies, management direction would continue toward removal of non-native species, and re-introduction of extirpated or declining species as priorities and opportunities are developed. Prioritize the study the Western pond turtle and foothill yellow-legged frog.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.

**TABLE 1: CATEGORY 1 ACTIONS – NO HISTORIC PROPERTIES AFFECTED OR NO ADVERSE EFFECT**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
5	Concessioner Stables Office, 1927; Concessioner Horse Stable, 1927; Concessioner Mule Barn, 1926; Concessioner Stables Linen Building, 1927; Concessioner Stables Tack Building, 1927; Concessioner Stables Harness Shop, 1927; Concessioner Stables Blacksmith Shop, 1927; Concessioner Stables Comfort Station, 1927; Concessioner Stables Pony Tack Shed #1, 1926; Concessioner Stables Pony Tack Shed #2, 1926; Concessioner Stables Employee Residence, 1927; Concessioner Stables Employee Cabins, 1927	ONA-2-002	Eliminate commercial day horseback rides from Yosemite Valley Concessioner Stables.	Retain Concessioner Stables in Yosemite Valley to support Merced Lake High Sierra Camp and overflow parking for campgrounds. Eliminate commercial day horseback rides from Yosemite Valley. Kennel service remains. Retain associated housing (25 beds).	No Adverse Effects as this action does not physically affect any historic property.
6	Yosemite Valley Archeological site (CA-MRP-0825H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians	ONA-2-007	Remove 5 sites from within 100 feet of the ordinary high water mark at Lower Pines Campground.	Remove 5 sites from within 100 feet of the ordinary high water mark, including the loop between sites 60-62 that is within the bed and banks of the river. Restore native plant communities.	No Adverse Effect to archeological district due to low-impact ecological restoration in vicinity of archeological site (CA-MRP-0825H). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
7	None	ONA-2-005 ONA-2-016	Construct 72 campsites at Upper and Lower River Campgrounds	Construct 72 campsites (30 walk-in and 10 auto campsites in Lower River Campground, and 30 walk-in sites and 2 group sites in Upper River Campground). The Lower Rivers Amphitheater will be retained, design plan for the Lower River Campground will incorporate a boating access point and commercial raft launch site, limited picnic and day-use parking opportunities will be accommodated, and restoration of the riparian buffer.	The area has been surveyed and no historic properties are identified within or adjacent to the project area. The 2006 Yosemite Valley Historic District NR lists the all campground loop roads and amphitheatres as non-contributing resource that post-date the period of significance.
8	None	REC-2-002	Interpretation of natural river processes	Create an interpretive (nature) walk through Lower Rivers that emphasizes river-related natural processes, the park's ecological restoration work and what visitors can do to protect the river.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.

**TABLE 1: CATEGORY 1 ACTIONS – NO HISTORIC PROPERTIES AFFECTED OR NO ADVERSE EFFECT**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
9	Mist Trail, 1858	REC-2-003	Improve way-finding between Happy Isles and the Mist Trail from the shuttle stop.	Provide appropriate signage and visual cues between the shuttle bus stop at Happy Isles, across the Happy Isles Bridge and to the John Muir Trailhead/Mist Trail.	No Adverse Effect because the nature of the action would not affect the significance of the contributing resource (Mist Trail) as the first valley trail specifically constructed as a scenic route for visitors.
10	None	RES-1-001	Special-status plants affected by trails	Re-route trails out of sensitive habitats such as wetlands. New trail routes should avoid wetlands and special-status habitat.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.
11	Merced Lake Ranger Station (Eligible 2004)	RES-1-002	Establish grazing capacity for the Merced Lake East Meadow near the Merced Lake Ranger Station Meadow.	Develop preliminary grazing capacities for the Merced Lake East Meadow of 58 grazing nights per year. When the meadow recovers, allow administrative grazing at established capacities. Monitor annually for five years, adapting use levels as needed.	No Adverse Effect because the establishing grazing capacities in the Merced Lake East Meadow will have no implications for the Merced Lake Ranger Station as an eligible historic property.
12	Segment 1 archeological site (CA-MRP-0453).	RES-1-003	Remove informal trails and restore the Merced Lake Shore Meadow to natural conditions.	Remove informal trails, decompact soils, fill ruts with native soils, and revegetate denuded areas with native plants.	No Adverse Effect due to low-impact ecological restoration in vicinity or archeological resource (CA-MRP-0453).
13	None	RES-1-005	Triple Fork Peak: trails through meadows	Re-route the trail to upland where possible.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.
14	Bridalveil Meadow	RES-2-010	Restore ephemeral riparian area on western edge of Bridalveil Meadow.	Treat by inserting live willow cuttings into the head cut area, river bank and adjacent meadow. Address head cuts in stream on west edge of meadow by planting willow cuttings in the impacted area, along riverbank, and adjacent meadow. Re-establish the riparian shrub layer. Remove encroaching conifer saplings.	No Adverse Effect to contributing meadow resource as the action of riparian area restoration will not affect the iconic significance of the meadow as an element of Yosemite scenery and will further the historic management of the meadow as a contributing resource.
15	Northside Drive, (1880s); Cook's Meadow; Yosemite Valley archeological sites (CA-MRP-0056/61/196/298/299/300 /301, and CA-MRP-1816); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-011 RES-2-012	Remove abandoned infrastructure and informal shoulder parking on north of Cook's Meadow along Northside Drive.	Remove fill of a former road bed north of Northside Drive between the Rangers' Club and the three-way stop. Revegetate with native meadow species. Remove roadside parking along Cook's meadow and restore to meadow conditions.	No Adverse Effects as the action would not affect either contributing resource (Northside Drive nor Cooks Meadow) as Northside Drive would continue to create a framework of circulation around the Valley, on either side of the Merced River and Cook's Meadow would retain its iconic significance of the meadow as an element of Yosemite scenery. No Adverse Effects to archeological sites (CA-MRP-0056/61/196/298/299/300/301, and CA-MRP-1816) as ground disturbance will be outside of site boundaries within the vicinity of the action. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.

**TABLE 1: CATEGORY 1 ACTIONS – NO HISTORIC PROPERTIES AFFECTED OR NO ADVERSE EFFECT**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
16	Yosemite Valley archeological site (CA-MRP-0825H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-022 RES-2-028	Remove campsites within 100-feet of ordinary highwater mark in Lower Pines and North Pines Campgrounds; establish river access points.	Remove all campsites and infrastructure within 100-foot of ordinary highwater mark. Restore 6.5 acres of riparian habitat. Designate river access point at North Pines campground. Direct visitors of Lower and North Pines campgrounds to resilient sandy beaches through signage and campground maps and brochures. There are four sandy beaches in the vicinity of the campgrounds. Fence off vulnerable steep slope and provide signs directing visitors to current access.	No Adverse Effect to archeological site CA-MRP-0825H due to minimal ground disturbance associated with revegetation or riverbanks, signage and fencing as needed. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
17	El Capitan Bridge; Yosemite Valley archeological site (CA-MRP-0311).	RES-2-026	Redirect visitors accessing the river near El Capitan Bridge to resilient sandbar points.	Redirect visitors accessing the river near El Capitan Bridge to resilient sandbar points. Fence and revegetate eroded areas.	No Adverse Effect to archeological site CA-MRP-0311 as the action will not affect the El Capitan Bridge's contribution to Yosemite Valley circulation. No Adverse Effect to due to minimal ground disturbance associated with revegetation or riverbanks, signage and fencing as needed.
18	None	RES-2-149	Direct visitors to the sandbar at Swinging Bridge. Fence riparian area at Yosemite Lodge.	Direct visitors to the sandbar at Swinging Bridge. Fence riparian area at Yosemite Lodge.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.



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#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
19	Yosemite Valley archeological sites (CA-MRP-0046/47/74, 0052/H, 0055/H, 0057, 0062, 0076, 0080, 0082/H, 0158/309, 0190/19, 0240/303, and 0902/H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians	RES-2-032 RES-2-033 RES-2-034 RES-2-036 RES-2-037 RES-2-038 RES-2-039 RES-2-040 RES-2-041 RES-2-042 RES-2-043	Various Yosemite Valley protection actions for archeological sites (CA-MRP-0046/47/74, 0052/H, 0055/H, 0057, 0062, 0076, 0080, 0082/H, 0158/309, 0190/19, 0240/303, and 0902/H).	<p>CA-MRP-0046/47/74: Re-route stock trail and formal trail off archeological site, remove graffiti from rock art boulder.</p> <p>CA-MRP-0052/H: Reroute bridal path off of archeological site.</p> <p>CA-MRP-0055/H: Remove informal trails that radiate from pullout and remove pull out near archeological site.</p> <p>CA-MRP-0057: Remove graffiti in rock shelter, rehabilitate informal trails. Increase law enforcement/ ranger monitoring of rock shelter.</p> <p>CA-MRP-0062: Remove the logs and graffiti. Ecologically restore the informal trails and relocate the parking area east, away from the site.</p> <p>CA-MRP-0076: Rehabilitate social trails and prohibit climbing on Feature 2.</p> <p>CA-MRP-0080: Remove campsite 208 and bear box; reroute bathroom foot traffic away from milling feature and fence off.</p> <p>CA-MRP-0082/H: Remove climbing bolts from rock shelter boulder. Increase interpretation/education/ outreach effort for climbers. Prohibit climbing at the Rock Shelter Boulder.</p> <p>CA-MRP-0158/309: Rehabilitate informal trails and prohibit climbing on rock art boulder. Increase interpretation/ education/outreach effort for climbers.</p> <p>CA-MRP-0190/19: Delineate trail/bike path to limit shoulder access within site.</p> <p>CA-MRP-0240/303: Fence off/close access to large bedrock mortar (pounding rock) next to trail.</p> <p>CA-MRP-0902/H: Remove informal trails that contribute to archeological site disturbance.</p>	<p>No Adverse Effects to archeological resources due to minimal ground disturbance associated with asphalt removal and restoring areas to natural conditions, removing informal trails and restoring roadside pullouts, removing campsite and bear box, rerouting foot trails, removing climbing bolts, and delineating trails to reduce off-trail travel.</p> <p>NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.</p>
20	Sugar Pine, Ahwahnee Bridge and Stoneman Bridges; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-052	Retain Sugar Pine, Ahwahnee and Stoneman Bridges; address localized hydrologic impacts.	Sugar Pine, Ahwahnee and Stoneman Bridges are retained. If mitigation measures fail to meet defined criteria for success, consideration of bridge removal would involve a public review process and additional environmental compliance. Mitigate effects to localized impacts to hydrological / geological processes through constructed solutions. Place large wood to lessen the scouring from the bridge. Use brush layering and constructed log jams. Add culverts along Northside Drive to improve drainage.	No Adverse Effect to historic bridges due to retention of the contributing resource. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided due to actions associated with addressing localized hydrologic impacts.

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#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
21	None	RES-2-056	Address localized hydrologic impacts of the non-historic Happy Isles footbridge footings (bridge was removed post-1997 flood and abutments retained to protect gauging station that was relocated in 2010).	Remove former footings and the former river gauge base from the bed and banks of the river. Revegetate denuded non-historic informal trails.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.
22	Clark's Bridge, Happy Isles Vehicle Bridge; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-054 RES-2-058 RES-2-059	Address localized hydrologic impacts associated with Clark's Bridge and Happy Isles Vehicle Bridge.	Mitigate effects to localized impacts to hydrological / geological processes through constructed solutions. Place large wood to lessen the scouring from the bridge. Use brush layering and constructed log jams.	No Adverse Effects to historic bridges due to retention of the contributing resources. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
23	El Portal archeological sites (CA-MRP-0250/H and 0251/H)	RES-4-003 RES-4-004	Various El Portal protection actions for archeological sites (CA-MRP-0250/H and 0251/H)	Remove non-historic informal trails and non-essential roads	No Adverse Effects to archeological resources due to minimal ground disturbance associated with removal of informal trails and non-essential roads.
24	None	RES-4-005	Restore the Greenemeyer sand pit to natural conditions	Restore the Greenemeyer sand pit to natural conditions; remove fill material and recontour. Retain road for river and utility access.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.
25	None	RES-4-006	Develop standards for revetment construction and repair through the El Portal Administrative Site and provide Caltrans with recommendations.	Develop standards for revetment construction and repair throughout the river corridor. Vertical walls should be used wherever possible. Provide Caltrans with recommendations when repair/replacement is necessary in Segment 4.	The area has been surveyed and no historic properties are identified within or adjacent to the project area.

**TABLE 1: CATEGORY 1 ACTIONS – NO HISTORIC PROPERTIES AFFECTED OR NO ADVERSE EFFECT**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
26	Wawona archeological sites (CA-MRP-0374, 0008/H, 0168/0329/H, 173/372/H, 0171/172/254/516/H)	RES-7-001 RES-7-002 RES-7-003 RES-7-010 RES-7-012	Various Wawona protection actions for archeological sites (CA-MRP-0374, 0008/H, 0168/0329/H, 173/372/H, 0171/172/254/516/H)	<p>CA-MRP-0374: Rehabilitate social trail and delineate access road.</p> <p>CA-MRP-0008/H: Remove non-historic informal trails. Relocate camp sites out of archeological site. Also, relocate the campground to the Wawona Maintenance Yard.</p> <p>CA-MRP-0168/0329/H: Remove 7 campsites from Wawona Campground that cause potential impacts to the archeological site.</p> <p>CA-MRP-173/372/H: Develop site management plan. Remove shoulder and off-road parking. Limit facility and concessioner off -road vehicle travel/parking on hotel grounds.</p> <p>CA-MRP-0171/172/254/516/H: Remove non-historic informal trails and shoulder and off-road parking.</p>	No Adverse Effects to archeological resources due to minimal ground disturbance associated with delineating trails and access roads, relocation and/or removal of campsites, development of site management plans, and removal of roadside pullouts.
27	Stoneman, Ahwahnee, Cook’s. Leidig, Slaughterhouse, El Capitan, and Bridalveil Meadows; Yosemite Valley archeological sites (CA-MRP-56/61/196/298/299/300/301/1816/H, 749, 77/H, 748/765/H, 1751H, 310, 1746H, 1196H, 305/H, 750H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians	RES-AS-002	Restore 6 miles of non-historic informal trails to natural conditions in Yosemite Valley.	Restore 6 miles of non-historic informal trails in Stoneman, Ahwahnee, Cook’s. Leidig, Slaughterhouse, El Capitan, and Bridalveil Meadows and other areas adjacent to South and Northside Drives. Remove non-historic informal trails by decompacting soils and filling ruts with native soils. Revegetate areas of denuded vegetation with appropriate native plants.	No Adverse Effect to archeological resources due to minimal ground disturbance within the vicinity of sites resulting from filling ruts, decompacting soil, and planting native vegetation. No Adverse Effects to contributing meadow resources as they would retain their iconic significance as elements of Yosemite scenery. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
28	Northside Drive (1880s); El Capitan Meadow	RES-2-009	Remove informal trails through El Capitan Meadow and restore to natural conditions; formalize access points and viewing areas.	Remove all informal trails from the meadow that incise, promote habitat fragmentation, or are located in sensitive and frequently inundated areas, and restore to natural condition. Use restoration fencing along northern perimeter of meadow and formalize appropriate access points and viewing areas.	No Adverse Effects to either contributing resource (Northside Drive and El Capitan Meadow) as Northside Drive would continue to create a framework of circulation around the Valley, on either side of the Merced River and El Capitan Meadow would retain its iconic significance of the meadow as an element of Yosemite scenery.

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#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
29	Leidig Meadow; Yosemite Valley archeological site (CA-MRP-1771H) Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-013 RES-2-015	Remove informal trails through Leidig Meadow and replace section of bike path.	Remove informal trails that incise meadow, and areas of wet and/or sensitive vegetation which fragment meadow habitat. Restore native meadow vegetation. Replace paved section of trail within the bed and banks of the river.	No Adverse Effect to contributing meadow resource as it would retain iconic significance as elements of Yosemite scenery. No Adverse Effect to archeological site (CA-MRP-1771H) due to minimal ground disturbance in the vicinity of the contributing resource. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
30	Sentinel Meadow	RES-2-018	Formalize access in Sentinel Meadow to the west of existing boardwalk area.	Formalize access to the west of the existing boardwalk to accommodate use and reduce meadow trampling.	No Adverse Effect to contributing meadow resource as it would retain iconic significance as elements of Yosemite scenery.
31	Sentinel Meadow, Sentinel Bridge Traverse Road;	TRAN-2-013	Remove roadside parking along Sentinel Drive and restore to natural conditions.	Remove roadside parking along Sentinel Drive and restore to natural conditions.	No Adverse Effects to either contributing resource (Sentinel Meadow and Sentinel Bridge Traverse Road) as the Sentinel Bridge Traverse Road (Sentinel Drive) would continue to contribute to a framework of circulation around the Valley, on either side of the Merced River and Sentinel Meadow would retain its iconic significance of the meadow as an element of Yosemite scenery.
32	Stoneman Meadow	RES-2-153	Expand fenced area to protect Stoneman Meadow near Lower Pines Campground	Slightly expand fenced area to protect wetlands on north end of meadow near Lower Pines Campground. Remove invasive non-native species and encroaching conifers. Remove ditch, fill with native soils and revegetate.	No Adverse Effect to contributing meadow resource as it would retain iconic significance as elements of Yosemite scenery.
33	El Capitan Meadow	TRAN-2-018	Construct formal El Capitan Meadow Shuttle Bus Stop	Construct a formal Shuttle bus stop in a location appropriate to the design for the restoration of the meadow and formalized access.	No Adverse Effect to contributing meadow resource as it would retain iconic significance as elements of Yosemite scenery.
34	None	TRAN-2-019	Repurpose the Yosemite Village Sports Shop and remove the Arts and Activities Center (Bank Building).	Repurpose the non-historic Village Sport Shop for visitor orientation services (eliminate the existing commercial service); remove the Arts and Activities Center (Bank Building) and restore to natural conditions. Create pathways leading from Yosemite Village Day-use Parking Area to the Village Sport Shop building.	The 2006 Yosemite Valley Historic District NR lists the Bank Building and Village Store as non-contributing resource that post-date the period of significance.
35	None	TRAN-2-015	Remediate the Curry Village dump at the Wilderness parking lot and formalize parking and provide for proper drainage.	Remediate the Curry Village dump at the Wilderness parking lot and formalize parking and provide for proper drainage. Wilderness-related parking area is a former dump site that was not designed as a formal parking area. It is not delineated and undersized for demand.	The area has been surveyed and no historic properties are identified within or adjacent to the project area; archeological site CA-MRP-1541H was determined to be ineligible.

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#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
36	Valley Loop Trail (CA-MRP-1425H); Yosemite Valley archeological site CA-MRP-0048.	RES-2-143	Remove 3,800 feet of pack stock trail proximate to the riverbank between the Concessioner Stables and Happy Isles.	Remove 3,800 feet of pack stock trail proximate to the riverbank. Remove residual asphalt and other fill material with an excavator and skid steer, decompact hardened surfaces, recontour surfaces and plant riparian vegetation where needed. Also, re-route stock use north along the road where they meet up on the Valley Loop Trail.	No Adverse Effect to the Valley Loop Trail due to the elimination neither of a non-historic trail segment nor to archeological site CA-MRP-0048 due to minimal ground disturbance from asphalt removal and restoring the area to natural conditions.
37	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians	ONA-2-008	Remove 14 sites from within 100 feet of the ordinary high water mark and restore native plant communities at North Pines Campground.	Remove 14 sites from within 100 feet of the ordinary high water mark and restore native plant communities. Campsites in North Pines campground receive periodic flooding and are located in close proximity to the river.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
38	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians	RES-2-016	Remove tiles, pipes and abandoned road in Royal Arches Meadow and restore to natural conditions.	Remove tiles, pipes and abandoned road. Decompact soils, remove conifers and revegetate with riparian species. Royal Arches Meadow contains tiles and pipes that cause meadow dewatering. A former road bed remains between the meadow and Tenaya Creek, impacting hydrology and vegetation; the adjacent riparian area contains thick conifer sapling cover.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
39	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians	RES-2-019	Restore 20 acres of floodplains at the portion of Lower Pines campground.	Restore 20 acres of floodplains at the portion of Lower Pines campground that was closed after the 1997-flood. Historically a floodplain/ meadow/riparian complex, the area has retained impacts of development including compacted soils, fill material over native soils, and invasive plant infestations.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
40	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians	RES-2-045	Restore traditionally used plant populations.	Threats to traditionally used plant populations include invasive species such as Himalayan Blackberry ( <i>Rubus discolor</i> ), drainage and hydrology impacts to meadows, encroachment of conifers in black oak habitat, and erosion and revetments that affect riparian vegetation.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
41	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-027 RES-2-060	Redesign Yosemite Valley Swinging Bridge Picnic Area and formalize access to river.	Delineate picnic area by fencing and revegetating the river terrace along the riparian zone approximately 50 feet from the ordinary high water mark. . Redesign the picnic area in its current location to better accommodate visitor use levels at this picnic area; formalize vehicle access and parking; designate formal river access. Use fencing to re-direct use across the bridge to the large sandbar on the north and downstream side of Swinging Bridge and designate the area as the river access point. Remove riprap and use bioengineering techniques to rebuild riverbank. Reestablish riparian vegetation	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.

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#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
42	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-050	Remove the former Bridalveil Sewer Plant including piping on both sides of the river; restore to natural conditions.	Remove the buried structure, including piping on both sides of the river, and add fill if needed. Cover with native topsoil and revegetate with native plants. Lasting impacts from the former Bridalveil sewer plant are still evident. Remaining underground infrastructure affects hydrology and fill material precludes recruitment of desirable native plants in black oak community, affecting the ethnographic ORV.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
43	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-061	Enhance channel complexity in the river reach upstream of the El Capitan moraine to the Sentinel picnic area	To enhance channel complexity in the river reach upstream of the El Capitan moraine to the Sentinel picnic area, localized restoration would include willow planting, brush layering, uninhibited accumulation and strategic placement of large wood.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
44	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-062	Place eight constructed log jams in the river channel between Clark's and Sentinel Bridges to address river widening and low channel complexity.	Place eight constructed log jams in the river channel between Clark's and Sentinel Bridges to address river widening and low channel complexity. Log jams would be designed to look natural, without straight-cut edges and with root wads remaining. Incorporate brush-layering and re-vegetation to repair localized riverbank erosion.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
45	El Portal Road (Eligible 1997)	RES-2-065	Formalize roadside parking and river access points between Pohono Bridge and Big Oak Flat Road/El Portal Road intersection.	Pave and formalize 5 roadside pull-outs for river access between Pohono Bridge and the intersection of the Big Oak Flat Road. Install curbing along pull-outs and along El Portal Road to prevent further encroachment towards the river and associated resource damage. Completely remove one pull-out that is not protective of resources. In the areas that require ecological restoration following parking and river access formalization, decompact soil and revegetate with riparian species, including willow. Install drainage improvements and head walls at 11 locations.	No Adverse Effect to the El Portal Road as the contributing resource would still continue to hold the route, appearance, and compatibility with the landscape that attests to its visual and historic significance.

**EXHIBIT 5 – CATEGORY 2: ADVERSE EFFECT**

**TABLE 2: CATEGORY 2 ACTIONS – ADVERSE EFFECT**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
1	Merced Lake High Sierra Camp (22 tents for guest and employee housing) (not evaluated); Segment 1 archeological site (CA-MRP-0453) (not evaluated)	ONA-1-003	Remove 11 of 22 Merced Lake High Sierra Camp canvas tents.	Retain the Merced Lake High Sierra Camp, removing 11 of the 22 historic canvas tents for a capacity of 42 beds. Replace the flush toilets with composting toilet. Retain tent pads in situ of those 11 canvas tents that are removed and retain the configuration of the remaining 11 historic canvas tents (possibly remove every other tent to maintain the “u” shape of the camp).	Adverse effect due to removal of 11 historic tent cabins. Identification, evaluation, and assessment of effect to be determined for archeological resources (CA-MRP-0453) that may result from ground disturbance.
2	Concessioner Headquarters Building, (1937-1939); Curry Garage (Concessioner Garage)(1920); Yosemite Valley archeological site complex (CA-MRP-56/61/196/298/299/300/301/1816/H); Yosemite Valley Group Utility Building (1935); and Yosemite Valley Utility Area Equipment Sheds (buildings 516, 518, and 519).	FAC-2-001 FAC-2-002 FAC-013	Removal of Concessioner Headquarters Building and relocate function to Concessioner Warehouse outside of river corridor. Removal of Concessioner Garage; relocation of function to Yosemite Valley Group Utility Building and NPS Maintenance Area.	The Concessioner Headquarters Building is demolished. Essential functions in-filled into the mezzanine of the existing Concessioner Maintenance and Warehouse Building behind Valley Visitor Center. The concessioner garage service is relocated to the Yosemite Valley Group Utility Building, outside of the river corridor. The building is demolished, and the Yosemite Village Day-Use Parking Area parking is expanded into the previous footprint. Visitor vehicle services are expanded in El Portal and Wawona service stations. Construct a new NPS maintenance building within the maintenance area.	Adverse effect due to demolition of contributing resources. Assessment of effects to be determined for archeological district that may result from major ground disturbance in vicinity of archeological sites (CA-MRP-56/61/196/298/299/300/301/1816/H site complex) and historic districts due to construction of new building and retrofit of contributing resource. The 2006 Yosemite Valley Historic District NR lists the Concessioner Warehouse as a non-contributing resource that post-dates the period of significance.
3	Northside Drive (1880s); Sentinel Bridge Traverse Road; Yosemite Valley archeological sites (CA-MRP-1816).	TRAN-2-001 TRAN-2-020	Redesign of the Yosemite Village Day-use Parking Area, re-routing Northside Drive south of parking area.	Re-route Northside Drive to the south of the Yosemite Village Day-use Parking Area and construct a traffic circle at Northside Drive/Village Drive to address traffic congestion and pedestrian/vehicle conflicts. Consolidate parking to the north of the road and provide walkways leading to Yosemite Village separating vehicle and pedestrian traffic. Add a three-way intersection at Sentinel Drive and the entrance to the parking area to improve traffic flow and alleviate congestion. All redevelopment will be 150 feet away from the ordinary highwater mark.	Adverse effects to Northside Drive and Sentinel Drives due to re-routing, changing location of intersections and construction of round-about. Assessment of effects to be determined for archeological district that may result from ground disturbance within the vicinity of archeological sites (CA-MRP-1816).
4	Yosemite Valley archeological site complex (CA-MRP-0056/61/196/298/299/300/301/1816/H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	FAC-2-017	Replace Lost Arrow Temporary Employee Housing with permanent dormitory.	Replace temporary employee housing facilities with permanent housing facilities for 87 additional beds.	Adverse effect to scientific data potential that may result from new construction within boundary of archeological site (CA-MRP-56/61/196/298/299/300/301/1816/H site complex). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.

**TABLE 2: CATEGORY 2 ACTIONS – ADVERSE EFFECT**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
5	Superintendent’s House (Residence 1) (1911/1929) and Garage; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	FAC-2-018 RES-2-150	Remove Superintendent’s House (Residence 1) and Garage and restore area to natural conditions.	Superintendent’s House (Residence 1) and Garage is removed from its current location, either by demolition or relocation. The area is restored to natural conditions.	Adverse effect due to demolition or relocation of a contributing resource. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
6	73 Camp Curry Employee Canvas Cabins (Boys Town Tent Cabins); Curry Orchard Parking Area; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	ONA-2-021 TRAN-2-007	Remove 23 historic canvas tent cabins and construct 52 cabin with-bath units in Boys Town. Redesign and formalized the Curry Orchard parking area to accommodate 415 parking spaces.	Total would be 482 guest units, including: 301 tents in Curry Village retained; at Boys Town retain 50 historic canvas tent cabins and 14 non-historic hard-sided cabins-without-bath; construct 52 new with bath cabins (within existing development footprint at Boys Town); 18 units at Stoneman House retained; and 47 cabin-with-bath units in Curry Village retained. The Curry Orchard Parking area would be formalized to have 415 parking spaces.	Adverse effect due to removal of 23 contributing resources. Assessment of effect to be determined for new development within the Camp Curry and Yosemite Valley Historic Districts. Assessment of effects to be determined for historic district that may result from redesign of the orchard parking area. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
7	Gauging Station at Pohono Bridge (1916)	RES-2-057	Remove the Pohono Bridge gauging station out of the ordinary highwater mark and relocate north of the river.	Move the gauging station north of the river outside of the bed and banks of the river. Revegetate denuded areas. The antiquated gauging station infrastructure within the bed and banks of the river is unnecessary with current technology and can be removed.	Adverse effect due to removal of a contributing resource
8	Merced Canyon Travel Corridor (CCC camp)	RES-3-001	Remove abandoned infrastructure at the Cascades picnic area	Remove abandoned infrastructure including cement block, surface concrete and asphalt and imported rock.	Adverse effect due to substantial ecological restoration and removal of contributor resources.
9	Wawona archeological sites (CA-MRP-168/329/H, 1366/H, 0007, 1365H, P-22-296, 331, 810, 171/172/254/516/H, 217/H, and CA-MRP-645).	RES-7-006 RES-7-007	Construct pump station and utility corridor connecting the Wawona Campground to the Wawona Wastewater Treatment Plant. Relocation of RV dump station from Wawona Store area to Wawona Campground.	Develop a waste water collection system. Build a pump station above the Wawona Campground to connect the facility to the existing waste water treatment plant. Relocate the RV dump station, currently located near the Wawona Store Area to the Wawona Campground. Design and construct RV dump station near the campground entrance.	Adverse effect to scientific data potential due to trenching within the boundaries and within the vicinity of archeological sites (CA-MRP-168/329/H, 1366/H, 0007, 1365H, P-22-296, 331, 810, 171/172/254/516/H, 217/H, and CA-MRP-645).



**EXHIBIT 6 – CATEGORY 3: IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
1	Identified but not yet evaluated Housekeeping Camp; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	FAC-2-004	Housekeeping Camp: Lodging	Remove 34 lodging units within the ordinary high water mark. Retain a total of 232 lodging units.	Identification, evaluation, and assessment of effects to be determined to historic district and camp itself that may be caused by the removal of lodging units. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
2	Camp Curry Bike Shop/Skate Rental Building; Yosemite Valley archeological site (P-22-002878);	FAC-2-011 REC-AS-001 FAC-2-016	Relocation of Curry Ice Rink, bike and raft rentals outside of the river corridor. Redesign the area to accommodate 189 parking spaces. Relocate temporary non-historic employee canvas tents to Lost Arrow Dormitory and El Portal.	Relocate ice rink, bike rentals and raft rental facilities outside the river corridor. Retain a total of 10 non-historic employee tent cabins and the historic Huff House; remove all remaining non-historic tent cabins. Expand the existing associated parking area to accommodate 189 parking spaces in the location of the existing ice rink.	Assessment of effects to be determined for historic districts upon design of expanded parking area and for ground disturbance in vicinity of archeological site (P-22-002878). The 2006 Yosemite Valley Historic District NR lists the Ice Rink, 3 ice rink support sheds and ice rink parking lot as non-contributing resources that post-date the period of significance.
3	Identified but not yet evaluated Yosemite Lodge	FAC-2-012	Remove, relocate, or repurpose facilities at the Yosemite Lodge	Yosemite Lodge maintenance and housekeeping are relocated. Removed temporary employee housing to be replaced with new housing. Remove the NPS Volunteer Office (former Wellness Center), and post office. Yosemite Lodge employee housing (Thousands Cabins) and Highland Court employee housing are removed. The convenience shop and nature shop are re-purposed. The Yosemite Lodge Food Court and pool are retained. Yosemite Lodge maintenance and housekeeping are relocated. Bike rentals are relocated outside of river corridor.	Identification, evaluation, and assessment of effect to be determined for districts that may result from the removal, relocation, and or repurposing of buildings and changes in services at the Yosemite Lodge motel complex.
4	El Portal archeological site (CA-MRP-0360/1582/H).	FAC-4-002 RES-4-008 TRAN-4-001	Redesign of Abbieville/Trailer Village to accommodate 300 spaces for visitor parking and 40 RV-sites; restoration within 150-feet of the ordinary highwater mark.	Remove or relocate 36 existing private residences. 40 RV campsites, some with hook-ups will be incorporated into the re-design of the Abbieville/Trailer Village area; develop El Portal Remote Visitor Parking Area to provide 300 spaces of visitor parking serviced by regional transit. Remove development, asphalt and imported fill; recontour and plant native riparian species and oaks within the 150-foot riparian buffer.	Identification, evaluation and assessment of effect to be determined to archeological district that may result from removed or relocated residences and new development within the vicinity of archeological sites (CA-MRP-0360/1582/H).

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
5	El Portal archeological site (CA-MRP-1038); Identified but not yet evaluated Yosemite Valley Railroad Residences	FAC-4-003	Infill Employee Housing in Old El Portal and El Portal Village Center	Construct 12 employee beds in old El Portal and 18 employee beds in El Portal Village Center to facilitate removal of temporary housing in Yosemite Valley.	Assessment of effects to be determined for archeological district that may result from ground disturbance in the vicinity of archeological site (CA-MRP-1038); Identification, evaluation, and assessment of effects to be determined for 3 Yosemite Valley Railroad Residences and Old El Portal Residential Area that may result from new construction
6	El Portal archeological sites (CA-MRP-181/H, 182/H, 382/H, 1524, 1544H, and 2123); Rancheria Flat Mission 66-Era Housing (historic district); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	FAC-4-004	Infill Employee Housing in Rancheria Flat	Rancheria Flat Employee Housing: To replace temporary housing that will be removed from Yosemite Valley, construct a combination of single-family homes and high-density dormitory units—away from sensitive resources—for a total of 130 additional employee beds.	Identification, evaluation, and assessment of effects to be determined to for Rancheria Flat Mission 66-era Housing that may result from new construction; Assessment of effects to be determined for archeological district that may result from new construction and ground disturbance within vicinity or archeological sites (CA-MRP-181/H, 182/H, 382/H, 1524, 1544H, and 2123). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
7	Identified but not yet evaluated Standard Oil Bulk Fuel Operation	FAC-4-005	Remove of Odger's Bulk Fuel Storage Facility from the floodplain	Remove bulk fuel storage facility, all associated development, and non-native fill from the floodplain. Decompact soils, and plant appropriate native plant species, including valley oak. Relocate the fuel storage area outside the Merced River corridor or find an alternate source for emergency fuel supplies.	Identification, evaluation, and assessment of effects to be determined for Standard Oil Bulk Fuel Operation that may be caused from removal of infrastructure and associated buildings.
8	Wawona archeological site (CA-MRP-008/H).	FAC-7-001	Construct a new Wawona Wildland Fire Station within the existing NPS Maintenance Area	Construct a 4,300-square-foot building and grounds maintenance facility, a 6,500-square-foot combined structural and wildland fire station, and a 4,000-square-foot roads maintenance facility.	Assessment of effect to be determined archeological site (CA-MRP-008/H) that may result from ground disturbance and new construction within the vicinity of archeological resources.
9	Identified but not yet evaluated Civilian Conservation Corps structures.	FAC-7-004	Remove Civilian Conservation Corps structures.	Remove Civilian Conservation Corps structures. Establish a riparian buffer within 150-feet of the ordinary highwater mark. Remove staged materials, abandoned utilities, vehicles, and parking lot within the riparian buffer and restore a native ecosystem.	Identification, evaluation, and assessment of effects to be determined for CCC-era buildings that may result from demolition or removal;
10	Wawona archeological site (CA-MRP-173/327/H).	FAC-7-002 RES-7-009	Expand Wawona Store Picnic Area, improve/expand public restroom facilities, and formalize river access	Increase the number of picnic benches to accommodate more picnicking near the store. Harden the three steep river access points using rockwork or staircase construction to prevent further erosion. If needed, place fencing to direct visitors to these hardened access points. Add path to river that encourages visitors to walk in the more resilient areas. Replace the existing public restroom facilities next to the Wawona Store with larger restrooms.	Assessment of effect to be determined for archeological resources that may result from formalization of visitor use areas within the vicinity of archeological site (CA-MRP-173/327/H).

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
11	Wawona archeological site (CA-MRP-0008)	FAC-7-005	Relocate the Wawona Stock Campground at least 150-feet from the ordinary highwater mark; location to be determined.	The Wawona stock use campground (2 sites) is relocated to another area near the Wawona Maintenance Yard.	Assessment of effect to be determined to archeological district that may result from relocation of stock campground within the vicinity of archeological site (CA-MRP-0008).
12	Yosemite Valley archeological sites (CA-MRP-0190/191, 0053/H, 289); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	ONA-2-001 ONA-2-012	Remove and relocate 15 walk-in sites within 100-feet of Tenaya Creek at Backpackers Campground;	Retain 10 walk-in sites and remove 15 walk-in sites within the 100-foot riparian buffer. Partially replace removed sites with 16 walk-in sites at Backpackers Campground Western Expansion.	Assessment of effect to be determined for archeological district that may result from restoration activities and relocation of campsites in the vicinity of archeological sites (CA-MRP-0190/191, 0053/H, 289). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
13	Yosemite Valley archeological site (CA-MRP-0059); Camp 4 Historic Site; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	ONA-2-004	Expand the Camp 4 Campground Eastward by adding 35 new walk-in campsites	Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4.	Assessment of effect to be determined for archeological district that may result from construction of new campsites within vicinity of archeological site (CA-MRP-0059). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
14	Yosemite Valley archeological site (CA-MRP-0015); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	ONA-2-010 ONA-2-011	Upper Pines Campground: Additional campsites	Construct additional loop for recreational vehicles (36 RV campsites) and an additional walk-in camping area (49 individual and 2 group campsites).	Assessment of effects to be determined for historic and archeological districts that may result from construction of new facilities and buildings within boundaries historic district and vicinity of archeological site (CA-MRP-0015). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
15	Wawona Campground (identified but not yet evaluated); Wawona archeological sites (CA-MRP-168/329/H, CA-MRP-1366/H, CA-MRP-7, and CA-MRP-1365H, and P-22-296).	ONA-7-001	Remove 13 sites at Wawona Campground within 100 feet of the river or in culturally sensitive areas.	Retains 83 sites and one group site. Remove 13 sites that are either within 100-feet of the river or in culturally sensitive areas.	Identification, evaluation, and assessment of effect to be determined to campground that may result from changes in circulation and spatial organization. No adverse to archeological resources due to reduction in visitor use and low-impact ecological restoration within boundaries of archeological sites (CA-MRP-168/329/H, CA-MRP-1366/H, CA-MRP-7, and CA-MRP-1365H, and P-22-296)..

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
16	Bridalveil Fall Trail, Three Bridalveil Fall Trail Bridges No. 1-3 (1913);	REC-2-001	Bridalveil Fall Area Redesign	Redesign Bridalveil Fall Area to improve the visitor experience, reduce congestion, and accessibility.	Assessment of effect to be determined to historic district that may result from changes in circulation or spatial organization of the Bridalveil Fall Area.
17	Wawona archeological sites (CA-MRP-0375 and 0206)	REC-7-001	Wawona Swinging Bridge area	Provide access on the south side of the river on public land, delineating a trail and formal access that includes restrooms, waste disposal, and parking.	Assessment of effect to be determined to archeological district that may result from ground disturbance in the vicinity of archeological sites (CA-MRP-0375 and 0206).
18	Identified but not yet evaluated Segment 1 archeological site (CA-MRP-1426); Mist Trail	RES-1-004	Trail improvements to address special status plants	Relocate sections of a trail through wetland in Echo Valley and mineral spring outlet between Merced Lake and Washburn Lake to less sensitive areas. Harden the trail along the wet sections of the Mist Trail to avoid trail widening. Prevent the John Muir Trail from widening.	Evaluation and assessment of effect to be determined for archeological district that may result from trail relocation and formalization in the vicinity of archeological site (CA-MRP-1426). No adverse effects to Mist Trail or John Muir Trail because formalization would not affect alignment or resources associated with the trail.
19	Ahwahnee Meadow, The Ahwahnee Hotel Tennis Courts, Northside Drive; Yosemite Valley archeological site (CA-MRP-0292/293H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-003 RES-2-004 RES-2-151	Ahwahnee Meadow Restoration Actions	Restore the impacted portion of Ahwahnee Meadow to natural meadow conditions, while allowing special functions, such as weddings to continue on the lawn. Remove the tennis courts from the black oak woodland. Restore topography by removing abandoned irrigation lines and fill, filling in ditches, and revegetating with native meadow vegetation. Reconnect currently disjunctive portions of Ahwahnee Meadow by removing conifers to return approximately 5.7 acres to meadow habitat. In the section of trail that passes through meadow and wet areas, remove fill. Improve hydrologic connectivity of meadow by increasing the number of culverts under Northside Drive.	Identification, evaluation, and assessment of effect to be determined to archeological district that may result from substantial ecological restoration in the vicinity of archeological site (CA-MRP-0292/293H). Adverse effect to historic district due to removal of tennis courts. No Adverse Effect to Northside Drive due to the addition of culverts. Assessment of effects to be determined for Ahwahnee Meadow that may result from substantial and low-impact restoration. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
20	Valley Loop Trail (CA-MRP-1425H); Slaughterhouse Meadow; Bridalveil Meadow; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-005	Formalize access through sensitive wet meadow habitat in Slaughterhouse Meadow.	Formalize access through sensitive wet meadow habitat in Slaughterhouse Meadow. Move 780 feet of the trail that runs through Bridalveil Meadow to the toe of the fill slope of Southside Drive.	Assessment of effects to be determined for historic and archeological districts that may result from relocation of section of contributing Valley Loop Trail through contributing meadow. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
21	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-007	Yosemite Village: Indian Creek Ahwahnee Row and Tecoya Housing	Create a buffer zone for Indian Creek by pulling parking and residential yard use back 50 feet. Restore native riparian vegetation and protect with restoration fencing.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
22	Stoneman Meadow; Curry Orchard Parking Area; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-008	Stoneman Meadow and Curry Orchard parking lot: road through meadow and parking lot	The Orchard Parking Lot would be re-designed and engineering solutions applied to promote water flow and improve meadow health to increase drainage from the cliff walls to Stoneman Meadow. Remove apple trees and replace with native vegetation.	No adverse effect to Stoneman Meadow due to low impact ecological restoration designed to improve the historic setting of the contributing meadow. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
23	Valley Loop Trail (CA-MRP-1425H); and Yosemite Valley archeological site (CA-MRP-0068H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-014 RES-2-025	Eagle Creek/Rocky Point Sewage Plant: abandoned infrastructure and drainage channelization	Remove abandoned infrastructure from vicinity of Eagle Creek Meadow and restore 3.5 acres of meadow habitat. Remove berm and parking lot abutting Eagle Creek. Add culverts to allow more dispersed water delivery to the Eagle Creek Meadow. Revegetate with native upland species.	No adverse effect to historic district due to low-impact ecological restoration. Assessment of effects to be determined for archeological district that may result from substantial ecological restoration in vicinity of archeological site (CA-MRP-0068H). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
24	Valley Loop Trail (CA-MRP-1425H); Yosemite Valley archeological site (CA-MRP-0310)	RES-2-020	Devil's Elbow: riverbank erosion	Relocate parking from Devil's Elbow to the east of the current parking lot, and delineate a trail to access the large sandbar to the east of the "elbow," river right. Remove informal trail and restore to meadow conditions (designated with river access signs).	Assessment of effects to be determined for districts and archeological site CA-MRP-0310 that may result from relocation of parking and formalization of river access points.
25	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-023	Housekeeping Camp: riparian restoration and river access	Remove 34 lodging units to restore 1 acre of riparian zone. Provide for day use arriving via shuttle. Focus visitor use and river access on the two resilient beach locations on the western edge of Housekeeping Camp and across the footbridge. Fence off current eastern river access point located on a steep eroded bank, and actively restore riverbank with brush layering. Where infrastructure is removed, decompact soils and plant riparian species.	Identification, evaluation, and assessment of Housekeeping Camp Historic District that may result from removal of buildings and changes to associated circulation/spatial organization of Housekeeping Camp and substantial ecological restoration. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
26	Slaughterhouse Meadow, Valley Loop Trail (CA-MRP-1425H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-029	Valley Loop Trail: delineation and river access	Reconstruct trail and designate river access along Valley Loop Trail at Housekeeping Camp, Sentinel Beach, Cathedral Beach, Swinging Bridge, in the southwest area of the former River's Campground, and South of Slaughterhouse Meadow. Re-establish the historic Valley Loop Trail at Curry Village where it ends.	Assessment of effects to be determined for historic district and resources of cultural and/or religious significance that may result from substantial ecological restoration in vicinity of historic village site and reconstruction of sections of the historic Valley Loop Trail. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
27	Identified but not yet evaluated Yosemite Lodge; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-030	Restoration of former lodge cabin area and volunteer center abandoned infrastructure at Yosemite Lodge	Restore 4.5 acres of riparian ecosystem at the site of the former Yosemite Lodge units and cabins and wellness center, from the western portion of the Lodge complex (those that were lost after the 1997 flood). Remove fill, decompact soils and plant riparian plant species.	Identification, evaluation, and assessment of effects to be determined for Yosemite Lodge and historic district that may result from substantial ecological restoration and changes to setting, circulation, and spatial organization. The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
28	Identified but not yet evaluated Yosemite Valley archeological site (CA-MRP-0070H, 1196); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-145	Formalize parking and river access at the Cathedral Beach Picnic Area	Designate area as a formal river access point, fence off sensitive areas, direct use to more resilient areas, and reestablish impacted native riparian vegetation. Remove parking in the riparian zone, decompact soils, plant appropriate vegetation and delineate river access. Remove infrastructure (toilets, parking and picnic tables) in the 10-year floodplain, decompact soils, plant appropriate vegetation and delineate river access.	Assessment of effects to be determined for historic district, scientific data potential that may result from substantial restoration in vicinity of archeological resources (CA-MRP-0070H, 1196). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
29	Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-154	Restoration of former Pine and Oak Building Areas at Yosemite Lodge	Restore 10.9 acres of riparian ecosystem at the site of the former Yosemite Lodge units and cabins (those that were damaged by the 1997 flood and subsequently removed). Delineate one service road to the well house and parking. Remove fill, decompact soils and plant riparian plant species.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
30	El Portal archeological sites (CA-MRP-0179/180/H; CA-MRP-0006, 2030/H, 1749H, 0178, 1583H, 1038/H, 1581/H).	RES-4-002	Restore community of valley oaks in Old El Portal	Restore the community of valley oaks in Old El Portal through invasive species removal, overwatering, tree pruning, and prohibiting grading and parking in the drip line. Create a valley oak recruitment area of 1 acre in Old El Portal. Decompact soils, plant appropriate native understory plant species, and treat invasive plants.	Assessment of effects to be determined for archeological district that may result from substantial restoration in the vicinity of archeological sites (CA-MRP-0179/180/H; CA-MRP-0006, 2030/H, 1749H, 0178, 1583H, 1038/H, 1581/H).

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
31	El Portal archeological site (CA-MRP-0183H).	RES-4-007	Pave the existing dirt parking area located across Foresta Road from the NPS Warehouse Building	Pave the existing dirt parking area located across Foresta Road from the NPS Warehouse Building, maximizing parking within the existing footprint. Restore the informal roadside parking, which is southeast of the dirt parking area, between Foresta Road and the Merced River.	Assessment of effects to be determined for archeological district that may result from restoration and formalization of parking in the vicinity of archeological resources (CA-MRP-0183H).
32	El Portal archeological site (CA-MRP-0181/H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-4-049	Develop plan of action to address the Obsolete Wastewater Treatment Plant in Rancheria Flat with traditionally-associated American Indian tribes and groups	In recognition of the high cultural significance of CA-MRP-0181/H for traditionally-associated American Indians, the site will be protected from any further development. A plan of action for addressing the abandoned infrastructure on the site will be developed in consultation with traditionally-associated American Indian tribes and groups. Any solution(s) developed will also include a recommended approach for deterring visitor use within the site.	Assessment of effects to be determined for archeological district that may result from ground disturbances within the boundaries of archeological site (CA-MRP-0181/H). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
33	Identified but not yet evaluated Wawona Road	RES-7-008	Delineate South Fork Wawona Picnic Area and formalize river access	Delineate picnic area. Add formal river access point and path to river that encourages visitors to walk in the more resilient areas.	Identification, evaluation, and assessment of effects to be determined for Wawona Road that may result from introduction of new development.
34	Yosemite Valley archeological sites (CA-MRP-902/H, 45/326, 825/H, 519, 290, 79/H, 750H, 1771H, 1735H, 311, 187, 1745/H, and 73).	RES-AS-007 RES-AS-009	Revetments: Project Level & Programmatic	3,400 feet of riprap will be removed and revegetated with riparian species where needed. An additional 2,300 feet will be removed but replaced with bioconstructed riverbank stabilization (see map for precise locations). Remove riprap where possible to restore natural river processes. Replace riprap with native riparian vegetation, using bioengineering techniques if riverbank stabilization is still necessary for infrastructure protection.	Identification, evaluation, and assessment of effects to be determined for archeological district that may result from substantial and low-impact ecological restoration in the vicinity of archeological sites (CA-MRP-902/H, 45/326, 825/H, 519, 290, 79/H, 750H, 1771H, 1735H, 311, 187, 1745/H, and 73).
35	Yosemite Valley archeological sites (CA-MRP-0240/303/H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	TRAN-2-005	Yosemite Lodge: pedestrian / vehicle conflicts on Northside Drive	A tiered NEPA / NHPA compliance effort (EA/Section 106 Determination) will evaluate a range of alternatives to address the pedestrian / vehicle conflicts on Northside Drive between the Yosemite Lodge Area and the Lower Yosemite Fall Area. The final preferred alternative will include design guidelines to ensure that archeological impacts are avoided or minimized; the alignment of the crossing keeps pedestrians on the pathways and reduces the temptation to cross the road on-grade; the safety of pedestrians is maximized; and visual impacts are minimized.	Identification, evaluation and assessment of effects to be determined for district and Yosemite Lodge that may result from addressing the pedestrian / vehicle conflicts within the vicinity of archeological resources (CA-MRP-0240/303/H). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
36	Identified but not yet evaluated Yosemite Lodge; Yosemite Valley archeological sites (CA-MRP-0305H and CA-MRP-0748/765/H); Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	TRAN-2-008	West of Yosemite Lodge: Yosemite Lodge Parking Area	Yosemite Lodge Day-use Parking Area re-developed to provide additional 300 day-use parking spaces. This parking area will also accommodate 22 tour buses.	Identification, evaluation, and assessment of effects to be determined for historic district and Yosemite Lodge that may result from redevelopment and ground disturbance within and in vicinity of archeological sites (CA-MRP-0305H and CA-MRP-0748/765/H). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.

**TABLE 3: CATEGORY 3 ACTIONS – IDENTIFICATION, EVALUATION AND/OR ASSESSMENT OF EFFECT TO BE DETERMINED**

#	Historic Property	Action code	Project Name	Project Description	Assessment of Direct, Indirect, and Cumulative Adverse Effects
37	The Ahwahnee Hotel NHL; Yosemite Valley archeological sites (CA-MRP-292/293, CA-MRP-291/751).	TRAN-2-014	The Ahwahnee Hotel: Parking	Re-design and formalize the existing parking lot; providing for proper drainage. Construct new 50 parking space lot east of the current parking. Follow <i>The Ahwahnee Hotel Historic Structures Report</i> (2011) and <i>The Ahwahnee Hotel Cultural Landscape Report</i> (2011) recommendations to the greatest extent possible for parking lot configuration and gatehouse restoration.	Assessment of effects to be determined for NHL that may result from possible changes in circulation and setting of the parking lot as a contributing resource. Assessment of effects to be determined for archeological district that may result from ground disturbance in the vicinity of archeological sites (CA-MRP-292/293, CA-MRP-291/751).
38	Camp 4 Historic Site; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	TRAN-2-016 TRAN-2-017	Camp 4 Campground: Expanded parking and shuttle bus stop	Establish a new 41-space parking lot for Camp 4 campground on Northside Drive. Construct a shuttle bus stop near Camp 4.	The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.
39	Wawona Road (not yet evaluated for National Register eligibility); Wawona archeological site (CA-MRP-0173/327)	TRAN-7-001 TRAN-7-002	Wawona Store/Gas Station Area: Parking and Bus loading/unloading area	Roadside parking between store and Chilnualna Falls Road removed. Day use parking remains, Mariposa Grove primary parking outside corridor, all shuttles remain, formalize parking for eight tour buses at Wawona Store. Re-design bus stop (for tour buses and shuttles) to accommodate visitor use.	Identification, evaluation and assessment of effects to be determined for Wawona Road that may result from redesigned parking area and bus stop. Assessment of effects to be determined for archeological site (CA-MRP-0173/327) that may result from ground disturbance.
40	Bridalveil Meadow, Bridalveil Fall Trail and Bridges, Valley Loop Trail (CA-MRP-1425H), Sentinel Meadow, Cooks Meadow, Yosemite Lodge; Happy Isles Bridge); Yosemite Valley Archeological District; Identified but not yet evaluated historic properties with religious and cultural significance to American Indians.	RES-2-068 RES-2-070 RES-2-071 RES-2-072 RES-2-076 RES-2-078 RES-2-079 RES-2-080 RES-2-082 RES-2-084 RES-2-086 RES-2-088 RES-2-092 RES-2-093 RES-2-094 RES-2-098 RES-2-099 RES-2-102 RES-2-104 RES-2-116 RES-2-117 RES-2-119 RES-2-121 RES-2-125 RES-2-128 RES-2-139 RES-2-141 RES-2-142	Various Scenic Vista Management Actions (See Appendix H)	Selectively clear foreground to maintain views.	Assessment of effects to be determined to the historic and archeological districts that may result from removal of large diameter trees (change is setting or within vicinity of archeological resources). The NPS and American Indian tribes and groups will continue to collaborate on resources management and historic preservation activities guided by existing cooperative agreements to ensure that adverse effects to historic properties with traditional religious and cultural significance can be avoided.