THE ENVIRONMENTALLY PREFERRABLE ALTERNATIVE

Legal Mandates

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.*

Conformance

Alternative 5 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. Alternative 5 would achieve a balance between population and resource use by maintaining current peak visitation levels without yet having to implement a day-use permit system. Additionally, Alternative 5 would restore essential riverbank areas within 100-foot buffer adjacent to Yosemite Valley campgrounds, including some of Upper and Lower River Campgrounds; and some acreage around Housekeeping Camp. This alternative would attain the widest range of beneficial uses of the environment by providing a diversity of recreational opportunities through an increase in the inventory of overnight accommodations, inventory of parking facilities, and paddling access to all segments (despite the elimination of commercial paddling).

The No Action Alternative (Alternative 1) would provide for diversity and variety of individual choice; however, it would not best fulfill any of the other requirements, particularly in Yosemite Valley, where increasing amounts of visitor use and foot traffic would continue to adversely 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 all of the above requirements through continuation of existing wilderness and resource management policies, ecological restoration of fragile meadow and riparian areas, protection of water quality, protection of archeological and historical resources, and conformance with existing requirements under Executive Order 13514 to improve energy efficiency, reduce consumption and waste, and conserve water use to improve sustainability of NPS operations and facilities. The alternatives would vary primarily in the extent of riparian restoration in Yosemite Valley; diversity of recreational opportunities affected by a range of user capacity and visitor use management, inventory and mixture of overnight accommodations, inventory and locations of parking facilities, and paddling restrictions.

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 rip-rap. 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 resources. Alternative 2 also would include extensive restoration of the 100-year floodplain adjacent to Valley campgrounds, including Upper and Lower River; complete removal of North Pines campground and stables and Housekeeping Camp; removal of Yosemite Lodge; removal of Tecoya housing areas. However, this alternative is the least protective of historic and cultural resources due to the removal of the three historic bridges and removal of historic lodging at Merced Lake High Sierra Camp, Housekeeping Camp, Curry Village, and Yosemite Lodge, and removal of the Wawona golf course. Finally, this alternative would result in the greatest reduction of the diversity of individual choice because it would reduce the inventory and mixture of overnight accommodations; implement the most restrictions on visitor use through a permit system required at the entrance stations; and result in the most restrictions to paddling.

Alternative 3 would have significant benefit to the biological and physical environment due to removal of three bridges and 6,135 linear feet of rip-rap. This alternative would include extensive restoration within 150-foot buffer adjacent to Valley campgrounds, removal of Yosemite Lodge units in the 100-year floodplain, removal and/or re-aligning roads through meadows, and major restoration of the Curry Orchard Parking Lot. As Alternative 2, this alternative would also remove the three historic bridges and Wawona golf course, and 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 result in a moderate reduction in diversity of individual choice due to a reduction in overnight accommodations, day-use permit system, and minor paddling restrictions.

Alternative 4 would have moderate benefit to the biological and physical environment due to the removal of two bridges and 6,135 linear feet of rip-rap. This alternative would restore fewer acres than Alternatives 2 and 3, include partial restoration of Yosemite Valley meadows, and ecological restoration within a 150-foot buffer in Valley campgrounds. Alternative 4 would be slightly more protective of historic and cultural resources than Alternatives 2 and 3 because Stoneman Bridge would be retained, as well as all units at Yosemite Lodge. Alternative 4 would attain a wider range in beneficial uses over Alternatives 2 and 3 through the replacement of the Merced Lake High Sierra Camp with a temporary pack camp, a major increase in camping opportunities, a minor reduction in lodging from current levels, and fewer agency restrictions regarding paddling and day-use access.

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 only minor benefit to the biological and physical environment due to having the fewest number of acres restored and the fewest linear feet of rip-rap removed.

In comparison, Alternative 5 would strike a balance between maintaining the historic setting of the river corridor, maintaining a diversity of recreational opportunities, and allowing for extensive natural resource management throughout the river corridor to restore natural ecosystem function to the extent possible.

ACTIONS CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

Federal agencies are required to rigorously explore and objectively evaluate all reasonable actions and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). As described in "Purpose and Need" (Chapter 2), public and internal scoping and planning sought to understand and consider input from the public, NPS staff, subject-matter experts, culturally associated American Indian tribes and groups, and other federal, state, and local agencies as part of an extensive planning process for the *Merced River Plan/DEIS*.

As a reminder, Chapter 2 describes actions brought forth during the planning process that the NPS considered but dismissed. The NPS removed actions from consideration if they 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)

Additionally, the following actions were considered but dismissed from the range of alternatives in the *Merced River Plan/DEIS*:

The NPS should reintroduce historical fire regimes as part of an ecological restoration and fuels management approach while balancing fire management with public safety, air quality, and visual experience values.

Rationale for Dismissal: Fire management issues are addressed under the 2009 Yosemite Fire Management Plan and under annual workplans.

The NPS should restore the Merced River corridor to conditions as existed prior to Euro-American settlement by removing nearly all commercial services and lodging, visitor facilities, limiting private vehicles, and conducting extensive restoration projects.

Rationale for Dismissal: This action is inconsistent with the NPS' Organic Act to provide for visitors' experiences of the natural and cultural resources.

When using a quarter-mile boundary throughout the river corridor, the NPS should keep a "scenic" classification in Wawona and East Yosemite Valley.

Rationale for Dismissal: The boundaries and classifications of the Merced Wild and Scenic River have been presented and refined throughout the legal and planning history for the Wild and Scenic River. The classification of a river segment provides a general framework for the type and intensity of land management activities that may take place in the future (IWSRCC, 2002). To provide for visitors' experiences as guided by the 1916 NPS' Organic Act, a recreational classification in Wawona and East Yosemite Valley is appropriate and justified.

The NPS should include the entire Yosemite Valley within the MRP boundaries.

Rationale for Dismissal: The Wild and Scenic Rivers Act allows up to a maximum average of 320 acres per linear mile of river (equivalent to one-quarter mile on each side of the river) to be included within the boundaries of a Wild and Scenic River corridor. The project study area, however, of this plan includes all of Yosemite Valley within 1.5 miles of the Merced River's ordinary high-water mark. This project study area ensures that NEPA and NHPA analysis will examine the impacts and effects to natural, cultural and socioeconomic resources throughout Yosemite Valley.

The NPS should increase development in Wilderness areas.

Rationale for Dismissal: The Merced River Plan is not considering an expansion of services and facilities in the entire river corridor. Furthermore, addition of permanent structures and development would violate the Wilderness Act of 1964 (with very limited exceptions where essential for administering an area as Wilderness).

The NPS should re-align the river and allow a smaller channel **of the river to continue to flow under Sugar Pine and Ahwahnee bridges.**

Rationale for Dismissal: Re-aligning a river is counter to restoring the free flow of a river. Also, the engineering of a river is a fundamental violation of the Wild and Scenic Rivers Act (with very limited exceptions where essential for administering an area as Wilderness).

The NPS should restore all Yosemite Valley campsites that existed prior to the 1997 flood and/or are determined consistent with the General Management Plan (GMP).

Rationale for Dismissal: The level of camping contemplated in the GMP proposed camping in locations that are ecologically sensitive, and the GMP was approved prior to designation of the Merced River as Wild and Scenic in 1987, therefore, it did not contemplate river values. Some campsites that existed prior to the 1997 flood, such as at Upper and Lower River Campgrounds, were sited on or adjacent to sensitive resources now considered river values. In response to public comment, the range of alternatives commit to providing a maximum number of campsites while protecting and enhancing river values. As required by WSRA, the Merced River Plan must provide for the ecological restoration of the river corridor. The NPS has determined that this protection requires the removal of existing campsites within a 100-foot riparian buffer between the ordinary high-water mark and the nearest campsite. In addition, due to the hydrologic processes ORV, new campsite development must incorporate a 150-foot riparian between the ordinary high-water mark and campsites located near the river.

The NPS should have the Wilderness Stewardship Plan address the High Sierra camps.

Rationale for Dismissal: The NPS must address how the High Sierra camps and all other major public use facilities in the river corridor affect river values.

The NPS should eliminate private vehicles and tour buses from Yosemite Valley (as stated as a goal in the General Management Plan).

Rationale for Dismissal: Although the removal of private vehicles in Yosemite Valley was a goal of the 1980 General Management Plan, the Merced River Plan/ DEIS will amend the GMP. This action would not meet the purpose and need of this plan. Existing transportation networks will not support this option, and construction of new transportation networks would be infeasible from a cost perspective to only allow access by public transit. In addition, the range of alternatives includes actions that reduce crowding and do not require the elimination of private vehicles. Finally, existing modes of travel provide for a diversity of visitor experiences that are integral to developing direct connections with the river.

The NPS should widen Northside Drive and Southside Drive to improve traffic flow.

Rationale for Dismissal: This action contradicts the purpose and need of a Wild and Scenic River Comprehensive Management Plan because it is not possible to widen road corridors in Yosemite Valley without impacting ORVs including meadow and riparian communities, and sensitive cultural resources.

The NPS should limit tour bus access in Yosemite Valley because tour buses contribute to congestion, parking shortages, and road safety.

Rationale for Dismissal: The NPS will continue supporting increased use of alternative forms of transportation. In addition, the NPS will only consider an East Yosemite Valley day-use parking permit system for private vehicles and tour buses when conditions become "unacceptable." Thresholds for acceptable conditions are defined and monitored using scientific standards.

The NPS should use pedestrian overpasses to alleviate pedestrian-vehicle conflicts at major crosswalks.

Rationale for Dismissal: The NPS recognizes the need to separate pedestrians from vehicles in these congested areas. Construction of pedestrian overpasses that provide adequate accessibility for all visitors would require infrastructure that would be disproportionate to the landscape, and, therefore, would infringe on the scenic landscapes in these areas. The NPS has chosen pedestrian underpasses to remediate this pedestrian-vehicle conflict without affecting the scenic nature of Yosemite Valley.

The NPS should re-introduce native fish to areas where they naturally occurred.

Rationale for Dismissal: Although some Wild and Scenic River fisheries are considered outstandingly remarkable, this has not been the case of the Merced River fisheries within Yosemite. Native fish are found only in the lower elevations of the Merced River up to the vicinity of El Portal. Historically, the majority of waterbodies in Yosemite have been naturally fishless prior to fish stocking, which occurred in the area from 1877 to 1990. The native strain of rainbow trout in the Merced River corridor was lost long ago through hybridization with other introduced trout strains. The existing strain of rainbow trout acts as an ecological surrogate for the native strain. Restoration of the native strain would require detection of a relict population of native fish and eradication of the existing rainbow strain and introduced brown trout. The NPS considers native trout restoration infeasible on the Merced River due to the difficulty of eradication of the brown trout and existing rainbow trout. In addition, some fish have the ability to swim from El Portal to Yosemite

Valley, the non-native fish present in El Portal would likely recolonize upstream, causing additional stress and hybridization with a re-introduced population of native rainbow trout. Because native fish are not an ORV of the Merced River, this action was dismissed.

The NPS should relocate all visitor services and employee housing from Yosemite Valley to El Portal.

Rationale for Dismissal: Services are needed to support the level of visitation where that visitation occurs, primarily Yosemite Valley. Supporting the needs of millions of visitors requires a large workforce. Shuttling the entire employee population in and out of Yosemite Valley over multiple shifts throughout the course of the day would further compound traffic congestion currently experienced by visitors and significantly increase the carbon footprint associated with visitors and employees. Currently, Yosemite's park management has moved a substantial number of employees out of Yosemite Valley and out of El Portal. Further adjustments are infeasible and impractical at this point from a park operation's standpoint.

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

Rationale for Dismissed: The National Park Service has considered a range of alternatives that provide lower and higher user capacities and related visitor use levels than exist today. Alternative 6 represents the highest use levels considered in this range. Capacities and use levels higher than those proposed in this alternative were considered but dismissed for the following reasons:

- Higher use levels would require significant expansion of infrastructure and development, which is not feasible while protecting river values and working within the constraints of Yosemite Valley's natural environment. Yosemite Valley, where the majority of use occurs in the Merced River corridor, is a long, narrow canyon. Significant physical sites constraints exist limiting the expansion of infrastructure and developments that would be needed to accommodate higher use levels. Between rockfall and related hazard zones and floodplains and the locations of river values, no land area remains to expand developments beyond those proposed in Alternative 6.
- Infrastructure that would be required to accommodate higher use levels include widening roadways and intersections, retaining roadside parking in areas adjacent to meadows, expanding existing parking areas into sensitive resource areas or closer to the river, developing new parking areas and or camping areas in location that have not been previously disturbed. However, other alternatives to expanded parking include a multi-level parking garage that would not be congruent with retaining the natural scenic qualities of Yosemite Valley and would be cost prohibitive.
- Visitor use levels beyond those considered in alternative six would create additional crowding and congestion such as long queues at entrance stations, increased travel times through the park, and difficulties locating open parking, all of which would negatively affect the visitor experience.

COST COMPARISONS FOR THE MERCED WILD AND SCENIC RIVER COMPREHENSIVE MANAGEMENT PLAN

The costs of implementing the MRP are defined for each alternative by the management actions that are included within the plan. Table 8-52 summarizes those costs that do not vary across the action alternatives and thus are considered common to all. Table 8-53 summarizes those costs that vary by alternative. These costs include natural resource protection and site improvements that would occur within the river corridor. Total project costs are summarized in Table 8-54.

TABLE 8-52: PROJECT COSTS COMMON TO ALTERNATIVES 2-6

Project Component	Common to All
Yosemite Valley	
Yosemite Valley Maintenance Area	$9,833,708
Concessioner General Office Relocation	$5,043,300
Bridalveil Fall	$755,152
El Portal	
El Portal housing additions	$5,973,381
Wawona	
Swinging Bridge Picnic Area	$668,359
Wawona Maintenance Area	$13,001,235
Wawona Town Center	$1,811,354
Miscellaneous Site-Specific Actions*	
Costs Common to Alternatives 2-6	$6,606,193

TABLE 8-53: ALTERNATIVE PROJECT COSTS

Project Component	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
Yosemite Valley						
Upper Pines Campground	$0	$590,359	$3,555,559	$7,529,202	$7,529,202	$7,529,202
Concessioner Stables	$0	$292,916	$87,875	$3,837,283	$0	$0
North Pines Campground	$0	$1,137,238	$470,402	$470,402	$204,555	$204,555
Lower Pines Campground	$0	$306,329	$363,372	$363,372	$480,466	$480,466
Curry Village Lodging and Employee Housing	$0	$45,005,402	$30,520,312	$32,526,590	$46,294,562	$48,327,763
Bridge Removals	$0	$3,950,898	$3,950,898	$2,637,067	$1,520,682	$0
Housekeeping Camp	$0	$1,767,149	$1,767,149	$622,807	$419,802	$245,445
Upper & Lower River Campgrounds	$0	$0	$0	$5,995,990	$2,518,316	$5,995,990
Yosemite Village Day-use Parking Area	$0	$8,311,720	$7,763,719	$7,918,376	$10,019,466	$11,844,989
Lost Arrow Employee Housing	$0	$811,650	$811,650	$7,711,355	$7,711,355	$7,711,355
Yosemite Lodge and Camp 4	$0	$17,460,290	$24,156,475	$28,617,726	$27,641,055	$100,779,542
West Valley Overflow Parking Area	$0	$0	$0	$0	$1,216,099	$2,040,209
El Capitan Meadow	$0	$0	$0	$926,478	$926,478	$926,478
Eagle Creek Campground (New)	$0	$0	$0	$0	$4,401,403	$6,668,792
El Portal						
Rancheria housing area	$0	$8,381,837	$9,396,417	$15,264,905	$13,540,040	$14,763,465
Abbieville-Trailer Court	$0	$52,794,663	$2,249,936	$2,249,936	$2,249,936	$55,531,245
Wawona						
Wawona Campground	$0	$1,963,465	$1,881,298	$1,881,298	$1,651,233	$1,651,233
Miscellaneous Site-Specific Actions*						
Unique to the alternative	$0	$8,165,000	$7,830,000	$2,580,000	$2,150,000	$1,575,000

*These costs include removal of rip-rap (or riverbank lining); removal of informal trails, installation of engineered log jams, brush layering and willow plantings to address riverbank erosion; and other like actions.

TABLE 8-54: TOTAL PROJECT COSTS

	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
Total**	**$0**	**$262,752,657**	**$186,971,954**	**$222,514,383**	**$235,125,897**	**$418,457,354**

**Total includes net construction costs +35% to account for costs associated with follow on compliance, site monitoring and contracting.

In total, the range of alternatives is priced from $186 Million to $418 Million when measured in current-year values. The mean (or average) cost of the range of alternatives is $265 Million, while the median (or middle) value is $235 Million. The preferred alternative would cost $235 Million, approximately 90 percent of the mean cost of the entire range of alternatives.

Anticipated Total Project Costs

Natural resource protection cost estimates were developed by NPS vegetation and ecological restoration biologists who have knowledge and expertise in undertaking work of this nature. These estimates presume use of existing park staff, base-funded positions, seasonal workers, consultants and volunteers to complete restoration work. Labor and material costs associated with actions common to all action alternatives include management actions that would remove rip-rap (or riverbank lining); remove abandoned infrastructure, such as bridge footings, plumbing or drainage structures; remove informal trails; loosen compacted soils; re-align trails to less-sensitive areas, harden trails in other locations; install engineered log jams, brush layering and willow plantings to address riverbank erosion; remove a limited number of problem campsites; remove asphalt and concrete; provide access to the river in certain locations; restore wetlands and portions of the flood plain; and remove obsolete buildings.

Specific resource restoration projects are also proposed across the range of alternatives, and are unique to one or more of the alternatives. Examples of these projects include proposed actions to remove certain roadways and bridges in Alternatives 2 and 3; construct boardwalks in meadows; restore the flood plain to different levels, such as the 10-year versus 100-year elevation; remove varying amounts of infrastructure from the flood plain; and install of varying numbers of engineered log jams.

Site redevelopment or improvement of existing facilities and a limited amount of new development is proposed for the purpose of protecting river values and supporting ongoing visitor use and enjoyment. Specific sites and projects are presented by rows in Table 8-52 and Table 8-53 and are described in more detail by project alternatives. Alternatives generally propose such actions as adding walk-in camp sites in several locations (Upper Pines, Upper and Lower River and Camp 4 campgrounds); replacing tents with permanent lodging units at Curry Village; replacing temporary employee housing with permanent structures in Curry Village, Yosemite Lodge, and El Portal; removing units from Housekeeping Camp; improving parking areas at Yosemite Village Day Use Parking Area, Yosemite Lodge, and in Wawona and El Portal; and proposing one new parking facility known as the West Valley Day Use Area.

Project alternative cost comparisons for Alternatives 2, 3, 4, 5 and 6 were generated by a senior cost estimating technical specialist and civil engineer from the Denver Service Center, one of only two agency employees who work full time in this capacity service-wide. Estimates are based upon management actions described in project alternatives and accompanying conceptual site plans. The cost estimating technician identified individual components of each project described by each of the alternatives, such as building descriptions and proposed uses, square footage, proposed demolition or adaptive re-use of structures, site preparations and site improvements (transit connections, required roadways, parking areas, pedestrian walkways and landscaping) and landscape enhancements for parking areas.

Cost estimates consider market prices for raw materials (sand, gravel and stone), building materials (lumber, construction paper, roofing material), windows and doors, heat, ventilation and air conditioning systems, plumbing and electrical fixtures, asphalt and other forms of concrete, etc. Specific costs were tabulated according to the characteristics of development proposed.

After calculating direct construction and development costs (or direct costs), estimates were adjusted according to a number of factors that are unique to the cost of working in Yosemite National Park. These factors include design fees and preparation of construction documents, cost of living for the region, remoteness, prevailing wage rates, state and local taxes to be paid by the contractor, commuting and lodging costs, special compliance requirements, contractor overhead, expectations for profit, bonds and permits, contracting method adjustments and rates of inflation. These factors are expressed as simple percentages known as mark-ups or add-ons resulting in net costs per unit. Costs were further adjusted to include project management costs that will otherwise accrue to the NPS, such as contracting and oversight functions, additional compliance, long-term monitoring, *et cetera*.

The full cost estimates amount to approximately 680 pages of analysis provided through detailed spreadsheets. Because of the volume and detail contained in the cost estimator's report, it is not feasible to reproduce the information within the river plan, but this information remains available for reference as part of the administrative record.

Class C cost estimates represent a broad overview of anticipated project costs. These estimates are intended to provide a realistic understanding of the full costs of project implementation, to help decision makers choose a preferred alternative and to establish long-term budget goals. Following the anticipated approval of the Merced River plan, as project descriptions are refined and design and construction documents prepared, Class B and Class A estimates will be completed in greater detail, with more accuracy and precision.

Operational (or non-Facility) Costs

In order to protect and enhance river values and manage visitor use from year to year, implementation of the alternatives will require time and effort by staff resources, volunteers or contractors. These costs may increase or decrease depending on which alternative is selected. Management actions would require more or less operational maintenance, traffic and parking management, law enforcement and other ongoing duties of NPS and concessioner personnel. Park staff will be responsible for monitoring specific indicators and standards that are linked river values and related natural and cultural resources.

Approximate costs associated with operational costs are summarized in Table 8-55. Although specific operational costs are identified, each activity relates to existing monitoring programs or regular park management activities that are already conducted with existing park staff. The size of the park staff fluctuates seasonally, but the overall number of full-time employees varies from 800 in winter to approximately 1,000 in late spring and summer. Given flexibility in staffing and the size of the park's annual operating budget, operational costs are less significant than site-specific costs but are noteworthy for the purpose of comparing alternatives.

TABLE 8-55: ADDITIONAL OPERATIONAL (NON-FACILITY) COSTS

Project Component	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
Cultural resources monitoring *	$0	$115,000	$115,000	$465,000	$465,000	$465,000
Facilities management and maintenance †	$0	$269,110	$315,701	$828,313	$800,079	$1,138,465
River value monitoring program †	$0	$300,000	$300,000	$300,000	$300,000	$300,000
Traffic and parking management †	$0	-$69,300	-$77,700	-$39,900	-$10,500	$8,400
Wildlife management †	$0	$0	$0	$110,000	$65,000	$150,000
* One-time cost	$0	$115,000	$115,000	$465,000	$465,000	$465,000
† Annual recurring costs	$0	$499,810	$538,001	$1,198,413	$1,154,579	$1,596,865

Cost figures presented here or elsewhere in the plan are intended to provide a general estimate of the relative costs of implementing the project alternatives. NPS and industry cost estimating guidelines were used to develop costs in 2012 dollars to a reliable and accurate extent, but estimates should not be used for budgeting purposes. Specific costs will be determined in subsequent, more detailed planning and design exercises, and will consider the design of facilities, identification of detailed resource protection needs, and changing visitor use expectations and constraints on user capacity. Actual costs to the NPS will vary depending on if and when the actions are implemented, and on contributions by partners and volunteers.

The implementation of this plan, regardless of which alternative is selected, will depend on future NPS funding levels and service-wide priorities, and on partnership funds, time, and effort. The approval of this plan does not guarantee that project funding or staffing are forthcoming. Full implementation of this plan is anticipated over a period of 15 to 20 years.

COMPARISON OF USER CAPACITIES AND ALTERNATIVES ACTIONS

The following pages present summaries of alternatives as follows:

TABLE 8-56: SUMMARY OF ALTERNATIVE CAPACITIES

TABLE 8-57: VISITOR DAY USE CAPACITIES (PEOPLE)

TABLE 8-58: MERCED WILD AND SCENIC RIVER PLAN ALTERNATIVE SUMMARY COMPARISON TABLE

TABLE 8-56: SUMMARY OF ALTERNATIVE CAPACITIES

ADEIS MRP USER CAPACITY SUMMARY													
User Capacities by Use Type and Location		Alt 1 (No Action)		Alt 2		Alt 3		Alt 4		Alt 5		Alt 6	
	Unit Type	Units	People	Units	People	Units	People	Units	People	Units	People	Units	People
Wilderness Above Nevada Fall													
Vistitor Overnight Use	Zone Capacities & Beds	380	380	195	195	260	260	270	270	362	362	380	380
Visitor Day Use	Day Hikers	350	350	350	350	350	350	350	350	350	350	350	350
Employee Housing	Employee Beds	15	15	5	5	10	10	10	10	15	15	15	15
Administrative Day Use	People on Day Patrols	5	5	5	5	5	5	5	5	5	5	5	5
Yosemite Valley													
Vistitor Overnight Use	Rooms & Campsites	1,500	6,564	1,006	4,758	1,098	5,027	1,524	7,224	1,693	7,729	1,987	9,006
Visitor Day Use*	Parking Spaces & Buses	-	8,272	-	6,819	-	6,289	-	7,554	-	8,954	-	9,449
Employee Housing	Employee Beds	1,315	1,315	658	658	1,086	1,086	1,087	1,087	1,136	1,136	1,136	1,136
Administrative Day Use	Parking Spaces	166	332	166	332	166	332	166	332	166	332	166	332
Gorge													
Vistitor Overnight Use	Rooms & Campsites	-	-	-	-	-	-	-	-	-	-	-	-
Visitor Day Use	Parking Spaces	180	869	180	869	180	869	180	869	180	869	180	869
Employee Housing	Employee Beds	9	9	9	9	9	9	9	9	9	9	9	9
Administrative Day Use	Parking Spaces	2	4	2	4	2	4	2	4	2	4	2	4
El Portal													
Vistitor Overnight Use	Rooms & Campsites	-	-	-	-	-	-	-	-	-	-	-	-
Visitor Day Use	Parking Spaces	214	740	214	740	214	740	214	740	214	740	214	740
Employee Housing	Employee Beds	192	192	618	618	223	223	300	300	288	288	506	506
Administrative Day Use	Parking Spaces	610	1,220	610	1,220	610	1,220	610	1,220	610	1,220	610	1,220
South Fork Above Wawona													
Vistitor Overnight Use	Zone Capacities	20	20	20	20	20	20	20	20	20	20	20	20
Visitor Day Use	Day Hikers	6	6	6	6	6	6	6	6	6	6	6	6
Employee Housing	Employee Beds	-	-	-	-	-	-	-	-	-	-	-	-
Administrative Day Use	Day Patrols	1	1	1	1	1	1	1	1	1	1	1	1
Wawona													
Vistitor Overnight Use	Rooms & Campsites	203	865	171	673	176	703	176	703	190	787	190	787
Visitor Day Use*	Parking Spaces & Buses	-	1,295	-	1,321	-	1,321	-	1,399	-	1,606	-	1,606
Employee Housing	Employee Beds	121	121	121	121	121	121	121	121	121	121	121	121
Administrative Day Use	Parking Spaces	30	60	30	60	30	60	30	60	30	60	30	60
South Fork Below Wawona													
Vistitor Overnight Use	Overnight Hikers	3	3	3	3	3	3	3	3	3	3	3	3
Visitor Day Use	Day Hikers	3	3	3	3	3	3	3	3	3	3	3	3
Employee Housing	Employee Beds	-	-	-	-	-	-	-	-	-	-	-	-
Administrative Day Use	Day Patrols	1	1	1	1	1	1	1	1	1	1	1	1

**Day use capacities in these segments factors in visitors arriving by private vehicles, regional transit and commercial tour buses. See breakdown by transportation mode in Table 8-57*

TABLE 8-57: VISITOR DAY USE CAPACITIES (PEOPLE)

Visitor Day Use Capacities (People)	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6
Wilderness above Nevada Fall						
MAX hikers thru corridor to Half Dome	300	300	300	300	300	300
MAX hikers per day to corridor	50	50	50	50	50	50
ABOVE NEVADA FALL TOTAL	**350**	**350**	**350**	**350**	**350**	**350**
Yosemite Valley						
PAOT from parking areas	7,260	5,858	5,328	6,497	7,549	7,941
PAOT from regional transit	293	241	241	337	684	788
PAOT from tour buses	720	720	720	720	720	720
VALLEY TOTAL	**8,272**	**6,819**	**6,289**	**7,554**	**8,954**	**9,449**
Gorge						
PAOT from parking areas	869	869	869	869	869	869
El Portal						
PAOT from parking areas	740	740	740	740	740	740
South Fork above Wawona						
MAX hikers per day to corridor	6	6	6	6	6	6
Wawona						
PAOT from parking areas	911	911	911	911	911	911
PAOT from regional transit	0	26	26	104	311	311
PAOT from tour buses	384	384	384	384	384	384
WAWONA TOTAL	**1,295**	**1,321**	**1,321**	**1,399**	**1,606**	**1,606**
South Fork below Wawona						
MAX hikers per day to corridor	3	3	3	3	3	3

	Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Ecological Restoration						
Total restoration acreage	0 acres	347 acres	302 acres	223 acres	203 acres	170 acres
Riprap	15,589 linear feet (existing)	6,664 linear feet removed	6,135 linear feet removed	6,135 linear feet removed	6,135 linear feet removed	6,048 linear feet removed
Free-flowing Condition (Bridges)	0 bridges removed	Remove 3 bridges: Ahwahnee, Sugar Pine, and Stoneman	Remove 3 bridges: Ahwahnee, Sugar Pine, and Stoneman	Remove 2 bridges: Ahwahnee, and Sugar Pine	Remove 1 bridge: Sugar Pine	0 bridges removed. Use design and engineering solutions.
Meadow Connectivity (Roads)	No re-routing of roads	• Remove Southside Drive along Stoneman Meadow • Remove Northside Drive along Ahwahnee Meadow	• Remove Southside Drive along Stoneman Meadow • Remove Northside Drive along Ahwahnee Meadow	• Remove Southside Drive along Stoneman Meadow	Roads remain. Design and engineering solutions applied.	Roads remain. Design and engineering solutions applied.
Camping (Existing)						
Backpackers	25 walk-in sites	0 walk-in sites (-25 sites but partially relocated)	0 walk-in sites (-25 sites but partially relocated)	0 walk-in sites (-25 sites but partially relocated)	10 walk-in sites (-15 sites that are relocated)	10 walk-in sites (-15 sites that are relocated)
Camp 4	35 walk-in sites	35 walk-in sites	35 walk-in sites	35 walk-in sites	35 walk-in sites	35 walk-in sites
Lower Pines	76 sites	44 sites (-32 sites)	61 sites (-15 sites)	61 sites (-15 sites)	71 sites (-5 sites)	71 sites (-5 sites)
North Pines	86 sites	0 sites (ecologically restored)	52 sites (-34 sites)	52 sites (-34 sites)	72 sites (-14 sites)	72 sites (-14 sites)
Upper Pines	240 sites	216 sites (-22 sites)	238 sites (-2 sites)	238 sites (-2 sites)	238 sites (-2 sites)	238 sites (-2 sites)
Yellow Pine Administrative	4 group administrative sites	0 sites (-4 group sites)	4 group administrative sites	4 group administrative sites	4 group administrative sites	4 group administrative sites
Wawona Campground and Wawona Stock Camp	99 sites (includes 1 group site and 2 stock sites)	67 sites (-32 sites) (2 stock sites relocated to Wawona Stables)	72 sites (-27 sites) (2 stock sites relocated to Wawona Stables)	72 sites (-27 sites) (2 stock sites relocated to Wawona Stables)	86 sites (-13 sites) (2 stock sites relocated to Maintenance Yard)	86 sites (-13 sites) (2 stock sites relocated to Wawona Stables)
Total Existing Camping Sites	565 sites	362 sites	462 sites	462 sites	516 sites	516 sites
Campground Development (New)						
West of Backpackers Walk-in	0 sites	16 walk-in sites	16 walk-in sites	16 walk-in sites	16 walk-in sites	16 walk-in sites
East of Camp 4 Walk-in	0 sites	35 walk-in sites	35 walk-in sites	35 walk-in sites	35 walk-in sites	35 walk-in sites
Upper Pines RV-Loop	0 sites	0 sites	36 RV sites	36 RV sites	36 RV sites	36 RV sites
Upper Pines Walk-In	0 sites	0 sites	0 sites	51 sites (49 walk-in sites, 2 group sites)	51 sites (49 walk-in sites and 2 group sites)	51 sites (49 walk-in sites and 2 group sites)
Former Upper River Walk-In	0 sites	0 sites (ecologially restored)	0 (ecologically restored)	32 sites (30 walk-in sites, 2 group sites)	30 walk-in sites	32 sites (30 walk-in sites and 2 group sites)
Former Lower River Walk-In	0 sites	0 sites (ecologically restored)	0 (ecologically restored)	40 walk-in sites	0 sites	40 walk-in sites
Concessioner Stables in Yosemite Valley (re-purposed as drive-in camping)	0 sites	0 sites	0 sites	41 drive-in car sites	0 sites	0 sites
Boys Town Walk-In	0 sites	0 sites	0 sites	40 walk-in sites	0 sites	0 sites
Eagle Creek (drive-in car and RV)	0 sites	0 sites	0 sites	0 sites	42 sites (40 drive-in car and 2 group sites)	79 drive-in car and RV sites
Yosemite Lodge Walk-In (re-purposed as camping)	0 sites	104 sites (100 walk-in and 4 group sites)	0 sites	0 sites	0 sites	0 sites
West of Lodge RV Sites	0 sites	0 sites	0 sites	20 RV sites	0 sites	20 RV sites
Abbieville / Trailer Court	0 sites	4 group administrative sites	0 sites	0 sites	0 sites	0 sites
Total New Camping Sites Total	0 sites	159 sites	87 sites	311 sites	210 sites	309 sites
Total Camping Sites Corridorwide	565 sites	521 sites	549 sites	773 sites	726 sites	825 sites
Wilderness Camping						
Merced Lake Backpackers Camping Area; Little Yosemite Valley Camping Area; and Moraine Dome Camping Area	All three designated camping areas remain.	All three designated camping areas are discontinued. Area converted to dispersed camping.	All three designated camping areas are discontinued. Area converted to dispersed camping.	Continue designated camping areas at all three sites. (Note: Little Yosemite Valley Camping Area reduced. Merced Lake Backpackers Camping Area expanded.)	Continue designated camping areas at all three sites.	Continue designated camping areas at all three sites.

	Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Lodging						
Curry Village Lodging Units	400 units (per Settlement Agreement, 103 guest lodging units can not be included in No Action)	433 lodging units at Curry Village, consisting of 143 hard-sided units and 290 tents.	355 lodging units at Curry Village, 65 hard-sided units and 290 tents. Boys Town would be ecologically restored.	355 units at Curry Village, consisting of 65 hard-sided units and 290 tents. Convert Boys Town to a 40-site campground.	453 units at Curry Village, consisting of 163 hard-sided units and 290 tents.	453 lodging units at Curry Village, consisting of 163 hard-sided units and 290 tents.
Yosemite Lodge	245 rooms	0 rooms (-245 rooms with area re-purposed as day lodge and camping)	143 rooms (-102 rooms comprised in 4 buildings removed from 100-year floodplain)	245 rooms	245 rooms	440 rooms (construct multiple 3-story lodging structures outside the 100-year floodplain).
Housekeeping Camp	266 units	0 units (-266 units: Convert to river access and picnicking, and ecologically restore 100-year floodplain)	0 units (-266 units: Convert to river access and picnicking, and ecologically restore 100-year floodplain)	100 units (-166 units: Removed from ordinary high-water mark)	232 units (-34 units: Removed from bed and banks)	232 units (-34 units: Removed from bed and banks)
Ahwahnee Hotel	123 rooms	123 rooms	123 rooms	123 rooms	123 rooms	123 rooms
Wawona Hotel	104 rooms	104 rooms	104 rooms	104 rooms	104 rooms	104 rooms
Merced Lake High Sierra Camp	22 units (60 beds)	0 units (lodging facility closed and re-purposed as camping)	15 people (lodging converted to temporary pack camp)	0 units (lodging facility removed and ecologically restored)	11 units (-18 beds)	22 units (60 beds)
Lodging Totals (units)	**1,160 units**	**660 units**	**725 units**	**927 units**	**1,168 units**	**1,374 units**
Transportation						
Curry Orchard Parking Area	424 spaces	420 spaces	300 spaces	300 spaces	430 spaces	430 spaces
Yosemite Village Day-use Parking Area	754 spaces	550 spaces (parking moved north)	550 spaces (parking moved north)	750 spaces (parking moved north)	850 spaces (parking moved north)	850 spaces (parking moved north)
Yosemite Lodge: Converted to Day Lodge	0 spaces	250 spaces	0 spaces	0 spaces	0 spaces	0 spaces
Yosemite Lodge Parking Area	0 spaces	150 spaces	150 spaces	150 spaces	300 spaces	300 spaces
West Valley Overflow Parking Area	No	No	No	No	100 spaces	250 spaces
Total Yosemite Valley Day-Use Parking	2,337 spaces (0% change)	1,800 spaces (-23% change)	1,597 spaces (-31% change)	2,045 spaces (-13% change)	2,448 spaces (+5% change)	2,598 spaces (+11% change)
El Portal Remote Visitor Parking	No	No	No	200 spaces	200 spaces	200 spaces
Roundabouts / Traffic Circles	No	No	No	No	• Traffic Circle: Northside Drive and Village Drive (at Yosemite Village Day-use Parking Area)	• Roundabout: Northside Drive and Village Drive (at Yosemite Village Day-use Parking Area) • Roundabout: Northside Drive and Sentinel Drive (at Bank 3-Way)
Pedestrian Underpasses	No	No	No	• Yosemite Falls Underpass	• Yosemite Falls Underpass	• Yosemite Village Day-use Parking Area Underpass • Yosemite Falls Underpass
Concession Housing						
Concession Employee Beds (in Yosemite Valley)	1,151 employees	494 employees	922 employees	923 employees	972 employees	972 employees
Temporary Housing Units Removed (all occurring within Yosemite Valley)	- 0 beds	- 519 beds	- 489 beds	- 469 beds	- 439 beds	- 439 beds
Permanent Replacement Housing (in Yosemite Valley)	+ 0 beds	+ 164 beds	+ 268 beds	+ 318 beds	+ 318 beds	+ 318 beds
Permanent Replacement Housing (in El Portal)	+ 0 beds	+ 426 beds	+ 31 beds	+ 108 beds	+ 96 beds	+ 314 beds
East Valley Visitation and Parking						
Daily Visitation to East Yosemite Valley (Day and Overnight)	20,900 visitors	13,900 visitors	13,200 visitors	17,000 visitors	19,900 visitors	21,800 visitors
Total Parking (day, overnight, and administrative use) in East Yosemite Valley	5,200 spaces	4,000 spaces	4,300 spaces	4,800 spaces	5,300 spaces	5,900 spaces
Cost Estimates						
Total Project Costs	$0 (if no actions taken)	$262,752,657	$186,971,954	$222,514,383	$235,125,897	$418,457,354

COMPREHENSIVE RIVER VALUE ANALYSIS

INTRODUCTION

Section 10(a) of the Wild and Scenic Rivers Act (WSRA) requires managers to "protect and enhance the values which caused [the river] to be included in [the wild and scenic rivers] system." The 1982 Secretaries' Guidelines for River Areas (USDI and USDA 1982) indicate that the nondegradation and enhancement standard for the outstandingly remarkable values (ORVs) of a wild and scenic river is initiated at time of designation. Consistent with section 10(a) of WSRA, Alternatives 2 – 6 give primary emphasis to protecting the river's "esthetic, scenic, historic, archeological and scientific [biological, geologic, and hydrologic] features" by proposing actions that would address the management concerns identified for these values.

While the actions proposed in this plan are designed to improve the condition of individual river values, this section examines the collective impact of all actions to ensure that the consequences of actions to protect one resource do not have unintended impacts to others. The combination of actions included in each alternative to protect a specific river value (described in Chapter 5) coupled with actions related to land use and facilities, and the user capacity management program are evaluated here for their overall net effect on each river value. These effects are compared with the measures of adverse effect and degradation provided in Chapter 5 as a checkpoint for the conclusion that all alternatives will protect and enhance all river values and meet the intent of WSRA.

ALTERNATIVE 2

River Value- Free-flowing Condition (All Segments)

A free-flowing river, or section of a river, moves in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis. Riprap revetment, abandoned infrastructure within the bed and banks of the river, and bridges that constrict the flow of the river may produce localized effects on free-flowing condition of the river. Alternatives 2-6 would enact a comprehensive suite of actions to enhance the free-flowing condition of the river by removing 3,400 linear feet of riprap and removing abandoned and unnecessary infrastructure from the river channel and its floodplain. Infrastructure that would be removed includes former sewage treatment facilities, sewer and water lines, and former bridge abutments. Alternative 2 would remove an additional 964 linear feet of riprap beyond that proposed for removal under Alternatives 2-6.

Alternative 2 also proposes removal of the Stoneman, Ahwahnee, and Sugar Pine bridges, which produce hydraulic constrictions that lead to accelerated erosion and prevent natural channel migration during high-water events. The removal of the three bridges would help achieve the robust ecological restoration principles that guide Alternative 2.

There are no new facilities proposed under Alternative 2 that would affect the free-flowing condition of the river. A number of proposed facility actions would enhance the connectivity of the river and its floodplain

(see Hydrological/Geological ORVs). For example, Alternative 2 would relocate the Yosemite Village Day-use Parking Area north, outside the 10-year floodplain, and the Odger's fuel storage area in El Portal would be moved out of the 500-year floodplain.

To protect the river's free flowing condition in the future, the NPS would require all proposed projects involving construction within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA. Through this process, the NPS would ensure that water resources projects within the designated river corridor would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition.

Conclusion: The free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis. This alternative includes localized management considerations such as intermittent riverbank riprap, and bridges that constrict river flows. Alternative 2 proposes a comprehensive suite of actions to enhance the free-flowing condition of the river by removing riprap, removing unnecessary infrastructure in the river channel, and removing three bridges that produce pronounced hydraulic constrictions at high water flows. There are no new facilities proposed under Alternative 2 that would affect the free-flowing condition of the river within the river channel, and a number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/ Geological ORVs). The NPS would require all proposed projects within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA to ensure that water resources projects would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition. The actions proposed under Alternative 2 ensure that there are no direct or adverse effects on the free-flowing condition of the Merced River.

River Value- Water Quality (All Segments)

The water quality of the Merced River is extremely high, and the current water quality of the river is fully protected and enhanced on a segmentwide basis. Intermittent local instances of contamination may occur in connection with surface water runoff from parking areas, recreational vehicle dump stations in proximity to the river, and accelerated erosion with potential sediment loading in the river during high water flows. Alternatives 2-6 would apply mitigation measures to ensure that surface water runoff associated with parking areas protects the water quality of the Merced River and meets regulations. The Upper Pines and Wawona recreational vehicle dump stations would be moved away from the river, and the Odger's bulk fuel storage area in El Portal would be moved out of the 500-year floodplain. In addition, Alternative 2 would relocate the Yosemite Village Day-use Parking Area outside the 10-year floodplain. All campsites and infrastructure currently within 100-feet of the river would be removed. The pack trail from Curry Village stables to Happy Isles would be re-routed farther away from the river. These actions would result in less erosion along the riverbank, reduce use in sensitive areas, direct use to resilient areas, and mitigate potential sources of pollutants.

Large-scale ecological restoration actions would take place along the riverbank and floodplain of the Merced River. These actions would enhance water quality, particularly the actions that re-establish

riverbank vegetation and reduce erosion potential. Ecological restoration actions are described in more detail in the discussion of the biological ORVs below and in Appendix E.

There are no new facilities proposed under Alternative 2 that would affect the water quality of the river. To maintain excellent water quality, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

TABLE 8-59: CORRIDOR-WIDE ACTIONS AND THEIR IMPLICATIONS FOR WATER QUALITY

Location	Action in Alternative 2	Effects to Water Quality
Segment 2		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	Campsites within the 100-year floodplain would be removed. Designated river access and put in areas established at resilient areas, discourage access to sensitive areas. Upper Pines dump station relocated away from the river.	These changes would result in less erosion along the riverbank; water quality would be enhanced segmentwide.
New campsites at Backpacker's, , Camp 4, and Yosemite Lodge	New campsites constructed at Yosemite Lodge, Backpackers, and Camp 4 out of the 150 foot riparian buffer.	Change would not result in additional water quality effects on a segmentwide level.
Yosemite Village Day-Use Parking Area	Move the unimproved parking lot out of the 10-year floodplain and restore the riparian habitat adjacent to the river.	Change would result in less erosion and storm water run-off from the parking area; water quality would be enhanced locally.
Pack Trail from Concessioner Stables to Happy Isles	Remove the Concessioner stable and the pack trail from the stable to Happy Isles; restore to natural conditions	Change would result in less erosion from the stock trail. Water quality would be enhanced locally.
Housekeeping Camp Lodging	Remove all 266 lodging units and associated facilities out of the 100-year floodplain; restore the floodplain to natural conditions.	Fencing and designated river access points would also direct use to resilient areas. Water quality would be enhanced locally.
Segment 4		
NPS Maintenance and Administrative Complex	Existing parking area formalized and paved using best management practices	Change would result in less erosion and storm water concerns in the parking area; water quality would be enhanced locally.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Removal of bulk fuel storage from the 500-year floodplain would further protect water quality segmentwide.
Segment 7		
Wawona Campground	Replace current septic system with waste water collection system connected to the waste water treatment plant. RV dump site relocated away from the river.	Change would result in less potential for storm water concerns in the campground; water quality would be enhanced locally.
Wawona Picnicking	Delineate boundaries of two formal picnic areas with formal river access points.	Change would result in less erosion along; water quality would be enhanced locally.

Conclusion. Under Alternative 2, water quality in all segments of the Merced River corridor would continue to be absent of adverse effects and degradation, and the potential for localized instances of contamination would be strongly reduced. Water quality would therefore continue to be protected on a corridor-wide basis. Alternative 2 would address localized water quality issues by moving the Upper Pines and Wawona recreational vehicle dump stations away from the river, moving the Odger's bulk fuel storage

area outside of the 500-yr floodplain, and applying mitigation measures to ensure surface water runoff associated with parking areas meets requirements. Large-scale riverbank restoration actions would decrease the potential for accelerated riverbank erosion and sediment loading during high water events. To ensure that existing high water quality conditions are maintained, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Segment 1 – Merced River above Nevada Fall (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Primary actions to protect and improve Biological ORV-1 include removal of informal trails that incise meadow habitat, trails in wet and/or sensitive vegetation, and trails that fragment meadow habitat, including trails in the Triple Peak Fork meadow, wetlands near Echo Valley and Merced Lake shore, mineral springs between Merced Lake and Washburn Lake, and other areas as necessary. Removal of social trails that bisect the meadows would improve conditions in this segment because soil compactions and habitat fragmentation would be reduced. Grazing would be permanently removed from Merced Lake East Meadow and pack stock would be required to pack-in pellet feed to address localized effects from grazing, roll-pits, manure, and trampled soils. Grazing would continue in other meadows in this segment.

This alternative would remove all facilities at the High Sierra Camp and the area would be ecologically restored, converting the area to designated wilderness. Designated camping areas in Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Area would be converted to dispersed camping. Seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones would be managed as indicated in Chapter 8. These changes would reduce use levels near the riverbank and result in some improvement to riparian conditions in the immediate vicinity of these camping areas. Facilities that would remain in this segment of the river include Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the Biological ORV in this segment indicates that these facilities are not adversely affecting the Biological ORV.

As described in Chapter 5, to ensure this ORV is protected and enhanced through time, the NPS would monitor three indicators to assess the condition of the ORV: meadow bare soil, meadow fragmentation due to the proliferation of informal trails, and streambank stability. The NPS would establish a baseline for all three indicators using site-specific monitoring protocols by 2013. Regular monitoring would also reveal whether assumptions about human behaviors and actions taken to correct past actions are sustaining conditions above the management standard. If conditions have reached trigger points; the NPS would implement specific response actions (as described in Chapter 5)

TABLE 8-60: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-1

Location	Action in Alternative 2	Effects toORV-1
Location		
Meadow Trails	Remove informal trails that incise meadow habitat.	Change reduces effects to wet and sensitive meadows and results in localized enhancement to ORV-1.
Merced Lake High Sierra Camp	Remove all facilities at the High Sierra Camp and ecologically restore the area.	Changes reduce uses near riverbank which would result in localized enhancement of ORV 1 through reduction in erosion and trampling of riparian resources.
Visitor Use Management Action		
Private boating would be allowed in this segment	Boating would consist of short floats using pack raft or other craft that can easily be carried. Private use would be unlimited in this segment; however, boaters completing overnight trips would be subject to wilderness permit restrictions.	Limited numbers would protect riparian habitat from trampling and bank erosion that could result with unlimited access. Changes would not affect high-elevation meadow and riparian habitat, this ORV would continue to be protected on a segmentwide level.
Wilderness zone capacity	Zone capacities for Merced Lake, Washburn Lake, Mount Lyell, and Clark Range zones would remain the same across all the alternatives. Manage to a reduced capacity of 25 in the Little Yosemite Valley Wilderness Zone.	Current zone capacities are designed to protect wilderness character including natural conditions such as riverbanks and meadows. Reduced capacity in LYV would result in localized enhancement of riparian habitat and thus this ORV.
Facilities retained	Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp	These facilities and associated administrative uses and maintenance do not affect riparian habitat or meadows.

to avoid or minimize adverse effects. The meadow monitoring programs for the biological ORV would monitor meadow fragmentation to ensure that use levels from hikers, backpackers and stock users do not result in meadow fragmentation or bare ground in excess of the management standards prescribed to protect and enhance meadows.

Conclusion. Under Alternative 2, the biological ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance riverbanks and meadows at specific locations. Removal of social trails, grazing in Merced Lake East Meadow, conversion of the designated camping areas to dispersed camping, and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures. **Facilities that would remain** in this segment of the river include Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the Biological ORV in this segment indicates that these facilities are not adversely affecting the Biological ORV.

Geological/Hydrological ORV-4 – Glacially-carved Canyon in the Upper Merced River Canyon

As discussed in Chapter 5, there are no management considerations with respect to the U-shaped, glacially carved canyon above Nevada Fall. This ORV is currently protected and enhanced segmentwide within the meaning of the Wild and Scenic Rivers Act. Alternative 2 does not propose any actions that would change

the condition of this ORV over time. Further, the U-shaped, glacially carved attributes of this ORV would not be affected by the types and levels of use authorized under this alternative, which are all directed toward wilderness oriented recreation. The NPS would nevertheless monitor the condition of this ORV to ensure that its condition does not decline.

Scenic ORV-15 – Scenic Views in Wilderness

Visitors to this Wilderness segment experience scenic views of serene montane lakes, pristine meadows, slickrock cascades, and High Sierra peaks. Management considerations associated with the condition of the scenic river above Nevada Fall include contributions of regional air pollution (primary factors contributing to this condition are outside of NPS jurisdiction), visual intrusions of temporary and permanent structures, and crowding in and near wilderness campgrounds. There are few "visual intrusions" noted at the High Sierra Camp and other designated camping areas. However, these effects are local in nature and do not affect the ORV on a segment wide basis. The NPS would ensure that designated camping areas are maintained in a clean and tidy condition. Under Alternative 2, the High Sierra Camp would be removed and replaced with dispersed camping. This change would return scenic views to be keeping with the native landscape. These measures would locally enhance the scenic ORV. Other visitor use management actions under Alternative 2 would reduce crowding, thus additionally enhancing this ORV on a segmentwide basis.

TABLE 8-61: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR SCENIC ORV-15

Location	Action in Alternative 2	Effects to ORV-15
Merced Lake High Sierra Camp	Remove all facilities at the High Sierra Camp and ecologically restore the area.	Change would locally enhance ORV because the reduced infrastructure that remains would better blend in to the natural environment.
Merced Lake Backpackers Camping Area	Transfer to dispersed camping area.	Element currently does not cause adverse effects or degradation to ORV on a segment wide basis, thus ORV would continue to be locally protected in this area.
Facilities retained	Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp	These facilities and associated administrative uses and maintenance do not result in segmentwide adverse effects to scenic values. The ORV will continue to be protected on a segmentwide level.

The ORV is determined to be in the protected state, as defined by an absence of adverse effects and degradation, although intermittent air quality concerns are present. Because of the ambient nature of air quality, it cannot be managed exclusively for the river corridor. Facilities that would remain in this segment of the river include Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the scenic ORV in this segment indicates that these facilities are not adversely affecting the scenic ORV.

Conclusion. Under Alternative 2, the scenic ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance scenic values in this segment. Removal of the Merced Lake High Sierra Camp, conversion of the designated camping areas to dispersed camping, and ecological restoration of meadows and riparian areas would improve scenic conditions in this segment and thereby enhance the scenic ORV. The wild segment of

the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures.

Recreational ORV-19 – Wilderness Recreation above Nevada Fall

Visitors to federally designated Wilderness in Segment 1 would engage in a variety of river related activities in an iconic High Sierra landscape, where opportunities for primitive and unconfined recreation, self-reliance, and solitude shape the Wilderness experience. The current condition of this ORV is at or above the management standard at the segment level. Localized management concerns in this segment relate to crowding at Little Yosemite Valley and Moraine Dome backpackers campgrounds, high use levels at the Merced Lake Backpackers Camping Area, and high encounter rates along the trails that connect these areas. Crowding and high use levels affect the Wilderness experience, which is an integral part of the recreational ORV in this segment.

Alternative 2 would remove the Merced Lake High Sierra Camp, remove permanent infrastructure, converting the area to designated Wilderness. The capacity of the Little Yosemite Valley Wilderness Zone would be reduced to 25, and the footprint of the camping area would be reduced accordingly. Designated camping areas in Moraine Dome and the Merced Lake Backpackers Camping Area would be converted to dispersed camping. This would give backpackers an opportunity to camp outside of close proximity to other backpackers. Actions in Alternative 2 would apply additional seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones. These changes would reduce use crowding, high use levels, and increase opportunities for solitude in this Wilderness segment.

Facilities that would remain in this segment of the river include the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. These facilities do not have an adverse effect on the Wilderness experience integral to this Recreational ORV.

NPS would monitor visitor encounter rates to ensure that they are not exceeding established standards. Should specific trigger points be reached, the NPS would be required to implement a series of specific actions to reduce visitor levels to an acceptable level. These actions increase in severity as the current condition ORV condition moves away from the management standard to ensure proper course correction and re-establishment of the management standard. These trigger points were selected to inform managers in advance of any adverse effects or degradation to this ORV.

Conclusion: Under Alternative 2, the recreational ORV in Segment 1 of the Merced River corridor would be protected on a segmentwide basis and continue to be absent of adverse effects and degradation on a segmentwide level. Although actions under Alternative 2 would decrease the availability for visitors to pack in to wilderness (on horses or mules) conversion of backpackers campgrounds to dispersed camping, reductions in the zone capacity for Little Yosemite Valley, and removal of the Merced Lake High Sierra Camp would address management considerations by reducing crowding, high use levels, and increasing opportunities for solitude.

TABLE 8-62: SEGMENT 1 ACTIONS AND IMPLICATION FOR RECREATION ORV-19

Location	Action in Alternative 3	Effects toORV-19
Location		
Merced Lake High Sierra Camp	Remove the Merced Lake High Sierra Camp, remove permanent infrastructure, convert the area to designated Wilderness.	The undeveloped and primitive recreation elements of wilderness character are enhanced on a segmentwide level by removal of this facility.
Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Areas	Designated camping areas would be converted to dispersed camping.	The solitude and primitive elements of wilderness character would be enhanced due to the opportunity to camp out of sight and sound of other campers.
Segmentwide River Access	Swimming and water play allowed. No permits required for private boating. No commercial boating	Permitted use and commercial limits would not substantively change current recreational use or recreational values in the segment. Recreational values would continue to be protected segmentwide.
Visitor Use Management Action		
Private boating	Boating would consist of short floats using pack raft or other craft that can easily be carried Private use would be unlimited in this segment; however, boaters completing overnight trips would be subject to wilderness permit restrictions.	Permitted use would not substantively change current recreational use or recreational values in the segment. Recreational values would continue to be protected segmentwide.
Wilderness zone capacity	Zone capacities for Merced Lake, Washburn Lake, Mount Lyell, and Clark Range zones would remain the same across all the alternatives. Manage to a reduced capacity of 25 in the Little Yosemite Valley Wilderness Zone	Zone capacities are designed to protect recreational setting attributes and recreational experience quality. Reduced capacity in LYV would result in localized enhancement of recreational values in the wilderness.

Segment 2 – Yosemite Valley (Recreational and Scenic Segments)

Biological ORV-2 – Mid-elevation Meadows and Riparian Habitat

The meadows and riparian communities of Yosemite Valley comprise one of the largest mid-elevation meadow-riparian complexes in the Sierra Nevada. Actions to protect and enhance Biological ORV-2 under Alternative 2 include:

- Removal of informal trails in meadows where they fragment meadow habitat or cross through sensitive, wet vegetation communities. Overall, restore twelve miles of informal trails throughout Yosemite Valley;
- Use boardwalks or hardened surfaces to allow access to sensitive areas;
- Delineation and re-routing of trails through upland areas and along meadow perimeters;
- De-compacting trampled soils and consolidate multiple parallel trails;
- Re-directing visitor use to more stable and resilient river access points such as sandbars, and designate formal river access sites. Establishing fencing and signage to protect sensitive areas; install boardwalks where appropriate, and actively revegetate where needed;

- Remove all campsites and infrastructure within the 100-year floodplain and restore natural floodplain and riparian habitat;
- Restoration of the mosaic of meadow, riparian deciduous vegetation, black oak, and open mixed conifer forest at specific locations in Yosemite Valley. Management actions could include re-vegetation, prescribed fire, mechanical removal of conifers, and infrastructure re-design. Alternative 2 would include 347 acres of ecological restoration.
- Day use parking capacity is expanded and formalized. A total of 1,800 visitor parking spaces would be provided in the Valley accommodating a maximum of 5,858 people at one time to Segment 2. Managing access and other proactive restoration measures would protect Biological ORVs by during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Biological ORVs by removing these uses from the river corridor and managing access in the corridor.

This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Under this alternative, all roads, buildings, campgrounds, trails, utilities and infrastructure, and other facilities in this segment with current local effects on the biological ORV would be removed, reduced, or relocated, including Yosemite Lodge. Facilities that would remain in this segment of the river have no direct impact on the biological river value as indicated in the baseline condition assessment. Effects to the free-flowing condition of the river as a result of the bridges that would remain under this alternative would be mitigated through constructed log jams.

The NPS would monitor three indicators to assess the condition of ORV 2: meadow fragmentation resulting from informal trails, the status of riparian habitat, and riparian bird abundance. As described in Chapter 5, adverse effects and degradation are not present. Actions are proposed to address management considerations pertaining to meadow connectivity, informal trailing, and fragmentation.

The NPS is beginning to monitor the third indicator in this segment, riparian bird abundance. The first status assessments would take place in 2013, after one year of monitoring. The next assessment requires information from two out of three years.

To ensure the biological ORV in Segment 2 is protected and enhanced through time, the NPS would continue to monitor the condition of the ORV to provide early warning of conditions that require management action before effects occur. Regular monitoring would also reveal whether conditions have reached trigger points; and, if so, the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects.

TABLE 8-63: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2

Location	Action in Alternative 2	Effects to ORV-2
Segmentwide Restoration	(Common to all) Restoration includes restoration of meadow habitat, removal of informal trails, riparian restoration and establishment of designated river access points, and use of boardwalks and hardened surfaces.	Actions would enhance the biological ORV segmentwide.
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within the 100-year floodplain would be removed. Designated put in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be discouraged; the biological ORV would be enhanced segmentwide.
Stoneman Meadow and Curry Orchard parking lot	Removal of 1,335 feet of Southside Drive and re-alignment of road through Boys Town area. The Orchard Parking Lot would be re-designed. Remove apple trees and landscape with native vegetation. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	These changes would promote water flow and improve meadow health thereby enhancing the biological ORV locally.
New campsites at Yosemite Lodge, Backpacker's, and Camp 4	New campsites constructed at Yosemite Lodge, Backpackers, and Camp 4 out of the 100 year floodplain.	Actions would protect riparian areas from direct impacts related to the increase in visitor activity in these areas. Fencing and designated river access points would also direct use to resilient areas. Monitoring would proactively assess the effectiveness of these actions and established triggers to ensure that future protective measures are implemented in a timely manner. Change would result in protection of biological ORV in this segment.
Ahwahnee, Sugar Pine and Stoneman Bridges	Remove the Ahwahnee, Sugar Pine and Stoneman Bridges, and the associated berms and restore to natural conditions. Reroute the multiple use trail to the north bank of the river. Reroute utilities under Ahwahnee Bridge.	Change would reduce channel widening, erosion, and scouring thereby enhancing local riparian communities.
Yosemite Village and Housekeeping Camp		
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	These changes would reduce effects to riparian corridor and enhance ORV components locally due to restoration. In addition access would be directed to resilient sandy beaches.
Ahwahnee Row and Tecoya Dorms Concessioner Employee Housing	Remove housing and development, recontour topography, decompact soils, and restore stream hydrologic function.	These changes would remove infrastructure from the 100-year floodplain and former meadow and wetland areas thereby locally enhancing the ORV.
Northside Drive (Stoneman Bridge to Yosemite Village Day use Parking Area)	Remove 900' of road and relocate the bike path to the south.	These changes would improve meadow/river connectivity.

Table 8-63: Segment 2 Actions and Implications for Biological ORV-2 (continued)

Location	Action in Alternative 2	Effects to ORV-2
Yosemite Village and Housekeeping Camp (cont.)		
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Drive and restore to natural conditions.	These changes would remove uses from the riverbank thus reducing erosion and trampling effects in riparian corridor and enhancing ORV components locally.
Yosemite Lodge and Camp 4		
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Relocation of this facility outside of the river corridor may reduce informal trailing in the adjacent meadow thereby enhancing the ORV locally.

Conclusion: Under Alternative 2, the biological ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance riverbanks and meadows. Removal or relocation of select campsites and infrastructure and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Geological/Hydrological ORV-5 – The "Giant Staircase"

The NPS has no immediate management considerations with respect to the Giant Staircase characteristic of the geology of Yosemite Valley above Happy Isles as this geologic ORV is determined to be absent of adverse effects and degradation. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Geological/Hydrological ORV-6 – Rare, Mid-elevation Alluvial River

As described in Chapter 5, the NPS selected the status of riparian habitat as the indicator to specifically assess the effectiveness of actions designed to protect this and other ORVs. This ORV integrates geologic/hydrologic processes and the condition of aquatic, riparian, and floodplain communities.

The following actions are included to specifically protect and enhance free-flowing conditions and the biological ORV in Segment 2, but would also address the protection and enhancement of the Geologic/Hydrologic ORV in Segment 2:

- Large wood, constructed log jams, and brush layering would be used in the vicinity of bridges to decrease bed scouring and streambank instability, river widening, river constrictions, and low channel complexity. Riprap would be removed where possible and replaced with native riparian vegetation, using bioengineering techniques. In the event that such actions do not improve conditions, bridge redesign or removal could be reconsidered.

- Under Alternative 2 the free-flowing condition of the river would be enhanced by removing the Ahwahnee, Sugar Pine, and Stoneman Bridges. Mitigation measures would be employed during removal and the long-term recovery of the removal areas is expected. Restoring free-flowing conditions would enhance riparian communities associated with ORV-6.

- Removing abandoned underground infrastructure, along the river corridor would be part of a comprehensive strategy to correct altered surface and subsurface hydrology.

- Remove riprap where riverbanks do not need stabilization to allow for channel migration. Replace riprap with bioengineered riverbanks, integrating native riparian vegetation, where riverbank stabilization is necessary for protection of critical infrastructure.

- Remove all campsites and infrastructure within the 100-year floodplain and restore natural floodplain and riparian habitat.

- Major restoration of the 100-year floodplain and restoration of the dynamic 10-year floodplain in East Yosemite Valley.

TABLE 8-64: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR GEOLOGICAL/HYDROLOGICAL ORV-6

Location	Action in Alternative 2	Effects toORV-6
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center Parking Area	Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	These changes would reduce effects to the riparian corridor and enhance ORV components locally as use would be relocated away from areas critical to hydrologic function.
Ahwahnee Row and Tecoya Dorms Concessioner Employee Housing	Remove housing and development out of the 100-year floodplain, recontour topography, decompact soils, and restore stream hydrologic function.	These changes would remove infrastructure from the 100-year floodplain and former meadow and wetland areas thereby enhancing the floodplain and geologic/hydrologic processes locally.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	These changes would reduce effects to riparian corridor and enhance ORV components locally. In addition access would be directed to resilient sandy beaches.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Implementation of mitigation measures would protect the floodplain from erosion and other disturbance during construction.
Yosemite Lodge Visitor Facilities	Remove all of the lodging units (-245 units). Repurpose the area outside the 100-year floodplain for Day Lodge and Parking. Restore the 100-year floodplain.	Lodging is outside the 100-year floodplain and is not causing adverse effects
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Lodging is outside the 100-year floodplain and is not causing adverse effects

To ensure this ORV is protected and enhanced through time, the NPS would monitor the condition of the ORV using the status of riparian habitat as an indicator, and take specific actions should conditions reach trigger points.

Conclusion: Under Alternative 2, the geologic/hydrologic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would enhance the 10 and/or 100-year floodplains. Actions to protect and enhance free-flowing conditions as well as meadows and riparian complexes in Segment 2 would result in additional enhancement of the geologic/hydrologic ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Cultural ORV-8 – Yosemite Valley American Indian Ethnographic Resources

As described in Chapter 5, Yosemite Valley American Indian ethnographic resources include 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 tribes and groups. Management considerations related to ethnographic resources involve park operations, crowding, and visitor use. Actions included in the Merced River Plan/DEIS include:

- Document the Yosemite Valley Traditional Cultural Property, consisting of traditional use areas, spiritual places and historic villages and complete National Register evaluation and interpretive summary.
- Continue coordination between traditionally associated American Indian tribes, groups, and traditional practitioners (through the Park American Indian Liaison) with law enforcement, fire management, interpretation, invasive species, ecological restoration, and facilities management programs.
- Continue to provide operational guidelines for material staging areas, parking, etc. to protect ethnographic resources.
- Ensure access for traditionally-associated American Indians for participation in annually scheduled traditional cultural events. In addition, tribal access for the personal conduct of ongoing traditional cultural practices would be assured through the Yosemite tribal fee waiver pass program.
- Reduce and formalize day-use parking capacity Manage access in Segment 2 to protect traditionally-used plant populations in the river corridor during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Cultural ORVs by removing these uses from the proximity of several cultural resources.

Threats to traditionally-used plant populations include invasive species such as Himalayan Blackberry (*Rubus armeniacus*), drainage and hydrology impacts to meadows, and erosion and revetments that affect riparian vegetation. The *Merced River Plan/DEIS* would address these considerations through the following actions:

- The ecological restoration actions associated with this planning effort implemented in concert with the existing invasive plant management program would address impacts to some traditionally-used plant populations in some locations.

- Restoration actions to protect riparian areas, meadows, and hydrological resources would further contribute to the protection and enhancement of the traditional-use plant communities included in this ORV.
- Introduction of seedlings to affected stands of black oaks and protection as necessary to ensure that ratios of adults to saplings is at least 0.65.
- Primary actions to manage major vista points under Scenic ORV-16 include mechanical thinning or removal of conifer trees. This action would be coordinated to ensure that the ORV – 8 trigger point for the ratio of sapling to adult trees is not exceeded.

TABLE 8-65: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR CULTURAL ORV-8

Location	Action in Alternative 2	Effects toORV-8
Curry Village and Campgrounds		
Traditional Cultural Property Documentation	Document the Yosemite Valley Traditional Cultural Property, consisting of traditional use areas, spiritual places and historic villages and complete National Register evaluation and interpretive summary	Documentation, mapping, and evaluation would provide the detail necessary to protect and enhance the ORV segmentwide.
Visitation	13,900 people per day	This level of visitation would improve privacy for traditional cultural practices thereby enhancing the ORV segmentwide. Access to annually-scheduled traditional cultural events and personal conduct of traditional cultural practices would be assured thereby continuing protection of the ORV segmentwide.
Upper Pines, Backpacker's, Concessioner Stables, Camp 4, and Upper and Lower River Campgrounds	All campsites within 100 feet of the river would be removed. New campsites constructed at Upper Pines, Backpacker's, Concessioner Stables, Camp 4, and Upper and Lower River Campgrounds. Designated put in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged. Traditional uses in riparian areas would thereby be enhanced segmentwide.
Curry Village Lodging	Lodging would include 433 units, (143 hard-sided units and 290 tents).	Lodging is outside the 100 year floodplain and is not causing adverse effects or degradation to ORV-6 on a segmentwide basis. The ORV would continue to be protected segmentwide.
Yosemite Village and Housekeeping Camp		
Housekeeping Camp Lodging	Remove 266 lodging units, out of the observed ordinary high water mark.	These changes would reduce effects to riparian corridor and locally enhance ORV components locally due to restoration. In addition access would be directed to resilient sandy beaches.
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Removal of the tennis courts would allow for recruitment of desirable black oaks in this area thereby enhancing the ORV locally.

Table 8-65: Segment 2 Actions and Implications for Cultural ORV-8 (continued)

Location	Action in Alternative 2	Effects toORV-8
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Implementation of best management practices would protect the floodplain from erosion and other disturbance. Traditional uses in riparian areas would thereby be enhanced locally.
Yosemite Lodge Visitor Facilities	Removing the existing 245 units.	Restoration in this area may improve conditions for traditional use plants thereby enhancing the ORV locally.
Former Bridalveil Sewer Plant	Remove the buried structure.	Removal of the abandoned infrastructure and native plant revegetation will allow for recruitment of desirable black oaks in this area thereby enhancing the ORV locally.
Yellow Pine Administrative Campground	Remove 4 group administrative use sites (up to 120 people).	Restoration would reduce effects to riparian corridor traditional use plants. Yellow Pines is used for overflow camping during annual traditional cultural events. Removal of this campground and restoration of the site would continue to protect the ORV segmentwide.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Relocation of this facility outside of the river corridor will allow for recruitment of desirable black oaks in this area thereby enhancing the ORV locally.

Facilities that would remain in this segment of the river have no direct impact on the ethnographic component of the cultural ORV as indicated in the baseline condition assessment.

The Merced *River Plan/DEIS* proposes a variety of actions to address specific considerations including continued coordination between traditionally associated American Indian tribes, groups, and traditional practitioners and the NPS; continued access for traditionally associated American Indians for participation in annually scheduled traditional cultural events; and ecological restoration actions to protect and enhance traditionally used plant populations. To prevent future impacts, the NPS would monitor the condition of the ORV, and take specific actions should additional trigger points be exceeded.

Conclusion: Under Alternative 2, the ethnographic component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Actions to protect and enhance floodplains, meadows and riparian complexes in Segment 2 would result in additional enhancement of the traditionally-used plant resources of the ethnographic component of the cultural ORV on local and segmentwide levels. Actions that would remove infrastructure and restore black oak woodlands would also enhance a critical component of this ORV. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would not limit access to traditional practitioners because measures would be in place to ensure access to annually-scheduled events as well as individual access for ongoing traditional cultural practices. Furthermore, the overall reduction in visitation under Alternative 2 would reduce the effects of crowding and enhance privacy for traditional cultural practices.

Cultural ORV-9 – Yosemite Valley Archeological District

The Yosemite Valley Archeological District is a linked landscape that contains dense concentrations of resources that represent thousands of years of human settlement along this segment of the Merced River. Heavily-used formal trails and informal trails, as well as illegal campfires, graffiti, and trampling stock trail use, parking and informal rock climbing can all affect ORVs in this area. Archeological resource protection would be achieved through actions in this plan to manage visitor use levels, divert foot traffic around sites, removing informal trails, and formalizing river and meadow access locations, mitigating ecological restoration practices by using noninvasive techniques wherever possible. Many of the actions related to ecological restoration in Segment 2, such as delineating roadside parking, would also help protect archeological sites by diverting foot traffic away from sites and into less sensitive areas. Actions to enhance the recreational ORV in Segment 2 would manage recreational users both in terms of flow and location of users at any one time. A reduction in people and vehicles at one time in Yosemite Valley could also reduce visitor use-related effects on archeological resources.

Site-specific treatment actions would be developed through site management plans, where necessary, to avoid resource loss through park actions (such as development, repair, and maintenance of facilities and underground utilities to support visitor use or natural forces).

Management considerations for this ORV also involve continuing to survey and monitor archeological resources as well as update required documentation.

Under Alternative 2 the free-flowing condition of the river would be enhanced by removing the Ahwahnee, Sugar Pine, and Stoneman Bridges. Mitigation measures would be utilized to reduce localized impacts and ensure that this action would not cause adverse effects or degradation to ORV-9 on a segmentwide basis. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Facilities that would remain in this segment of the river have no direct impact on the archeological component of the cultural ORV as indicated in the baseline condition assessment.

The NPS would delineate bike paths, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; remove graffiti at rock art and other sensitive features, conduct public education to discourage climbing, and remove climbing hardware from sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

TABLE 8-66: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9

Location	Action in Alternative 2	Impact on ORV-9
Curry Village and Campgrounds		
North, Lower and Upper Pines, and Backpackers Campgrounds	All campsites within 100-year floodplain would be removed. Upper Campsite in culturally sensitive area.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological

		resources. Actions would continue to protect the ORV segmentwide.
Concessioner Stables	Ecologically restore the Curry Village Stables area; eliminate commercial day rides. Remove associated housing (25 beds).	Mitigation measures would protect cultural resources during facility removal. Actions would continue to protect the ORV segmentwide.
Curry Village Lodging	Lodging would include 433 units, (143 hard-sided units and 290 tents).	Mitigation measures would protect cultural resources during facility removal. Actions would continue to protect the ORV segmentwide.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would protect cultural resources during facility removal and would locally protect the ORV. Actions would continue to protect the ORV segmentwide.
The Ahwahnee Parking Lot	Redesign and formalize the existing parking lot; providing for proper drainage. Construct new 50 parking space lot east of the current parking.	Mitigation measures would protect cultural resources during facility removal. Actions would continue to protect the ORV segmentwide.
Yosemite Village Day-use Parking Area	The Concessioner General Offices, Garage, and the Bank Building are removed. Move the Camp 6 day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	Mitigation measures would protect cultural resources during facility removal. Actions would continue to protect the ORV segmentwide.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	Mitigation measures would protect cultural resources during facility removal. Actions would continue to protect the ORV segmentwide.
Yosemite Village Concessioner Employee Housing	Temporary housing at Huff House and Boys Town is removed. Remove housing units (7 buildings, 64 beds) in rock fall hazard zone. Construct 16 buildings, housing 164 employees using the same dormitory prototype. Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Dr. and restore to natural conditions.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.

TABLE 8-66: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9 (CONTINUED)

Location	Action in Alternative 2	Impact on ORV-9
Yosemite Lodge and Camp 4		
West of Yosemite Lodge New Parking	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge Visitor Facilities	Remove all of the lodging units (-245 units). Repurpose the area outside the 100-year floodplain for Day Lodge and Parking. Restore the 100-year floodplain.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Change would not affect contributing element of the Archeological District due to location and level of use. Mitigation measures would protect cultural resources during facility removal and construction. Actions would continue to protect the ORV segmentwide.
Yellow Pine, Camp 4, Yosemite Lodge, and West Valley Campgrounds.	Remove camping and restore the 100-year floodplain to natural conditions. Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Remove campground and restore administrative use sites in Yellow Pine (in culturally sensitive area) to natural conditions.	Mitigation measures would protect cultural resources during facility removal. Actions would continue to protect the ORV segmentwide.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Mitigation measures would protect cultural resources during facility relocation. Actions would continue to protect the ORV segmentwide.
Northside Drive (Stoneman Bridge to Yosemite Village Day-use Parking Area)	Remove 900' of road and relocate the bike path to the south, to improve the meadow/river connectivity. Restore meadow contours and native vegetation.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.

Conclusion: Under Alternative 2, the archeological component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Localized visitor-use-related impacts to archeological resources would be addressed through various enhancement actions. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would reduce the potential for visitor use impacts.

Cultural ORV-10- Yosemite Valley Historic Resources

As described in Chapter 5, the Yosemite Valley Historic Resources represent a linked landscape of river-related or river-dependent, rare, unique or exemplary buildings and structures that bear witness to the historical significance of the river system. Protective actions to address management concerns related to the Yosemite Valley Historic Resources ORV-10 include:

- Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.
- Develop a Historic Structures Report for the LeConte Memorial Lodge NHL to determine the rehabilitation needs to bring the building to "good" condition.
- Rehabilitate the Superintendent's House (Residence 1) per the Historic Structure Report (Lingo 2012) to bring the building to "good" condition. This rehabilitation of the building will occur under all action alternatives, regardless of whether the building is relocated.

Under Alternative 2 the free-flowing condition of the river would be protected by removing the Ahwahnee, Sugar Pine, and Stoneman Bridges. Relocation of the Superintendent's House (Residence 1) is proposed under Alternative 2 to address the 1982 Guidelines for the Wild and Scenic Rivers Act that requires managing agencies to consider relocation of major public use facilities outside of the river corridor. These three bridges and the Superintendent's House (Residence 1) are components of the Yosemite Valley Historic Resources component of the cultural ORV in Segment 2. The NPS would document and interpret any building or structure threatened with removal or relocation. In this manner, while the individual tangible element or elements may be lost or moved, a record of their existence and historical significance would still be available to the public.

To address management considerations, the *Merced River Plan/DEIS* proposes continuing the active program of maintenance for historic buildings and structures; employing existing design guidelines to ensure that new development or redevelopment complements the ORV and the Yosemite Valley Historic District; and periodically assessing and updating professional documentation for the historic resources.

Ecological and scenic value restoration actions in Segment 2 would enhance the cultural landscape which contributes to the historic setting of the resources that comprise the ORV-10. There are no construction actions associated with Alternative 2 that would affect the spatial organization of the historic resource collective, though changes in the circulation patterns as a result of re-routing roads at the Yosemite Village day-use parking area and at Stoneman Meadow would affect circulation patterns that are associated with this ORV. These effects would be localized and would not affect the condition of the ORV on a segmentwide level.

Conclusion. Under Alternative 2, the historic resources component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of three bridges and the relocation of the Superintendent's House (Residence 1) would result in localized effects that would be mitigated through documentation and interpretation. Once removed or relocated, these resources would no longer be considered part of the

TABLE 8-67: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-10

Location	Action in Alternative 2	Effects toORV-10
Curry Village and Campgrounds		
Stoneman Bridge	Remove bridge and restore to natural conditions, make Southside Drive two-way, and redesign Sentinel intersection.	The action would remove 2 contributors to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of these two bridges would not result in a segmentwide adverse effect of the collective of resources.
Stoneman Meadow and Curry Orchard parking lot	Restore Stoneman Meadow including removal of 1,335 feet of Southside Drive and re-alignment of road through Boys Town area. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	Change would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective.
Yosemite Village Day-Use Parking Area	Remove Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Re-align the intersection at Northside Drive and Village Drive. Add a three-way intersection at Sentinel Drive and the entrance to the parking area. Provide on-grade pedestrian crossings.	The removal of historic and non-historic properties and re-alignment/re-establishment of the intersections would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Sugar Pine and Ahwahnee Bridges	Remove both bridges and the connecting berm.	The action would remove 2 contributors to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of these two bridges would not result in a segmentwide adverse effect of the collective of resources.
Superintendent's House (Residence 1)	Relocate outside the river corridor to the NPS housing area. Rehabilitate historic structure in new location.	The action would remove a contributor to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of this resource would not result in a segmentwide adverse effect of the collective of resources.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	The action would affect trails that are connected by the historic footbridges which are components of the Yosemite Valley Historic Resources ORV. Mitigation measures and Section 106 review would ensure the protection of the historic resources and the redesign could result in enhancement of the ORV locally.

ORV collective. All disturbances to circulation and spatial organization associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and documentation (as needed) to ensure that historic resources are protected.

Scenic ORV-16 – Iconic Scenic Views in Yosemite Valley

Visitors to Yosemite Valley experience scenic views of some of the world's most iconic scenery, with the river and meadows forming a placid foreground to towering cliffs and waterfalls. Actions intended to manage natural resources may include the use of prescribed fire or controlled burns to thin forests that are encroaching on meadows; cutting trees, tree branches or other vegetation by mechanical means; and the application of herbicides to control invasive species. Related actions intended to protect the Recreation ORV would limit the number of visitors to lessen visitor density and congestion at attraction sites and make improvements to the transportation system that would reduce automobile congestion. Air quality can affect visitors' ability to experience scenic values in Segment 2. The NPS would cooperate with regional authorities to reduce airborne contaminants caused by combustion, including carbon dioxide emissions, smoke caused by fire, particulate matter generated by construction, and to improve air quality conditions.

In consideration of Wild and Scenic River Act requirements that the NPS consider the presence of existing structures, major facilities and services provided for visitor use, the NPS would eliminate several structures and facilities in Segment 2 under this alternative. Under Alternative 2 actions would remove many structures at the Yosemite Lodge, and the Ahwahnee pool and tennis court. Removal of these structures could enhance scenic resources from specific locations. Ecological restoration actions in Segment 2 would enhance the meadow and riparian communities which contribute to the scenic values in Yosemite Valley. This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Facilities that would remain in this segment of the river have no direct impact on the scenic river value as indicated in the baseline condition assessment. Changes to parking and vehicle traffic in Yosemite Valley to enhance Recreational ORV- 20 particularly the removal of roadside parking along Sentinel Drive and restoration to natural conditions would enhance Scenic ORV-16.

The NPS would monitor the condition of the scenic ORV-16 by removal of conifers encroaching on meadows and vista points, taking action to maintain viewsheds.

Conclusion: Under Alternative 2, the scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Tree thinning and ecological restoration actions would improve natural scenic conditions. Removal of buildings at Housekeeping Camp, Yosemite Lodge, the Concessioner Garage, the Concessioner General Offices, and the Concessioner Stables would reduce intrusions on scenic resources. All parking lot and campground construction under this alternative would be subject to park standard operating procedures and subject matter expert review to ensure that scenic resources are protected.

TABLE 8-68: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR SCENIC ORV-16

Location	Action in Alternative 2	Effects toORV-16
Curry Village and Campgrounds		
Select Scenic vista Points	Selectively thin conifers and other trees and shrubs that encroach on selected scenic vista points. Remove unnecessary facilities and ensure that all future development satisfies objectives that provide low contrast ratings.	Changes would enhance the scenic values on a segmentwide level.
Concessioner Stables	Ecologically restore the Curry Village Stables area; eliminate commercial day rides. Remove associated housing (25 beds).	Currently not causing effects on scenic resources. Restoration would improve viewsheds thereby enhancing scenic values locally.
Curry Village Lodging	Lodging would include 433 units, (143 hard-sided units and 290 tents).	Changes to Lodge would be in keeping with current facility and given the location of the facility would not interfere with iconic scenery. The ORV would continue to be protected locally.
Ahwahnee, Sugar Pine, and Stoneman Bridges	Remove the Ahwahnee, Sugar Pine, and Stoneman Bridges.	Given the location of the bridges, removal would not interfere with iconic scenery. The ORV would continue to be protected locally.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts	Given the location of the facility, changes to facilities would not interfere with iconic scenery. The ORV would continue to be protected locally.
The Ahwahnee Parking Lot	Redesign and formalize the existing parking lot; providing for proper drainage. Construct new 50 parking space lot east of the current parking.	Given the location of the facility, changes to facilities would not interfere with iconic scenery. The ORV would continue to be protected locally.
Yosemite Village Day Use Parking Area/Village Center Parking Area	The Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	Removal of buildings would enhance viewsheds locally.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	Removal of Housekeeping units near the river will enhance viewsheds locally.
Yosemite Village Concessioner Employee Housing	Temporary housing at Huff House and Boys Town is removed. Remove housing units (7 buildings, 64 beds) in rock fall hazard zone. Construct 16 buildings, housing 164 employees using the same dormitory prototype. Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Mitigation measures would avoid or mitigate effects to iconic scenic vistas. Actions would continue to protect the ORV locally.
Yosemite Lodge and Camp 4		
Yosemite Lodge Visitor Facilities	Remove all of the lodging units (-245 units). Repurpose the area outside the 100-year floodplain for Day Lodge and Parking and walk-in Camping. Restore the 100-year floodplain.	Currently not interfering with scenic resources. Viewsheds would be enhanced locally through the removal of these buildings.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins.	The ORV would continue to be protected locally.

Recreational ORV-20 – River-related Recreation in Yosemite Valley

Visitors to Yosemite Valley enjoy a wide variety of river-related recreational activities in the Valley's extraordinary setting along the Merced River. Throughout the Yosemite Valley segment, the river has provided the setting for recreational experiences such as fishing, floating, and sightseeing. Transportation is considered an important part of the visitor experience in Yosemite Valley because it is the means of access to recreational opportunities in Yosemite Valley. Management considerations address the amount of vehicle traffic and the number of people at one time in Yosemite Valley at the peak times of day during the park's busy summer season.

All restoration actions to protect and enhance biological, cultural, geologic/hydrologic, and scenic ORVs would further enhance visitors' connections to the river and its values, which are essential to the recreational ORV in this segment. A reduction in day-use, camping, and lodging opportunities would reduce access to these recreational experiences, but would not cause adverse effects or degradation to ORV-20 on a segmentwide basis. The removal of Yosemite Lodge and Housekeeping Camp would eliminate two distinct types of overnight accommodations in Yosemite Valley, but overnight lodging would not be eliminated segmentwide, nor would an essential aspect of the recreational ORV be affected. There are also actions proposed in Alternative 2 that would improve picnicking, and wayfinding. Finally, while commercial boating is eliminated and private boating is limited to 25 trips per day in Segment 2, this alternative reduces crowding and increases the stretches of the river on which private boating and paddling is allowed, thereby enhancing key aspects of this recreational experience.

Chapter 6 provides a more detailed description of the day-visitor capacity management strategies that directly measure aspects of the Recreation ORV and outlines specific actions. These actions include:

- Utilize parking and traffic management staff to improve parking efficiency and traffic flow in Yosemite Valley and other locations where needed.
- Institute a transportation fee at entrance stations (for peak-use season).
- Divert vehicles to other destinations outside of Yosemite Valley when parking in the Valley fills.
- When all parking fills to capacity, day visitors would be diverted at checkpoints throughout the park and at entrance stations.
- East Valley day-use parking permits would be issued by advanced reservation and on a first-come-first-serve basis.

NPS would use the Highway Capacity Manual Pedestrian Level of Service (discussed further in Chapter 5) for evaluating the capacity and quality of service of transportation facilities, including walkways, multi-use paths, and similar pedestrian facilities. NPS would also monitor parking rates and vehicles at one time to ensure that they are not exceeding the management standard. Should specific trigger points be reached, the NPS would implement a series of specific actions to improve parking to an acceptable level. Similarly, should visitor densities begin to approach specific triggers; NPS would take steps to keep such densities within the management standard.

Conclusion. Under Alternative 2, the recreation ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping

and lodging opportunities, as well as reduction in visitation particularly during the peak season will significantly reduce crowding thereby enhancing the recreational ORV. All restoration actions would enhance opportunities to connect with the river and its values. The reduction in commercial services would affect opportunities for particular types of recreational activities, but would not affect the essential components of the recreation ORV on a segmentwide basis.

TABLE 8-69: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR RECREATIONAL ORV-20

Location	Action in Alternative 2	Effects toORV-20
Segmentwide visitation	13,900 visitors per day	This reduction in visitation would reduce crowding and congestion thereby enhancing the recreation ORV on a segmentwide level.
Concessioner Stables	Ecologically restore the Curry Village Stables area; eliminate commercial day rides. Remove associated housing (25 beds).	Changes would reduce opportunities for one type of recreational activity, but would not substantially alter components of the river recreation experience. The ORV would continue to be protected on a segmentwide level.
Curry Village Lodging	Lodging would include 433 units, (143 hard-sided units and 290 tents).	Changes to Lodge would increase access to overnight accommodations. Lodge itself is not part of the ORV-20 but does facilitate access to ORV-20 for certain visitors. The ORV would continue to be protected on a segmentwide level.
Lower Rivers Nature Walk	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.	Change would improve interpretation of the river and its values, and would enhance the recreation ORV in this segment.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	(Common to All) Remove the pool and tennis courts	Removal of facilities would reduce opportunities for one type of recreation activities, but would not substantially alter components of the river recreation experience.
Segment wide River Access	Swimming and water play allowed in all segments except 6, impoundment. No commercial boating. Boating allowed on all segments except 6, impoundment. Private use limited to 25 trips per day in Segment 2 between the Pines Campgrounds and Sentinel Beach.	Change would eliminate commercial boating and would limit the number of private boating. However, this change does not affect components of the recreational ORV. This reduction in boats enhances dispersed recreation along the river corridor thereby enhancing the ORV segmentwide.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	Changes to Lodge would reduce access to overnight accommodations and would eliminate one type of recreation activity. The ORV would continue to be protected on a segmentwide level.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	Change would improve circulation and wayfinding thus enhancing ORV-20 locally.

TABLE 8-69: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR RECREATIONAL ORV-20 (CONTINUED)

Location	Action in Alternative 2	Effects toORV-20
Yosemite Lodge and Camp 4		
Yosemite Lodge Visitor Facilities	Remove all of the lodging units (-245 units). Repurpose the area outside the 100-year floodplain for Day Lodge and Parking. Restore the 100-year floodplain.	Removal of lodging would have local affect, but would not substantially alter components of the river recreation experience. Changes to Lodge would decrease access to overnight accommodations. Lodge itself is not part of the ORV-20 but does facilitate access to ORV-20 for certain visitors. The ORV would continue to be protected on a segmentwide level.
Yellow Pine, Camp 4, Yosemite Lodge, and West Valley Campgrounds.	Remove camping and restore the 100-year floodplain to natural conditions. Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Restore Yellow Pines site and restore group administrative use sites to natural conditions.	Reduction in the number of campsites limits access to these recreational experiences, but camping opportunities would continue and change would not substantially alter components of the river recreation experience. The ORV would continue to be protected on a segmentwide level.
Recreational Experience Quality	Reduction in available day-use parking, and implementation of an East Yosemite Valley Day-use Parking Permit system	Reduction in the number of parking spaces limits access to these recreational experiences, but personal vehicle parking opportunities would continue and change would not substantially alter components of the river recreation experience. This will enhance the recreational experience of segment 2 by reducing crowding and congestion. The ORV would be enhanced on a segmentwide level.

Segment 3 – The Merced Gorge (Scenic Segment)

Scenic ORV-17 – Scenic View in the Merced River Gorge

The Merced River drops 2,000 feet over 14 miles; a continuous cascade under spectacular Sierra granite outcrops and domes. There are no existing management considerations with respect to the Scenic ORV in the Merced River Gorge. Although there are some localized visual intrusions from essential facilities such as visitor parking areas, restrooms, the Arch Rock entrance station and the El Portal Road, these facilities are consistent with the scenic classification of this river segment. As explained in Chapter 5, this ORV is currently protected and enhanced.

This alternative does not propose any new development or landscape changes within the river corridor aside from improvements to existing roadside pullouts and drainage. These changes would not degrade or adversely impact the scenic ORV on a segmentwide basis. Although private vehicles and overall visitation during peak periods will be managed for East Yosemite Valley only, it is probable that visitation and visitors at one time in Segment 3 will also witness a reduction under this alternative. This reduction in visitation and visitors at one time may reduce vehicles per viewshed, thereby enhancing the scenic ORV. Monitoring associated with this ORV would ensure that the attributes that comprise this ORV remain within the accepted management class rating.

Alternative 2 would accommodate the same kinds and amounts of use that exist today in Segment 3. The types and levels of use in Segment 3 under this alternative would remain largely unchanged. Actions considered under Alternative 2 would cause no adverse effects or degradation to ORVs on a segmentwide basis.

Conclusion. Under Alternative 2, this scenic river segment would show little evidence of human activity and remain largely free of structures. The scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season in Yosemite Valley will significantly reduce the number of vehicles per viewshed in this segment. All restoration actions would further enhance scenic characteristics in this segment.

Segment 4 – El Portal (Recreational Segment)

Geological/Hydrological ORV-7 – The Boulder Bar in El Portal

Natural processes would continue to shape the landscape and the geologic ORV. The NPS has not identified any management considerations with respect to the El Portal boulder bar. Land use and facility actions proposed in this alternative would not affect this ORV. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection are necessary. Moreover, the types and levels of visitor and administrative use (e.g., housing, maintenance operations, office space, passive recreation) allowed under this alternative would not affect this ORV. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Conclusion: Under Alternative 2, the geologic values of this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no actions that would affect the boulder bar in El Portal, and there are no ongoing concerns or considerations associated with this resource.

Cultural ORV-11 – The El Portal Archeological District

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. Four sites are known to have experienced particularly severe damage, most notably a large ancient village and cemetery.

To address management considerations pertinent to this river value, the NPS would undertake the following actions:

- Protective measures would ensure that exceptional sites would be protected from unmitigated effects that could lead to adverse effects or degradation on a segmentwide level. A plan of action for addressing the abandoned infrastructure on sites would be developed in consultation with traditionally-associated American Indian tribes and groups. Any solution(s) developed would also include a recommended approach for deterring visitor use within the sites.

- Informal trails, non-essential roads, and abandoned infrastructure would be removed to protect and enhance the archeological resources contributing to the ORV in Segment 4.
- Remove informal trails and non-essential roads.

There are no existing instances of adverse effect or degradation to this ORV. As discussed above, management considerations are present associated with abandoned infrastructure that remains on an exceptional site containing diverse components and extremely sensitive cultural materials that are highly valued by traditionally associated American Indians. Management considerations are also associated with non-essential roads and trails that impact archeological sites. In recognition of the high cultural significance of these sites, this alternative requires the park to develop plans to remove abandoned infrastructure and non-essential roads. Restoration actions to establish a 2.5 acre recruitment area for Valley Oaks would further protect adjacent archeological resources. Construction of employee housing in Old El Portal, Abbieville, and Rancheria would be designed to avoid or mitigate threats and disturbances to archeological sites. Monitoring and protective measures would ensure that new use patterns associated with the new housing would not affect contributing elements of the El Portal Archeological District.

TABLE 8-70: SEGMENT 4 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-11

Location	Action in Alternative 2	Effects toORV-11
El Portal		
Abbieville, Old El Portal, and Rancheria Flat Concessioner Employee Housing	New employee housing in Abbieville (405 beds), Old El Portal (12 beds), and Rancheria Flat (9 beds).	Exact location for housing would avoid sensitive resources. Mitigation measures would protect cultural resources during construction. Ongoing monitoring and protective measures would ensure that use patterns associated with new housing would not affect contributing elements of the Archeological District. The ORV would continue to be protected segmentwide.
Abbieville Trailer Park Area	No new parking spaces added at the Abbieville/Trailer Park area.	Mitigation measures would protect cultural resources during facility removal and ecological restoration. Change would continue to protect archeological resources locally.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Mitigation measures would protect cultural resources during facility removal and ecological restoration. Change would continue to protect archeological resources locally.

Conclusion. Under Alternative 2, the archeological resources in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of abandoned infrastructure, informal trails and non-essential gravel roads would enhance protection of archeological resources. Valley Oak restoration actions would protect adjacent archeological resources from further ground disturbance, Construction of new employee housing would be designed to avoid or mitigate effects to the El Portal Archeological District. New or altered visitor use patterns associated with the new housing development would be monitored and protective actions would occur if effects triggered responses.

Segment 5 – South Fork Merced River Above Wawona (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Restoration actions to remove informal trails and charcoal rings to protect cultural resources proposed under this alternative would not affect high-elevation meadows. The NPS proposes no major facility or visitor use actions for Segment 5 under Alternative 2. The biological ORV in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level.

Cultural ORV-12 – Regionally rare archeological features representing indigenous settlement including archeological sites with rock ring features

Three regionally rare prehistoric archeological sites are located along this segment of the South Fork of the Merced Wild and Scenic River corridor. The sites contain unique stacked rock ring constructions and rock alignments. Two sites also contain pine timber remains within the ring interiors or incorporated into the stacked rock courses. Rock constructions are considered fragile and highly subject to human alteration from camping and campfire building disturbances. Two of the South Fork sites are adjacent to formal NPS trails, increasing the likelihood of disturbance. The vicinity of the sites has not been systematically surveyed, and it is possible that additional rock ring sites may be present along the South Fork. Should additional rock ring sites be discovered in the monitoring process, they would also become a part of the South Fork ORV. To remedy these considerations, NPS would:

- Complete documentation of the features. Restrict Wilderness camping in the area of the rock rings (camping allowed past particular marker). Remove informal trails and charcoal rings.
- Increase education and outreach to Wilderness travelers.

Conclusion. Under Alternative 2, the archeological resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no specific actions to manage user capacity, land use, and/or facilities under Alternative 2 within Segment 5 beyond those designed to protect and enhance ORV-12 that would impact components of Cultural ORV-12. Monitoring activities described in Chapters 5 and 8 would continue to protect and enhance Cultural ORV-12 to ensure there are no adverse effects or degradation to ORV-12 on a segmentwide basis.

Scenic ORV 18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

Conclusion. Under Alternative 2, the scenic resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. The scenic ORV for Segment 5 is

determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

Segment 7 – Wawona (Recreational Segment)

Biological ORV-3 – The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV would be determined by comparing populations located near Wawona Campground (an area that is likely to be disturbed by humans) with more remote populations that are less likely to receive such disturbance. This population of Sierra sweet bay is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

TABLE 8-71: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR BIOLOGICAL ORV-3

Facility	Action in Alternative 2	Effects toORV-3
Wawona		
Wawona Campground	Retains 67 sites and one group site. Remove 32 sites that are either within the 100-year floodplain or in culturally sensitive areas.	Action would improve the condition of the ORV by reducing the potential effects on this species associated with campground visitation. The ORV would continue to be protected locally.

To ensure that this biological ORV is protected and enhanced through time, the NPS would monitor the condition of the Sierra sweet bay population to ensure early warning of conditions that require management action before impacts occur.

Conclusion. Under Alternative 2, the Sierra Sweet Bay in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Reduction in camping and visitor activity in the vicinity of Wawona Campground would enhance this resource.

Cultural ORV-13 – Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This district spans segments 5, 6, 7, and 8. Accordingly, the condition of this historic property is assessed at the property-level, rather than the segmentwide level. 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. There are several management considerations for this ORV: the Wawona Archeological District is subject to site-specific impacts from park operations, visitor use, artifact collection, vandalism, and ecological processes. The following actions would help to address these issues:

- Increase monitoring frequency at affected sites.

- At the district-wide level, revise the existing National Register nomination to reflect changes since its original writing, for example, incorporating newly discovered resources and documenting impacts.
- The Wawona Campground capacity would be reduced to 67 sites (including one group site). 32 sites are removed because they are either within the 100-year floodplain or in culturally sensitive areas.
- Remove informal trails and fire rings to prevent continuing disturbance.
- Develop site management plans as needed for sites with complex uses. Remove shoulder and off-road parking. Limit facility and concessionaire off -road vehicle travel/parking on hotel grounds
- Consider need for archeological site treatment measures to address impacts to shallow deposits of artifacts and features.

TABLE 8-72: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-13

Facility and Land Use	Action in Alternative 2	Effects toORV-13
Wawona		
Wawona Campground Septic System	Remove septic system, and connect to the sewer system. Build a lift station above the campground to connect to the existing water treatment plant.	Mitigation measures would protect cultural resources during facility construction. The ORV would be protected locally.
Wawona RV dump site	Relocate the dump site to an appropriate location away from the river.	Mitigation measures would protect cultural resources during facility removal and construction. The ORV would be protected locally.
Wawona Store	Replace the existing public restroom facilities with larger restrooms to accommodate visitor use levels. Improve picnic area, redesign bus stop.	Mitigation measures would protect cultural resources during facility construction. The ORV would be protected locally.
Wawona Swinging Bridge	Provide access to Swinging Bridge with access on the south side of the river, delineate trail, restrooms, waste disposal and parking.	Mitigation measures would protect cultural resources during facility construction. Restrooms and waste disposal will reduce threats and disturbances to adjacent archeological resources. The ORV would be protected locally.

The NPS would delineate trails, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; conduct public education to discourage disturbance to sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

Cultural ORV-14 – Wawona Historic Resources

The Wawona Historic Resources ORV includes one of the few covered bridges in the region and the National Historic Landmark Wawona Hotel complex. The Wawona Hotel complex is the largest existing Victorian hotel complex within the boundaries of a national park, and one of the few remaining in the United States with this high level of integrity. The Wawona Covered Bridge is in good condition, and there are no current management considerations associated with it, however the bridge requires maintenance to keep the historic structure in good condition in the face of adverse weather and visitor use.

The Wawona Hotel complex continues to serve its original purpose as a guest lodging facility. Management considerations related to the hotel complex involve concessioner operations, the need for regular and routine preservation maintenance, and periodic rehabilitation to ensure visitor safety.

- Regular and routine preservation maintenance, conducted in accordance with the Secretary of the Interior's Standards, would ensure that this upkeep protects the historic character of the buildings
- Periodic rehabilitation would involve subject-matter specialists in planning, design and implementation to ensure actions do not compromise the historical integrity of the complex
- Concessioner operations would ensure that any operational modifications or updates are appropriate and in keeping with the historic character of the complex.

To prevent future impacts, the NPS would monitor the condition of the bridge, and take specific actions should conditions exceed trigger points. Trigger points are selected to inform managers well in advance of adverse effects or degradation on the Wawona Covered Bridge. Management considerations for the Wawona Hotel complex include the need for regular and routine preservation maintenance, periodic rehabilitation, and ongoing operations that serve its continuing function as a historic lodging facility. To address these management considerations, the NPS would ensure that these activities would conform to the Secretary of the Interior's Standards for Treatment of Historic Properties.

TABLE 8-73: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR WAWONA HISTORIC RESOURCES ORV-14

Facility	Action in Alternative 2	Effects toORV-14
Wawona		
Wawona Hotel	Retain 104 lodging units at the Wawona Hotel. Retain hotel restaurant and swimming pool. Wawona golf course and shop would be removed to accommodate ecological restoration, though the spray field would remain. The Wawona Hotel Tennis Court would also be removed under this alterative.	The action would retain contributors to the Wawona Historic Resource. The golf course and golf shop are not components of the ORV and their removal would not affect the condition of the Wawona Historic Resource river value. The ORV would continue to be protected locally.

Segment 8 – South Fork Merced River below Wawona (Wild Segment)

Biological ORV-3 — The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV in Segment 8 is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

Cultural ORV 13— Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This ORV in Segment 8 is in good condition, with no management considerations present. Management actions are not required at this time.

Scenic ORV-18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

The scenic ORV for Segment 8 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

ALTERNATIVE 3

River Value – Free-flowing Condition in all Segments

A free-flowing river, or section of a river, moves in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis. Riprap revetment, abandoned infrastructure within the bed and banks of the river, and bridges that constrict the flow of the river may produce localized effects on free-flowing condition of the river. Alternatives 2-6 would enact a comprehensive suite of actions to enhance the free-flowing condition of the river by removing 3,400 linear feet of riprap, and removing abandoned and unnecessary infrastructure from the river channel and its floodplain. Infrastructure that would be removed includes former sewage treatment facilities, sewer and water lines, and former bridge abutments. In addition, Alternative 3 would remove an additional 435 feet of riprap from riverbank areas, beyond that proposed for removal under Alternatives 2-6.

Alternative 3 also proposes removal of Stoneman, Ahwahnee, and Sugar Pine bridges, which produce hydraulic constrictions that lead to accelerated erosion and prevent natural channel migration during high-water events. The removal of the three bridges would help achieve the robust ecological restoration principles that guide Alternative 3.

There are no new facilities proposed under Alternative 3 that would affect the free-flowing condition of the river. A number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/Geological ORVs). For example, the Yosemite Village Day-use Parking Area would be relocated north outside the 10-year floodplain.

To protect the river's free flowing condition, the NPS would require all projects involving construction within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA. Through this process, the NPS would ensure that water resources projects within the designated river corridor would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition.

Conclusion: The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis, although localized considerations such as intermittent riverbank and bridges that constrict the flow of the river are present. Alternative 3 proposes a comprehensive suite of actions to enhance the free-flowing condition of the river by removing riprap, removing unnecessary infrastructure in the river channel, and removing three bridges that produce pronounced hydraulic constrictions at high water flows. There are no new facilities proposed under Alternative 3 that would affect the free-flowing condition of the river within the river channel, and a number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/ Geological ORVs). The NPS would require all proposed projects within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA to ensure that water resources projects would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition. The actions proposed under Alternative 3 ensure that there are no direct or adverse effects on free-flowing condition of the Merced River.

River Value- Water Quality (All Segments)

The water quality of the Merced River is extremely high, and the current water quality of the river is fully protected and enhanced on a segmentwide basis. Intermittent local instances of contamination may occur in connection with surface water runoff from parking areas, recreational vehicle dump stations in proximity to the river, and accelerated erosion with potential sediment loading in the river during high water flows. Alternatives 2-6 would apply mitigation measures to ensure that surface water runoff associated with parking areas protects the water quality of the Merced River and meets regulations. The Upper Pines and Wawona recreational vehicle dump stations would be moved away from the river, and the Odger's bulk fuel storage area in El Portal would be moved out of the 500-year floodplain. In addition, Alternative 3 would relocate the Yosemite Village Day-use Parking Area outside the 10-year floodplain. All campsites and infrastructure currently within 100-feet of the river would be removed. The pack trail from Curry Village stables to Happy Isles would be re-routed farther away from the river. These actions would reduce result in less erosion along the riverbank, reduce use in sensitive areas, direct use to resilient areas, and mitigate potential sources of pollutants.

Large-scale ecological restoration actions would take place along the riverbank and floodplain of the Merced River. These actions would enhance water quality, particularly the actions that re-establish riverbank vegetation and reduce erosion potential. Ecological restoration actions are described in more detail in the discussion of the biological ORVs below and in Appendix E.

There are no new facilities proposed under Alternative 3 that would affect the water quality of the river. To maintain excellent water quality, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Conclusion: Under Alternative 3, water quality in all segments of the Merced River corridor would continue to be absent of adverse effects and degradation, and the potential for localized instances of contamination would be strongly reduced. Alternative 3 would address localized water quality issues by

TABLE 8-74: CORRIDOR-WIDE ACTIONS AND THEIR IMPLICATIONS FOR WATER QUALITY

Location	Action in Alternative 3	Effects to Water Quality
Segment 2		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	Campsites within the 100-year floodplain would be removed. Designated river access and put in areas established at resilient areas, discourage access to sensitive areas. Upper Pines dump station relocated away from the river.	These changes would result in less erosion along the riverbank; water quality would be enhanced segmentwide.
New campsites at Upper Pines, Backpacker's, and Camp 4.	New campsites constructed at Upper Pines, Backpackers, and Camp 4 out of the 150 foot riparian buffer.	Change would not result in additional water quality effects on a segmentwide level.
Yosemite Village Day-Use Parking Area	Move the unimproved parking lot out of the 10-year floodplain and restore the riparian habitat adjacent to the river.	Change would result in less erosion and storm water run-off from the parking area; water quality would be enhanced locally.
Pack Trail from Concessioner Stables to Happy Isles	Continue to provide staging at the Concessioner Stable for temporary pack camp operations; reduce the stable size.	Change would result in less erosion from the stock trail. Water quality would be enhanced locally.
Housekeeping Camp Lodging	Remove all 266 lodging units and associated facilities out of the 100-year floodplain; restore the floodplain to natural conditions.	Fencing and designated river access points would also direct use to resilient areas. Water quality would be enhanced locally.
Segment 4		
NPS Maintenance and Administrative Complex	Existing parking area formalized and paved using best management practices	Change would result in less erosion and storm water concerns in the parking area; water quality would be enhanced locally.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Removal of bulk fuel storage from the 500-year floodplain would further protect water quality segmentwide.
Segment 7		
Wawona Campground	Replace current septic system with waste water collection system connected to the waste water treatment plant. RV dump site relocated away from the river.	Change would result in less potential for storm water concerns in the campground; water quality would be enhanced locally.
Wawona Picnicking	Delineate boundaries of two formal picnic areas with formal river access points.	Change would result in less erosion along; water quality would be enhanced locally.

moving the Upper Pines and Wawona recreational vehicle dump stations away from the river, moving the Odger's bulk fuel storage area outside of the 500-yr floodplain, and applying mitigation measures to ensure surface water runoff associated with parking areas meets requirements. Large-scale riverbank restoration actions would decrease the potential for accelerated riverbank erosion and sediment loading during high water events. To ensure that existing high water quality conditions are maintained, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Segment 1 – Merced River above Nevada Fall (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity in Wilderness segments of the river corridor. Primary actions to protect and improve Biological ORV 1 include removal of informal trails in wet and sensitive habitats, and removal of trails that fragment or incise meadow habitat. This includes trails in Triple Peak Fork meadow, wetlands near Echo Valley and Merced Lake shore, mineral springs between Merced Lake and Washburn Lake, and other areas as necessary. Removal of informal trails would reduce soil compaction and habitat fragmentation. Grazing capacities would be established, monitored, and adapted as necessary to reduce soil compaction and habitat fragmentation, and enhance meadow health.

Alternative 3 would convert the Merced Lake High Sierra Camp to a temporary pack camp with a maximum of 15 people per night and remove permanent infrastructure in the area, converting the area to designated Wilderness. Designated camping areas in Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Area would be converted to dispersed camping. Seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones would be applied. These changes would reduce concentrated use near the riverbank and improve

TABLE 8-75: SEGMENT 1 ACTIONS AND IMPLICATION FOR BIOLOGICAL ORV-1

Location	Action in Alternative 3	Effects toORV-1
Location		
Meadow Trails	Remove informal trails that incise meadow habitat.	Change reduces effects to wet and sensitive meadows and results in localized enhancement to ORV-1.
Merced Lake High Sierra Camp	Convert to a temporary pack camp with a maximum of 15 people per night and remove permanent infrastructure in the area.	Changes reduce uses near riverbank which would result in localized enhancement of ORV 1 through reduction in erosion and trampling of riparian resources.
Visitor Use Management Action		
Private boating would be allowed in this segment	Boating would consist of short floats using pack raft or other craft that can easily be carried. Private use would be unlimited in this segment; however, boaters completing overnight trips would be subject to wilderness permit restrictions.	Limited numbers would protect riparian habitat from trampling and bank erosion that could result with unlimited access. Changes would not affect high-elevation meadow and riparian habitat, this ORV would continue to be protected on a segmentwide level.
Wilderness zone capacity	Zone capacities for Merced Lake, Washburn Lake, Mount Lyell, and Clark Range zones would remain the same across all the alternatives. Manage to a reduced capacity of 75 in the Little Yosemite Valley Wilderness Zone	Current zone capacities are designed to protect wilderness character including natural conditions such as riverbanks and meadows. Reduced capacity in LYV would result in localized enhancement of riparian habitat and thus this ORV.
Facilities retained	Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp	These facilities and associated administrative uses and maintenance do not affect riparian habitat or meadows.

riparian conditions in the immediate vicinity of these camping areas. Facilities that would remain in this segment of the river include the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the Biological ORV in this segment indicates that these facilities are not adversely affecting the Biological ORV.

The NPS would monitor three indicators to assess the condition of this ORV: meadow bare soil, meadow fragmentation due to the proliferation of informal trails, and streambank stability. The NPS would establish a baseline for all three indicators using site-specific monitoring protocols by 2013. Regular monitoring would also assess whether assumptions about human behaviors and actions taken to correct past impacts are sustaining conditions above the management standard. The meadow monitoring programs for the biological ORV would monitor meadow fragmentation to ensure that use levels from hikers, backpackers and stock users do not result in meadow fragmentation or bare ground in excess of the management standards prescribed to protect and enhance meadows. If conditions reach trigger points, the NPS would implement specific response actions (as described in Chapter 5) to ensure this ORV is protected and enhanced through time.

Conclusion: Under Alternative 3, the biological ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The removal of inappropriate informal trails in meadows and establishment of grazing capacities would enhance meadow conditions. The conversion of the High Sierra Camp to a temporary pack camp with a maximum of 15 people per night, and conversion of designated camping areas to dispersed camping, would reduce concentrated use along riverbanks and reduce trampling in riparian habitat. There are no new facilities proposed under Alternative 3 that would affect meadow and riparian habitat. These actions proposed under Alternative 3 would protect and enhance Biological ORV-1 and segmentwide would achieve the robust ecological restoration principles that guide Alternative 3.

Geological/Hydrological ORV-4 – Glacially-carved Canyon in the Upper Merced River Canyon

As discussed in Chapter 5, there are no management considerations with respect to the U-shaped, glacially carved canyon above Nevada Fall. This ORV is currently protected and enhanced within the meaning of the Wild and Scenic Rivers Act. Alternative 3 does not propose any actions that would change the condition of this ORV over time. Further, the U-shaped, glacially carved attributes of this ORV would not be affected by the types and levels of use authorized under this alternative, which are all directed toward wilderness oriented recreation. The NPS would nevertheless monitor the condition of this ORV to ensure that its condition does not decline.

Scenic ORV-15 – Scenic Views in Wilderness

Visitors to this Wilderness segment experience scenic views of serene montane lakes, pristine meadows, slickrock cascades, and High Sierra peaks. Management considerations associated with the condition of the scenic river above Nevada Fall include contributions of regional air pollution (primary factors contributing to this condition are outside of NPS jurisdiction), visual intrusions of temporary and permanent structures, and crowding in and near wilderness campgrounds. There are few “visual intrusions” noted beyond the High Sierra Camp and other designated camping areas. However, these effects are local in nature and do not

degrade the ORV on a segment wide basis. The NPS would ensure that the Merced Lake High Sierra Camp and designated camping areas are maintained in a clean and tidy condition. Under Alternative 3, the High Sierra Camp would be converted to a temporary pack camp with a maximum of 15 people per night. This change would return scenic views to be keeping with the native landscape. These measures would locally enhance the scenic ORV. Other visitor use management actions under Alternative 3 would reduce crowding, thus additionally enhancing this ORV on a segmentwide basis.

As described in the Baseline Condition Report, the ORV is determined to be in the protected state, as defined by an absence of adverse effects and degradation, although intermittent air quality concerns are present. Because of the ambient nature of air quality, it cannot be managed exclusively for the river corridor. Facilities that would remain in this segment of the river include the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the scenic ORV in this segment indicates that these facilities are not adversely affecting the scenic ORV.

TABLE 8-76: SEGMENT 1 ACTIONS AND IMPLICATION FOR SCENIC ORV-15

Location	Action in Alternative 3	Effects toORV-15
Merced Lake High Sierra Camp	Convert the Merced Lake High Sierra Camp to a temporary pack camp with a maximum of 15 people per night. Remove permanent infrastructure, converting the area to designated Wilderness.	Change would locally enhance ORV because the reduced infrastructure that remains would better blend in to the natural environment.
Merced Lake Backpackers Camping Area and Little Yosemite Valley Camping Area	Converted to dispersed camping area.	Element currently does not cause adverse effects or degradation to ORV on a segment wide basis, thus ORV would continue to be locally protected in this area.
Facilities retained	Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp	These facilities and associated administrative uses and maintenance do not result in segmentwide adverse effects to scenic values. The ORV will continue to be protected on a segmentwide level.

Conclusion: Under Alternative 3, the scenic ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance scenic values in this segment. Conversion of the Merced Lake High Sierra Camp to a smaller temporary pack camp would address scenic considerations in this segment, which focus on the High Sierra Camp and thereby enhance the scenic ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures.

Recreational ORV-19 – Wilderness Recreation above Nevada Fall

Visitors to federally designated Wilderness in Segment 1 would engage in a variety of river related activities in an iconic High Sierra landscape, where opportunities for primitive and unconfined recreation, self-reliance, and solitude shape the Wilderness experience. The current condition of this ORV is at or above the management standard at the segment level. Localized management concerns in this segment relate to crowding at Little Yosemite Valley and Moraine Dome backpackers campgrounds, high use levels at the Merced Lake Backpackers Camping Area, and high encounter rates along the trails that connect these areas. Crowding and high use levels affect the Wilderness experience, which is an integral part of the recreational ORV in this segment.

This alternative would convert the Merced Lake High Sierra Camp to a temporary pack camp with a maximum of 15 people per night and remove permanent infrastructure, converting the area to designated Wilderness. The capacity of the Little Yosemite Valley Wilderness Zone would be reduced to 75, and the footprint of the camping area would be reduced accordingly. Designated camping areas in Moraine Dome and the Merced Lake Backpackers Camping Area would be converted to dispersed camping. This would give backpackers an opportunity to camp outside of close proximity to other backpackers. Actions in Alternative 3 would apply additional seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones. These changes would reduce use crowding, high use levels, and increase opportunities for solitude in this Wilderness segment.

TABLE 8-77: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR RECREATION ORV-19

	Action in Alternative 3	Effects toORV-19
Location		
Merced Lake High Sierra Camp	Convert the Merced Lake High Sierra Camp to a temporary pack camp with a maximum of 15 people per night. Remove permanent infrastructure, converting the area to designated Wilderness.	The undeveloped and primitive elements of wilderness character are enhanced on a segmentwide level by this camp reduction.
Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Areas	Designated camping areas would be converted to dispersed camping.	The solitude and primitive elements of wilderness character would be enhanced due to the opportunity to camp out of sight and sound of other campers.
Segmentwide River Access	Swimming and water play allowed. No permits required for private boating. No commercial boating	Permitted use and commercial limits would not substantively change current recreational use or recreational values in the segment. Recreational values would continue to be protected segmentwide.
Visitor Use Management Action		
Private boating	Boating would consist of short floats using pack raft or other craft that can easily be carried Private use would be unlimited in this segment; however, boaters completing overnight trips would be subject to wilderness permit restrictions.	Permitted use would not substantively change current recreational use or recreational values in the segment. Recreational values would continue to be protected segmentwide.
Wilderness zone capacity	Zone capacities for Merced Lake, Washburn Lake, Mount Lyell, and Clark Range zones would remain the same across all the alternatives. Manage to a reduced capacity of 75 in the Little Yosemite Valley Wilderness Zone	Zone capacities are designed to protect recreational setting attributes and recreational experience quality. Reduced capacity in LYV would result in localized enhancement of recreational values in the wilderness.

Facilities that would remain in this segment of the river include the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. These facilities do not have an adverse effect on the Wilderness experience integral to this Recreational ORV.

NPS would monitor visitor encounter rates to ensure that they are not exceeding established standards. Should specific trigger points be reached, the NPS would be required to implement a series of specific actions to reduce visitor levels to an acceptable level. These actions increase in severity as the current condition ORV condition moves away from the management standard to ensure proper course correction and re-establishment of the management standard. These trigger points were selected to inform managers in advance of any adverse effects or degradation to this ORV.

Conclusion: Under Alternative 3, the recreational ORV in Segment 1 of the Merced River corridor would be protected on a segmentwide basis and continue to be absent of adverse effects and degradation on a segmentwide level. Although actions under Alternative 3 would decrease the availability for visitors to pack in to wilderness (on horses or mules) conversion of backpackers campgrounds to dispersed camping, reductions in the zone capacity for Little Yosemite Valley, and conversion of the Merced Lake High Sierra Camp to a smaller temporary pack camp would address management considerations by reducing crowding, high use levels, and increasing opportunities for solitude.

Segment 2 – Yosemite Valley (Recreational and Scenic Segments)

Biological ORV-2 – Mid-elevation Meadows and Riparian Habitat

The meadows and riparian communities of Yosemite Valley comprise one of the largest mid-elevation meadow-riparian complexes in the Sierra Nevada. Actions to protect and enhance Biological ORV-2 under Alternative 3 include:

- Removal of informal trails in meadows where they fragment meadow habitat or cross through sensitive, wet vegetation communities. Overall, restore six miles of informal trails throughout Yosemite Valley;
- Use boardwalks or hardened surfaces to allow access to sensitive areas;
- Delineation of trails through upland areas and along meadow perimeters;
- De-compacting trampled soils and consolidate multiple parallel trails;
- Re-directing visitor use to more stable and resilient river access points such as sandbars, and designate formal river access sites. Establishing fencing and signage to protect sensitive areas; install boardwalks where appropriate, and actively revegetate where needed;
- Relocate or remove all campsites within the 100-year floodplain;
- Restoration of the mosaic of meadow, riparian deciduous vegetation, black oak, and open mixed conifer forest at specific locations in Yosemite Valley. Management actions could include re-vegetation, prescribed fire, mechanical removal of conifers, and infrastructure re-design. Alternative 3 would include 302 acres ecological restoration.
- Day use parking capacity is expanded and formalized. A total of 1,597 visitor parking spaces would be provided in the Valley accommodating a maximum of 5,328 people at one time to Segment 2. Managing access and other proactive restoration measures would protect Biological ORVs by during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Biological ORVs by removing these uses from the river corridor and managing access in the corridor.

This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Under this alternative, all roads, buildings, campgrounds, trails, utilities and infrastructure, and other facilities in this segment with current local effects on the biological ORV would be removed, reduced, or relocated, including portions of Yosemite Lodge. Facilities that would remain in this segment of the river, including the Ahwahnee Hotel have no direct impact on the

TABLE 8-78: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2

Location	Action in Alternative 3	Effects toORV-2
Segmentwide Restoration	Restoration includes restoration of meadow habitat, removal of informal trails, riparian restoration and establishment of designated river access points, and use of boardwalks and hardened surfaces.	Actions would enhance the biological ORV segmentwide.
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within the 100-year floodplain would be removed. Designated put in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be discouraged; the biological ORV would be enhanced segmentwide.
New campsites at Upper Pines, Backpackers, and Camp 4.	New campsites constructed at Upper Pines, Backpackers, and Camp 4 out of the 100 year floodplain.	Actions would protect riparian areas from direct impacts related to the increase in visitor activity in these areas. Fencing and designated river access points would also direct use to resilient areas. Monitoring would proactively assess the effectiveness of these actions and established triggers to ensure that future protective measures are implemented in a timely manner. Change would result in protection of biological ORV in this segment.
Stoneman Meadow and Curry Orchard parking lot	Removal of 1,335 feet of Southside Drive and re-alignment of road through Boys Town area. The Orchard Parking Lot would be re-designed. Remove apple trees and landscape with native vegetation. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	These changes would promote water flow and improve meadow health thereby enhancing the biological ORV locally.
Ahwahnee, Sugar Pine and Stoneman Bridges	Remove the Ahwahnee, Sugar Pine and Stoneman Bridges, and the associated berms and restore to natural conditions. Reroute the multiple use trail to the north bank of the river. Reroute utilities under Ahwahnee Bridge.	Change would reduce channel widening, erosion, and scouring thereby enhancing local riparian communities.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center Parking Area/	Move the Yosemite Village Day Use Parking Area out of the 100-year floodplain to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	These changes would reduce effects to riparian corridor and enhance ORV components as use would be relocated away from areas critical to river or meadow function. The ORV would be enhanced locally.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	These changes would reduce effects to riparian corridor and enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Ahwahnee Row and Tecoya Dorms Concessioner Housing	Retain housing. Create 50-foot setback from Indian Creek – ecologically restore the riparian habitat and protect by restoration fencing.	These changes would remove uses from the riverbank thus reducing erosion and trampling impacts in riparian corridor and enhancing ORV components locally.

TABLE 8-78: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2 (CONTINUED)

Location	Action in Alternative 3	Effects toORV-2
Yosemite Village and Housekeeping Camp (cont.)		
Northside Drive (Stoneman Bridge to Yosemite Village Day use Parking Area)	Remove 900' of road and relocate the bike path to the south.	These changes would improve meadow/river connectivity thereby enhancing the ORV locally.
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Drive and restore to natural conditions.	These changes would remove uses from the riverbank thus reducing erosion and trampling effects in riparian corridor and enhancing ORV components.
Yosemite Lodge and Camp 4		
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Relocation of this facility outside of the river corridor may reduce informal trailing in the adjacent meadow thereby enhancing the ORV locally.

biological river value as indicated in the baseline condition assessment. Effects to the free-flowing condition of the river as a result of the bridges that would remain under this alternative would be mitigated through constructed log jams.

Some associated facilities are proposed for relocation as described below.

The NPS would monitor three indicators to assess the condition of ORV 2: meadow fragmentation resulting from informal trails, the status of riparian habitat, and riparian bird abundance. As described in Chapter 5, adverse effects and degradation are not present in relation to the meadow fragmentation indicator. Management concerns in meadows are present; however, actions to address informal trailing impacts and fragmentation would be taken at all meadows where these concerns have been documented. Initial surveys of the riparian status indicator in 2010 indicate that degradation is not present, but management concerns are also present in the riparian corridor.

The NPS is beginning to monitor the third indicator in this segment, riparian bird abundance. The first status assessments would take place in 2013, after one year of monitoring. The next assessment requires information from two out of three years.

To ensure Biological ORV-2 is protected by this plan and protected and enhanced through time, the NPS would continue to monitor the condition of the ORV to provide early warning of conditions that require management action before impacts occur. Regular monitoring would also reveal whether conditions have reached trigger points; and, if so, the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects.

Conclusion: Under Alternative 3, the biological ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance riverbanks and meadows. Removal or relocation of select campsites and infrastructure and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West

Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Geological/Hydrological ORV-5 – The "Giant Staircase"

The NPS has no immediate management considerations with respect to the Giant Staircase characteristic of the geology of Yosemite Valley above Happy Isles as this geologic ORV is determined to be absent of adverse effects and degradation. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Geological/Hydrological ORV-6 – Rare, Mid-elevation Alluvial River

As described in Chapter 5, the NPS selected the status of riparian habitat as the indicator to specifically assess the effectiveness of actions designed to protect this and other ORVs. This ORV integrates geologic/hydrologic processes and the condition of aquatic, riparian, and floodplain communities.

The following actions are included to specifically protect and enhance free-flowing conditions and the biological ORV in Segment 2, but would also address the protection and enhancement of the Geologic/Hydrologic ORV in Segment 2:

- Large wood, constructed log jams, and brush layering would be used in the vicinity of bridges to decrease bed scouring and streambank instability, river widening, river constrictions, and low channel complexity. Riprap would be removed where possible and replaced with native riparian vegetation, using bioengineering techniques. In the event that such actions do not improve conditions, bridge redesign or removal could be reconsidered.
- Under Alternative 3 the free-flowing condition of the river would be enhanced by removing the Ahwahnee, Sugar Pine, and Stoneman Bridges. Mitigation measures would be employed during removal and the long-term recovery of the removal areas is expected. Restoring free-flowing conditions would enhance riparian communities associated with ORV-6.
- Removing abandoned underground infrastructure, along the river corridor would be part of a comprehensive strategy to correct altered surface and subsurface hydrology.
- Remove riprap where riverbanks do not need stabilization to allow for channel migration. Replace riprap with bioengineered riverbanks, integrating native riparian vegetation, where riverbank stabilization is necessary for protection of critical infrastructure.
- Remove all campsites and infrastructure within the 100-year floodplain and restore natural floodplain and riparian habitat.
- Major restoration of the 100-year floodplain and restoration of the dynamic 10-year floodplain in East Yosemite Valley.

To ensure this ORV is protected and enhanced through time, the NPS would monitor the condition of the ORV using the status of riparian habitat as an indicator, and take specific actions should conditions reach trigger points.

TABLE 8-79: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR GEOLOGICAL/HYDROLOGICAL ORV-6

Location	Action in Alternative 3	Effects toORV-6
Curry Village and Campgrounds		
Upper Pines, Camp 4 and Backpackers Campgrounds	*Upper Pines*: New RV campground loop with 36 sites *Camp 4:* 35 new walk-in sites east of existing Camp 4 *Backpackers:* 16 new walk-in sites west of existing Backpackers	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would not be permitted.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Lodging is outside the 100 year floodplain and is not causing adverse effects or degradation to ORV-6 on a segmentwide basis.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center Parking Area	Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	These changes would reduce effects to riparian corridor and locally enhance ORV components as use would be relocated away from areas critical to hydrologic function.
Ahwahnee Row and Tecoya Dorms Concessioner Employee Housing	Remove housing and development out of the 100-year floodplain, recontour topography, decompact soils, and restore stream hydrologic function.	Changes would result in reduction of residential activities in riparian areas; biological ORV would be enhanced locally.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	These changes would reduce effects to riparian corridor and enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	West of Yosemite Lodge re-developed to provide additional 550 day use parking spaces.	Implementation of mitigation measures would protect the floodplain from erosion and other disturbance during construction.
Yosemite Lodge Visitor Facilities	Remove 102 lodging units. Restore the 100-year floodplain.	Lodging is outside the 100-year floodplain and is not causing adverse effects
El Capitan Crossover	Facility retained. This roadway segment is a key connector between Northside and Southside Drives and serves as a exit point at west end of Yosemite Valley.	Bridge protects riparian habitat from destruction caused by random crossings throughout the river corridor
Northside Drive (Stoneman Bridge to Yosemite Village Day Use Parking Area)	Remove 900' of road and relocate the bike path to the south, to improve the meadow/river connectivity. Restore meadow contours and native vegetation.	Removes facility that currently has a localized effect on the ORV. Restoration enhances the ORV in this area.

Conclusion: Under Alternative 2, the geologic/hydrologic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would enhance the 10 and/or 100-year floodplains and this ORV. Actions to protect and enhance free-flowing conditions as well as meadows and riparian complexes in Segment 2 would result in additional enhancement of the geologic/hydrologic ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of

impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Cultural ORV-8 – Yosemite Valley American Indian Ethnographic Resources

As described in Chapter 5, Yosemite Valley American Indian ethnographic resources include 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 tribes and groups. Management considerations related to ethnographic resources involve park operations, crowding, and visitor use. Actions included in the Merced River Plan/DEIS include:

- Continue coordination between traditionally associated American Indian tribes, groups, and traditional practitioners (through the Park American Indian Liaison) with law enforcement, fire management, interpretation, invasive species, ecological restoration, and facilities management programs;
- Continue to provide operational guidelines for material staging areas, parking, etc. to protect ethnographic resources;
- Ensure access for traditionally-associated American Indians for participation in annually scheduled traditional cultural events. In addition, tribal access for the personal conduct of ongoing traditional cultural practices would be assured through the Yosemite tribal fee waiver pass program.
- Reduce and formalize day-use parking capacity Manage access in Segment 2 to protect traditionally-used plant populations in the river corridor during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Cultural ORVs by removing these uses from the proximity of several cultural resources.

Threats to traditionally-used plant populations include invasive species such as Himalayan Blackberry (*Rubus armeniacus*), drainage and hydrology impacts to meadows, and erosion and revetments that affect riparian vegetation. The *Merced River Plan/DEIS* would address these considerations through the following actions:

- The ecological restoration actions associated with this planning effort implemented in concert with the existing invasive plant management program would address impacts to some traditionally-used plant populations in some locations.
- Restoration actions to protect riparian areas, meadows, and hydrological resources would further contribute to the protection and enhancement of the traditional-use plant communities included in this ORV.
- Introduction of seedlings to affected stands of black oaks and protection as necessary to ensure that ratios of adults to saplings is at least 0.65.
- Primary actions to manage major vista points under Scenic ORV-16 include mechanical thinning or removal of conifer trees. This action would be coordinated to ensure that the ORV–8 trigger point for the ratio of sapling to adult trees is not exceeded.

TABLE 8-80: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR CULTURAL ORV-8

Location	Action in Alternative 3	Effects toORV-8
Curry Village and Campgrounds		
Traditional Cultural Property Documentation	Document the Yosemite Valley Traditional Cultural Property, consisting of traditional use areas, spiritual places and historic villages and complete National Register evaluation and interpretive summary	Documentation, mapping, and evaluation would provide the detail necessary to protect and enhance the ORV segmentwide.
Visitation	13,200 people per day	This level of visitation may continue to result in a lack of privacy for traditional cultural practices in particular locations seasonally. Access to annually-scheduled traditional cultural events and personal conduct of traditional cultural practices would be assured thereby continuing protection of the ORV segmentwide.
Upper Pines, Backpacker's, and Camp 4 Campgrounds	All campsites within 100 feet of the river would be removed. New campsites constructed at Upper Pines, Backpacker's, and Camp 4. Designated put in areas for boating established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged. The ORV would be enhanced segmentwide.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Lodging is outside the 100 year floodplain and is not causing adverse effects or degradation to ORV-6 on a segmentwide basis.
Yosemite Village and Housekeeping Camp		
Housekeeping Camp Lodging	Remove 266 lodging units, out of the observed ordinary high water mark.	These changes would reduce effects to riparian corridor and locally enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Mitigation measures would protect vegetation and traditional use plants locally. Increased use in this area would be monitored to ensure protection of ethnographic resources. Additional parking near Wahhoga would increase access to traditional uses at this location. The ORV would continue to be protected locally.
Yosemite Lodge Parking	25 additional spaces added at Yosemite Lodge due to redesign, improving parking efficiency near Northside Drive.	Implementation of best management practices would protect the floodplain from erosion and other disturbance. Additional parking near Wahhoga would increase access to traditional uses at this location. The ORV would continue to be protected locally.
Yosemite Lodge Visitor Facilities	Removing 102 units.	Lodging is outside the 100 year floodplain and is not affecting the ethnographic resources. Reduced visitor use near Wahhoga would increase privacy for traditional uses at this location. The ORV would continue to be protected locally.

TABLE 8-80: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR CULTURAL ORV-8 (CONTINUED)

Location	Action in Alternative 3	Effects toORV-8
Yosemite Lodge and Camp 4 (cont.))		
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Lodging is outside is not affecting ethnographic resources. The ORV would continue to be protected locally.
Former Bridalveil Sewer Plant	Remove the buried structure.	Removal of the abandoned infrastructure and native plant revegetation will allow for recruitment of desirable black oaks in this area. The ORV would continue to be enhanced locally.
Yellow Pine Administrative Campground	Retain 4 group administrative use sites (up to 120 people).	Yellow Pines is used for overflow camping during annual traditional cultural events. Retention of this campground continues to protect the ORV segmentwide.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Relocation of this facility outside of the river corridor may reduce informal trailing in the river corridor. Restoration will allow for recruitment of desirable black oaks in this area. The ORV would be enhanced locally.

Facilities that would remain in this segment of the river have no direct impact on the ethnographic component of the cultural ORV as indicated in the baseline condition assessment.

The Merced *River Plan/DEIS* proposes a variety of actions to address specific considerations including continued coordination between traditionally associated American Indian tribes, groups, and traditional practitioners and the NPS; continued access for traditionally associated American Indians for participation in annually scheduled traditional cultural events; and ecological restoration actions to protect and enhance traditionally used plant populations. To prevent future impacts, the NPS would monitor the condition of the ORV, and take specific actions should additional trigger points be exceeded.

Conclusion: Under Alternative 3, the ethnographic component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Actions to protect and enhance floodplains, meadows and riparian complexes in Segment 2 would result in additional enhancement of the traditionally-used plant resources of the ethnographic component of the cultural ORV. Actions that would remove infrastructure and restore black oak woodlands would also enhance a critical component of this ORV. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would not limit access to traditional practitioners because measures would be in place to ensure access to annually-scheduled events as well as individual access for ongoing traditional cultural practices. Furthermore, the overall reduction in visitation under Alternative 3 would reduce the effects of crowding and enhance privacy for traditional cultural practices.

Cultural ORV-9 – Yosemite Valley Archeological District

The Yosemite Valley Archeological District is a linked landscape that contains dense concentrations of resources that represent thousands of years of human settlement along this segment of the Merced River. Heavily-used formal trails and informal trails, as well as illegal campfires, graffiti, and trampling stock trail

use, parking and informal rock climbing can all affect ORVs in this area. Archeological resource protection would be achieved through actions in this plan to manage visitor use levels, divert foot traffic around sites, removing informal trails, and formalizing river and meadow access locations, mitigating ecological restoration practices by using noninvasive techniques wherever possible. Many of the actions related to ecological restoration in Segment 2, such as delineating roadside parking, would also help protect archeological sites by diverting foot traffic away from sites and into less sensitive areas. Actions to enhance the recreational ORV in Segment 2 would manage recreational users both in terms of flow and location of users at any one time. A reduction in people and vehicles at one time in Yosemite Valley could also reduce visitor use-related effects on archeological resources.

Site-specific treatment actions would be developed through site management plans, where necessary, to avoid resource loss through park actions (such as development, repair, and maintenance of facilities and underground utilities to support visitor use or natural forces).

Management considerations for this ORV also involve continuing to survey and monitor archeological resources as well as update required documentation.

Under Alternative 3 the free-flowing condition of the river would be enhanced by removing the Ahwahnee, Sugar Pine, and Stoneman Bridges. Mitigation measures would be utilized to reduce localized impacts and ensure that this action would not cause adverse effects or degradation to ORV-9 on a segmentwide basis. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Facilities that would remain in this segment of the river have no direct impact on the archeological component of the cultural ORV as indicated in the baseline condition assessment.

The NPS would delineate bike paths, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; remove graffiti at rock art and other sensitive features, conduct public education to discourage climbing, and remove climbing hardware from sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

Conclusion: Under Alternative 3, the archeological component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Localized visitor-use-related impacts to archeological resources would be addressed through various enhancement actions. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would reduce the potential for visitor use impacts.

TABLE 8-81: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9

Location	Action in Alternative 3	Impact on ORV-9
Curry Village and Campgrounds		
North, Lower and Upper Pines, and Backpackers Campgrounds	All campsites within 100-year floodplain would be removed. Upper Pines Campsite in culturally sensitive area.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Concessioner Stables	Concessioner Stable for temporary pack camp operation at Merced Lake High Sierra Camp; reduce the stable size	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would protect cultural resources during facility removal and would locally protect the ORV. Change would not affect contributing element of the Archeological District.
The Ahwahnee Parking Lot	Redesign and formalize the existing parking lot; providing for proper drainage. Construct new 50 parking space lot east of the current parking.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Yosemite Village Day-use Parking Area	The Concessioner General Offices, Garage, and the Bank Building are removed. Move the Yosemite Village Day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Yosemite Village Concessioner Employee Housing	Temporary housing at Huff House and Boys Town is removed. Remove housing units (7 buildings, 64 beds) in rock fall hazard zone. Construct 16 buildings, housing 164 employees using the same dormitory prototype. Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Dr. and restore to natural conditions.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge and Camp 4		
West of Yosemite Lodge New Parking	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.

TABLE 8-81: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9 (CONTINUED)

Location	Action in Alternative 3	Impact on ORV-9
Yosemite Lodge and Camp 4 (cont.)		
Yosemite Lodge Visitor Facilities	Remove all of the lodging units (-245 units). Repurpose the area outside the 100-year floodplain for Day Lodge and Parking. Restore the 100-year floodplain.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Change would not affect contributing element of the Archeological District due to location and level of use.
Yellow Pine, Camp 4, Yosemite Lodge, and West Valley Campgrounds.	Remove camping and restore the 100-year floodplain to natural conditions. Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Retain campground and administrative use sites in Yellow Pine.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Mitigation measures would protect cultural resources during facility relocation. Change would not affect contributing element of the Archeological District.
Northside Drive (Stoneman Bridge to Yosemite Village Day-use Parking Area)	Remove 900' of road and relocate the bike path to the south, to improve the meadow/river connectivity. Restore meadow contours and native vegetation.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.

Cultural ORV-10 – Yosemite Valley Historic Resources

As described in Chapter 5, the Yosemite Valley Historic Resources represent a linked landscape of river-related or river-dependent, rare, unique or exemplary buildings and structures that bear witness to the historical significance of the river system. Protective actions to address management concerns related to the Yosemite Valley Historic Resources ORV-10 include:

- Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.
- Develop a Historic Structures Report for the LeConte Memorial Lodge NHL to determine the rehabilitation needs to bring the building to "good" condition.
- Rehabilitate the Superintendent's House (Residence 1) per the Historic Structure Report (Lingo 2012) to bring the building to "good" condition. This rehabilitation of the building will occur under all action alternatives, regardless of whether the building is relocated.

Under Alternative 3 the free-flowing condition of the river would be protected by removing the Ahwahnee, Sugar Pine, and Stoneman Bridges. Relocation of the Superintendent's House (Residence 1) is proposed under Alternative 3 to address the 1982 Guidelines for the Wild and Scenic Rivers Act that requires managing agencies to consider relocation of major public use facilities outside

TABLE 8-82: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-10

Location	Action in Alternative 3	Effects toORV-10
Curry Village and Campgrounds		
Stoneman Bridge	Remove bridge and restore to natural conditions, make Southside Drive two-way, and redesign Sentinel intersection.	The action would remove 2 contributors to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of these two bridges would not result in a segmentwide adverse effect of the collective of resources.
Stoneman Meadow and Curry Orchard parking lot	Restore Stoneman Meadow including removal of 1,335 feet of Southside Drive and re-alignment of road through Boys Town area. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	Change would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective.
Yosemite Village Day-Use Parking Area	Remove Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Re-align the intersection at Northside Drive and Village Drive. Add a three-way intersection at Sentinel Drive and the entrance to the parking area. Provide on-grade pedestrian crossings.	The removal of historic and non-historic properties and re-alignment/re-establishment of the intersections would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Sugar Pine and Ahwahnee Bridges	Remove both bridges and the connecting berm.	The action would remove 2 contributors to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of these two bridges would not result in a segmentwide adverse effect of the collective of resources.
Superintendent's House (Residence 1)	Relocate outside the river corridor to the NPS housing area. Rehabilitate historic structure in new location.	The action would remove a contributor to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of this resource would not result in a segmentwide adverse effect of the collective of resources.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	The action would affect trails that are connected by the historic footbridges which are components of the Yosemite Valley Historic Resources ORV. Mitigation measures and Section 106 review would ensure the protection of the historic resources and the redesign could result in enhancement of the ORV locally.

of the river corridor. These three bridges and the Superintendent's House (Residence 1) are components of the Yosemite Valley Historic Resources component of the cultural ORV in Segment 2. The NPS would document and interpret any building or structure threatened with removal or relocation. In this manner, while the individual tangible element or elements may be lost or moved, a record of their existence and historical significance would still be available to the public.

To address management considerations, the *Merced River Plan/DEIS* proposes continuing the active program of maintenance for historic buildings and structures; employing existing design guidelines to ensure that new development or redevelopment complements the ORV and the Yosemite Valley Historic District; and periodically assessing and updating professional documentation for the historic resources.

Ecological and scenic value restoration actions in Segment 2 would enhance the cultural landscape which contributes to the historic setting of the resources that comprise the ORV-10. There are no construction actions associated with Alternative 3 that would affect the spatial organization of the historic resource collective, though changes in the circulation patterns as a result of re-routing roads at the Yosemite Village day-use parking area and at Stoneman Meadow would affect circulation patterns that are associated with this ORV. These effects would be localized and would not affect the condition of the ORV on a segmentwide level.

Conclusion: Under Alternative 3, the historic resources component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of three bridges and the relocation of the Superintendent's House (Residence 1) would result in localized effects that would be mitigated through documentation and interpretation. Once removed or relocated, these resources would no longer be considered part of the ORV collective. All disturbances to circulation and spatial organization associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and documentation (as needed) to ensure that historic resources are protected.

Scenic ORV-16 – Iconic Scenic Views in Yosemite Valley

Visitors to Yosemite Valley experience scenic views of some of the world's most iconic scenery, with the river and meadows forming a placid foreground to towering cliffs and waterfalls. Actions intended to manage natural resources may include the use of prescribed fire or controlled burns to thin forests that are encroaching on meadows; cutting trees, tree branches or other vegetation by mechanical means; and the application of herbicides to control invasive species. Related actions intended to protect the Recreation ORV would limit the number of visitors to lessen visitor density and congestion at attraction sites and make improvements to the transportation system that would reduce automobile congestion. Air quality can affect visitors' ability to experience scenic values in Segment 2. The NPS would cooperate with regional authorities to reduce airborne contaminants caused by combustion, including carbon dioxide emissions, smoke caused by fire, particulate matter generated by construction, and to improve air quality conditions.

TABLE 8-83: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR SCENIC ORV-16

Location	Action in Alternative 3	Effects toORV-16
Curry Village and Campgrounds		
Select Scenic vista Points	Selectively thin conifers and other trees and shrubs that encroach on selected scenic vista points. Remove unnecessary facilities and ensure that all future development satisfies objectives that provide low contrast ratings.	Changes would enhance the scenic values on a segmentwide level.
Concessioner Stables	Reduce the Curry Village Stables area; eliminate commercial day rides. Remove associated housing (25 beds).	Currently not causing effects on scenic resources. Restoration would improve viewsheds.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Changes to Lodge would be in keeping with current facility and given the location of the facility would not interfere with iconic scenery.
Ahwahnee, Sugar Pine, and Stoneman Bridges	Remove the Ahwahnee, Sugar Pine, and Stoneman Bridges.	Given the location of the bridges, removal would not interfere with iconic scenery.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts	Given the location of the facility, changes to facilities would not interfere with iconic scenery
The Ahwahnee Parking Lot	Redesign and formalize the existing parking lot; providing for proper drainage. Construct new 50 parking space lot east of the current parking.	Given the location of the facility, changes to facilities would not interfere with iconic scenery
Yosemite Village Day Use Parking Area/Village Center Parking Area	The Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	Removal of buildings would enhance viewsheds locally.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	Removal of Housekeeping units near the river will enhance viewsheds locally.
Yosemite Village Concessioner Employee Housing	Temporary housing at Huff House and Boys Town is removed. Remove housing units (7 buildings, 64 beds) in rock fall hazard zone. Construct 16 buildings, housing 164 employees using the same dormitory prototype. Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Mitigation measures would avoid or mitigate effects to iconic scenic vistas. Actions would continue to protect the ORV locally.
Yosemite Lodge and Camp 4		
Yosemite Lodge Visitor Facilities	Remove of 102 lodging units (143 remain). Repurpose the area outside the 100-year floodplain for Day Lodge and Parking. Restore the 100-year floodplain.	Currently not interfering with scenic resources. Viewsheds would be enhanced through the removal of these buildings.

In consideration of Wild and Scenic River Act requirements that the NPS consider the presence of existing structures, major facilities and services provided for visitor use, the NPS would eliminate several structures and facilities in Segment 2 under this alternative. Under Alternative 3 actions would remove many structures at the Yosemite Lodge, and the Ahwahnee pool and tennis court. Removal of these structures could enhance scenic resources from specific locations. Ecological restoration actions in Segment 2 would

enhance the meadow and riparian communities which contribute to the scenic values in Yosemite Valley. This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Facilities that would remain in this segment of the river have no direct impact on the scenic river value as indicated in the baseline condition assessment. Changes to parking and vehicle traffic in Yosemite Valley to enhance Recreational ORV- 20 particularly the removal of roadside parking along Sentinel Drive and restoration to natural conditions would enhance Scenic ORV-16.

Conclusion: Under Alternative 3, the scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Tree thinning and ecological restoration actions would improve natural scenic conditions. Removal of buildings at Housekeeping Camp, Yosemite Lodge, the Concessioner Garage, the Concessioner General Offices, and the Concessioner Stables would reduce intrusions on scenic resources. All parking lot and campground construction under this alternative would be subject to park standard operating procedures and subject matter expert review to ensure that scenic resources are protected.

Recreational ORV-20 – River-related Recreation in Yosemite Valley

Visitors to Yosemite Valley enjoy a wide variety of river-related recreational activities in the Valley's extraordinary setting along the Merced River. Throughout the Yosemite Valley segment, the river has provided the setting for recreational experiences such as fishing, floating, and sightseeing. Transportation is considered an important part of the visitor experience in Yosemite Valley because it is the means of access to recreational opportunities in Yosemite Valley. Management considerations address the amount of vehicle traffic and the number of people at one time in Yosemite Valley at the peak times of day during the park's busy summer season.

All restoration actions to protect and enhance biological, cultural, geologic/hydrologic, and scenic ORVs would further enhance visitors' connections to the river and its values, which are essential to the recreational ORV in this segment. A reduction in day-use, camping, and lodging opportunities would reduce access to these recreational experiences, but would not cause adverse effects or degradation to ORV-20 on a segmentwide basis. The removal of Yosemite Lodge and Housekeeping Camp would eliminate two distinct types of overnight accommodations in Yosemite Valley, but overnight lodging would not be eliminated segmentwide, nor would an essential aspect of the recreational ORV be affected. There are also actions proposed in Alternative 3 that would improve picnicking, and wayfinding. Finally, while commercial boating is eliminated and private boating is limited to 50 trips per day in Segment 2, this alternative reduces crowding and increases the stretches of the river on which private boating and paddling is allowed, thereby enhancing key aspects of this recreational experience.

TABLE 8-84: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR RECREATIONAL ORV-20

Location	Action in Alternative 3	Effects toORV-20
Segmentwide visitation	13,200 visitors per day	This reduction in visitation would reduce crowding and congestion thereby enhancing the recreation ORV on a segmentwide level.
Concessioner Stables	Reduce the Curry Village Stables area; eliminate commercial day rides.	Changes would reduce opportunities for one type of recreational activity, but would not substantially alter components of the river recreation experience.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Changes to Lodge would reduce access to overnight accommodations. Lodge itself is not part of the ORV-20 but does facilitate access to ORV-20 for certain visitors. This use would remain.
Lower Rivers Nature Walk	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.	Change would improve interpretation of the river and its values, and would enhance the recreation ORV in this segment.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts	Removal of facilities would reduce opportunities for one type of recreation activities, but would not substantially alter components of the river recreation experience.
Segment wide River Access	Swimming and water play allowed in all segments except 6, impoundment. No commercial boating. Boating allowed on all segments except 6, impoundment. Private use limited to 50 trips per day in Segment 2 between the Pines Campgrounds and Sentinel Beach.	Change would eliminate commercial boating and would limit the number of private boating. However, this change does not affect components of the recreational ORV. This reduction in boats enhances dispersed recreation along the river corridor.
Housekeeping Camp Lodging	Remove all 266 lodging units. Convert Housekeeping Camp to a day use river access point and picnic area.	Removal of units would have local affect, but would not substantially alter components of the river recreation experience.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	Change would cause improve circulation and wayfinding thus enhancing ORV-20.
Yosemite Lodge And Camp 4		
Yosemite Lodge Visitor Facilities	Remove 102 lodging units (143 units remain). Repurpose the area outside the 100-year floodplain for Day Lodge and Parking. Restore the 100-year floodplain.	Removal of lodging would have local affect, but would not substantially alter components of the river recreation experience.
Yellow Pine, Camp 4, Yosemite Lodge, and West Valley Campgrounds.	Remove camping and restore the 100-year floodplain to natural conditions. Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4.	Reduction in the number of campsites limits access to these recreational experiences, but camping opportunities would continue and not substantially alter components of the river recreation experience.
Recreational Experience Quality	Reduction in available day-use parking, and implementation of an East Yosemite Valley Day-use Parking Permit system	This will enhance the recreational experience of segment 2 by reducing crowding at key attraction sites as well as access to these areas (along roadways, in parking lots, etc).

Chapter 6 provides a more detailed description of the day-visitor capacity management strategies that directly measure aspects of the Recreation ORV and outlines specific actions. These actions include:

- Utilize parking and traffic management staff to improve parking efficiency and traffic flow in Yosemite Valley and other locations where needed.
- Institute a transportation fee at entrance stations (for peak-use season).
- Divert vehicles to other destinations outside of Yosemite Valley when parking in the Valley fills.
- When all parking fills to capacity, day visitors would be diverted at checkpoints throughout the park and at entrance stations.
- East Valley day-use parking permits would be issued by advanced reservation and on a first-come-first-serve basis.

NPS would use the Highway Capacity Manual Pedestrian Level of Service (discussed further in Chapter 5) for evaluating the capacity and quality of service of transportation facilities, including walkways, multi-use paths, and similar pedestrian facilities. NPS would also monitor parking rates and vehicles at one time to ensure that they are not exceeding the management standard. Should specific trigger points be reached, the NPS would implement a series of specific actions to improve parking to an acceptable level. Similarly, should visitor densities begin to approach specific triggers; NPS would take steps to keep such densities within the management standard.

Conclusion: Under Alternative 3, the recreation ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season will significantly reduce crowding thereby enhancing the recreational ORV. All restoration actions would enhance opportunities to connect with the river and its values. The reduction in commercial services would affect opportunities for particular types of recreational activities, but would not affect the essential components of the recreation ORV on a segmentwide basis.

Segment 3 – The Merced Gorge (Scenic Segment)

Scenic ORV-17 – Scenic View in the Merced River Gorge

The Merced River drops 2,000 feet over 14 miles; a continuous cascade under spectacular Sierra granite outcrops and domes. There are no existing management considerations with respect to the Scenic ORV in the Merced River Gorge. Although there are some localized visual intrusions from essential facilities such as visitor parking areas, restrooms, the Arch Rock entrance station and the El Portal Road, these facilities are consistent with the scenic classification of this river segment. As explained in Chapter 5, this ORV is currently protected and enhanced.

This alternative does not propose any new development or landscape changes within the river corridor aside from improvements to existing roadside pullouts and drainage. These changes would not degrade or adversely impact the scenic ORV on a segmentwide basis. Although private vehicles and overall visitation during peak periods will be managed for East Yosemite Valley only, it is probable that visitation and visitors

at one time in Segment 3 will also witness a reduction under this alternative. This reduction in visitation and visitors at one time may reduce vehicles per viewshed, thereby enhancing the scenic ORV. Monitoring associated with this ORV would ensure that the attributes that comprise this ORV remain within the accepted management class rating.

Alternative 3 would accommodate the same kinds and amounts of use that exist today in Segment 3. The types and levels of use in Segment 3 under this alternative would remain largely unchanged. Actions considered under Alternative 3 would cause no adverse effects or degradation to ORVs on a segmentwide basis.

Conclusion. Under Alternative 3, this scenic river segment would show little evidence of human activity and remain largely free of structures. The scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season in Yosemite Valley will significantly reduce the number of vehicles per viewshed in this segment. All restoration actions would further enhance scenic characteristics in this segment.

Segment 4 – El Portal (Recreational Segment)

Geological/Hydrological ORV-7 – The Boulder Bar in El Portal

Natural processes would continue to shape the landscape and the geologic ORV. The NPS has not identified any management considerations with respect to the El Portal boulder bar. Land use and facility actions proposed in this alternative would not affect this ORV. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection are necessary. Moreover, the types and levels of visitor and administrative use (e.g., housing, maintenance operations, office space, passive recreation) allowed under this alternative would not affect this ORV. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Conclusion. Under Alternative 3, the geologic values of this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no actions that would affect the boulder bar in El Portal, and there are no ongoing concerns or considerations associated with this resource.

Cultural ORV-11 – The El Portal Archeological District

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. Four sites are known to have experienced particularly severe damage, most notably a large ancient village and cemetery.

To address management considerations pertinent to this river value, the NPS would undertake the following actions:

- Protective measures would ensure that exceptional sites would be protected from unmitigated effects that could lead to adverse effects or degradation on a segmentwide level. A plan of action for addressing the abandoned infrastructure on sites would be developed in consultation with traditionally-associated American Indian tribes and groups. Any solution(s) developed would also include a recommended approach for deterring visitor use within the sites.
- Informal trails, non-essential roads, and abandoned infrastructure would be removed to protect and enhance the archeological resources contributing to the ORV in Segment 4.
- Remove informal trails and non-essential roads.

There are no existing instances of adverse effect or degradation to this ORV. As discussed above, management considerations are present associated with abandoned infrastructure that remains on an exceptional site containing diverse components and extremely sensitive cultural materials that are highly valued by traditionally associated American Indians. Management considerations are also associated with non-essential roads and trails that impact archeological sites. In recognition of the high cultural significance of these sites, this alternative requires the park to develop plans to remove abandoned infrastructure and non-essential roads. Restoration actions to establish a 2.5 acre recruitment area for Valley Oaks would further protect adjacent archeological resources. Construction of employee housing in Old El Portal, Abbieville, and Rancheria would be designed to avoid or mitigate threats and disturbances to archeological sites. Monitoring and protective measures would ensure that new use patterns associated with the new housing would not affect contributing elements of the El Portal Archeological District.

TABLE 8-85: SEGMENT 4 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-11

Facility	Action in Alternative 3	Effects toORV-11
El Portal		
Old El Portal, and Rancheria Flat Concessioner Employee Housing	New employee housing in Old El Portal (12 beds), and Rancheria Flat (19 beds).	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Abbieville Trailer Park Area	No new parking spaces added at the Abbieville/Trailer Park area.	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Mitigation measures would protect cultural resources during facility removal and ecological restoration. Change would continue to protect archeological resources locally.

Conclusion: Under Alternative 3, the archeological resources in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of abandoned infrastructure, informal trails and non-essential gravel roads would enhance protection of archeological resources. Valley Oak restoration actions would protect adjacent archeological resources from further ground disturbance, Construction of new employee housing would be designed to avoid or mitigate effects

to the El Portal Archeological District. New or altered visitor use patterns associated with the new housing development would be monitored and protective actions would occur if effects triggered responses.

Segment 5 – South Fork Merced River Above Wawona (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Restoration actions to remove informal trails and charcoal rings to protect cultural resources proposed under this alternative would not affect high-elevation meadows. The NPS proposes no major facility or visitor use actions for Segment 5 under Alternative 3. The biological ORV in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level.

Cultural ORV-12 – Regionally rare archeological features representing indigenous settlement including archeological sites with rock ring features

Three regionally rare prehistoric archeological sites are located along this segment of the South Fork of the Merced Wild and Scenic River corridor. The sites contain unique stacked rock ring constructions and rock alignments. Two sites also contain pine timber remains within the ring interiors or incorporated into the stacked rock courses. Rock constructions are considered fragile and highly subject to human alteration from camping and campfire building disturbances. Two of the South Fork sites are adjacent to formal NPS trails, increasing the likelihood of disturbance. The vicinity of the sites has not been systematically surveyed, and it is possible that additional rock ring sites may be present along the South Fork. Should additional rock ring sites be discovered in the monitoring process, they would also become a part of the South Fork ORV. To remedy these considerations, NPS would:

- Complete documentation of the features. Restrict Wilderness camping in the area of the rock rings (camping allowed past particular marker). Remove informal trails and charcoal rings.
- Increase education and outreach to Wilderness travelers.

Conclusion. Under Alternative 3, the archeological resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no specific actions to manage user capacity, land use, and/or facilities under Alternative 3 within Segment 5 beyond those designed to protect and enhance ORV-12 that would impact components of Cultural ORV-12. Monitoring activities described in Chapters 5 and 8 would continue to protect and enhance Cultural ORV-12 to ensure there are no adverse effects or degradation to ORV-12 on a segmentwide basis.

Scenic ORV 18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no

considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

Conclusion. Under Alternative 3, the scenic resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. The scenic ORV for Segment 5 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

Segment 7 – Wawona (Recreational Segment)

Biological ORV-3 – The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV would be determined by comparing populations located near Wawona Campground (an area that is likely to be disturbed by humans) with more remote populations that are less likely to receive such disturbance. This population of Sierra sweet bay is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

TABLE 8-86: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR BIOLOGICAL ORV-3

Facility	Action in Alternative 3	Effects toORV-3
Wawona		
Wawona Campground	Retains 72 sites. Remove 27 sites that are either within the 100-year floodplain or in culturally sensitive areas.	Action would improve the condition of the ORV by reducing the potential effects on this species associated with campground visitation.

To ensure that this biological ORV is protected and enhanced through time, the NPS would monitor the condition of the Sierra sweet bay population to ensure early warning of conditions that require management action before impacts occur.

Conclusion. Under Alternative 3, the Sierra Sweet Bay in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Reduction in camping and visitor activity in the vicinity of Wawona Campground would enhance this resource.

Cultural ORV-13 – Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This district spans segments 5, 6, 7, and 8. Accordingly, the condition of this historic property is assessed at the property-level, rather than the segmentwide level. 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. There are several management considerations for this ORV: the Wawona Archeological District is subject to site-specific impacts from park operations, visitor

use, artifact collection, vandalism, and ecological processes. The following actions would help to address these issues:

- Increase monitoring frequency at affected sites.
- At the district-wide level, revise the existing National Register nomination to reflect changes since its original writing, for example, incorporating newly discovered resources and documenting impacts.
- The Wawona Campground capacity would be reduced to 67 sites (including one group site). 32 sites are removed because they are either within the 100-year floodplain or in culturally sensitive areas.
- Remove informal trails and fire rings to prevent continuing disturbance.
- Develop site management plans as needed for sites with complex uses. Remove shoulder and off-road parking. Limit facility and concessionaire off -road vehicle travel/parking on hotel grounds
- Consider need for archeological site treatment measures to address impacts to shallow deposits of artifacts and features.

TABLE 8-87: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-13

Facility and Land Use	Action in Alternative 3	Effects toORV-13
Wawona		
Wawona Campground Septic System	Remove septic system, and connect to the sewer system. Build a lift station above the campground to connect to the existing water treatment plant.	Mitigation measures would protect cultural resources during facility construction.
Wawona RV dump site	Relocate the dump site to an appropriate location away from the river.	Mitigation measures would protect cultural resources during facility removal and construction.
Wawona Store	Replace the existing public restroom facilities with larger restrooms to accommodate visitor use levels. Improve picnic area, redesign bus stop.	Mitigation measures would protect cultural resources during facility construction.
Wawona Swinging Bridge	Provide access to Swinging Bridge with access on the south side of the river, delineate trail, restrooms, waste disposal and parking.	Mitigation measures would protect cultural resources during facility construction. Restrooms and waste disposal will reduce threats and disturbances to adjacent archeological resources.

The NPS would delineate trails, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; conduct public education to discourage disturbance to sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

Cultural ORV-14 – Wawona Historic Resources

The Wawona Historic Resources ORV includes one of the few covered bridges in the region and the National Historic Landmark Wawona Hotel complex. The Wawona Hotel complex is the largest existing Victorian hotel complex within the boundaries of a national park, and one of the few remaining in the

United States with this high level of integrity. The Wawona Covered Bridge is in good condition, and there are no current management considerations associated with it, however the bridge requires maintenance to keep the historic structure in good condition in the face of adverse weather and visitor use.

The Wawona Hotel complex continues to serve its original purpose as a guest lodging facility. Management considerations related to the hotel complex involve concessioner operations, the need for regular and routine preservation maintenance, and periodic rehabilitation to ensure visitor safety.

- Regular and routine preservation maintenance, conducted in accordance with the Secretary of the Interior's Standards, would ensure that this upkeep protects the historic character of the buildings
- Periodic rehabilitation would involve subject-matter specialists in planning, design and implementation to ensure actions do not compromise the historical integrity of the complex
- Concessioner operations would ensure that any operational modifications or updates are appropriate and in keeping with the historic character of the complex.

TABLE 8-88: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR WAWONA HISTORIC RESOURCES ORV-14

Facility	Action in Alternative 3	Effects toORV-14
Wawona		
Wawona Hotel	Retain 104 lodging units at the Wawona Hotel. Retain hotel restaurant and swimming pool. Wawona golf course and shop would be removed to accommodate ecological restoration, though the spray field would remain. The Wawona Hotel Tennis Court would also be removed under this alterative.	The action would retain contributors to the Wawona Historic Resource. The golf course and tennis courts are not components of the ORV and their removal would not affect the condition of the Wawona Historic Resource river value. The ORV would continue to be protected locally.

To prevent future impacts, the NPS would monitor the condition of the bridge, and take specific actions should conditions exceed trigger points. Trigger points are selected to inform managers well in advance of adverse effects or degradation on the Wawona Covered Bridge. Management considerations for the Wawona Hotel complex include the need for regular and routine preservation maintenance, periodic rehabilitation, and ongoing operations that serve its continuing function as a historic lodging facility. To address these management considerations, the NPS would ensure that these activities would conform to the Secretary of the Interior's Standards for Treatment of Historic Properties.

Segment 8 – South Fork Merced River below Wawona (Wild Segment)

Biological ORV-3 — The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV in Segment 8 is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

Cultural ORV 13— Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This ORV in Segment 8 is in good condition, with no management considerations present. Management actions are not required at this time.

Scenic ORV-18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

The scenic ORV for Segment 8 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

ALTERNATIVE 4

River Value – Free-flowing Condition in All Segments

A free-flowing river, or section of a river, moves in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis. Riprap revetment, abandoned infrastructure within the bed and banks of the river, and bridges that constrict the flow of the river may produce localized effects on free-flowing condition of the river. Alternatives 2-6 would enact a comprehensive suite of actions to enhance the free-flowing condition of the river by removing 3,400 linear feet of riprap, and removing abandoned and unnecessary infrastructure from the river channel and its floodplain. Infrastructure that would be removed includes former sewage treatment facilities, sewer and water lines, and former bridge abutments. In addition, Alternative 4 would remove 435 linear feet of riprap from riverbank areas, beyond that proposed for removal under Alternatives 2-6.

Alternative 4 also proposes removal the Stoneman and Ahwahnee bridges, as these features constrict flows during high-water events, accelerate riverbank and channel erosion, and prevent natural channel migration. Although Sugar Pine Bridge would remain under Alternative 4, the hydrological effects of the bridge would be mitigated with strategic placement of large wood on riverbanks, constructed log jams in the river channel, and the use of brush layering and other techniques to establish riverside vegetation and decrease erosion.

There are no new facilities proposed under Alternative 4 that would affect the free-flowing condition of the river. A number of proposed facility actions would enhance the connectivity of the river and its floodplain

(see Hydrological/Geological ORVs). For example, the Yosemite Village Day-use Parking Area would be relocated 150 feet away from the river.

To protect the river's free flowing condition in the future, the NPS would require all proposed projects involving construction within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA. Through this process, the NPS would ensure that water resources projects within the designated river corridor would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition.

Conclusion: The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis, although localized considerations such as intermittent riprap and bridges that constrict the flow of the river are present. Alternative 4 proposes a comprehensive suite of actions to enhance the free-flowing condition of the river by removing riprap, removing unnecessary infrastructure in the river channel, and removing two bridges that produce pronounced hydraulic constrictions at high water flows. There are no new facilities proposed under Alternative 4 that would affect the free-flowing condition of the river within the river channel, and a number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/ Geological ORVs). The NPS would require all proposed projects within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA to ensure that water resources projects would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition. The actions proposed under Alternative 4 ensure that there are no direct or adverse effects on free-flowing condition of the Merced River.

River Value – Water Quality in All Segments

The water quality of the Merced River is extremely high, and the current water quality of the river is fully protected and enhanced on a segmentwide basis. Intermittent local instances of contamination may occur in connection with surface water runoff from parking areas, recreational vehicle dump stations in proximity to the river, and accelerated erosion with potential sediment loading in the river during high water flows. Alternatives 2-6 would apply mitigation measures to ensure that surface water runoff associated with parking areas protects the water quality of the Merced River and meets regulations. The Upper Pines and Wawona recreational vehicle dump stations would be moved away from the river, and the Odger's bulk fuel storage area in El Portal would be moved out of the 100-year floodplain. In addition, Alternative 4 would relocate the Yosemite Village Day-use Parking Area 150-feet away from the river. All campsites and infrastructure currently within 100-feet of the river would be removed. The pack trail from Curry Village stables to Happy Isles would be re-routed farther away from the river. These actions would reduce result in less erosion along the riverbank, reduce use in sensitive areas, direct use to resilient areas, and mitigate potential sources of pollutants.

TABLE 8-89: CORRIDOR-WIDE ACTIONS AND THEIR IMPLICATIONS FOR WATER QUALITY

Location	Action in Alternative 4	Effects to Water Quality
Segment 2		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	Campsites within the 100-year floodplain would be removed. Designated river access and put in areas established at resilient areas, discourage access to sensitive areas. Upper Pines dump station relocated away from the river.	These changes would result in less erosion along the riverbank; water quality would be enhanced segmentwide.
New campsites at Upper Pines, Backpacker's, Concessioner Stables, Camp 4, West of Lodge, and Upper and Lower River Campgrounds	New campsites constructed at Upper Pines, Upper River, Lower River, Backpackers, Concessioner Stables, West of Lodge and Camp 4 out of the 150 foot riparian buffer.	Change would not result in additional water quality effects on a segmentwide level.
Yosemite Village Day-Use Parking Area	Move the unimproved parking lot out of the 10-year floodplain and restore the riparian habitat adjacent to the river.	Change would result in less erosion and storm water run-off from the parking area; water quality would be enhanced locally.
Pack Trail from Concessioner Stables to Happy Isles	Remove pack trail and Concessioner Stables and convert to a campground with 41 sites.	Change would result in less erosion from the stock trail. Water quality would be enhanced locally.
Housekeeping Camp Lodging	Retain 100 lodging units, and remove 166 lodging units (83 duplex lodging units, 4 restrooms, store and office) out of the observed ordinary high water mark.	Fencing and designated river access points would also direct use to resilient areas. Water quality would be enhanced locally.
Segment 4		
NPS Maintenance and Administrative Complex	Existing parking area formalized and paved using best management practices	Change would result in less erosion and storm water concerns in the parking area; water quality would be enhanced locally.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Removal of bulk fuel storage from the 500-year floodplain would further protect water quality segmentwide.
Segment 7		
Wawona Campground	Replace current septic system with waste water collection system connected to the waste water treatment plant. RV dump site relocated away from the river.	Change would result in less potential for storm water concerns in the campground; water quality would be enhanced locally.
Wawona Picnicking	Delineate boundaries of two formal picnic areas with formal river access points.	Change would result in less erosion along; water quality would be enhanced locally.

Ecological restoration actions would take place along the riverbank and floodplain of the Merced River. These actions would enhance water quality, particularly the actions that re-establish riverbank vegetation and reduce erosion potential. Ecological restoration actions are described in more detail in the discussion of the biological ORVs below and in Appendix E.

There are no new facilities proposed under Alternative 4 that would threaten the water quality of the river. In areas of new development or high-density use, sensitive riverbanks would be fenced to eliminate trampling. Trampling can lead to vegetation loss and exposed soil, leading to accelerated sediment

deposition in the river. To maintain excellent water quality, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Conclusion: Under Alternative 4, water quality in all segments of the Merced River corridor within Yosemite Valley would continue to be absent of adverse effects and degradation, and the potential for localized instances of contamination would be strongly reduced. Alternative 4 would address localized issues by moving the Upper Pines and Wawona recreational vehicle dump stations away from the river, moving the Odger's bulk fuel storage area outside of the 500-yr floodplain, and applying mitigation measures to ensure surface water runoff associated with parking areas meets requirements. Ecological restoration actions would decrease the potential for accelerated riverbank erosion and sediment loading during high water events. To ensure that existing high water quality conditions are maintained, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Segment 1 – Merced River Above Nevada Fall (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Primary actions to protect and improve Biological ORV 1 include removal of informal trails that incise meadow habitat, trails in wet and/or sensitive vegetation, and trails that fragment meadow habitat, including trails in the Triple Peak Fork meadow, wetlands near Echo Valley and Merced Lake shore, mineral springs between Merced Lake and Washburn Lake, and other areas as necessary. Removal of social trails that bisect the meadows would improve conditions in this segment because soil compactions and habitat fragmentation would be reduced. Preliminary grazing capacities would be established, monitored, and adapted as necessary which would also reduce soil compaction and habitat fragmentation, thus further enhancing meadow health.

Facilities that would remain in this segment of the river include designated camping areas in Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Area (including associated trails and footbridges). As described in Chapter 5, these facilities are not adversely impacting the Biological ORV. This alternative would remove all facilities at the High Sierra Camp and the area would be ecologically restored. Seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones would be applied as indicated. These changes would reduce use levels near the riverbank and result in improvement to riparian conditions in the immediate vicinity of these camping areas.

As described in Chapter 5, to ensure this ORV is protected and enhanced through time, the NPS would monitor three indicators to assess the condition of the ORV: meadow bare soil, meadow fragmentation due to the proliferation of informal trails, and streambank stability. The NPS would establish a baseline for all three indicators using site-specific monitoring protocols by 2013. Regular monitoring would also reveal whether assumptions about human behaviors and actions taken to correct past actions are sustaining conditions above the management standard. If conditions have reached trigger points; the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects. The

meadow monitoring programs for the biological ORV would monitor meadow fragmentation to ensure that use levels from hikers, backpackers and stock users do not result in meadow fragmentation or bare ground in excess of the management standards prescribed to protect and enhance meadows.

TABLE 8-90: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-1

Location	Action in Alternative 4	Effects toORV-1
Meadow trails	Remove informal trails that incise meadow habitat.	Change reduces effects to wet and sensitive meadows and results in localized enhancement to ORV-1.
Merced Lake High Sierra Camp	Remove all facilities at the High Sierra Camp and ecologically restore the area.	Changes reduce uses near riverbank which would enhance riparian conditions through reduction in erosion and trampling.
Private boating would be allowed in this segment	Boating would consist of short floats using pack raft or other craft that can easily be carried. Put-ins and take-outs would be undesignated and dispersed. Only five boats per day allowed - permit would be required.	Limited numbers would protect riparian habitat from trampling and bank erosion that could result with unlimited access.
Wilderness zone capacity	Zone capacities for Merced Lake, Washburn Lake, Mount Lyell, and Clark Range zones would remain the same across all the alternatives. Manage to a reduced capacity of 100 in the Little Yosemite Valley Wilderness Zone	Zone capacities are designed to protect wilderness character including natural conditions such as riverbanks and meadows. Reduced capacity in LYV would result in localized enhancement of riparian habitat.

Conclusion: Under Alternative 4, the biological ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance riverbanks and meadows. Removal of social trails, changes to grazing in Merced Lake East Meadow, and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures. Facilities that would remain in this segment of the river include Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the Biological ORV in this segment indicates that these facilities are not adversely affecting the Biological ORV.

Geological/Hydrological ORV-4 – Glacially-carved Canyon in the Upper Merced River Canyon

As discussed in Chapter 5, there are no management considerations with respect to the U-shaped, glacially carved canyon above Nevada Fall. This ORV is currently protected and enhanced within the meaning of the Wild and Scenic Rivers Act. Alternative 4 does not propose any actions that would change the condition of this ORV over time. Further, the U-shaped, glacially carved attributes of this ORV would not be affected by the types and levels of use authorized under this alternative, which are all directed toward wilderness oriented recreation. The NPS would nevertheless monitor the condition of this ORV to ensure that its condition does not decline.

Scenic ORV-15 – Scenic Views in Wilderness

Visitors to this Wilderness segment experience scenic views of serene montane lakes, pristine meadows, slickrock cascades, and High Sierra peaks. Management considerations associated with the condition of the scenic river above Nevada Fall include contributions of regional air pollution (primary factors contributing to this condition are outside of NPS jurisdiction), visual intrusions of temporary and permanent structures, and crowding in and near wilderness campgrounds. There are few "visual intrusions" noted beyond the High Sierra Camp and other designated camping areas. However, these effects are local in nature and do not degrade the ORV on a segment wide basis. The NPS would ensure that designated camping areas are maintained in a clean and tidy condition. Under Alternative 4, the High Sierra Camp would be removed and replaced with dispersed camping. This change would return scenic views to be keeping with the native landscape. These measures would locally enhance the scenic ORV. Other visitor use management actions under Alternative 4 would reduce crowding, thus additionally enhancing this ORV on a segmentwide basis.

The ORV is determined to be in the protected state, as defined by an absence of adverse effects and degradation, although intermittent air quality concerns are present. Because of the ambient nature of air quality, it cannot be managed exclusively for the river corridor. Facilities that would remain in this segment of the river include the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the scenic ORV in this segment indicates that these facilities are not adversely affecting the scenic ORV.

TABLE 8-91: SEGMENT 1 ACTIONS AND IMPLICATION FOR SCENIC ORV-15

Location	Action in Alternative 4	Effects to ORV-15
Merced Lake High Sierra Camp	Remove all facilities at the High Sierra Camp and ecologically restore the area.	Change would enhance ORV because the removed infrastructure would allow for restoration to the natural environment.
Little Yosemite Valley Backpackers Camping Area	Decrease the designated camping area and retain composting toilet.	Reduction in designated camping area would enhance scenic values locally in this segment.
Facilities retained	Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp	These facilities and associated administrative uses and maintenance do not result in segmentwide adverse effects to scenic values. The ORV will continue to be protected on a segmentwide level.

Conclusion. Under Alternative 4, the scenic ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance scenic values in this segment. Removal of the Merced Lake High Sierra Camp, conversion of the designated camping areas to dispersed camping, and ecological restoration of meadows and riparian areas would improve scenic conditions in this segment and thereby enhance the scenic ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures.

Recreational ORV-19 – Wilderness Recreation above Nevada Fall

Visitors to federally designated Wilderness in Segment 1 would engage in a variety of river related activities in an iconic High Sierra landscape, where opportunities for primitive and unconfined recreation, self-

reliance, and solitude shape the Wilderness experience. The current condition of this ORV is at or above the management standard at the segment level. Localized management concerns in this segment relate to crowding at Little Yosemite Valley and Moraine Dome backpackers campgrounds, high use levels at the Merced Lake Backpackers Camping Area, and high encounter rates along the trails that connect these areas. Crowding and high use levels affect the Wilderness experience, which is an integral part of the recreational ORV in this segment.

This alternative would remove all facilities at the High Sierra Camp and ecologically restore the area. The capacity of the Little Yosemite Valley Wilderness Zone would be reduced to 100, and the footprint of the camping area would be reduced accordingly. Actions in Alternative 4 would apply additional seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones. These changes would reduce use crowding, high use levels, and increase opportunities for solitude in this Wilderness segment.

Facilities that would remain in this segment of the river include the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. These facilities do not have an adverse effect on the Wilderness experience integral to this Recreational ORV.

TABLE 8-92: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR RECREATION ORV-19

Location	Action in Alternative 4	Effects to ORV-19
Merced Lake High Sierra Camp	Remove all facilities at the High Sierra Camp and ecologically restore the area.	The undeveloped and primitive elements of wilderness character are enhanced on a segmentwide level.
Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Areas	Retain as designated camping. Replace flush toilets with composting toilet at the Merced Lake Backpackers Camping Area.	The solitude and primitive elements of wilderness character would be enhanced locally at Little Yosemite Valley and Merced Lake Backpacker's designated camping areas due to the reduction in crowding and opportunity to camp out of sight and sound of other campers.
Segmentwide River Access	Swimming and water play allowed. Permits required for private boating. Commercial boating by commercial use authorization.	Permitted use and commercial limits would not substantively change current recreational use or recreational values in the segment. Recreational values would continue to be protected.
Visitor Use Management Action		
Private boating would be allowed in this segment	Boating would consist of short floats using pack raft or other craft that can easily be carried. Put-ins and take-outs would be undesignated and dispersed. Private use limited to 10 boats per day with backcountry permit on Segment 1. Permit would be required.	Permitted use would not substantively change current recreational use or recreational values in the segment. Recreational values would continue to be protected.
Wilderness zone capacity	Zone capacities for Merced Lake, Washburn Lake, Mount Lyell, and Clark Range zones would remain the same across all the alternatives. Manage to a reduced capacity of 100 in the Little Yosemite Valley Wilderness Zone	Zone capacities are designed to protect recreational setting attributes and recreational experience quality. Reduced capacity in LYV would result in localized enhancement of recreational values in Wilderness.

NPS would monitor visitor encounter rates to ensure that they are not exceeding established standards. Should specific trigger points be reached, the NPS would be required to implement a series of specific actions to reduce visitor levels to an acceptable level. These actions increase in severity as the current condition ORV condition moves away from the management standard to ensure proper course correction and re-establishment of the management standard. These trigger points were selected to inform managers in advance of any adverse effects or degradation to this ORV.

Conclusion: Under Alternative 4, the recreational ORV in Segment 1 of the Merced River corridor would be protected on a segmentwide basis and continue to be absent of adverse effects and degradation on a segmentwide level. Reductions in the zone capacity for Little Yosemite Valley, and removal of the Merced Lake High Sierra Camp would address management considerations by reducing crowding, high use levels, and increasing opportunities for solitude.

Segment 2 – Yosemite Valley (Recreational and Scenic Segments)

Biological ORV-2 – Mid-elevation Meadows and Riparian Habitat

The meadows and riparian communities of Yosemite Valley comprise one of the largest mid-elevation meadow-riparian complexes in the Sierra Nevada. Actions to protect and enhance Biological ORV-2 under Alternative 4 include:

- Removal of informal trails in meadows where they fragment meadow habitat or cross through sensitive, wet vegetation communities. Overall, restore six miles of informal trails throughout Yosemite Valley;
- Use boardwalks or hardened surfaces to allow access to sensitive areas;
- Delineation of trails through upland areas and along meadow perimeters;
- De-compacting trampled soils and consolidate multiple parallel trails;
- Re-directing visitor use to more stable and resilient river access points such as sandbars, and designate formal river access sites. Establishing fencing and signage to protect sensitive areas; install boardwalks where appropriate, and actively revegetate where needed;
- Relocate or remove all campsites within the 100-year floodplain and restore natural floodplain and riparian habitat;
- Restoration of the mosaic of meadow, riparian deciduous vegetation, black oak, and open mixed conifer forest at specific locations in Yosemite Valley. Management actions could include re-vegetation, prescribed fire, mechanical removal of conifers, and infrastructure re-design. Alternative 4 would include 223 acres ecological restoration.
- Installation of constructed log jams in the river channel between Clark's Bridge and Sentinel Bridge to remediate river widening and improve channel complexity would also contribute to improving riparian health.
- Day use parking capacity is expanded and formalized. A total of 2,045 visitor parking spaces would be provided in the Valley accommodating a maximum of 6,497 people at one time to Segment 2. Managing access and other proactive restoration measures would protect Biological ORVs by during periods of high use.

- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Biological ORVs by removing these uses from the river corridor and managing access in the corridor.

This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Under this alternative, all roads, buildings, campgrounds, trails, utilities and infrastructure, and other facilities in this segment with current local effects on the biological ORV would be removed, reduced, or relocated, including portions of Yosemite Lodge. Facilities that would remain in this segment of the river, including the Ahwahnee Hotel have no direct impact on the biological river value as indicated in the baseline condition assessment. Effects to the free-flowing condition of the river as a result of the bridges that would remain under this alternative would be mitigated through constructed log jams.

TABLE 8-93: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2

Location	Action in Alternative 4	Effects toORV-2
Segmentwide Restoration	(Common to all) Restoration includes restoration of meadow habitat, removal of informal trails, riparian restoration and establishment of designated river access points, and use of boardwalks and hardened surfaces.	Actions would enhance the biological ORV segmentwide.
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within 150 feet of the river would be removed. Designated raft put-in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged; the biological ORV would be enhanced segmentwide
Stoneman Meadow and Curry Orchard parking lot	Restore Stoneman Meadow including removal of 1,335 feet of Southside Drive and realignment of road through Boys Town area. The Orchard Parking Lot would be re-designed. Remove apple trees and landscape with native vegetation. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	These restoration actions would promote water flow and improve meadow health thereby enhancing the biological ORV locally.
New campsites at Upper Pines, Backpacker's, Concessioner Stables, Camp 4, West of Lodge, Boystown, and Upper and Lower River Campgrounds	New campsites constructed at Upper Pines, Upper River, Lower River, Backpackers, Camp 4, West of Lodge, Boystown, and Concessioner Stables out of the 150 foot riparian buffer. Lower River: Designate river access at Housekeeping Camp eastern beach.	Actions would protect riparian areas from direct impacts related to the increase in visitor activity in these areas. Fencing and designated river access points would also direct use to resilient areas. Monitoring would proactively assess the effectiveness of these actions and established triggers to ensure that future protective measures are implemented in a timely manner. Change would result in protection of biological ORV in this segment.
Ahwahnee and Sugar Pine Bridges	Remove the Ahwahnee and Sugar Pine Bridges, and the associated berm and restore to natural conditions. Reroute the multiple use trail to the north bank of the river. Reroute utilities under Ahwahnee Bridge.	Change would reduce channel widening, erosion, and scouring thereby enhancing local riparian communities.

Yosemite Village and Housekeeping Camp		
Housekeeping Camp Lodging	Retain 100 lodging units, and remove 166 lodging units (83 duplex lodging units, 4 restrooms, store and office) out of the observed ordinary high water mark.	These changes would reduce effects to riparian corridor and enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Drive and restore to natural conditions.	These changes would remove uses from the riverbank thus reducing erosion and trampling impacts in riparian corridor and enhancing ORV components.
Ahwahnee Row and Tacoma Dorms Concessioner Housing	Housing and development between Village Store and Ahwahnee Meadow remain. 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.	Changes would result in reduction of residential activities in riparian areas; biological ORV would be enhanced locally.
Yosemite Lodge and Camp 4		
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Relocation of this facility outside of the river corridor may reduce informal trailing in the adjacent meadow thereby enhancing the ORV locally.
Northside Drive (Stoneman Bridge to Yosemite Village Day Use Parking Area	Facility retained. A component of the primary transportation & circulation road system that connects all major visitor service nodes. Hydrologic connectivity improved by increasing culverts.	Has a localized affect on the ORV as road bisects meadow but is consistent with recreational designation and not causing adverse effects or degradation to ORV-2 on a segmentwide basis.

The NPS would monitor three indicators to assess the condition of ORV 2: meadow fragmentation resulting from informal trails, the status of riparian habitat, and riparian bird abundance. As described in Chapter 5, adverse effects and degradation are not present in relation to the meadow fragmentation indicator. Management concerns in meadows are present; however, actions to address informal trailing impacts and fragmentation would be taken at all meadows where these concerns have been documented. Initial surveys of the riparian status indicator in 2010 indicate that degradation is not present, but management concerns are also present in the riparian corridor.

The NPS is beginning to monitor the third indicator in this segment, riparian bird abundance. The first status assessments would take place in 2013, after one year of monitoring. The next assessment requires information from two out of three years.

To ensure Biological ORV-2 is protected by this plan and protected and enhanced through time, the NPS would continue to monitor the condition of the ORV to provide early warning of conditions that require management action before impacts occur. Regular monitoring would also reveal whether conditions have reached trigger points; and, if so, the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects.

Conclusion: Under Alternative 4, the biological ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance riverbanks and meadows. Removal or relocation of select campsites and infrastructure and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by

road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Geological/Hydrological ORV-5 – The "Giant Staircase"

The NPS has no immediate management considerations with respect to the Giant Staircase characteristic of the geology of Yosemite Valley above Happy Isles as this geologic ORV is determined to be absent of adverse effects and degradation. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Geological/Hydrological ORV-6- Rare, Mid-elevation Alluvial River

As described in Chapter 5, the NPS selected the status of riparian habitat as the indicator to specifically assess the effectiveness of actions designed to protect this and other ORV. This ORV integrates geologic/hydrologic processes and the condition of aquatic, riparian, and floodplain communities.

The following actions are included to specifically protect and enhance Free-flowing Conditions and Biological ORV-2, but would also address the protection and enhancement of ORV - 6.

- Large wood, constructed log jams, and brush layering would be used in the vicinity of bridges to decrease bed scouring and streambank instability. Riprap would be removed where possible and replaced with native riparian vegetation, using bioengineering techniques. In the event that such actions do not improve conditions, bridge redesign or removal could be reconsidered.
- Under Alternative 4 the free-flowing condition of the river would be enhanced by removing the Ahwahnee and Stoneman Bridges. Mitigation measures would be employed during removal and the long-term recovery of the removal area is expected. Restoring free-flowing conditions would enhance riparian communities associated with ORV-6.
- Removing abandoned underground infrastructure, along the river corridor would be part of a comprehensive strategy to correct altered surface and subsurface hydrology.
- Remove riprap where riverbanks do not need stabilization to allow for channel migration. Replace riprap with bioengineered riverbanks, integrating native riparian vegetation, where riverbank stabilization is necessary for protection of critical infrastructure.

To ensure this ORV is protected and enhanced through time, the NPS would monitor the condition of the ORV using the status of riparian habitat as an indicator, and take specific actions should conditions reach trigger points.

Conclusion. Under Alternative 4, the geologic/hydrologic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would enhance the 10 and/or 100-year floodplains and this ORV. Actions to protect and enhance free-flowing conditions as well as meadows and riparian complexes in Segment 2 would result in additional enhancement of the geologic/hydrologic ORV. The recreational segment of the Merced River corridor in

East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

TABLE 8-94: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR GEOLOGICAL/HYDROLOGICAL ORV-6

Location	Action in Alternative 4	Effects toORV-6
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within 150 feet of the river would be removed. Designated raft put-in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged; the biological ORV would be enhanced segmentwide
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Lodging is outside the 100 year floodplain and is not causing adverse effects or degradation to ORV-6 on a segmentwide basis.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center Parking Area	Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 550 parking places.	These changes would reduce effects to riparian corridor and locally enhance ORV components as use would be relocated away from areas critical to hydrologic function.
Ahwahnee Row and Tecoya Dorms Concessioner Employee Housing	Remove housing and development out of the 100-year floodplain, recontour topography, decompact soils, and restore stream hydrologic function.	Changes would result in reduction of residential activities in riparian areas; biological ORV would be enhanced locally.
Housekeeping Camp Lodging	Remove 166 lodging units.	These changes would reduce effects to riparian corridor and enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	West of Yosemite Lodge re-developed to provide additional 550 day use parking spaces.	Implementation of mitigation measures would protect the floodplain from erosion and other disturbance during construction.
Yosemite Lodge Visitor Facilities	No changes in this facility.	Lodging is outside the 100-year floodplain and is not causing adverse effects
El Capitan Crossover	Facility retained. This roadway segment is a key connector between Northside and Southside Drives and serves as a exit point at west end of Yosemite Valley.	Bridge protects riparian habitat from destruction caused by random crossings throughout the river corridor
Northside Drive (Stoneman Bridge to Yosemite Village Day Use Parking Area)	Remove portion of road and relocate the bike path to the south, to improve the meadow/river connectivity. Restore meadow contours and native vegetation.	Removes facility that currently has a localized affect on the ORV. Restoration enhances the ORV in this area.

Cultural ORV-8 – Yosemite Valley American Indian Ethnographic Resources

As described in Chapter 5, Yosemite Valley American Indian ethnographic resources include 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 tribes and groups. Management considerations related to ethnographic resources involve park operations, crowding, and visitor use. Actions included in the Merced River Plan/DEIS include:

- Continue coordination between traditionally associated American Indian tribes, groups, and traditional practitioners (through the Park American Indian Liaison) with law enforcement, fire management, interpretation, invasive species, ecological restoration, and facilities management programs;
- Continue to provide operational guidelines for material staging areas, parking, etc. to protect ethnographic resources;
- Ensure access for traditionally-associated American Indians for participation in annually scheduled traditional cultural events. In addition, tribal access for the personal conduct of ongoing traditional cultural practices would be assured through the Yosemite tribal fee waiver pass program.
- Reduce and formalize day-use parking capacity Manage access in Segment 2 to protect traditionally-used plant populations in the river corridor during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Cultural ORVs by removing these uses from the proximity of several cultural resources.

Threats to traditionally-used plant populations include invasive species such as Himalayan Blackberry (*Rubus armeniacus*), drainage and hydrology impacts to meadows, and erosion and revetments that affect riparian vegetation. The *Merced River Plan/DEIS* would address these considerations through the following actions:

- The ecological restoration actions associated with this planning effort implemented in concert with the existing invasive plant management program would address impacts to some traditionally-used plant populations in some locations.
- Restoration actions to protect riparian areas, meadows, and hydrological resources would further contribute to the protection and enhancement of the traditional-use plant communities included in this ORV.
- Introduction of seedlings to affected stands of black oaks and protection as necessary to ensure that ratios of adults to saplings is at least 0.65.
- Primary actions to manage major vista points under Scenic ORV-16 include mechanical thinning or removal of conifer trees. This action would be coordinated to ensure that the ORV-8 trigger point for the ratio of sapling to adult trees is not exceeded.

Facilities that would remain in this segment of the river have no direct impact on the ethnographic component of the cultural ORV as indicated in the baseline condition assessment.

TABLE 8-95: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR CULTURAL ORV-8

Location	Action in Alternative 4	Effects to ORV-8
Visitation	17,000 people per day	This reduced level of visitation may improve privacy for traditional cultural practices in specific locations seasonally. Access to annually-scheduled traditional cultural events and personal conduct of traditional cultural practices would be assured thereby continuing protection of the ORV segmentwide.
Curry Village and Campgrounds		
Traditional Cultural Property Documentation	Document the Yosemite Valley Traditional Cultural Property, consisting of traditional use areas, spiritual places and historic villages and complete National Register evaluation and interpretive summary.	Documentation, mapping, and evaluation would provide the detail necessary to protect and enhance the ORV segmentwide.
Upper Pines, Backpacker's, Concessioner Stables, Boystown, Camp 4, and Upper and Lower River Campgrounds	All campsites within 150 feet of the river would be removed. New campsites constructed at Upper Pines, Backpacker's, Concessioner Stables, Boystown, Camp 4, and Upper and Lower River Campgrounds. Designated put in areas established for boating.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Lodging is outside the 100 year floodplain and is not causing adverse effects or degradation to ORV-6 on a segmentwide basis.
Yosemite Village and Housekeeping Camp		
Housekeeping Camp Lodging	Retain 100 lodging units, and remove 166 lodging units (83 duplex lodging units, 4 restrooms, store and office) out of the observed ordinary high water mark.	These changes would reduce effects to riparian corridor and locally enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Implementation of best management practices would protect the floodplain from erosion and other disturbance.
Yosemite Lodge Parking	25 additional spaces added at Yosemite Lodge due to redesign, improving parking efficiency near Northside Drive.	Implementation of best management practices would protect the floodplain from erosion and other disturbance.
Yosemite Lodge Visitor Facilities	Retain the existing 245 units.	Lodging is outside the 100 year floodplain and is not affecting the geologic and hydrologic processes.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Lodging is outside the 100 year floodplain and is not affecting the geologic and hydrologic processes.
Former Bridalveil Sewer Plant	Remove the buried structure.	Removal of the abandoned infrastructure and native plant revegetation will allow for recruitment of desirable black oaks in this area.
Yellow Pine Administrative Campground	Retain 4 group administrative use sites (up to 120 people).	Campground is within floodplain but would undergo restoration and is not impacting areas critical to river function.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Relocation of this facility outside of the river corridor may reduce informal trailing in the river corridor. Restoration will allow for recruitment of desirable black oaks in this area. The ORV would be enhanced locally.

The Merced *River Plan/DEIS* proposes a variety of actions to address specific considerations including continued coordination between traditionally associated American Indian tribes, groups, and traditional practitioners and the NPS; continued access for traditionally associated American Indians for participation in annually scheduled traditional cultural events; and ecological restoration actions to protect and enhance traditionally used plant populations. To prevent future impacts, the NPS would monitor the condition of the ORV, and take specific actions should additional trigger points be exceeded.

Conclusion. Under Alternative 4, the ethnographic component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Actions to protect and enhance floodplains, meadows and riparian complexes in Segment 2 would result in additional enhancement of the traditionally-used plant resources of the ethnographic component of the cultural ORV. Actions that would remove infrastructure and restore black oak woodlands would also enhance a critical component of this ORV. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would not limit access to traditional practitioners because measures would be in place to ensure access to annually-scheduled events as well as individual access for ongoing traditional cultural practices. Furthermore, the overall reduction in visitation under Alternative 4 would reduce the effects of crowding and enhance privacy for traditional cultural practices.

Cultural ORV-9 – Yosemite Valley Archeological District

The Yosemite Valley Archeological District is a linked landscape that contains dense concentrations of resources that represent thousands of years of human settlement along this segment of the Merced River. Heavily-used formal trails and informal trails, as well as illegal campfires, graffiti, and trampling stock trail use, parking and informal rock climbing can all affect ORVs in this area. Archeological resource protection would be achieved through actions in this plan to manage visitor use levels, divert foot traffic around sites, removing informal trails, and formalizing river and meadow access locations, mitigating ecological restoration practices by using noninvasive techniques wherever possible. Many of the actions related to ecological restoration in Segment 2, such as delineating roadside parking, would also help protect archeological sites by diverting foot traffic away from sites and into less sensitive areas. Actions to enhance the recreational ORV in Segment 2 would manage recreational users both in terms of flow and location of users at any one time. A reduction in people and vehicles at one time in Yosemite Valley could also reduce visitor use-related effects on archeological resources.

Site-specific treatment actions would be developed through site management plans, where necessary, to avoid resource loss through park actions (such as development, repair, and maintenance of facilities and underground utilities to support visitor use or natural forces).

Management considerations for this ORV also involve continuing to survey and monitor archeological resources as well as update required documentation.

Under Alternative 4 the free-flowing condition of the river would be enhanced by removing the Ahwahnee and Sugar Pine Bridges. Mitigation measures would be utilized to reduce localized impacts and ensure that this action would not cause adverse effects or degradation to ORV-9 on a segmentwide

TABLE 8-96: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9

Location	Action in Alternative 4	Impact on ORV-9
Curry Village and Campgrounds		
Upper and Lower River Campgrounds, North, Lower and Upper Pines, and Backpackers Campgrounds	All campsites within 100-year floodplain would be removed. Upper Campsite in culturally sensitive area.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Concessioner Stables	Remove the Concessioner Stable and the pack trail from the stable to Happy Isles; restore to natural conditions.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would protect cultural resources during facility removal and would locally protect the ORV. Change would not affect contributing element of the Archeological District.
The Ahwahnee Parking Lot	Redesign and formalize the existing parking lot; providing for proper drainage. Construct new 50 parking space lot east of the current parking.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Yosemite Village Day-use Parking Area	The Concessioner General Offices, Garage, and the Bank Building are removed. Move the Camp 6 day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Housekeeping Camp Lodging	Remove 166 lodging units. Restore floodplain area.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Yosemite Village Concessioner Employee Housing	Temporary housing at Huff House and Boys Town is removed. Remove housing units (7 buildings, 64 beds) in rock fall hazard zone. Construct 16 buildings, housing 164 employees using the same dormitory prototype. Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Dr. and restore to natural conditions.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.

TABLE 8-96: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9 (CONTINUED)

Location	Action in Alternative 4	Impact on ORV-9
Yosemite Lodge and Camp 4		
West of Yosemite Lodge New Parking	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge Visitor Facilities	Retain existing lodging units (245 units).	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Change would not affect contributing element of the Archeological District due to location and level of use.
Yellow Pine, Camp 4, Yosemite Lodge, and West Valley Campgrounds.	Remove camping and restore the 100-year floodplain to natural conditions. Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Retain campground and administrative use sites in Yellow Pine.	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Archeological District.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Mitigation measures would protect cultural resources during facility relocation. Change would not affect contributing element of the Archeological District.
Northside Drive (Stoneman Bridge to Yosemite Village Day-use Parking Area)	Remove 900' of road and relocate the bike path to the south, to improve the meadow/river connectivity. Restore meadow contours and native vegetation.	Mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.

basis. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Facilities that would remain in this segment of the river have no direct impact on the archeological component of the cultural ORV as indicated in the baseline condition assessment.

The NPS would delineate bike paths, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; remove graffiti at rock art and other sensitive features, conduct public education to discourage climbing, and remove climbing hardware from sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

Conclusion: Under Alternative 4, the archeological component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Localized visitor-use-related impacts to archeological resources would be addressed through various enhancement actions. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Reduction in maximum people

per day in Yosemite Valley, and management of user capacity and visitor use would reduce the potential for visitor use impacts.

Cultural ORV-10 – Yosemite Valley Historic Resources

As described in Chapter 5, the Yosemite Valley Historic Resources represent a linked landscape of river-related or river-dependent, rare, unique or exemplary buildings and structures that bear witness to the historical significance of the river system. Protective actions to address management concerns related to the Yosemite Valley Historic Resources ORV-10 include:

- Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.
- Develop a Historic Structures Report for the LeConte Memorial Lodge NHL to determine the rehabilitation needs to bring the building to "good" condition.
- Rehabilitate the Superintendent's House (Residence 1) per the Historic Structure Report (Lingo 2012) to bring the building to "good" condition. This rehabilitation of the building will occur under all action alternatives, regardless of whether the building is relocated.

Under Alternative 4 the free-flowing condition of the river would be protected by removing the Ahwahnee and Sugar Pine Bridges. Relocation of the Superintendent's House (Residence 1) is proposed under Alternative 4 to address the 1982 Guidelines for the Wild and Scenic Rivers Act that requires managing agencies to consider relocation of major public use facilities outside of the river corridor. These three bridges and the Superintendent's House (Residence 1) are components of the Yosemite Valley Historic Resources component of the cultural ORV in Segment 2. The NPS would document and interpret any building or structure threatened with removal or relocation. In this manner, while the individual tangible element or elements may be lost or moved, a record of their existence and historical significance would still be available to the public.

To address management considerations, the *Merced River Plan/DEIS* proposes continuing the active program of maintenance for historic buildings and structures; employing existing design guidelines to ensure that new development or redevelopment complements the ORV and the Yosemite Valley Historic District; and periodically assessing and updating professional documentation for the historic resources.

Ecological and scenic value restoration actions in Segment 2 would enhance the cultural landscape which contributes to the historic setting of the resources that comprise the ORV-10. There are no construction actions associated with Alternative 4 that would affect the spatial organization of the

TABLE 8-97: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-10

Location	Action in Alternative 4	Effects toORV-10
Curry Village and Campgrounds		
Stoneman Meadow and Curry Orchard parking lot	Restore Stoneman Meadow including removal of 1,335 feet of Southside Drive and re-alignment of road through Boys Town area. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	Change would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective.
Ahwahnee Parking Lot	Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.	Redesign of the Ahwahnee Parking Lot would rehabilitate contributors to the cultural ORV thereby enhancing the Yosemite Valley Historic Resources ORV locally and segmentwide.
Yosemite Village Day-Use Parking Area	Remove Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Re-align the intersection at Northside Drive and Village Drive. Add a three-way intersection at Sentinel Drive and the entrance to the parking area. Provide on-grade pedestrian crossings.	The removal of historic and non-historic properties and re-alignment/re-establishment of the intersections would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Sugar Pine and Ahwahnee Bridges	Remove both bridges and the connecting berm.	The action would remove 2 contributors to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of these two bridges would not result in a segmentwide adverse effect of the collective of resources.
Superintendent's House (Residence 1)	Relocate outside the river corridor to the NPS housing area. Rehabilitate historic structure in new location.	The action would remove a contributor to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of this resource would not result in a segmentwide adverse effect of the collective of resources.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	The action would affect trails that are connected by the historic footbridges which are components of the Yosemite Valley Historic Resources ORV. Mitigation measures and Section 106 review would ensure the protection of the historic resources and the redesign could result in enhancement of the ORV locally.

historic resource collective, though changes in the circulation patterns as a result of re-routing roads at the Yosemite Village day-use parking area and at Stoneman Meadow would affect circulation patterns that are associated with this ORV. These effects would be localized and would not affect the condition of the ORV on a segmentwide level.

Conclusion: Under Alternative 4, the historic resources component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of three bridges and the relocation of the Superintendent's House (Residence 1) would result in localized effects that would be mitigated through documentation and interpretation. Once removed or relocated, these resources would no longer be considered part of the ORV collective. All disturbances to circulation and spatial organization associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and documentation (as needed) to ensure that historic resources are protected.

Scenic ORV-16 – Iconic Scenic Views in Yosemite Valley

Visitors to Yosemite Valley experience scenic views of some of the world's most iconic scenery, with the river and meadows forming a placid foreground to towering cliffs and waterfalls. Actions intended to manage natural resources may include the use of prescribed fire or controlled burns to thin forests that are encroaching on meadows; cutting trees, tree branches or other vegetation by mechanical means; and the application of herbicides to control invasive species. Related actions intended to protect the Recreation ORV would limit the number of visitors to lessen visitor density and congestion at attraction sites and make improvements to the transportation system that would reduce automobile congestion. Air quality can affect visitors' ability to experience scenic values in Segment 2. The NPS would cooperate with regional authorities to reduce airborne contaminants caused by combustion, including carbon dioxide emissions, smoke caused by fire, particulate matter generated by construction, and to improve air quality conditions.

In consideration of Wild and Scenic River Act requirements that the NPS consider the presence of existing structures, major facilities and services provided for visitor use, the NPS would eliminate several structures and facilities in Segment 2 under this alternative. Under Alternative 4 actions would remove many structures at the Ahwahnee pool and tennis court. Removal of these structures could enhance scenic resources from specific locations. Ecological restoration actions in Segment 2 would enhance the meadow and riparian communities which contribute to the scenic values in Yosemite Valley. This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Facilities that would remain in this segment of the river have no direct impact on the scenic river value as indicated in the baseline condition assessment. Changes to parking and vehicle traffic in Yosemite Valley to enhance Recreational ORV- 20 particularly the removal of roadside parking along Sentinel Drive and restoration to natural conditions would enhance Scenic ORV-16.

TABLE 8-98: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR SCENIC ORV-16

Location	Action in Alternative 4	Effects toORV-16
System-Wide		
Selected Scenic Vista Points	Selectively thin conifers and other trees and shrubs that encroach on selected scenic vista points. Remove unnecessary facilities and ensure that all future development satisfies objectives that provide low contrast ratings.	Changes would enhance the scenic values on a segmentwide level.
Curry Village and Campgrounds		
Yosemite Valley Campgrounds	All campsites within 150 feet of the river removed. New campsites installed at Upper Pines, Backpacker's, Boystown, Concessioner Stables, Camp 4, West of Lodge, and Upper and Lower River Campgrounds	Changes to campgrounds would not interfere with iconic scenery. Removal of campgrounds near the river will enhance viewsheds segmentwide.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day-Use Parking Area/Village Center Parking Area	The Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 750 parking places.	Removal of buildings would enhance viewsheds locally.
Housekeeping Camp Lodging	Retain 100 lodging units, and remove 166 lodging units (83 duplex lodging units, 4 restrooms, store and office) out of the observed ordinary high water mark.	Removal of Housekeeping units near the river will enhance viewsheds locally.
Yosemite Village Concessioner Employee Housing	Temporary housing at Huff House and Boys Town is removed. Remove housing units (7 buildings, 64 beds) in rock fall hazard zone. Construct 16 buildings, housing 164 employees using the same dormitory prototype. Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Facilities are out of major viewsheds and changes would not interfere with iconic scenery.

Conclusion: Under Alternative 4, the scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Tree thinning and ecological restoration actions would improve natural scenic conditions. Removal of buildings at Housekeeping Camp, Yosemite Lodge, the Concessioner Garage, the Concessioner General Offices, and the Concessioner Stables would reduce intrusions on scenic resources. All parking lot and campground construction under this alternative would be subject to park standard operating procedures and subject matter expert review to ensure that scenic resources are protected.

Recreational ORV-20– River-related Recreation in Yosemite Valley

Visitors to Yosemite Valley enjoy a wide variety of river-related recreational activities in the Valley's extraordinary setting along the Merced River. Throughout the Yosemite Valley segment, the river has provided the setting for recreational experiences such as fishing, floating, and sightseeing. Transportation is considered an important part of the visitor experience in Yosemite Valley because it is the means of access to recreational opportunities in Yosemite Valley. Management considerations address the amount of

vehicle traffic and the number of people at one time in Yosemite Valley at the peak times of day during the park's busy summer season.

All restoration actions to protect and enhance biological, cultural, geologic/hydrologic, and scenic ORVs would further enhance visitors' connections to the river and its values, which are essential to the recreational ORV in this segment. A reduction in day-use, camping, and lodging opportunities would reduce access to these recreational experiences, but would not cause adverse effects or degradation to ORV-20 on a segmentwide basis. The reduction of Housekeeping Camp would change the picture of overnight accommodations in Yosemite Valley, but overnight lodging would not be eliminated segmentwide, nor would an essential aspect of the recreational ORV be affected. There are also actions proposed in Alternative 4 that would improve picnicking, and wayfinding. Finally, commercial boating is limited to 75 boats at one time and private boating is limited to 100 trips per day in Segment 2, in this alternative which reduces crowding and increases the stretches of the river on which private boating and paddling is allowed, thereby enhancing key aspects of this recreational experience.

Chapter 6 provides a more detailed description of the day-visitor capacity management strategies that directly measure aspects of the Recreation ORV and outlines specific actions. These actions include:

- Utilize parking and traffic management staff to improve parking efficiency and traffic flow in Yosemite Valley and other locations where needed.
- Institute a transportation fee at entrance stations (for peak-use season).
- Divert vehicles to other destinations outside of Yosemite Valley when parking in the Valley fills.
- When all parking fills to capacity, day visitors would be diverted at checkpoints throughout the park and at entrance stations.
- East Valley day-use parking permits would be issued by advanced reservation and on a first-come-first-serve basis.

NPS would use the Highway Capacity Manual Pedestrian Level of Service (discussed further in Chapter 5) for evaluating the capacity and quality of service of transportation facilities, including walkways, multi-use paths, and similar pedestrian facilities. NPS would also monitor parking rates and vehicles at one time to ensure that they are not exceeding the management standard. Should specific trigger points be reached, the NPS would implement a series of specific actions to improve parking to an acceptable level. Similarly, should visitor densities begin to approach specific triggers; NPS would take steps to keep such densities within the management standard.

Conclusion: Under Alternative 4, the recreation ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season will significantly reduce crowding thereby enhancing the recreational ORV. All restoration actions would enhance opportunities to connect with the river and its values. The reduction in commercial services would affect opportunities for particular types of recreational activities, but would not affect the essential components of the recreation ORV on a segmentwide basis.

TABLE 8-99: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR RECREATIONAL ORV-20

Location	Action in Alternative 4	Effects toORV-20
Segmentwide visitation	17,000 visitors per day	This reduction in visitation would reduce crowding and congestion thereby enhancing the recreation ORV on a segmentwide level.
Concessioner Stables	Redeveloped as a campground with 41 sites.	Changes would reduce opportunities for one type of recreational activity, but would not substantially alter components of the river recreation experience.
Curry Village Lodging	Lodging would include 355 units, (65 hard-sided units and 290 tents).	Changes to Lodge would reduce access to overnight accommodations. Lodge itself is not part of the ORV-20 but does facilitate access to ORV-20 for certain visitors. This use would remain.
Lower Rivers Nature Walk	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.	Change would improve interpretation of the river and its values, and would enhance the recreation ORV in this segment.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts	Removal of facilities would reduce opportunities for one type of recreation activities, but would not substantially alter components of the river recreation experience.
Segment wide River Access	Swimming and water play allowed in all segments except 6, impoundment. No commercial boating. Boating allowed on all segments except 6, impoundment. Private use limited to 100 trips per day/commercial to 75 boats at one time in Segment 2 between the Pines Campgrounds and Sentinel Beach.	Change would limit commercial boating and would limit the number of private boating. However, this change does not affect components of the recreational ORV. This reduction in boats enhances dispersed recreation along the river corridor.
Housekeeping Camp Lodging	Retain Housekeeping Camp in current configuration.	Changes similar to current conditions and would not substantially alter components of the river recreation experience.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	Change would cause improve circulation and wayfinding thus enhancing ORV-20.
Yosemite Lodge and Camp 4		
Yosemite Lodge Visitor Facilities	Remove 34 lodging units (232 units remain).	Removal of lodging would have local affect, but would not substantially alter components of the river recreation experience.
Yellow Pine, Camp 4, Yosemite Lodge, and West Valley Campgrounds.	Remove camping and restore the 100-year floodplain to natural conditions. Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Restore Yellow Pines site and restore group administrative use sites to natural conditions.	Reduction in the number of campsites limits access to these recreational experiences, but camping opportunities would continue and not substantially alter components of the river recreation experience.
Recreational Experience Quality	Reduction in available day-use parking, and implementation of an East Yosemite Valley Day-use Parking Permit system	This will enhance the recreational experience of segment 2 by reducing crowding at key attraction sites as well as access to these areas (along roadways, in parking lots, etc).

Segment 3 – The Merced Gorge (Scenic Segment)

Scenic ORV-17 – Scenic View in the Merced River Gorge

The Merced River drops 2,000 feet over 14 miles; a continuous cascade under spectacular Sierra granite outcrops and domes. There are no existing management considerations with respect to the Scenic ORV in the Merced River Gorge. Although there are some localized visual intrusions from essential facilities such as visitor parking areas, restrooms, the Arch Rock entrance station and the El Portal Road, these facilities are consistent with the scenic classification of this river segment. As explained in Chapter 5, this ORV is currently protected and enhanced.

This alternative does not propose any new development or landscape changes within the river corridor aside from improvements to existing roadside pullouts and drainage. These changes would not degrade or adversely impact the scenic ORV on a segmentwide basis. Although private vehicles and overall visitation during peak periods will be managed for East Yosemite Valley only, it is probable that visitation and visitors at one time in Segment 3 will also witness a reduction under this alternative. This reduction in visitation and visitors at one time may reduce vehicles per viewshed, thereby enhancing the scenic ORV. Monitoring associated with this ORV would ensure that the attributes that comprise this ORV remain within the accepted management class rating.

Alternative 4 would accommodate the same kinds and amounts of use that exist today in Segment 3. The types and levels of use in Segment 3 under this alternative would remain largely unchanged. Actions considered under Alternative 4 would cause no adverse effects or degradation to ORVs on a segmentwide basis.

Conclusion. Under Alternative 4, this scenic river segment would show little evidence of human activity and remain largely free of structures. The scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season in Yosemite Valley will significantly reduce the number of vehicles per viewshed in this segment. All restoration actions would further enhance scenic characteristics in this segment.

Segment 4 – El Portal (Recreational Segment)

Geological/Hydrological ORV-7 – The Boulder Bar in El Portal

Natural processes would continue to shape the landscape and the geologic ORV. The NPS has not identified any management considerations with respect to the El Portal boulder bar. Land use and facility actions proposed in this alternative would not affect this ORV. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection are necessary. Moreover, the types and levels of visitor and administrative use (e.g., housing, maintenance operations, office space, passive recreation) allowed under this alternative would not affect this ORV. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Conclusion. Under Alternative 4, the geologic values of this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no actions that would affect the boulder bar in El Portal, and there are no ongoing concerns or considerations associated with this resource.

Cultural ORV-11 – The El Portal Archeological District

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. Four sites are known to have experienced particularly severe damage, most notably a large ancient village and cemetery.

To address management considerations pertinent to this river value, the NPS would undertake the following actions:

- Protective measures would ensure that exceptional sites would be protected from unmitigated effects that could lead to adverse effects or degradation on a segmentwide level. A plan of action for addressing the abandoned infrastructure on sites would be developed in consultation with traditionally-associated American Indian tribes and groups. Any solution(s) developed would also include a recommended approach for deterring visitor use within the sites.

- Informal trails, non-essential roads, and abandoned infrastructure would be removed to protect and enhance the archeological resources contributing to the ORV in Segment 4.

- Remove informal trails and non-essential roads.

There are no existing instances of adverse effect or degradation to this ORV. As discussed above, management considerations are present associated with abandoned infrastructure that remains on an exceptional site containing diverse components and extremely sensitive cultural materials that are highly valued by traditionally associated American Indians. Management considerations are also associated with non-essential roads and trails that impact archeological sites. In recognition of the high cultural significance of these sites, this alternative requires the park to develop plans to remove abandoned infrastructure and non-essential roads. Restoration actions to establish a 2.5 acre recruitment area for Valley Oaks would further protect adjacent archeological resources. Construction of employee housing in Old El Portal, Abbieville, and Rancheria would be designed to avoid or mitigate threats and disturbances to archeological sites. Monitoring and protective measures would ensure that new use patterns associated with the new housing would not affect contributing elements of the El Portal Archeological District.

Conclusion. Under Alternative 4, the archeological resources in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of abandoned infrastructure, informal trails and non-essential gravel roads would enhance protection of archeological resources. Valley Oak restoration actions would protect adjacent archeological resources from further ground disturbance, Construction of new employee housing would be designed to avoid or mitigate effects to the El Portal Archeological District. New or altered visitor use patterns associated with the new housing development would be monitored and protective actions would occur if effects triggered responses.

TABLE 8-100: SEGMENT 4 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-11

Facility	Action in Alternative 4	Effects toORV-11
El Portal		
Abbieville, Old El Portal, and Rancheria Flat Concessioner Employee Housing	New concessioner employee housing in Old El Portal (12 beds) and Rancheria Flat (96 beds). Remove or relocate 36 existing private residences at Abbieville out of the 150-foot riparian buffer.	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Abbieville Trailer Park Area	Develop El Portal Remote Visitor Parking Area in the Abbieville/Trailer Park area to provide 200 spaces of visitor parking serviced by regional transit. Adjacent to cultural resources, however only suitable location proximate with direct access to Highway 140.	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Mitigation measures would protect cultural resources during facility removal and ecological restoration. Change would continue to protect archeological resources locally.

Segment 5 – South Fork Merced River Above Wawona (Wild Segment)

Biological ORV 1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Restoration actions to remove informal trails and charcoal rings to protect cultural resources proposed under this alternative would not affect high-elevation meadows. The NPS proposes no major facility or visitor use actions for Segment 5 under Alternative 4. The biological ORV in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level.

Cultural ORV-12 – Regionally rare archeological features representing indigenous settlement including archeological sites with rock ring features

Three regionally rare prehistoric archeological sites are located along this segment of the South Fork of the Merced Wild and Scenic River corridor. The sites contain unique stacked rock ring constructions and rock alignments. Two sites also contain pine timber remains within the ring interiors or incorporated into the stacked rock courses. Rock constructions are considered fragile and highly subject to human alteration from camping and campfire building disturbances. Two of the South Fork sites are adjacent to formal NPS trails, increasing the likelihood of disturbance. The vicinity of the sites has not been systematically surveyed, and it is possible that additional rock ring sites may be present along the South Fork. Should additional rock ring sites be discovered in the monitoring process, they would also become a part of the South Fork ORV. To remedy these considerations, NPS would:

- Complete documentation of the features. Restrict Wilderness camping in the area of the rock rings (camping allowed past particular marker). Remove informal trails and charcoal rings.

- Increase education and outreach to Wilderness travelers.

Conclusion. Under Alternative 4, the archeological resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no specific actions to manage user capacity, land use, and/or facilities under Alternative 4 within Segment 5 beyond those designed to protect and enhance ORV-12 that would impact components of Cultural ORV-12. Monitoring activities described in Chapters 5 and 8 would continue to protect and enhance Cultural ORV-12 to ensure there are no adverse effects or degradation to ORV-12 on a segmentwide basis.

Scenic ORV 18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

Conclusion. Under Alternative 4, the scenic resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. The scenic ORV for Segment 5 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

Segment 7 – Wawona (Recreational Segment)

Biological ORV-3 – The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV would be determined by comparing populations located near Wawona Campground (an area that is likely to be disturbed by humans) with more remote populations that are less likely to receive such disturbance. This population of Sierra sweet bay is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

To ensure that this biological ORV is protected and enhanced through time, the NPS would monitor the condition of the Sierra sweet bay population to ensure early warning of conditions that require management action before impacts occur.

Conclusion. Under Alternative 4, the Sierra Sweet Bay in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Reduction in camping and visitor activity in the vicinity of Wawona Campground would enhance this resource.

TABLE 8-101: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR BIOLOGICAL ORV-3

Facility	Action in Alternative 4	Effects toORV-3
Wawona		
Wawona Campground	Retains 72 sites and one group site. Remove 27 sites that are either within the 100-year floodplain or in culturally sensitive areas.	Action would improve the condition of the ORV by reducing the potential effects on this species associated with campground visitation.

Cultural ORV-13 – Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This district spans segments 5, 6, 7, and 8. Accordingly, the condition of this historic property is assessed at the property-level, rather than the segmentwide level. 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. There are several management considerations for this ORV: the Wawona Archeological District is subject to site-specific impacts from park operations, visitor use, artifact collection, vandalism, and ecological processes. The following actions would help to address these issues:

- Increase monitoring frequency at affected sites.
- At the district-wide level, revise the existing National Register nomination to reflect changes since its original writing, for example, incorporating newly discovered resources and documenting impacts.
- The Wawona Campground capacity would be reduced to 67 sites (including one group site). 32 sites are removed because they are either within the 100-year floodplain or in culturally sensitive areas.
- Remove informal trails and fire rings to prevent continuing disturbance.
- Develop site management plans as needed for sites with complex uses. Remove shoulder and off-road parking. Limit facility and concessionaire off -road vehicle travel/parking on hotel grounds
- Consider need for archeological site treatment measures to address impacts to shallow deposits of artifacts and features.

The NPS would delineate trails, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; conduct public education to discourage disturbance to sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

TABLE 8-102: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-13

Facility and Land Use	Action in Alternative 4	Effects toORV-13
Wawona		
Wawona Campground Septic System	Remove septic system, and connect to the sewer system. Build a lift station above the campground to connect to the existing water treatment plant.	Mitigation measures would protect cultural resources during facility construction.
Wawona RV dump site	Relocate the dump site to an appropriate location away from the river.	Mitigation measures would protect cultural resources during facility removal and construction.
Wawona Store	Replace the existing public restroom facilities with larger restrooms to accommodate visitor use levels. Improve picnic area, redesign bus stop.	Mitigation measures would protect cultural resources during facility construction.
Wawona Swinging Bridge	Provide access to Swinging Bridge with access on the south side of the river, delineate trail, restrooms, waste disposal and parking.	Mitigation measures would protect cultural resources during facility construction. Restrooms and waste disposal will reduce threats and disturbances to adjacent archeological resources.

Cultural ORV-14 – Wawona Historic Resources

The Wawona Historic Resources ORV includes one of the few covered bridges in the region and the National Historic Landmark Wawona Hotel complex. The Wawona Hotel complex is the largest existing Victorian hotel complex within the boundaries of a national park, and one of the few remaining in the United States with this high level of integrity. The Wawona Covered Bridge is in good condition, and there are no current management considerations associated with it, however the bridge requires maintenance to keep the historic structure in good condition in the face of adverse weather and visitor use.

The Wawona Hotel complex continues to serve its original purpose as a guest lodging facility. Management considerations related to the hotel complex involve concessioner operations, the need for regular and routine preservation maintenance, and periodic rehabilitation to ensure visitor safety.

- Regular and routine preservation maintenance, conducted in accordance with the Secretary of the Interior's Standards, would ensure that this upkeep protects the historic character of the buildings
- Periodic rehabilitation would involve subject-matter specialists in planning, design and implementation to ensure actions do not compromise the historical integrity of the complex
- Concessioner operations would ensure that any operational modifications or updates are appropriate and in keeping with the historic character of the complex.

To prevent future impacts, the NPS would monitor the condition of the bridge, and take specific actions should conditions exceed trigger points. Trigger points are selected to inform managers well in advance of adverse effects or degradation on the Wawona Covered Bridge. Management considerations for the Wawona Hotel complex include the need for regular and routine preservation maintenance, periodic rehabilitation, and ongoing operations that serve its continuing function as a historic lodging facility. To address these management considerations, the NPS would ensure that these activities would conform to the Secretary of the Interior's Standards for Treatment of Historic Properties.

TABLE 8-103: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR WAWONA HISTORIC RESOURCES ORV-14

Facility	Action in Alternative 4	Effects toORV-14
Wawona		
Wawona Hotel	Retain 104 lodging units at the Wawona Hotel Retain hotel restaurant, swimming pool and tennis court. Retain golf course and golf shop.	The action would retain contributors to the Wawona Historic Resource. The ORV would continue to be protected locally.

Segment 8 – South Fork Merced River below Wawona (Wild Segment)

Biological ORV-3 — The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV in Segment 8 is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

Cultural ORV 13— Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This ORV in Segment 8 is in good condition, with no management considerations present. Management actions are not required at this time.

Scenic ORV-18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

The scenic ORV for Segment 8 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

ALTERNATIVE 5

River Value – Free-flowing Condition in all Segments

A free-flowing river, or section of a river, moves in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The current free-flowing condition of the

Merced River is fully protected and enhanced on a segmentwide basis. Riprap revetment, abandoned infrastructure within the bed and banks of the river, and bridges that constrict the flow of the river may produce localized effects on free-flowing condition of the river. Alternatives 2-6 would enact a comprehensive suite of actions to enhance the free-flowing condition of the river by removing 3,400 linear feet of riprap, and removing abandoned and unnecessary infrastructure from the river channel and its floodplain. Infrastructure that would be removed includes former sewage treatment facilities, sewer and water lines, and former bridge abutments. In addition, Alternative 5 would remove 435 linear feet of riprap from riverbank areas, beyond that proposed for removal under Alternatives 2-6.

Alternative 5 also proposes removal of Sugar Pine Bridge and the associated elevated multi-use trail connecting Sugar Pine Bridge and Ahwahnee Bridge. These features constrict flows during high-water events, and lead to accelerated riverbank, channel erosion, and prevent natural channel migration. The trail toward Lower Pines would require a new bridge to span a cut-off channel. Although the Stoneman and Ahwahnee bridges would remain under Alternative 5, the hydrological effects of these bridges would be mitigated with strategic placement of large wood on riverbanks, constructed log jams in the river channel, and the use of brush layering and other techniques to establish riverside vegetation and decrease erosion.

There are no new facilities proposed under Alternative 5 that would affect the free-flowing condition of the river. A number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/Geological ORVs). For example, the Yosemite Village Day-use Parking Area would be relocated 150 feet north of the river.

To protect the river's free flowing condition in the future, the NPS would require all proposed projects involving construction within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA. Through this process, the NPS would ensure that water resources projects within the designated river corridor would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition.

Conclusion: The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis, although localized considerations such as intermittent riverbank and bridges that constrict the flow of the river are present. Alternative 5 proposes a comprehensive suite of actions to enhance the free-flowing condition of the river by removing riprap, removing unnecessary infrastructure in the river channel, and removing Stoneman Bridge, as it produces pronounced hydraulic constrictions at high water flows. There are no new facilities proposed under Alternative 5 that would affect the free-flowing condition of the river, and a number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/ Geological ORVs). The NPS would require all proposed projects within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA to ensure that water resources projects would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition. The actions proposed under Alternative 5 ensure that there are no direct or adverse effects on free-flowing condition of the Merced River.

River Value – Water Quality in All Segments

The water quality of the Merced River is extremely high, and the current water quality of the river is fully protected and enhanced on a segmentwide basis. Intermittent localized instances of contamination may occur that are associated with automotive fluids in surface water runoff, recreational vehicle dump stations in proximity to the river, and accelerated erosion with potential sediment loading in the river during high water flows. Alternatives 2-6 would apply mitigation measures to ensure that surface water runoff associated with parking areas protects the water quality of the Merced River and meets regulations. The Upper Pines recreational vehicle dump station would be moved away from the river, and the Odger's bulk fuel storage area in El Portal would be moved out of the 500-year floodplain. In addition, Alternative 5 would relocate the Yosemite Village Day-use Parking Area north, 150-feet from the river. All campsites and infrastructure currently within 100-feet of the river would be removed. The pack trail from Curry Village stables to Happy Isles would be re-routed farther away from the river. These actions would reduce and mitigate potential sources of pollutants.

Proposed ecological restoration actions, particularly the actions that re-establish riverbank vegetation and reduce erosion potential would further enhance water quality conditions. These ecological restoration actions are described in more detail in the discussion of the biological ORVs below and in Appendix E.

There are no new facilities proposed under Alternative 5 that would threaten the water quality of the river. In areas of new development or high-density use, sensitive riverbanks would be fenced to eliminate trampling. Trampling can lead to vegetation loss and exposed soil, leading to accelerated sediment deposition in the river. To ensure that existing high water quality conditions are maintained in the future under Alternative 5, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Conclusion. Under Alternative 5, water quality in all segments of the Merced River corridor would continue to be absent of adverse effects and degradation, and the potential for localized instances of contamination would be strongly reduced. Alternative 5 would address localized issues by applying mitigation measures to ensure surface water runoff associated with parking areas meets state standards, move the Upper Pines recreational vehicle dump station away from the river, and remove the Odger's bulk fuel storage area from the 500-yr floodplain. Ecological restoration actions would decrease the potential for accelerated riverbank erosion and sediment loading during high water events.

TABLE 8-104: CORRIDOR-WIDE ACTIONS AND THEIR IMPLICATIONS FOR WATER QUALITY

Location	Action in Alternative 5	Effects to Water Quality
Segment 2		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	Campsites within the 100-year floodplain would be removed. Designated river access and put in areas established at resilient areas, discourage access to sensitive areas. Upper Pines dump station relocated away from the river.	These changes would result in less erosion along the riverbank; water quality would be enhanced segmentwide.
New campsites at Upper Pines, Backpacker's, Camp 4, Eagle Creek, and Upper River Campgrounds	New campsites constructed at Upper Pines, Upper River, Backpackers, Eagle Creek, and Camp 4 out of the 150 foot riparian buffer.	Change would not result in additional water quality effects on a segmentwide level. Water quality would continue to be protected segmentwide.
Yosemite Village Day-Use Parking Area	Move the unimproved parking lot out of the 10-year floodplain and restore the riparian habitat adjacent to the river.	Change would result in less erosion and storm water run-off from the parking area; water quality would be enhanced locally.
Pack Trail from Concessioner Stables to Happy Isles	Reroute the pack stock trail from the Concessioner Stable farther north, adjacent to the Happy Isles Loop Road.	Change would result in less erosion from the stock trail. Water quality would be enhanced locally.
Housekeeping Camp Lodging	Retain 232 units and associated facilities. Remove 34 units out of the ordinary high water mark.	Fencing and designated river access points would also direct use to resilient areas resulting in less erosion. Water quality would be enhanced locally.
Segment 4		
NPS Maintenance and Administrative Complex	Existing parking area formalized and paved using best management practices	Change would result in less erosion and storm water concerns in the parking area; water quality would be enhanced locally.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Removal of bulk fuel storage from the 500-year floodplain would further protect water quality segmentwide.
Segment 7		
Wawona Campground	Replace current septic system with waste water collection system connected to the waste water treatment plant. RV dump site relocated away from the river.	Change would result in less potential for storm water concerns in the campground; water quality would be enhanced locally.
Wawona Picnicking	Delineate boundaries of two formal picnic areas with formal river access points.	Change would result in less erosion along; water quality would be enhanced locally.

Segment 1 – Merced River Above Nevada Fall (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Primary actions to protect and improve Biological ORV 1 include removal of informal trails that incise meadow habitat, trails in wet and/or sensitive vegetation, and trails that fragment meadow habitat, including trails in the Triple Peak Fork meadow, wetlands near Echo Valley and Merced Lake shore, mineral springs

between Merced Lake and Washburn Lake, and other areas as necessary. Removal of social trails that bisect the meadows would improve conditions in this segment because soil compactions and habitat fragmentation would be reduced. Grazing capacities would be established, monitored, and adapted as necessary which would also reduce soil compaction and habitat fragmentation, thus further enhancing meadow health.

Facilities that would remain in this segment of the river include the Merced Lake High Sierra Camp, designated camping areas in Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Area (including associated trails and footbridges). As described in Chapter 5, these facilities are not adversely impacting the Biological ORV. This alternative would nevertheless reduce the size of the High Sierra Camp by 18 beds and apply additional seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones as indicated. These changes would reduce use levels near the riverbank and result in some improvement to riparian conditions in the immediate vicinity of these camping areas.

As described in Chapter 5, to ensure this ORV is protected and enhanced through time, the NPS would monitor three indicators to assess the condition of the ORV: meadow bare soil, meadow fragmentation due to the proliferation of informal trails, and streambank stability. The NPS would establish a baseline for all three indicators using site-specific monitoring protocols by 2013. Regular monitoring would also reveal whether assumptions about human behaviors and actions taken to correct past actions are sustaining conditions above the management standard. If conditions have reached trigger points; the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects. The meadow monitoring programs for the biological ORV would monitor meadow fragmentation to ensure that use levels from hikers, backpackers and stock users do not result in meadow fragmentation or bare ground in excess of the management standards prescribed to protect and enhance meadows.

TABLE 8-105: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-1

Location	Action in Alternative 5	Effects toORV-1
Meadow trails	Remove informal trails that incise meadow habitat.	Change reduces effects to wet and sensitive meadows and results in localized enhancement to ORV-1.
Merced Lake High Sierra Camp	Reduce the Merced Lake High Sierra Camp, to 11 units (42 beds). Replace the flush toilets with composting toilet.	Facility is not directly adjacent to meadows. Changes would not affect high-elevation meadow and riparian habitat, this ORV would continue to be protected locally.
Private boating would be allowed in this segment	Boating would consist of short floats using pack raft or other craft that can easily be carried. Put-ins and take-outs would be undesignated and dispersed. Only ten boats per day allowed - permit would be required.	Limited numbers would protect riparian habitat from trampling and bank erosion that could result with unlimited access.
Wilderness zone capacity	All zone capacities within the Merced WSR Corridor remain the same as currently managed.	Current zone capacities are designed to protect wilderness character including natural conditions such as riverbanks and meadows. Action would not affect high-elevation meadow and riparian habitat, this ORV would continue to be protected on a segmentwide level.

Conclusion. Under Alternative 5, the biological ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance riverbanks and meadows. Removal of social trails, grazing changes in Merced Lake East Meadow, and slightly reduced use of the Merced Lake High Sierra Camp would improve meadow conditions in this segment and thereby enhance the biological ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures. Facilities that would remain in this segment of the river include Merced Lake High Sierra Camp, Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the Biological ORV in this segment indicates that these facilities are not adversely affecting the Biological ORV.

Geological/Hydrological ORV-4 – Glacially-carved Canyon in the Upper Merced River Canyon

As discussed in Chapter 5, there are no management considerations with respect to the U-shaped, glacially carved canyon above Nevada Fall. This ORV is currently protected and enhanced within the meaning of the Wild and Scenic Rivers Act. Alternative 5 does not propose any actions that would change the condition of this ORV over time. Further, the U-shaped, glacially carved attributes of this ORV would not be affected by the types and levels of use authorized under this alternative, which are all directed toward wilderness oriented recreation. The NPS would nevertheless monitor the condition of this ORV to ensure that its condition does not decline.

Scenic ORV-15 – Scenic Views in Wilderness

Visitors to this Wilderness segment experience scenic views of serene montane lakes, pristine meadows, slickrock cascades, and High Sierra peaks. Management considerations associated with the condition of the scenic river above Nevada Fall include contributions of regional air pollution (primary factors contributing to this condition are outside of NPS jurisdiction), visual intrusions of temporary and permanent structures, and crowding in and near wilderness campgrounds. There are few "visual intrusions" noted beyond the High Sierra Camp and other designated camping areas. However, these effects are local in nature and do not degrade the ORV on a segment wide basis. The NPS would ensure that Merced Lake High Sierra Camp and other designated camping areas are maintained in a clean and tidy condition. Under Alternative 5, High Sierra Camp tent fabric would be replaced with colors that blend within the landscape, such as gray, brown or green, so as to reduce contrast (the tents are currently white canvas). These changes would be expected to blend quite well with the native landscape. These measures would enhance the scenic ORV in localized areas. Other visitor use management actions under Alternative 5 would reduce crowding, thus additionally enhancing this ORV on a segmentwide basis.

TABLE 8-106: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR SCENIC ORV-15

Location	Action in Alternative 5	Effects toORV-15
Merced Lake High Sierra Camp	Retain the Merced Lake High Sierra Camp, reducing the capacity to 11 units (42 beds). Replace tent fabric with colors that blend within the landscape.	Change would enhance ORV because the reduced infrastructure that remains would better blend in to the natural environment.
Designated Camping Areas	Retain the Merced Lake Backpackers, Little Yosemite Valley, and Moraine Dome designated camping areas.	Designated camping areas within the segment are currently protective of river values on a segmentwide level.
Facilities retained	Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp	These facilities and associated administrative uses and maintenance do not affect scenic values on a segmentwide level. The ORV would continue to be protected segmentwide.

The ORV is determined to be in the protected state, as defined by an absence of adverse effects and degradation, although intermittent air quality concerns are present. Because of the ambient nature of air quality, it cannot be managed exclusively for the river corridor. Facilities that would remain in this segment of the river include Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the scenic ORV in this segment indicates that these facilities are not adversely affecting the scenic ORV.

Conclusion. Under Alternative 5, the scenic ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance scenic values in this segment. Reduction of the Merced Lake High Sierra Camp units (and replacing tent fabric) would address scenic considerations in this segment, which focus on the High Sierra Camp and thereby enhance the scenic ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures.

Recreational ORV-19 – Wilderness Recreation above Nevada Fall

Visitors to federally designated Wilderness in Segment 1 would engage in a variety of river related activities in an iconic High Sierra landscape, where opportunities for primitive and unconfined recreation, self-reliance, and solitude shape the Wilderness experience. The current condition of this ORV is at or above the management standard at the segment level. Localized management concerns in this segment relate to crowding at Little Yosemite Valley and Moraine Dome backpackers campgrounds, high use levels at the Merced Lake Backpackers Camping Area, and high encounter rates along the trails that connect these areas. Crowding and high use levels affect the Wilderness experience, which is an integral part of the recreational ORV in this segment.

This alternative would retain the High Sierra Camp at a reduced level. The capacity of the Little Yosemite Valley Wilderness Zone would be remain at 150. Actions in Alternative 5 would reduce the size of the High Sierra Camp by 18 beds and apply additional seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones as indicated in Appendix L. These changes would reduce use levels and result in some decreased use in the immediate vicinity of these camping areas. These changes would reduce use crowding, high use levels, and increase opportunities for solitude in this Wilderness segment.

TABLE 8-107: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR RECREATION ORV-19

Location	Action in Alternative 5	Effects toORV-19
Merced Lake High Sierra Camp	Retain the Merced Lake High Sierra Camp, reducing the capacity to 11 units (42 beds). Replace the flush toilets with composting toilet.	The actions would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.
Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Areas	Retain as designated camping. Replace flush toilets with composting toilet at the Merced Lake Backpackers Camping Area.	Opportunities for solitude and primitive elements of wilderness character would be enhanced locally at Little Yosemite Valley and Merced Lake Backpacker's designated camping areas due to the reduction in crowding and opportunity to camp out of sight and sound of other campers. The recreation ORV would continue to be protected on a segmentwide level.
Private boating would be allowed in this segment	Swimming and water play allowed. Boating would consist of short floats using pack raft or other craft that can easily be carried. Put-ins and take-outs would be undesignated and dispersed. Permits required for private boating. No commercial boating. Private use limited to 10 boats per day with backcountry permit on Segment 1.	Permitted use would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.
Wilderness zone capacity	All zone capacities within the Merced WSR Corridor remain the same as currently managed.	The actions would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.

Facilities that would remain in this segment of the river include designated camping areas in Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Area (including associated trails and footbridges) and the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. These facilities do not have an adverse effect on the Wilderness experience integral to this Recreational ORV.

NPS would monitor visitor encounter rates to ensure that they are not exceeding established standards. Should specific trigger points be reached, the NPS would be required to implement a series of specific actions to reduce visitor levels to an acceptable level. These actions increase in severity as the current condition ORV condition moves away from the management standard to ensure proper course correction and re-establishment of the management standard. These trigger points were selected to inform managers in advance of any adverse effects or degradation to this ORV.

Conclusion: Under Alternative 5, actions would not substantively change existing wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.

Segment 2 – Yosemite Valley (Recreational and Scenic Segments)

Biological ORV-2 – Mid-elevation Meadows and Riparian Habitat

The meadows and riparian communities of Yosemite Valley comprise one of the largest mid-elevation meadow-riparian complexes in the Sierra Nevada. Actions to protect and enhance Biological ORV-2 under Alternative 5 include:

- Removal of informal trails in meadows where they fragment meadow habitat or cross through sensitive, wet vegetation communities. Overall, restore six miles of informal trails throughout Yosemite Valley;
- Use boardwalks or hardened surfaces to allow access to sensitive areas;
- Delineation of trails through upland areas and along meadow perimeters;
- De-compacting trampled soils and consolidate multiple parallel trails;
- Re-directing visitor use to more stable and resilient river access points such as sandbars, and designate formal river access sites. Establishing fencing and signage to protect sensitive areas; install boardwalks where appropriate, and actively revegetate where needed;
- Relocate or remove all campsites at least 100 feet away from the ordinary high-water mark;
- Restoration of the mosaic of meadow, riparian deciduous vegetation, black oak, and open mixed conifer forest at specific locations in Yosemite Valley. Management actions could include re-vegetation, prescribed fire, mechanical removal of conifers, and infrastructure re-design. Alternative 5 would include 203 acres ecological restoration.
- Installation of constructed log jams in the river channel between Clark's Bridge and Sentinel Bridge to remediate river widening and improve channel complexity would also contribute to improving riparian health.
- Day use parking capacity is expanded and formalized. A total of 2,448 visitor parking spaces would be provided in the Valley accommodating a maximum of 7,549 people at one time to Segment 2. Managing access and other proactive restoration measures would protect Biological ORVs by during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Biological ORVs by removing these uses from the river corridor and managing access in the corridor.

This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Under this alternative, all roads, buildings, campgrounds, trails, utilities and infrastructure, and other facilities in this segment with current local effects on the biological ORV would be removed, reduced, or relocated. Facilities that would remain in this segment of the river, including the Ahwahnee Hotel and Yosemite Lodge have no direct impact on the biological river value as indicated in the baseline condition assessment. Effects to the free-flowing condition of the river as a result of the bridges that would remain under this alternative would be mitigated through constructed log jams.

Some associated facilities are proposed for relocation as described below.

The NPS would monitor three indicators to assess the condition of ORV 2: meadow fragmentation resulting from informal trails, the status of riparian habitat, and riparian bird abundance. As described in Chapter 5, adverse effects and degradation are not present in relation to the meadow fragmentation indicator. Management concerns in meadows are present; however, actions to address informal trailing impacts and fragmentation would be taken at all meadows where these concerns have been documented. Initial surveys of the riparian status indicator in 2010 indicate that degradation is not present, but management concerns are also present in the riparian corridor.

The NPS is beginning to monitor the third indicator in this segment, riparian bird abundance. The first status assessments would take place in 2013, after one year of monitoring. The next assessment requires information from two out of three years.

To ensure Biological ORV-2 is protected by this plan and protected and enhanced through time, the NPS would continue to monitor the condition of the ORV to provide early warning of conditions that require management action before impacts occur. Regular monitoring would also reveal whether conditions have reached trigger points; and, if so, the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects.

TABLE 8-108: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2

Location	Action in Alternative 5	Effects toORV-2
Segmentwide Restoration	Restoration includes restoration of meadow habitat, removal of informal trails, riparian restoration and establishment of designated river access points, and use of boardwalks and hardened surfaces.	Actions would enhance the biological ORV segmentwide.
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within 100 feet of the river would be removed. Designated raft put-in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged; the biological ORV would be enhanced segmentwide.
New campsites at Upper Pines, Backpacker's, Eagle Creek, Camp 4, and Upper River Campgrounds	New campsites constructed at Upper Pines, Upper River, Backpackers, Camp 4 and Eagle Creek out of the 150 foot riparian buffer. Lower River: Designate river access at Housekeeping Camp eastern beach.	Actions would protect riparian areas from direct impacts related to the increase in visitor activity in these areas. Fencing and designated river access points would also direct use to resilient areas. Monitoring would proactively assess the effectiveness of these actions and established triggers to ensure that future protective measures are implemented in a timely manner. Change would result in protection of biological ORV in this segment.

TABLE 8-108: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2 (CONTINUED)

Location	Action in Alternative 5	Effects toORV-2
Curry Village (cont)		
Curry Orchard Day Use Parking Area	Provide 430 parking spaces through a re-design of the parking lot.	Actions include engineering solutions to promote water flow and increase drainage to Stoneman Meadow protecting and improving meadow health resulting in enhancement of the ORV locally.
Ahwahnee, Stoneman and Sugar Pine Bridges	Ahwahnee and Stoneman bridges would be retained. Sugar Pine Bridge would be removed.	Removal would reduce channel widening, erosion, and scouring thereby enhancing local riparian communities. Existing riparian impacts mitigated with strategic placement of large wood on riverbanks and the addition of brush layering and constructed log jams to address scouring resulting in enhancement of the ORV locally.
Yosemite Village and Housekeeping Camp		
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 units out of river bed and banks. Retain Housekeeping Camp shower houses, restrooms, and laundry, and remove grocery store. Restore one acre of the riparian ecosystem.	These changes would reduce effects to riparian corridor and locally enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches. The ORV would be enhanced locally.
Ahwahnee Row and Tecoya Dorms Concessioner Housing	Create 50-foot setback from Indian Creek – ecologically restore the riparian habitat and protect by restoration fencing.	Changes would result in reduction of residential activities in riparian areas; biological ORV would be enhanced locally.
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Drive and restore to natural conditions.	These changes would remove uses from the meadow edge thus reducing erosion and trampling impacts and enhancing ORV components locally.
Yosemite Village Day Use Parking Area/Roundabout	Move the Yosemite Village Day Use Parking Area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places. Build a traffic circle at the Village Drive and Northside Drive intersection at Yosemite Village Day Use Parking Area.	The extent of construction would partially encroach into Cook's Meadow; however riparian habitat would be enhanced by moving development away from the river. Mitigations would compensate wetland loss, and protect sensitive areas from staging impacts such as compaction and erosion. While Cook's Meadow may be affected locally, the ORV would continue to be protected segmentwide.
Yosemite Lodge And Camp 4		
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area outside of the river corridor.	Relocation of this facility outside of the river corridor may reduce informal trailing in the adjacent meadow thereby enhancing the ORV locally.
Northside Drive (Stoneman Bridge to Yosemite Village Day Use Parking Area)	Facility retained. A component of the primary transportation & circulation road system that connects all major visitor service nodes. Hydrologic connectivity improved by increasing culverts.	Facility has a localized effect on the ORV as road bisects meadow; ORV would continue to be protected segmentwide.

Conclusion: Under Alternative 5, the biological ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Actions would further enhance riverbanks and meadows. Removal or relocation of select campsites and infrastructure and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV.

The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Geological/Hydrological ORV-5 – The "Giant Staircase"

The NPS has no immediate management considerations with respect to the Giant Staircase characteristic of the geology of Yosemite Valley above Happy Isles as this geologic ORV is determined to be absent of adverse effects and degradation. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Geological/Hydrological ORV-6 – Rare, Mid-elevation Alluvial River

As described in Chapter 5, the NPS selected the status of riparian habitat as the indicator to specifically assess the effectiveness of actions designed to protect this and other ORV. This ORV integrates geologic/hydrologic processes and the condition of aquatic, riparian, and floodplain communities.

The following actions are included to specifically protect and enhance Free-flowing Conditions and Biological ORV-2, but would also address the protection and enhancement of ORV-6.

- Large wood, constructed log jams, and brush layering would be used in the vicinity of bridges to decrease bed scouring and streambank instability. Riprap would be removed where possible and replaced with native riparian vegetation, using bioengineering techniques. In the event that such actions do not improve conditions, bridge redesign or removal could be reconsidered.

- Under Alternative 5 the free-flowing condition of the river would be enhanced by removing Sugar Pine Bridge. Mitigation measures would be employed during removal and the long-term recovery of the area is expected. Restoring free-flowing conditions would enhance riparian communities associated with ORV-6.

- Removing abandoned underground infrastructure, along the river corridor would be part of a comprehensive strategy to correct altered surface and subsurface hydrology.

- Remove riprap where riverbanks do not need stabilization to allow for channel migration. Replace riprap with bioengineered riverbanks, integrating native riparian vegetation, where riverbank stabilization is necessary for protection of critical infrastructure.

TABLE 8-109: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR GEOLOGICAL/HYDROLOGICAL ORV-6

Location	Action in Alternative 5	Effects toORV-6
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within 100 feet of the river would be removed. Designated raft put-in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged; the biological ORV would be enhanced segmentwide.
Curry Village Lodging	Lodging would include 453 units, (290 tents and 163 hard-sided units)	Lodging is outside the 100-year floodplain and is not causing adverse effects or degradation to ORV-6 segmentwide.
Ahwahnee and Stoneman Bridges	Both these bridges are retained. Existing riparian impacts mitigated with strategic placement of large wood on riverbanks and the addition of brush layering and constructed log jams to address scouring.	Changes would improve riparian areas and channel complexity; the biological ORV would be enhanced segmentwide.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center	Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places.	These changes would reduce effects to riparian corridor and locally enhance ORV components as use would be relocated away from areas critical to river or meadow function; the biological ORV would be enhanced locally.
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 units out of observed ordinary high water mark. Retain Housekeeping Camp shower houses, restrooms, and laundry, and remove grocery store. Restore one acre of the riparian ecosystem.	These changes would reduce effects to riparian corridor and locally enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches. The ORV would be enhanced locally.
Ahwahnee Row and Tecoya Dorms Concessioner Employee Housing	Remove housing and development out of the 100-year floodplain, recontour topography, decompact soils, and restore stream hydrologic function.	Changes would result in reduction of residential activities in riparian areas; biological ORV would be enhanced locally.
Yosemite Village Day Use Parking Area /Roundabout	Construct a traffic circle at Yosemite Village Day Use Parking Area parking area to address congestion at intersection. Additionally, re-route Northside Drive south of the parking area to alleviate pedestrian/vehicle conflicts.	The extent of construction would encroach into Cook's Meadow; however wetlands would be restored by moving development away from the river. A net increase in wetland areas is expected. Mitigations would protect sensitive areas from staging impacts such as compaction and erosion. While the traffic circle and realignment of Northside Drive may affect the hydrologic processes of the alluvial river locally, the ORV would be protected segmentwide.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	Construct 300 vehicle parking spaces and 15 tour bus parking spaces.	Implementation of mitigation measures would protect the floodplain from erosion and other disturbance during construction. The ORV would continue to be protected locally.
Yosemite Lodge Visitor Facilities	Retain the existing 245 units.	Lodging is outside the 100 year floodplain and is not causing adverse effects. The ORV would continue to be protected locally.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Lodging is outside the 100 year floodplain and is not causing adverse effects. The ORV would continue to be protected locally.

Yellow Pine Administrative Site	Retain 4 group administrative use sites (up to 120 people).	Campground is within floodplain but would undergo restoration and is not impacting areas critical to alluvial river function. The ORV would continue to be protected segmentwide.
Yosemite Lodge Road and Northside Drive	Construct a pedestrian underpass and roundabout to address congestion at intersection and alleviate pedestrian/vehicle conflicts. Roadside parking would be removed and more culverts would be added. Implementation of mitigations would protect the riparian corridor from erosion, pollutants, and general habitat disturbance during construction.	Changes would remove and redirect uses from the riverbank thus reducing erosion and trampling impacts in riparian corridor. Underpass not likely to affect geological and hydrological processes. The ORV would continue to be protected locally.
El Capitan Crossover	Facility retained. This roadway segment is a key connector between Northside and Southside Drives and serves as a exit point at west end of Yosemite Valley.	Bridge protects riparian habitat from destruction caused by random crossings throughout the river corridor; the ORV would continue to be protected locally.
Northside Drive (Stoneman Bridge to Yosemite Village Day Use Parking Area)	Remove portion of road and relocate the bike path to the south, to improve the meadow/river connectivity. Restore meadow contours and native vegetation.	Removes facility that currently has a localized effect on the ORV. Restoration enhances the ORV locally.

To ensure this ORV is protected and enhanced through time, the NPS would monitor the condition of the ORV using the status of riparian habitat as an indicator, and take specific actions should conditions reach trigger points.

Conclusion. Under Alternative 5, the geologic/hydrologic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would enhance the 10 and/or 100-year floodplains and this ORV. Actions to protect and enhance free-flowing conditions as well as meadows and riparian complexes in Segment 2 would result in additional enhancement of the geologic/hydrologic ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Cultural ORV-8 – Yosemite Valley American Indian Ethnographic Resources

As described in Chapter 5, Yosemite Valley American Indian ethnographic resources include 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 tribes and groups. Management considerations related to ethnographic resources involve park operations, crowding, and visitor use. Actions included in the Merced River Plan/DEIS include:

- Continue coordination between traditionally associated American Indian tribes, groups, and traditional practitioners (through the Park American Indian Liaison) with law enforcement, fire management, interpretation, invasive species, ecological restoration, and facilities management programs;
- Continue to provide operational guidelines for material staging areas, parking, etc. to protect ethnographic resources;

- Ensure access for traditionally-associated American Indians for participation in annually scheduled traditional cultural events. In addition, tribal access for the personal conduct of ongoing traditional cultural practices would be assured through the Yosemite tribal fee waiver pass program.
- Reduce and formalize day-use parking capacity Manage access in Segment 2 to protect traditionally-used plant populations in the river corridor during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Cultural ORVs by removing these uses from the proximity of several cultural resources.

Threats to traditionally-used plant populations include invasive species such as Himalayan Blackberry (*Rubus armeniacus*), drainage and hydrology impacts to meadows, and erosion and revetments that affect riparian vegetation. The *Merced River Plan/DEIS* would address these considerations through the following actions:

- The ecological restoration actions associated with this planning effort implemented in concert with the existing invasive plant management program would address impacts to some traditionally-used plant populations in some locations.

TABLE 8-110: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR CULTURAL ORV-8

Location	Action in Alternative 5	Effects toORV-8
Visitation	19,900 people per day	This level of visitation may continue to result in a lack of privacy for traditional cultural practices in specific locations seasonally. Access to annually-scheduled traditional cultural events and personal conduct of traditional cultural practices would be assured thereby continuing protection of the ORV segmentwide.
Curry Village and Campgrounds		
Traditional Cultural Property Documentation	Document the Yosemite Valley Traditional Cultural Property, consisting of traditional use areas, spiritual places and historic villages and complete National Register evaluation and interpretive summary	Documentation, mapping, and evaluation would provide the detail necessary to protect and enhance the ORV segmentwide.
Upper Pines, Backpacker's, Eagle Creek, Camp 4, and Upper River Campgrounds	All campsites within 150 feet of the river would be removed. New campsites constructed at Upper Pines, Backpacker's, Eagle Creek, Camp 4, and Upper River Campgrounds. Designated boating put in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged.
Curry Village Lodging	Lodging would include 453 units, (163 hard-sided units and 290 tents).	Lodging is outside the 100 year floodplain and is not causing adverse effects or degradation to ORV-6 on a segmentwide basis.
Yosemite Village and Housekeeping Camp		
Housekeeping Camp Lodging	Retain 266 lodging units.	These changes would reduce effects to riparian corridor and locally enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	West of Yosemite Lodge re-developed to provide additional 150 day use parking spaces.	Implementation of best management practices would protect the floodplain from erosion and other disturbance. The ORV would continue to be protected locally.
Yosemite Lodge Parking	25 additional spaces added at Yosemite Lodge due to redesign, improving parking efficiency near Northside Drive.	Implementation of best management practices would protect the floodplain from erosion and other disturbance. The ORV would continue to be protected locally.

Yosemite Lodge Visitor Facilities	Retain existing 245 rooms.	Lodging is outside the 100-year floodplain and is not affecting the riparian and hydrologic processes. The ORV would continue to be protected locally.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Lodging is outside the 100-year floodplain and is not affecting the geologic and hydrologic processes. The ORV would continue to be protected locally.
Yellow Pine Administrative Campground	Retain 4 group administrative use sites (up to 120 people).	Yellow Pines is used for overflow camping during annual traditional cultural events. Retention of this campground continues to protect the ORV segmentwide.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Relocation of this facility outside of the river corridor may reduce informal trailing in the river corridor. Restoration will allow for recruitment of desirable black oaks in this area. The ORV would be enhanced locally.
Eagle Creek New Campground	New campground developed east of El Capitan Picnic Area with two group auto campsites.	Implementation of mitigation measures would protect planted areas from disturbance during construction; the ORV would continue to be protected locally.

- Restoration actions to protect riparian areas, meadows, and hydrological resources would further contribute to the protection and enhancement of the traditional-use plant communities included in this ORV.
- Introduction of seedlings to affected stands of black oaks and protection as necessary to ensure that ratios of adults to saplings is at least 0.65.
- Primary actions to manage major vista points under Scenic ORV-16 include mechanical thinning or removal of conifer trees. This action would be coordinated to ensure that the ORV-8 trigger point for the ratio of sapling to adult trees is not exceeded.

Facilities that would remain in this segment of the river have no direct impact on the ethnographic component of the cultural ORV as indicated in the baseline condition assessment.

The Merced *River Plan/DEIS* proposes a variety of actions to address specific considerations including continued coordination between traditionally associated American Indian tribes, groups, and traditional practitioners and the NPS; continued access for traditionally associated American Indians for participation in annually scheduled traditional cultural events; and ecological restoration actions to protect and enhance traditionally used plant populations. To prevent future impacts, the NPS would monitor the condition of the ORV, and take specific actions should additional trigger points be exceeded.

Conclusion. Under Alternative 5, the ethnographic component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Actions to protect and enhance floodplains, meadows and riparian complexes in Segment 2 would result in additional enhancement of the traditionally-used plant resources of the ethnographic component of the cultural ORV. Actions that would remove infrastructure and restore black oak woodlands would also enhance a critical component of this ORV. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would not limit access to traditional practitioners because measures would be in place to ensure access to annually-scheduled events as well as individual access for ongoing traditional cultural practices. Furthermore, the overall reduction in visitation under Alternative 5 would reduce the effects of crowding and enhance privacy for traditional cultural practices.

Cultural ORV-9 – Yosemite Valley Archeological District.

The Yosemite Valley Archeological District is a linked landscape that contains dense concentrations of resources that represent thousands of years of human settlement along this segment of the Merced River. Heavily-used formal trails and informal trails, as well as illegal campfires, graffiti, and trampling stock trail use, parking and informal rock climbing can all affect ORVs in this area. Archeological resource protection would be achieved through actions in this plan to manage visitor use levels, divert foot traffic around sites, removing informal trails, and formalizing river and meadow access locations, mitigating ecological restoration practices by using noninvasive techniques wherever possible. Many of the actions related to ecological restoration in Segment 2, such as delineating roadside parking, would also help protect archeological sites by diverting foot traffic away from sites and into less sensitive areas. Actions to enhance the recreational ORV in Segment 2 would manage recreational users both in terms of flow and location of users at any one time. A reduction in people and vehicles at one time in Yosemite Valley could also reduce visitor use-related effects on archeological resources.

TABLE 8-111: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9

Location	Action in Alternative 5	Impact on ORV-9
Curry Village and Campgrounds		
Upper and Lower River Campgrounds, North, Lower and Upper Pines, and Backpackers Campgrounds	All campsites within 100-year floodplain would be removed. Upper Campsite in culturally sensitive area.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Curry Village Lodging	Total would be 453 guest units, including: 290 tents in Curry Village retained; 98 hard-sided units in Boys Town constructed; 18 units at Stoneman House retained; and 47 cabin-with-bath units in Curry Village retained.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Huff House Employee Housing	Temporary housing at Huff House and Boys Town is removed. Construct 16 buildings, housing 164 employees using the same dormitory prototype.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility removal. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
The Ahwahnee Parking Lot	Redesign and formalize the existing parking lot; providing for proper drainage. Construct new 50 parking space lot east of the current parking.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.

Camp 6/Village Center Parking Area	The Concessioner General Offices, Garage, and the Bank Building are removed. Move the Camp 6 day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places. 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.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility removal and construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Housekeeping Camp Lodging	Remove 34 lodging units – retain 232 units.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility removal. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Yosemite Village Concessioner Employee Housing	Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge and Camp 4		
West of Yosemite Lodge New Parking	West of Yosemite Lodge re-developed to provide additional 300 day use parking spaces.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Lodge Visitor Facilities	Retain existing lodging units (245 units).	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility removal and construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Camp 4 and Yellow Pines Campground	Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Retain campground and administrative use sites in Yellow Pine.	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV locally.
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.

Site-specific treatment actions would be developed through site management plans, where necessary, to avoid resource loss through park actions (such as development, repair, and maintenance of facilities and underground utilities to support visitor use or natural forces).

Management considerations for this ORV also involve continuing to survey and monitor archeological resources as well as update required documentation.

Under Alternative 5 the free-flowing condition of the river would be enhanced by removing the Sugar Pine Bridge. Mitigation measures would be utilized to reduce localized impacts and ensure that this action would not cause adverse effects or degradation to ORV-9 on a segmentwide basis. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Facilities that would remain in this segment of the river have no direct impact on the archeological component of the cultural ORV as indicated in the baseline condition assessment.

The NPS would delineate bike paths, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; remove graffiti at rock art and other sensitive features, conduct public education to discourage climbing, and remove climbing hardware from sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

Conclusion: Under Alternative 5, the archeological component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Localized visitor-use-related impacts to archeological resources would be addressed through various enhancement actions. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would reduce the potential for visitor use impacts.

Cultural ORV-10 – Yosemite Valley Historic Resources

As described in Chapter 5, the Yosemite Valley Historic Resources represent a linked landscape of river-related or river-dependent, rare, unique or exemplary buildings and structures that bear witness to the historical significance of the river system. Protective actions to address management concerns related to the Yosemite Valley Historic Resources ORV-10 include:

- Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.
- Develop a Historic Structures Report for the LeConte Memorial Lodge NHL to determine the rehabilitation needs to bring the building to "good" condition.
- Rehabilitate the Superintendent's House (Residence 1) per the Historic Structure Report (Lingo 2012) to bring the building to "good" condition. This rehabilitation of the building will occur under all action alternatives, regardless of whether the building is relocated.

Under Alternative 5 the free-flowing condition of the river would be protected by removing the Sugar Pine Bridge. Relocation of the Superintendent's House (Residence 1) is proposed under Alternative 5 to address the 1982 Guidelines for the Wild and Scenic Rivers Act that requires managing agencies to consider relocation of major public use facilities outside of the river corridor. The bridge and the Superintendent's House (Residence 1) are components of the Yosemite Valley Historic Resources component of the cultural ORV in Segment 2. The NPS would document and interpret any building or structure threatened with removal or relocation. In this manner, while the individual tangible element or elements may be lost or moved, a record of their existence and historical significance would still be available to the public.

TABLE 8-112: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-10

Location	Action in Alternative 5	Effects toORV-10
Segmentwide visitation	19,900 visitors per day	This level of visitation would
Curry Village and Campgrounds		
Stoneman Meadow and Curry Orchard parking lot	Restore Stoneman Meadow including removal of 1,335 feet of Southside Drive and re-alignment of road through Boys Town area. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	Change would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective. The ORV would be protected segmentwide.
Curry Village Lodging	Total would be 453 guest units, including: 290 tents in Curry Village retained; 98 hard-sided units in Boys Town constructed; 18 units at Stoneman House retained; and 47 cabin-with-bath units in Curry Village retained.	Mitigation measures would contribute to documentation and interpretation of historic cultural resources during facility removal. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective. The ORV would be protected segmentwide.
Huff House Employee Housing	Temporary housing at Huff House and Boys Town is removed. Construct 16 buildings, housing 164 employees using the same dormitory prototype.	Mitigation measures would contribute to documentation and interpretation of historic cultural resources during facility removal and construction. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective. The ORV would be protected segmentwide.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would contribute to documentation and interpretation of historic cultural resources during facility removal. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective. The ORV would be protected segmentwide.
Ahwahnee Parking Lot	Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.	Redesign of the Ahwahnee Parking Lot would rehabilitate contributors to the cultural ORV thereby enhancing the Yosemite Valley Historic Resources ORV locally and segmentwide.

Yosemite Village Day-Use Parking Area	Remove Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Re-align the intersection at Northside Drive and Village Drive. Add a three-way intersection at Sentinel Drive and the entrance to the parking area. Provide on-grade pedestrian crossings. 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.	The removal of historic and non-historic properties and re-alignment/re-establishment of the intersections would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective. The ORV would be protected segmentwide.
Sugar Pine Bridge	Remove bridge and the connecting berm.	The action would remove a contributor to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of this bridge would not result in a segmentwide adverse effect of the collective of resources. The ORV would be protected segmentwide.
Superintendent's House (Residence 1)	Relocate outside the river corridor to the NPS housing area. Rehabilitate historic structure in new location.	The action would remove a contributor to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of this resource would not result in a segmentwide adverse effect of the collective of resources. The ORV would be protected segmentwide.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	The action would affect trails that are connected by the historic footbridges which are components of the Yosemite Valley Historic Resources ORV. Mitigation measures and Section 106 review would ensure the protection of the historic resources and the redesign could result in enhancement of the ORV locally.

To address management considerations, the *Merced River Plan/DEIS* proposes continuing the active program of maintenance for historic buildings and structures; employing existing design guidelines to ensure that new development or redevelopment complements the ORV and the Yosemite Valley Historic District; and periodically assessing and updating professional documentation for the historic resources.

Ecological and scenic value restoration actions in Segment 2 would enhance the cultural landscape which contributes to the historic setting of the resources that comprise the ORV-10. There are no construction actions associated with Alternative 5 that would affect the spatial organization of the historic resource collective, though changes in the circulation patterns as a result of re-routing roads at the Yosemite Village day-use parking area and at Stoneman Meadow would affect circulation patterns that are associated with this ORV. These effects would be localized and would not affect the condition of the ORV on a segmentwide level.

Conclusion: Under Alternative 5, the historic resources component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of three bridges and the relocation of the Superintendent's House (Residence 1) would result in localized effects that would be mitigated through documentation and interpretation. Once removed or

relocated, these resources would no longer be considered part of the ORV collective. All disturbances to circulation and spatial organization associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and documentation (as needed) to ensure that historic resources are protected.

Scenic ORV-16 – Iconic Scenic Views in Yosemite Valley

Visitors to Yosemite Valley experience scenic views of some of the world's most iconic scenery, with the river and meadows forming a placid foreground to towering cliffs and waterfalls. Actions intended to manage natural resources may include the use of prescribed fire or controlled burns to thin forests that are encroaching on meadows; cutting trees, tree branches or other vegetation by mechanical means; and the application of herbicides to control invasive species. Related actions intended to protect the Recreation ORV would limit the number of visitors to lessen visitor density and congestion at attraction sites and make improvements to the transportation system that would reduce automobile congestion. Air quality can affect visitors' ability to experience scenic values in Segment 2. The NPS would cooperate with regional authorities to reduce airborne contaminants caused by combustion, including carbon dioxide emissions, smoke caused by fire, particulate matter generated by construction, and to improve air quality conditions.

In consideration of Wild and Scenic River Act requirements that the NPS consider the presence of existing structures, major facilities and services provided for visitor use, the NPS would eliminate several structures and facilities in Segment 2 under this alternative. Under Alternative 5 actions would remove structures at the Ahwahnee pool and tennis court. Removal of these structures could enhance scenic resources from specific locations. Ecological restoration actions in Segment 2 would enhance the meadow and riparian communities which contribute to the scenic values in Yosemite Valley. This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Facilities that would remain in this segment of the river have no direct impact on the scenic river value as indicated in the baseline condition assessment. Changes to parking and vehicle traffic in Yosemite Valley to enhance Recreational ORV- 20 particularly the removal of roadside parking along Sentinel Drive and restoration to natural conditions would enhance Scenic ORV-16.

Conclusion. Under Alternative 5, the scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Tree thinning and ecological restoration actions would improve natural scenic conditions. Removal of buildings at Housekeeping Camp, the Concessioner Garage, the Concessioner General Offices, and the Concessioner Stables would reduce intrusions on scenic resources. All parking lot and campground construction under this alternative would be subject to park standard operating procedures and subject matter expert review to ensure that scenic resources are protected.

TABLE 8-113: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR SCENIC ORV-16

Location	Action in Alternative 5	Effects toORV-16
Segmentwide		
Selected Scenic Vista Points	Selectively thin conifers and other trees and shrubs that encroach on selected scenic vista points. Remove unnecessary facilities and ensure that all future development satisfies objectives that provide low contrast ratings.	Changes would enhance the scenic values on a segmentwide level.
Curry Village and Campgrounds		
Yosemite Valley Campgrounds	All campsites within 150 feet of the river removed. New campsites installed at Upper Pines, Backpacker's, Eagle Creek, Camp 4, West of Lodge, and Upper River Campgrounds	Changes to campgrounds would not interfere with iconic scenery. Removal of campgrounds near the river will enhance viewsheds segmentwide.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day-Use Parking Area/Village Center Parking Area	The Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 750 parking places.	Removal of buildings would enhance viewsheds locally.
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 lodging units out of the observed ordinary high water mark.	Removal of Housekeeping units near the river will enhance viewsheds locally.
Yosemite Village Concessioner Employee Housing	Temporary housing at Huff House and Boys Town is removed. Remove housing units (7 buildings, 64 beds) in rock fall hazard zone. Construct 16 buildings, housing 164 employees using the same dormitory prototype. Temporary housing at Lost Arrow is removed, replaced with 50 bed permanent housing facility.	Facilities are out of major viewsheds and changes would not interfere with iconic scenery.

Recreational ORV-20 – River-related Recreation in Yosemite Valley

Visitors to Yosemite Valley enjoy a wide variety of river-related recreational activities in the Valley's extraordinary setting along the Merced River. Throughout the Yosemite Valley segment, the river has provided the setting for recreational experiences such as fishing, floating, and sightseeing. Transportation is considered an important part of the visitor experience in Yosemite Valley because it is the means of access to recreational opportunities in Yosemite Valley. Management considerations address the amount of vehicle traffic and the number of people at one time in Yosemite Valley at the peak times of day during the park's busy summer season.

TABLE 8-114: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR RECREATIONAL ORV-20

Location	Action in Alternative 5	Effects toORV-20
Segmentwide visitation	19,900 visitors per day	This managed change in visitation would reduce crowding and congestion thereby enhancing the recreation ORV on a segmentwide level.
Curry Village and Campgrounds		
Concessioner Stables	Retain Concessioner Stables to support Merced Lake High Sierra Camp and overflow parking for campgrounds. Commercial equestrian day rides would be eliminated. Kennel service remains. Retain associated housing (25 beds).	Actions result in little change from current conditions and would not substantially alter components of the river recreation experience. The ORV would continue to be protected segmentwide.
Curry Village Lodging	Lodging would include 453 units, as compared with 400 under Alternative 1.	Changes to Lodge would be in keeping with current facility. Lodge itself is not part of the ORV-20 but does facilitate access to ORV-20 for certain visitors. This use would remain. The ORV would continue to be protected segmentwide.
Lower Rivers Nature Walk	Create an interpretive (nature) walk through Lower River that emphasizes river-related natural processes, the park's ecological restoration work and what visitors can do to protect the river.	Change would improve interpretation of the river and its values. The ORV would continue to be protected locally.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts	Removal of facilities would reduce opportunities for one type of recreation activities, but would not substantially alter components of the river recreation experience. The ORV would continue to be protected segmentwide.
Segment wide River Access	Swimming and water play allowed. No commercial boating. Private use limited to 100 trips per day in Segment 2 between put in at Lower River Day Use Area and take out at Sentinel Beach.	Change would limit commercial boating and would limit the number of private boating. However, this change does not affect components of the recreational ORV. This reduction in boats enhances dispersed recreation along the river corridor thereby enhancing the ORV segmentwide.
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 units out of observed ordinary high water mark. Retain Housekeeping Camp shower houses, restrooms, and laundry, and remove grocery store. Restore one acre of the riparian ecosystem.	Changes similar to current conditions and would not substantially alter components of the river recreation experience. The ORV would continue to be protected segmentwide.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	Change would bring about localized improvements in circulation and wayfinding thus enhance ORV-20 locally.
Yosemite Lodge and Camp 4		
Yosemite Lodge Visitor Facilities	Retain 245 existing rooms	Changes similar to current conditions and would not substantially alter components of the river recreation experience. The ORV would continue to be protected segmentwide.

TABLE 8-114: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR RECREATIONAL ORV-20 (CONTINUED)

Location	Action in Alternative 5	Effects toORV-20
Yosemite Lodge and Camp 4 (cont.)		
Yellow Pine and Camp 4 Campgrounds	Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Retain 4 group administrative use sites (up to 120 people).	Increased access to camping as recreational experience would not substantially alter components of the river recreation experience. The ORV would continue to be protected segmentwide.
East Valley Day-Use Parking	Reduction in available day-use parking, and implementation of an East Yosemite Valley Day-use Parking Permit system	This will result in a segmentwide enhancement of the recreational experience in segment 2 by reducing crowding at key attraction sites as well as access to these areas (along roadways, in parking lots, etc).

All restoration actions to protect and enhance biological, cultural, geologic/hydrologic, and scenic ORVs would further enhance visitors' connections to the river and its values, which are essential to the recreational ORV in this segment. These actions would ensure that the changes in day-use, camping, and lodging opportunities would not cause adverse effects or degradation to ORV-20 on a segmentwide basis. Camping and overnight lodging would be available segmentwide, and essential aspects of the recreational ORV would not be affected. There are also actions proposed in Alternative 5 that would improve picnicking, and wayfinding. Finally, commercial boating is eliminated and private boating is limited to 100 trips per day in Segment 2, in this alternative which reduces crowding and increases the stretches of the river on which private boating and paddling is allowed, thereby enhancing key aspects of this recreational experience.

Chapter 6 provides a more detailed description of the day-visitor capacity management strategies that directly measure aspects of the Recreation ORV and outlines specific actions. These actions include:

- Utilize parking and traffic management staff to improve parking efficiency and traffic flow in Yosemite Valley and other locations where needed.
- Institute a transportation fee at entrance stations (for peak-use season).
- Divert vehicles to other destinations outside of Yosemite Valley when parking in the Valley fills.
- When all parking fills to capacity, day visitors would be diverted at checkpoints throughout the park and at entrance stations.
- East Valley day-use parking permits would be issued by advanced reservation and on a first-come-first-serve basis.

NPS would use the Highway Capacity Manual Pedestrian Level of Service (discussed further in Chapter 5) for evaluating the capacity and quality of service of transportation facilities, including walkways, multi-use paths, and similar pedestrian facilities. NPS would also monitor parking rates and vehicles at one time to ensure that they are not exceeding the management standard. Should specific trigger points be reached, the NPS would implement a series of specific actions to improve parking to an acceptable level. Similarly, should visitor densities begin to approach specific triggers; NPS would take steps to keep such densities within the management standard.

Conclusion. Under Alternative 5, the recreation ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season will significantly reduce crowding thereby enhancing the recreational ORV. All restoration actions would enhance opportunities to connect with the river and its values. The reduction in commercial services would affect opportunities for particular types of recreational activities, but would not affect the essential components of the recreation ORV on a segmentwide basis.

Segment 3 – The Merced Gorge (Scenic Segment)

Scenic ORV-17 – Scenic View in the Merced River Gorge

The Merced River drops 2,000 feet over 14 miles; a continuous cascade under spectacular Sierra granite outcrops and domes. There are no existing management considerations with respect to the Scenic ORV in the Merced River Gorge. Although there are some localized visual intrusions from essential facilities such as visitor parking areas, restrooms, the Arch Rock entrance station and the El Portal Road, these facilities are consistent with the scenic classification of this river segment. As explained in Chapter 5, this ORV is currently protected and enhanced.

This alternative does not propose any new development or landscape changes within the river corridor aside from improvements to existing roadside pullouts and drainage. These changes would not degrade or adversely impact the scenic ORV on a segmentwide basis. Although private vehicles and overall visitation during peak periods will be managed for East Yosemite Valley only, it is probable that visitation and visitors at one time in Segment 3 will also witness a reduction under this alternative. This reduction in visitation and visitors at one time may reduce vehicles per viewshed, thereby enhancing the scenic ORV. Monitoring associated with this ORV would ensure that the attributes that comprise this ORV remain within the accepted management class rating.

Alternative 5 would accommodate the same kinds and amounts of use that exist today in Segment 3. The types and levels of use in Segment 3 under this alternative would remain largely unchanged. Actions considered under Alternative 5 would cause no adverse effects or degradation to ORVs on a segmentwide basis.

Conclusion. Under Alternative 5, this scenic river segment would show little evidence of human activity and remain largely free of structures. The scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season in Yosemite Valley will significantly reduce the number of vehicles per viewshed in this segment. All restoration actions would further enhance scenic characteristics in this segment.

Segment 4 – El Portal (Recreational Segment)

Geological/Hydrological ORV-7 – The Boulder Bar in El Portal

Natural processes would continue to shape the landscape and the geologic ORV. The NPS has not identified any management considerations with respect to the El Portal boulder bar. Land use and facility actions proposed in this alternative would not affect this ORV. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection are necessary. Moreover, the types and levels of visitor and administrative use (e.g., housing, maintenance operations, office space, passive recreation) allowed under this alternative would not affect this ORV. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Conclusion. Under Alternative 5, the geologic values of this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no actions that would affect the boulder bar in El Portal, and there are no ongoing concerns or considerations associated with this resource.

Cultural ORV-11 – The El Portal Archeological District

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. Four sites are known to have experienced particularly severe damage, most notably a large ancient village and cemetery.

To address management considerations pertinent to this river value, the NPS would undertake the following actions:

- Protective measures would ensure that exceptional sites would be protected from unmitigated effects that could lead to adverse effects or degradation on a segmentwide level. A plan of action for addressing the abandoned infrastructure on sites would be developed in consultation with traditionally-associated American Indian tribes and groups. Any solution(s) developed would also include a recommended approach for deterring visitor use within the sites.

- Informal trails, non-essential roads, and abandoned infrastructure would be removed to protect and enhance the archeological resources contributing to the ORV in Segment 4.

- Remove informal trails and non-essential roads.

There are no existing instances of adverse effect or degradation to this ORV. As discussed above, management considerations are present associated with abandoned infrastructure that remains on an exceptional site containing diverse components and extremely sensitive cultural materials that are highly valued by traditionally associated American Indians. Management considerations are also associated with non-essential roads and trails that impact archeological sites. In recognition of the high cultural significance of these sites, this alternative requires the park to develop plans to remove abandoned infrastructure and non-essential roads. Restoration actions to establish a 2.5 acre recruitment area for Valley Oaks would further protect adjacent archeological resources. Construction of employee housing in Old El Portal, Abbieville, and Rancheria would be designed to avoid or mitigate threats and

TABLE 8-115: SEGMENT 4 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-11

Facility	Action in Alternative 5	Effects toORV-11
El Portal		
Abbieville, Old El Portal, and Rancheria Flat Concessioner Employee Housing	New concessioner employee housing in Old El Portal (12 beds) and Rancheria Flat (94 beds). Remove or relocate 36 existing private residences at Abbieville out of the 150-foot riparian buffer.	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Abbieville Trailer Park Area	Develop El Portal Remote Visitor Parking Area in the Abbieville/Trailer Park area to provide 200 spaces of visitor parking serviced by regional transit. Adjacent to cultural resources, however only suitable location proximate with direct access to Highway 140.	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Mitigation measures would protect cultural resources during facility removal and ecological restoration. Change would continue to protect archeological resources locally.

disturbances to archeological sites. Monitoring and protective measures would ensure that new use patterns associated with the new housing would not affect contributing elements of the El Portal Archeological District.

Conclusion: Under Alternative 5, the archeological resources in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of abandoned infrastructure, informal trails and non-essential gravel roads would enhance protection of archeological resources. Valley Oak restoration actions would protect adjacent archeological resources from further ground disturbance, Construction of new employee housing would be designed to avoid or mitigate effects to the El Portal Archeological District. New or altered visitor use patterns associated with the new housing development would be monitored and protective actions would occur if effects triggered responses.

Segment 5 – South Fork Merced River Above Wawona (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Restoration actions to remove informal trails and charcoal rings to protect cultural resources proposed under this alternative would not affect high-elevation meadows. The NPS proposes no major facility or visitor use actions for Segment 5 under Alternative 5. The biological ORV in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level.

Cultural ORV-12 – Regionally rare archeological features representing indigenous settlement including archeological sites with rock ring features

Three regionally rare prehistoric archeological sites are located along this segment of the South Fork of the Merced Wild and Scenic River corridor. The sites contain unique stacked rock ring constructions and rock alignments. Two sites also contain pine timber remains within the ring interiors or incorporated into the

stacked rock courses. Rock constructions are considered fragile and highly subject to human alteration from camping and campfire building disturbances. Two of the South Fork sites are adjacent to formal NPS trails, increasing the likelihood of disturbance. The vicinity of the sites has not been systematically surveyed, and it is possible that additional rock ring sites may be present along the South Fork. Should additional rock ring sites be discovered in the monitoring process, they would also become a part of the South Fork ORV. To remedy these considerations, NPS would:

- Complete documentation of the features. Restrict Wilderness camping in the area of the rock rings (camping allowed past particular marker). Remove informal trails and charcoal rings.
- Increase education and outreach to Wilderness travelers.

Conclusion: Under Alternative 2, the archeological resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no specific actions to manage user capacity, land use, and/or facilities under Alternative 5 within Segment 5 beyond those designed to protect and enhance ORV-12 that would impact components of Cultural ORV-12. Monitoring activities described in Chapters 5 and 8 would continue to protect and enhance Cultural ORV-12 to ensure there are no adverse effects or degradation to ORV-12 on a segmentwide basis.

Scenic ORV 18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

Conclusion. Under Alternative 5, the scenic resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. The scenic ORV for Segment 5 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

Segment 7 – Wawona (Recreational Segment)

Biological ORV-3 – The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV would be determined by comparing populations located near Wawona Campground (an area that is likely to be disturbed by humans) with more remote populations that are less likely to receive such disturbance. This population of Sierra sweet bay is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

To ensure that this biological ORV is protected and enhanced through time, the NPS would monitor the condition of the Sierra sweet bay population to ensure early warning of conditions that require management action before impacts occur.

Conclusion. Under Alternative 5, the Sierra Sweet Bay in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Reduction in camping and visitor activity in the vicinity of Wawona Campground would enhance this resource.

TABLE 8-116: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR BIOLOGICAL ORV-3

Facility	Action in Alternative 5	Effects toORV-3
Wawona		
Wawona Campground	Retains 72 sites and one group site. Remove 27 sites that are either within the 100-year floodplain or in culturally sensitive areas.	Action would improve the condition of the ORV by reducing the potential effects on this species associated with campground visitation. The ORV would be protected locally.

Cultural ORV-13 – Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This district spans segments 5, 6, 7, and 8. Accordingly, the condition of this historic property is assessed at the property-level, rather than the segmentwide level. 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. There are several management considerations for this ORV: the Wawona Archeological District is subject to site-specific impacts from park operations, visitor use, artifact collection, vandalism, and ecological processes. The following actions would help to address these issues:

- Increase monitoring frequency at affected sites.
- At the district-wide level, revise the existing National Register nomination to reflect changes since its original writing, for example, incorporating newly discovered resources and documenting impacts.
- The Wawona Campground capacity would be reduced to 67 sites (including one group site). 32 sites are removed because they are either within the 100-year floodplain or in culturally sensitive areas.
- Remove informal trails and fire rings to prevent continuing disturbance.
- Develop site management plans as needed for sites with complex uses. Remove shoulder and off-road parking. Limit facility and concessionaire off -road vehicle travel/parking on hotel grounds
- Consider need for archeological site treatment measures to address impacts to shallow deposits of artifacts and features.

The NPS would delineate trails, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; conduct public education to discourage disturbance to sensitive features. To

prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

TABLE 8-117: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-13

Facility and Land Use	Action in Alternative 5	Effects toORV-13
Wawona		
Wawona Campground Septic System	Remove septic system, and connect to the sewer system. Build a lift station above the campground to connect to the existing water treatment plant.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Wawona RV dump site	Relocate the dump site to an appropriate location away from the river.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Wawona Store	Replace the existing public restroom facilities with larger restrooms to accommodate visitor use levels. Improve picnic area, redesign bus stop.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Wawona Swinging Bridge	Provide access to Swinging Bridge with access on the south side of the river, delineate trail, restrooms, waste disposal and parking.	Mitigation measures would (as applicable) include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Restrooms and waste disposal will reduce threats and disturbances to adjacent archeological resources. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.

Cultural ORV-14 – Wawona Historic Resources

The Wawona Historic Resources ORV includes one of the few covered bridges in the region and the National Historic Landmark Wawona Hotel complex. The Wawona Hotel complex is the largest existing Victorian hotel complex within the boundaries of a national park, and one of the few remaining in the United States with this high level of integrity. The Wawona Covered Bridge is in good condition, and there are no current management considerations associated with it, however the bridge requires maintenance to keep the historic structure in good condition in the face of adverse weather and visitor use.

The Wawona Hotel complex continues to serve its original purpose as a guest lodging facility. Management considerations related to the hotel complex involve concessioner operations, the need for regular and routine preservation maintenance, and periodic rehabilitation to ensure visitor safety.

- Regular and routine preservation maintenance, conducted in accordance with the Secretary of the Interior's Standards, would ensure that this upkeep protects the historic character of the buildings
- Periodic rehabilitation would involve subject-matter specialists in planning, design and implementation to ensure actions do not compromise the historical integrity of the complex

- Concessioner operations would ensure that any operational modifications or updates are appropriate and in keeping with the historic character of the complex.

To prevent future impacts, the NPS would monitor the condition of the bridge, and take specific actions should conditions exceed trigger points. Trigger points are selected to inform managers well in advance of adverse effects or degradation on the Wawona Covered Bridge. Management considerations for the Wawona Hotel complex include the need for regular and routine preservation maintenance, periodic rehabilitation, and ongoing operations that serve its continuing function as a historic lodging facility. To address these management considerations, the NPS would ensure that these activities would conform to the Secretary of the Interior's Standards for Treatment of Historic Properties.

TABLE 8-118: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR WAWONA HISTORIC RESOURCES ORV-14

Facility	Action in Alternative 5	Effects toORV-14
Wawona		
Wawona Hotel	Retain 104 lodging units at the Wawona Hotel Retain hotel restaurant, swimming pool and tennis court. Retain golf course and golf shop.	The action would retain contributors to the Wawona Historic Resource. The ORV would continue to be protected locally.

Segment 8 – South Fork Merced River below Wawona (Wild Segment)

Biological ORV-3 — The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV in Segment 8 is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

Cultural ORV 13— Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This ORV in Segment 8 is in good condition, with no management considerations present. Management actions are not required at this time.

Scenic ORV-18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

The scenic ORV for Segment 8 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

ALTERNATIVE 6

River Value – Free-flowing Condition in All Segments

A free-flowing river, or section of a river, moves in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis. Riprap revetment, abandoned infrastructure within the bed and banks of the river, and bridges that constrict the flow of the river may produce localized effects on free-flowing condition of the river. Alternatives 2-6 would enact a comprehensive suite of actions to enhance the free-flowing condition of the river by removing 3,400 linear feet of riprap, and removing abandoned and unnecessary infrastructure from the river channel and its floodplain. Infrastructure that would be removed includes former sewage treatment facilities, sewer and water lines, and former bridge abutments. In addition, Alternative 6 would remove 348 linear feet of riprap from riverbank areas, beyond that proposed for removal under Alternatives 2-6.

All three historic bridges, the Stoneman, the Sugar Pine and the Ahwahnee, would remain in place under Alternative 6. The existing hydrological effects of these bridges would be mitigated with strategic placement of large wood on riverbanks, constructed log jams in the river channel, and the use of brush layering techniques to establish riverside vegetation and decrease erosion.

There are no new facilities proposed under Alternative 6 that would affect the free-flowing condition of the river. A number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/Geological ORVs). For example, the Yosemite Village Day-use Parking Area would be relocated north 150 feet away from the river.

To protect the river's free flowing condition in the future, the NPS would require all proposed projects involving construction within the bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA. Through this process, the NPS would ensure that water resources projects within the designated river corridor would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition.

Conclusion: The current free-flowing condition of the Merced River is fully protected and enhanced on a segmentwide basis, although localized considerations such as intermittent riverbank and bridges that constrict the flow of the river are present. Alternative 6 proposes a comprehensive suite of actions to enhance the free-flowing condition of the river by removing riprap and unnecessary infrastructure in the river channel. The existing hydrological effects of bridges that constrict the flow of the river would be mitigated with techniques to establish riverside vegetation and decrease erosion. There are no new facilities proposed under Alternative 6 that would affect the free-flowing condition of the river within the river channel, and a number of proposed facility actions would enhance the connectivity of the river and its floodplain (see Hydrological/ Geological ORVs). The NPS would require all proposed projects within the

bed or banks of the Merced River or its tributaries to undergo an analysis in accordance with Section 7 of the WSRA to ensure that water resources projects would not lead to "direct or adverse effects" on free flow, and that projects on tributaries to the river do not "invade or unreasonably diminish" the river's free flowing condition. The actions proposed under Alternative 6 ensure that there are no direct or adverse effects on free-flowing condition of the Merced River.

River Value – Water Quality in All Segments

The water quality of the Merced River is extremely high, and the current water quality of the river is fully protected and enhanced on a segmentwide basis. Intermittent local instances of contamination may occur in connection with surface water runoff from parking areas, recreational vehicle dump stations in proximity to the river, and accelerated erosion with potential sediment loading in the river during high water flows. Alternatives 2-6 would apply mitigation measures to ensure that surface water runoff associated with parking areas protects the water quality of the Merced River and meets regulations. The Upper Pines and Wawona recreational vehicle dump stations would be moved away from the river, and the Odger's bulk fuel storage area in El Portal would be moved out of the 500-year floodplain. In addition, Alternative 6 would relocate the Yosemite Village Day-use Parking Area 150-feet away from the river. All campsites and infrastructure currently within 100-feet of the river would be removed. The pack trail from Curry Village stables to Happy Isles would be re-routed farther away from the river. These actions would reduce result in less erosion along the riverbank, reduce use in sensitive areas, direct use to resilient areas, and mitigate potential sources of pollutants.

Ecological restoration actions would take place along the riverbank and floodplain of the Merced River. These actions would enhance water quality, particularly the actions that re-establish riverbank vegetation and reduce erosion potential. Ecological restoration actions are described in more detail in the discussion of the biological ORVs below and in Appendix E.

There are no new facilities proposed under Alternative 6 that would affect the water quality of the river. In areas of new development or high-density use, sensitive riverbanks would be fenced to

TABLE 8-119: CORRIDOR-WIDE ACTIONS AND THEIR IMPLICATIONS FOR WATER QUALITY

Location	Action in Alternative 6	Effects to Water Quality
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within 100 feet of the river would be removed. Designated put in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged. Water quality would be enhanced segmentwide.
New campsites at Upper Pines, Backpackers, Camp 4, Eagle Creek and Upper and Lower River Campgrounds	New campsites constructed at Upper Pines, Upper River, Lower River, Backpackers, Eagle Creek, West of Lodge and Camp 4 out of the 150 foot riparian buffer. Lower River: Designate river access at Housekeeping Camp eastern beach.	New campsites would be located 150 feet away from the river to protect riparian areas from direct impacts related to the increase in visitor activity in these areas. Fencing and designated river access points would also direct use to resilient areas. Change would not result in result in additional water quality effects on a segmentwide level.
Stock Trail from Concessioner Stables to Happy Isles	Remove 3,800' of pack stock trail proximate to the riverbank. Remove residual asphalt and other fill material. Also, in addition to common to all, re-route stock use north along the road where they meet up on the Valley Loop Trail.	Change would result in less erosion from the stock trail and stock use. Water quality continue to be protected locally.
Curry Orchard Day-Use Parking Area:	Provide 430 parking spaces through a re-design of the parking lot.	Engineering solutions included to promote water flow and increase drainage to Stoneman Meadow. Change would not result in result in additional water quality effects on a segmentwide level.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area	Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places.	Fencing and designated river access points would also direct use to resilient areas. Change would result in less erosion and storm water run-off from the parking area; water quality would continue to be protected locally.
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 units out of river bed and banks. Retain Housekeeping Camp shower houses, restrooms, and laundry, and remove grocery store. Restore one acre of the riparian ecosystem.	Fencing and designated river access points would also direct use to resilient areas. Water quality would continue to be protected locally.
Concessioner Employee Housing	Create 50-foot setback from Indian Creek – ecologically restore the riparian habitat and protect by restoration fencing.	These changes would result in less erosion along the riverbank by reducing activities in this setback. Sensitive areas would be restored and protected by fencing.
Segment 4		
NPS Maintenance and Administrative Complex	Existing parking area formalized and paved using best management practices.	Change would result in less erosion and storm water concerns in the parking area; water quality would continue to be protected locally.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Removal of bulk fuel storage from the 500-year floodplain would further protect water quality segmentwide.

TABLE 8-119: CORRIDOR-WIDE ACTIONS AND THEIR IMPLICATIONS FOR WATER QUALITY (CONTINUED)

Location	Action in Alternative 6	Effects to Water Quality
Segment 7		
Wawona Campground	Replace current septic system with waste water collection system connected to the waste water treatment plant. RV dump site relocated away from the river.	Change would result in less potential for storm water concerns in the campground; water quality would be enhanced locally.
Wawona Picnicking	Delineate boundaries of two formal picnic areas with formal river access points.	Change would result in less erosion along; water quality would be enhanced locally.

eliminate trampling. Trampling can lead to vegetation loss and exposed soil, leading to accelerated sediment deposition in the river. To maintain excellent water quality, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Conclusion. Under Alternative 6, water quality in all segments of the Merced River corridor would continue to be absent of adverse effects and degradation, and the potential for localized instances of contamination would be strongly reduced. Alternative 5 would address localized issues by moving the Upper Pines and Wawona recreational vehicle dump stations away from the river, moving the Odger's bulk fuel storage area outside of the 500-yr floodplain, and applying mitigation measures to ensure surface water runoff associated with parking areas meets requirements. Ecological restoration actions would decrease the potential for accelerated riverbank erosion and sediment loading during high water events. To ensure that existing high water quality conditions are maintained, the NPS would monitor water quality indicators that are tied to human activity (e.g., nutrient levels), and take specific actions should specific trigger points be reached.

Segment 1 – Merced River Above Nevada Fall (Wild Segment)

Biological ORV 1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Primary actions to protect and improve Biological ORV 1 include removal of informal trails that incise meadow habitat, trails in wet and/or sensitive vegetation, and trails that fragment meadow habitat, including trails in the Triple Peak Fork meadow, wetlands near Echo Valley and Merced Lake shore, mineral springs between Merced Lake and Washburn Lake, and other areas as necessary. Removal of social trails that bisect the meadows would improve conditions in this segment because soil compactions and habitat fragmentation would be reduced. Preliminary grazing capacities would be established, monitored, and adapted as necessary which would also reduce soil compaction and habitat fragmentation, thus further enhancing meadow health. Under this alternative the High Sierra Camp would remain at its current capacity of 60 people per night.

As described in Chapter 5, to ensure this ORV is protected and enhanced through time, the NPS would monitor three indicators to assess the condition of the ORV: meadow bare soil, meadow fragmentation due to the proliferation of informal trails, and streambank stability. The NPS would establish a baseline for all three indicators using site-specific monitoring protocols by 2013. Regular

TABLE 8-120: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-1

Location	Action in Alternative 6	Effects to ORV-1
Meadow Trails	Remove informal trails that incise meadow habitat.	Change reduces effects to wet and sensitive meadows and results in localized enhancement to ORV-1.
Merced Lake High Sierra Camp	Retain the Merced Lake High Sierra Camp, keeping 22 units (60 beds). Replace the flush toilets with composting toilet.	Facility is not directly adjacent to meadows. Changes would not affect high-elevation meadow and riparian habitat, this ORV would continue to be protected locally.
Private boating would be allowed in this segment	Boating would consist of short floats using pack raft or other craft that can easily be carried. Put-ins and take-outs would be undesignated and dispersed. Ten boats per day allowed - permit would be required.	Limited numbers would protect riparian habitat from trampling and bank erosion that could result with unlimited access. Changes would not affect high-elevation meadow and riparian habitat, this ORV would continue to be protected on a segmentwide level.
Wilderness zone capacity	All zone capacities within the Merced WSR Corridor remain the same as currently managed.	Current zone capacities are designed to protect wilderness character including natural conditions such as riverbanks and meadows. Action would not affect high-elevation meadow and riparian habitat, this ORV would continue to be protected on a segment –wide level.

monitoring would also reveal whether assumptions about human behaviors and actions taken to correct past actions are sustaining conditions above the management standard. If conditions have reached trigger points; the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects. The meadow monitoring programs for the biological ORV would monitor meadow fragmentation to ensure that use levels from hikers, backpackers and stock users do not result in meadow fragmentation or bare ground in excess of the management standards prescribed to protect and enhance meadows.

Conclusion. Under Alternative 6, the biological ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance riverbanks and meadows. Removal of social trails, grazing in Merced Lake East Meadow, and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures. **Facilities that would remain** in this segment of the river include Merced Lake High Sierra Camp, Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the Biological ORV in this segment indicates that these facilities are not adversely affecting the Biological ORV.

Geological/Hydrological ORV-4 – Glacially-carved Canyon in the Upper Merced River Canyon

As discussed in Chapter 5, there are no management considerations with respect to the U-shaped, glacially carved canyon above Nevada Fall. This ORV is currently protected and enhanced within the meaning of the Wild and Scenic Rivers Act. Alternative 3 does not propose any actions that would change the condition of this ORV over time. Further, the U-shaped, glacially carved attributes of this ORV would not be affected by

the types and levels of use authorized under this alternative, which are all directed toward wilderness oriented recreation. The NPS would nevertheless monitor the condition of this ORV to ensure that its condition does not decline.

Scenic ORV-15 – Scenic Views in Wilderness

Visitors to this Wilderness segment experience scenic views of serene montane lakes, pristine meadows, slickrock cascades, and High Sierra peaks. Management considerations associated with the condition of the scenic river above Nevada Fall include contributions to regional air pollution, visual intrusions, temporary and permanent structures, and crowding in and near wilderness campgrounds. There are few "visual intrusions" noted beyond the High Sierra Camp and other designated camping areas. The NPS would ensure that Merced Lake High Sierra Camp and other designated camping areas are maintained in a clean and tidy condition. Under Alternative 6, High Sierra Camp tent fabric would be replaced with colors that blend within the landscape, such as gray, brown or green, so as to reduce contrast (the tents are currently white canvas). These changes, as well as any other structures proposed at the camp or elsewhere in Segment 1, would be expected to blend quite well with the native landscape.

The ORV is determined to be in the protected state, as defined by an absence of adverse effects and degradation, although intermittent air quality concerns are present. Because of the ambient nature of air quality, it cannot be managed exclusively for the river corridor. Facilities that would remain in this segment of the river include Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. The baseline condition assessment for the scenic ORV in this segment indicates that these facilities are not adversely affecting the scenic ORV.

TABLE 8-121: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR SCENIC ORV-15

Location	Action in Alternative 6	Effects to ORV-15
Merced Lake High Sierra Camp	Retain the Merced Lake High Sierra Camp, at current capacity (60 beds). Replace tent fabric with colors that blend within the landscape.	Change would enhance the ORV locally.
Designated Camping Areas	Retain the Merced Lake Backpackers, Little Yosemite Valley, and Moraine Dome designated camping areas.	Designated camping areas within the segment are currently protective of river values on a segmentwide level.
Facilities retained	Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp	These facilities and associated administrative uses and maintenance do not affect scenic values on a segmentwide level. The ORV would continue to be protected segmentwide.

Conclusion. Under Alternative 6, the scenic ORV in Segment 1 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would further enhance scenic values in this segment. Replacement of the Merced Lake High Sierra Camp tent fabric would address scenic considerations in this segment, which focus on the High Sierra Camp and thereby enhance the scenic ORV. The wild segment of the Merced River corridor above Nevada Fall would show little evidence of human activity and remain largely free of structures.

Recreational ORV-19 – Wilderness Recreation above Nevada Fall

Visitors to federally designated Wilderness in Segment 1 would engage in a variety of river related activities in an iconic High Sierra landscape, where opportunities for primitive and unconfined recreation, self-reliance, and solitude shape the Wilderness experience. The current condition of this ORV is at or above the management standard at the segment level. Localized management concerns in this segment relate to crowding at Little Yosemite Valley and Moraine Dome backpackers campgrounds, high use levels at the Merced Lake Backpackers Camping Area, and high encounter rates along the trails that connect these areas. Crowding and high use levels affect the Wilderness experience, which is an integral part of the recreational ORV in this segment.

This alternative would retain the High Sierra Camp at current levels. The capacity of the Little Yosemite Valley Wilderness Zone would be remain at 150. Actions in Alternative 6 would apply additional seasonal and weekend restrictions for commercial groups in the Mount Lyell, Merced Lake, and Little Yosemite Valley zones as indicated. These changes would reduce use levels and result in some decreased use in the immediate vicinity of these camping areas. These changes would reduce use crowding, high use levels, and increase opportunities for solitude in this Wilderness segment.

Facilities that would remain in this segment of the river include designated camping areas in Little Yosemite Valley, Moraine Dome, and the Merced Lake Backpackers Camping Area (including associated trails and footbridges) and the Merced Lake Ranger Station, Little Yosemite Valley trail crew and ranger camp, trails and footbridges. These facilities do not have an adverse effect on the Wilderness experience integral to this Recreational ORV.

NPS would monitor visitor encounter rates to ensure that they are not exceeding established standards. Should specific trigger points be reached, the NPS would be required to implement a series of specific actions to reduce visitor levels to an acceptable level. These actions increase in severity as the current condition ORV condition moves away from the management standard to ensure proper course correction and re-establishment of the management standard. These trigger points were selected to inform managers in advance of any adverse effects or degradation to this ORV.

Conclusion: Under Alternative 6, actions would not substantively change existing wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.

TABLE 8-122: SEGMENT 1 ACTIONS AND IMPLICATIONS FOR RECREATION ORV-19

Location	Action in Alternative 6	Effects to ORV-19
Location		
Merced Lake High Sierra Camp	Retain the Merced Lake High Sierra Camp, at current capacity (60 beds). Replace the flush toilets with composting toilet.	The actions would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.
Merced Lake and Little Yosemite Valley Backpackers Camping Areas	Concentrate visitor use at Little Yosemite Valley and Merced Lake by retaining designated camping areas in these zones.	The actions would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.
Segmentwide River Access	Swimming and water play allowed. Permits required for private boating. No commercial boating	Permitted use would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.
Visitor Use Management Action		
Private boating would be allowed in this segment	Boating would consist of short floats using pack raft or other craft that can easily be carried. Put-ins and take-outs would be undesignated and dispersed. Private use limited to 10 boats per day with backcountry permit on Segment 1. Permit would be required.	Permitted use would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.
Wilderness zone capacity	All zone capacities within the Merced WSR Corridor remain the same as currently managed.	The actions would not substantively change wilderness character or wilderness experience in this segment; the recreation ORV would continue to be protected on a segmentwide level.

Segment 2 – Yosemite Valley (Recreational and Scenic Segments)

Biological ORV-2 – Mid-elevation Meadows and Riparian Habitat

The meadows and riparian communities of Yosemite Valley comprise one of the largest mid-elevation meadow-riparian complexes in the Sierra Nevada. Actions to protect and enhance Biological ORV-2 under Alternative 6 include:

- Removal of informal trails in meadows where they fragment meadow habitat or cross through sensitive, wet vegetation communities. Overall, restore six miles of informal trails throughout Yosemite Valley;
- Use boardwalks or hardened surfaces to allow access to sensitive areas;
- Delineation of trails through upland areas and along meadow perimeters;
- De-compacting trampled soils and consolidate multiple parallel trails;
- Re-directing visitor use to more stable and resilient river access points such as sandbars, and designate formal river access sites. Establishing fencing and signage to protect sensitive areas; install boardwalks where appropriate, and actively revegetate where needed;

- Relocate or remove all campsites at least 100 feet away from the ordinary high-water mark;
- Restoration of the mosaic of meadow, riparian deciduous vegetation, black oak, and open mixed conifer forest at specific locations in Yosemite Valley. Management actions could include re-vegetation, prescribed fire, mechanical removal of conifers, and infrastructure re-design. Alternative 6 would include 170 acres ecological restoration.
- Installation of constructed log jams in the river channel between Clark's Bridge and Sentinel Bridge to remediate river widening and improve channel complexity would also contribute to improving riparian health.
- Day use parking capacity is expanded and formalized. A total of 2,598 visitor parking spaces would be provided in the Valley accommodating a maximum of 7,941 people at one time to Segment 2. Managing access and other proactive restoration measures would protect Biological ORVs by during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Biological ORVs by removing these uses from the river corridor and managing access in the corridor.

This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Under this alternative, all roads, buildings, campgrounds, trails, utilities and infrastructure, and other facilities in this segment with current local effects on the biological ORV would be removed, reduced, or relocated. Facilities that would remain in this segment of the river, including the Ahwahnee Hotel and Yosemite Lodge have no direct impact on the biological river value as indicated in the baseline condition assessment. Effects to the free-flowing condition of the river as a result of the bridges that would remain under this alternative would be mitigated through constructed log jams. Some associated facilities are proposed for relocation as described below.

The NPS would monitor three indicators to assess the condition of ORV 2: meadow fragmentation resulting from informal trails, the status of riparian habitat, and riparian bird abundance. As described in Chapter 5, adverse effects and degradation are not present in relation to the meadow fragmentation indicator. Management concerns in meadows are present; however, actions to address informal trailing impacts and fragmentation would be taken at all meadows where these concerns have been documented. Initial surveys of the riparian status indicator in 2010 indicate that degradation is not present, but management concerns are also present in the riparian corridor.

The NPS is beginning to monitor the third indicator in this segment, riparian bird abundance. The first status assessments would take place in 2013, after one year of monitoring. The next assessment requires information from two out of three years.

TABLE 8-123: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2

Location	Action in Alternative 6	Effects to ORV-2
Segmentwide		
Segmentwide Restoration	(Common to all) Restoration includes restoration of meadow habitat, removal of informal trails, riparian restoration and establishment of designated river access points, and use of boardwalks and hardened surfaces.	Actions would enhance the biological ORV segmentwide.
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within 100 feet of the river would be removed. Designated raft put-in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged; the biological ORV would be enhanced segmentwide.
Stoneman Meadow and Curry Orchard Parking Lot	Provide 430 parking spaces through a re-design of the parking lot.	Engineering solutions included to promote water flow and increase drainage to Stoneman Meadow. Change would not result in result in additional effects to meadow and riparian habitat on a segmentwide level.
New campsites at Upper Pines, Backpacker's, Camp 4, Eagle Creek,and Upper and Lower River Campgrounds	New campsites constructed at Upper Pines, Upper River, Lower River, Backpacker's, Eagle Creek and Camp 4 out of the 150-foot riparian buffer.	New campsites would be located 150 feet away from the river to protect riparian areas from direct impacts related to the increase in visitor activity in these areas. Fencing and designated river access points would also direct use to resilient areas. Monitoring would proactively assess the effectiveness of these actions and established triggers to ensure that future protective measures are implemented in a timely manner. Change would result in protection of the ORV segmentwide.
Ahwahnee, Stoneman and Sugar Pine Bridges	All three historic bridges are retained. Existing riparian impacts mitigated with strategic placement of large wood on riverbanks and the addition of brush layering and constructed log jams to address scouring.	Actions would increase channel complexity and reduce channel widening, erosion, and scouring, thereby enhancing riparian communities locally.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center Parking Area	Move the Yosemite Village Day Use Parking Area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places.	These changes would reduce effects to riparian corridor and enhance ORV components as use would be relocated away from areas critical to river or meadow function. The ORV would be enhanced locally.
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 units out of river bed and banks. Retain Housekeeping Camp shower houses, restrooms, and laundry, and remove grocery store. Restore one acre of the riparian ecosystem.	These changes would reduce effects to riparian corridor and enhance ORV components locally due to restoration. In addition access would be directed to resilient sandy beaches.

TABLE 8-123: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR BIOLOGICAL ORV-2 (CONTINUED)

Location	Action in Alternative 6	Effects to ORV-2
Yosemite Village and Housekeeping Camp (cont.)		
Ahwahnee Row and Tecoya Dorms Concessioner Housing	Create 50-foot setback from Indian Creek – ecologically restore the riparian habitat and protect by restoration fencing.	These changes would remove uses from the riverbank thus reducing erosion and trampling impacts in riparian corridor and enhancing ORV components locally.
Sentinel Drive Roadside Parking	Remove roadside parking along Sentinel Drive and restore to natural conditions.	These changes would remove uses from the riverbank thus reducing erosion and trampling impacts in riparian corridor and enhancing ORV components locally.
Yosemite Village Day Use Parking Area/Roundabouts	Move the Yosemite Village Day Use Parking Area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places. Two traffic roundabouts, one at the Village Drive and Northside Drive intersection at Yosemite Village Day Use Parking Area and one at the intersection of Sentinel Drive and Northside Drive, would be needed. A pedestrian undercrossing would be constructed to address traffic congestion and pedestrian/vehicle conflicts.	The extent of construction would partially encroach into Cook's Meadow; however wetlands would be restored by moving development away from the river. Mitigations would compensate wetland loss, and protect sensitive areas from staging impacts such as compaction and erosion. The ORV would be protected locally.
Yosemite Lodge and Camp 4		
Superintendent's House (Residence 1)	Remove and relocate to the NPS housing area outside of the river corridor.	Relocation of this facility outside of the river corridor may reduce informal trailing in the adjacent meadow thereby enhancing the ORV locally.
Yosemite Lodge Road and Northside Drive	Construct a pedestrian underpass to address congestion at intersection and alleviate pedestrian/vehicle conflicts. Roadside parking would be removed and more culverts would be added. Implementation of mitigations would protect the riparian corridor from erosion, pollutants, and general habitat disturbance during construction.	Changes would remove and redirect uses from the riverbank thus reducing erosion and trampling impacts in riparian corridor; the ORV would be protected locally.
Yosemite Lodge Visitor Facilities	In addition to retaining the existing 245 units, construct new 3-story lodging structure(s) with the pre-flood number of 440 units (redesign Yosemite Lodge out of the 100-year floodplain).	New and existing lodging would be outside the 100-year floodplain and would not affect meadow or riparian habitat; the ORV would continue to be protected locally.
Northside Drive (Stoneman Bridge to Yosemite Village Day Use Parking Area	Facility retained. A component of the primary transportation & circulation road system that connects all major visitor service nodes. Hydrologic connectivity improved by increasing culverts.	Change has a localized effect on the ORV as road bisects meadow but in keeping with recreational designation; ORV would continue to be protected segmentwide.

To ensure Biological ORV-2 is protected by this plan and protected and enhanced through time, the NPS would continue to monitor the condition of the ORV to provide early warning of conditions that require management action before impacts occur. Regular monitoring would also reveal whether conditions have reached trigger points; and, if so, the NPS would implement specific response actions (as described in Chapter 5) to avoid or minimize adverse effects.

Conclusion. Under Alternative 6, the biological ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Actions would further enhance riverbanks and meadows. Removal or relocation of select campsites and infrastructure and reduced use would improve meadow conditions in this segment and thereby enhance the biological ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Geological/Hydrological ORV-5 – The "Giant Staircase"

The NPS has no immediate management considerations with respect to the Giant Staircase characteristic of the geology of Yosemite Valley above Happy Isles as this geologic ORV is determined to be absent of adverse effects and degradation. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Geological/Hydrological ORV-6 – Rare, Mid-elevation Alluvial River

As described in Chapter 5, the NPS selected the status of riparian habitat as the indicator to specifically assess the effectiveness of actions designed to protect this and other ORV. This ORV integrates geologic/hydrologic processes and the condition of aquatic, riparian, and floodplain communities.

The following actions are included to specifically protect and enhance Free-flowing Conditions and Biological ORV-2, but would also address the protection and enhancement of ORV-6.

- Large wood, constructed log jams, and brush layering would be used in the vicinity of bridges to decrease bed scouring and streambank instability. Riprap would be removed where possible and replaced with native riparian vegetation, using bioengineering techniques. In the event that such actions do not improve conditions, bridge redesign or removal could be reconsidered.
- Removing abandoned underground infrastructure, along the river corridor would be part of a comprehensive strategy to correct altered surface and subsurface hydrology.
- Remove riprap where riverbanks do not need stabilization to allow for channel migration. Replace riprap with bioengineered riverbanks, integrating native riparian vegetation, where riverbank stabilization is necessary for protection of critical infrastructure.

TABLE 8-124: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR GEOLOGICAL/HYDROLOGICAL ORV-6

Location	Action in Alternative 5	Effects toORV-6
Curry Village and Campgrounds		
North, Lower and Upper Pines Campgrounds and Backpackers Campgrounds	All campsites within 100 feet of the river would be removed. Designated raft put-in areas established.	These changes would result in less erosion along the riverbank because designated access points to resilient areas are identified for visitors, and sensitive areas would be restored and access would be discouraged; the biological ORV would be enhanced segmentwide
Curry Village Lodging	Lodging would include 453 units, (290 tents and 163 hard-sided units)	Lodging is outside the 100 year floodplain and is not causing adverse effects or degradation to ORV-6 on a segmentwide basis.
Ahwahnee, Stoneman and Sugar Pine Bridges	All three bridges are retained.	Existing riparian impacts mitigated with strategic placement of large wood on riverbanks and the addition of brush layering and constructed log jams to address scouring.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center Parking Area	Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places.	These changes would reduce effects to riparian corridor and locally enhance ORV components as use would be relocated away from areas critical to river or meadow function.
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 units out of observed ordinary high water mark. Retain Housekeeping Camp shower houses, restrooms, and laundry, and remove grocery store. Restore one acre of the riparian ecosystem.	These changes would reduce effects to riparian corridor and locally enhance ORV components due to restoration. In addition access would be directed to resilient sandy beaches.
Ahwahnee Row and Tecoya Dorms Concessioner Employee Housing	Remove housing and development out of the 100-year floodplain, recontour topography, decompact soils, and restore stream hydrologic function.	Changes would result in reduction of residential activities in riparian areas; biological ORV would be enhanced locally.
Yosemite Village Day Use Parking Area /Roundabout	Construct a pedestrian underpass and roundabout at Yosemite Village Day Use Parking Area parking area to address congestion at intersection and alleviate pedestrian/vehicle conflicts.	The extent of construction would encroach into Cook's Meadow; however wetlands would be restored by moving development away from the river. Expect a net increase in wetland areas. Mitigations would protect sensitive areas from staging impacts such as compaction and erosion.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	Construct 300 vehicle parking spaces and 15 tour bus parking spaces.	Implementation of mitigation measures would protect the floodplain from erosion and other disturbance during construction.
Yosemite Lodge Visitor Facilities	Retain the existing 245 units.	Lodging is outside the 100 year floodplain and is not causing adverse effects
Yosemite Lodge Concessioner Employee Housing	Remove old and temporary housing at Highland Court and the Thousands Cabins. Construct two new concessioner housing areas housing 104 employees. Construct 78 employee parking spaces.	Lodging is outside the 100 year floodplain and is not causing adverse effects

TABLE 8-124: SEGMENT 2 ACTIONS AND IMPLICATIONS FOR GEOLOGICAL/HYDROLOGICAL ORV-6 (CONTINUED)

Location	Action in Alternative 5	Effects toORV-6
Yosemite Lodge and Camp 4 (cont.)		
Yellow Pine Administrative Site	Retain 4 group administrative use sites (up to 120 people).	Campground is within floodplain but would undergo restoration and is not impacting areas critical to river function.
Yosemite Lodge Road and Northside Drive	Construct a pedestrian underpass and roundabout to address congestion at intersection and alleviate pedestrian/vehicle conflicts.	Roadside parking would be removed and more culverts would be added. Implementation of mitigations would protect the riparian corridor from erosion, pollutants, and general habitat disturbance during construction. Changes would remove and redirect uses from the riverbank thus reducing erosion and trampling impacts in riparian corridor.
El Capitan Crossover	Facility retained. This roadway segment is a key connector between Northside and Southside Drives and serves as a exit point at west end of Yosemite Valley.	Bridge protects riparian habitat from destruction caused by random crossings throughout the river corridor
Northside Drive (Stoneman Bridge to Yosemite Village Day Use Parking Area)	Remove portion of road and relocate the bike path to the south, to improve the meadow/river connectivity. Restore meadow contours and native vegetation.	Removes facility that currently has a localized affect on the ORV. Restoration enhances the ORV in this area.

To ensure this ORV is protected and enhanced through time, the NPS would monitor the condition of the ORV using the status of riparian habitat as an indicator, and take specific actions should conditions reach trigger points.

Conclusion: Under Alternative, the geologic/hydrologic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. All actions would enhance the 10 and/or 100-year floodplains and this ORV. Actions to protect and enhance free-flowing conditions as well as meadows and riparian complexes in Segment 2 would result in additional enhancement of the geologic/hydrologic ORV. The recreational segment of the Merced River corridor in East Yosemite Valley would remain readily accessible by road and will have appropriate development along the shorelines. The scenic portion of Segment 2 in West Yosemite Valley would remain free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Cultural ORV-8 – Yosemite Valley American Indian Ethnographic Resources

As described in Chapter 5, Yosemite Valley American Indian ethnographic resources include 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 tribes and groups. Management considerations related to ethnographic resources involve park operations, crowding, and visitor use. Actions included in the Merced River Plan/DEIS include:

- Continue coordination between traditionally associated American Indian tribes, groups, and traditional practitioners (through the Park American Indian Liaison) with law enforcement, fire

management, interpretation, invasive species, ecological restoration, and facilities management programs;

- Continue to provide operational guidelines for material staging areas, parking, etc. to protect ethnographic resources;
- Ensure access for traditionally-associated American Indians for participation in annually scheduled traditional cultural events. In addition, tribal access for the personal conduct of ongoing traditional cultural practices would be assured through the Yosemite tribal fee waiver pass program.
- Reduce and formalize day-use parking capacity Manage access in Segment 2 to protect traditionally-used plant populations in the river corridor during periods of high use.
- A series of actions to improve and relocate parking (described further below and in Chapter 8) would protect Cultural ORVs by removing these uses from the proximity of several cultural resources.

Threats to traditionally-used plant populations include invasive species such as Himalayan Blackberry (*Rubus armeniacus*), drainage and hydrology impacts to meadows, and erosion and revetments that affect riparian vegetation. The *Merced River Plan/DEIS* would address these considerations through the following actions:

- The ecological restoration actions associated with this planning effort implemented in concert with the existing invasive plant management program would address impacts to some traditionally-used plant populations in some locations.
- Restoration actions to protect riparian areas, meadows, and hydrological resources would further contribute to the protection and enhancement of the traditional-use plant communities included in this ORV.
- Introduction of seedlings to affected stands of black oaks and protection as necessary to ensure that ratios of adults to saplings is at least 0.65.
- Primary actions to manage major vista points under Scenic ORV-16 include mechanical thinning or removal of conifer trees. This action would be coordinated to ensure that the ORV–8 trigger point for the ratio of sapling to adult trees is not exceeded.

Facilities that would remain in this segment of the river have no direct impact on the ethnographic component of the cultural ORV as indicated in the baseline condition assessment.

The Merced *River Plan/DEIS* proposes a variety of actions to address specific considerations including continued coordination between traditionally associated American Indian tribes, groups, and traditional practitioners and the NPS; continued access for traditionally associated American Indians for participation in annually scheduled traditional cultural events; and ecological restoration actions to protect and enhance traditionally used plant populations. To prevent future impacts, the NPS would monitor the condition of the ORV, and take specific actions should additional trigger points be exceeded.

TABLE 8-125: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-8

Location	Action in Alternative 6	Effects toORV-8
Segmentwide		
Traditional Cultural Property Documentation	Document the Yosemite Valley Traditional Cultural Property, consisting of traditional use areas, spiritual places and historic villages and complete National Register evaluation and interpretive summary	Documentation, mapping, and evaluation would provide the detail necessary to protect and enhance the ORV segmentwide.
Visitation	21,800 people per day	This level of visitation may continue to result in a lack of privacy for traditional cultural practices in particular locations seasonally. Access to annually-scheduled traditional cultural events and personal conduct of traditional cultural practices would be assured thereby continuing protection of the ORV segmentwide.
Curry Village and Campgrounds		
North Pines, Lower Pines, and Backpackers Campgrounds	Remove camp sites, including from North Pines (14), Lower Pines (5), and Backpackers (15), and restore the area within 100' of the floodplain with native plant communities.	Removal of campsites from the floodplain would reduce effects to riparian corridor and enhance plant growth and support native restoration. New campsites would be located 150 feet away from the river to protect riparian areas from direct impacts related to potential trampling. Fencing and designated river access points would also direct use to resilient areas. The ORV would continue to be protected segmentwide.
Yosemite Village and Housekeeping Camp		
Ahwahnee Meadow	Restore the impacted portion of Ahwahnee Meadow to natural meadow conditions. Remove the tennis courts from the black oak woodland.	Removal of the abandoned infrastructure and native plant revegetation will allow for recruitment of desirable black oaks in this area thereby enhancing the ethnographic component of the cultural ORV locally.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	Construct 300 vehicle parking spaces and 15 tour bus parking spaces.	Additional parking near the Wahhoga designated use area will enhance access for traditional practitioners to participate in ongoing cultural practices; thereby enhancing the ORV segmentwide.
Yellow Pine Administrative Site	Retain 4 group administrative use sites (up to 120 people).	Campground is within culturally important areas but is not currently impacting resources due to location and level of use. Retention of Yellow Pines Campground will enhance access for traditional practitioners to participate in ongoing traditional cultural practices segmentwide.

TABLE 8-125: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-8 (CONTINUED)

Location	Action in Alternative 6	Effects toORV-8
Yosemite Lodge and Camp 4 (cont.)		
Eagle Creek New Campground	New campground developed east of El Capitan Picnic Area with ~79 car and recreational vehicle sites.	Implementation of mitigation measures would protect planted areas from disturbance during construction; the ORV would continue to be protected locally.
Former Bridalveil Sewer Plant	Remove the buried infrastructure.	Removal of abandoned infrastructure and native plant revegetation will allow for recruitment of desirable black oaks in this area thereby enhancing the ethnographic component of the cultural ORV locally.

Conclusion. Under Alternative 6, the ethnographic component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Actions to protect and enhance floodplains, meadows and riparian complexes in Segment 2 would result in additional enhancement of the traditionally-used plant resources of the ethnographic component of the cultural ORV. Actions that would remove infrastructure and restore black oak woodlands would also enhance a critical component of this ORV. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would not limit access to traditional practitioners because measures would be in place to ensure access to annually-scheduled events as well as individual access for ongoing traditional cultural practices. Furthermore, the overall reduction in visitation under Alternative 6 would reduce the effects of crowding and enhance privacy for traditional cultural practices.

Cultural ORV-9 – Yosemite Valley Archeological District.

The Yosemite Valley Archeological District is a linked landscape that contains dense concentrations of resources that represent thousands of years of human settlement along this segment of the Merced River. Heavily-used formal trails and informal trails, as well as illegal campfires, graffiti, and trampling stock trail use, parking and informal rock climbing can all affect ORVs in this area. Archeological resource protection would be achieved through actions in this plan to manage visitor use levels, divert foot traffic around sites, removing informal trails, and formalizing river and meadow access locations, mitigating ecological restoration practices by using noninvasive techniques wherever possible. Many of the actions related to ecological restoration in Segment 2, such as delineating roadside parking, would also help protect archeological sites by diverting foot traffic away from sites and into less sensitive areas. Actions to enhance the recreational ORV in Segment 2 would manage recreational users both in terms of flow and location of users at any one time. A reduction in people and vehicles at one time in Yosemite Valley could also reduce visitor use-related effects on archeological resources.

Site-specific treatment actions would be developed through site management plans, where necessary, to avoid resource loss through park actions (such as development, repair, and maintenance of facilities and underground utilities to support visitor use or natural forces).

Management considerations for this ORV also involve continuing to survey and monitor archeological resources as well as update required documentation.

TABLE 8-126: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-9

Location	Action in Alternative 6	Effects toORV-9
Segmentwide		
Removal of abandoned infrastructure at Eagle Creek/Rocky Point, Bridalveil Fall Sewer Plant, Royal Arches Meadow, corridor-wide	Remove abandoned underground infrastructure	Individual actions will be subject to NHPA Section 106 review to avoid and/or mitigate effects to archeological resources. This action could result in local effects to the archeological component of the cultural ORV, however, the river value would continue to be protected segmentwide.
Concessioner Employee Housing	Temporary employee housing would be removed and replaced with permanent housing at Huff House (164 beds), Lost Arrow (50 beds) and Yosemite Lodge (104 beds).	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Curry Village and Campgrounds		
New campsites at Upper Pines, Backpacker's, Camp 4, West of Yosemite Lodge, and Upper and Lower River Campgrounds	All campsites within 100 feet of the river would be removed. Upper Campsite in culturally sensitive area. New campsites and infrastructure constructed out of the 150-foot riparian buffer. Lower River – designate river access at Housekeeping Camp eastern beach	Design, follow-on compliance, and mitigation measures would avoid or mitigate effects to sensitive archeological resources. Actions would continue to protect the ORV segmentwide.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Yosemite Village Day Use Parking Area/Roundabouts	Move the Yosemite Village Day Use Parking Area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places. Two traffic roundabouts, one at the Village Drive and Northside Drive intersection at Yosemite Village Day Use Parking Area and one at the intersection of Sentinel Drive and Northside Drive would be needed. A pedestrian undercrossing would be constructed to address traffic congestion and pedestrian/vehicle conflicts.	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking Area	Construct 300 vehicle parking spaces and 15 tour bus parking spaces.	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Yosemite Lodge Intersection Congestion	Design a pedestrian underpass to alleviate pedestrian/vehicle conflicts.	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.

All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under Alternative 6 would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Facilities that would remain in this segment of

the river have no direct impact on the archeological component of the cultural ORV as indicated in the baseline condition assessment.

The NPS would delineate bike paths, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; remove graffiti at rock art and other sensitive features, conduct public education to discourage climbing, and remove climbing hardware from sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

Conclusion: Under Alternative 6, the archeological component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Localized visitor-use-related impacts to archeological resources would be addressed through various enhancement actions. All ground disturbances associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and monitoring (as needed) to ensure that archeological resources are protected. Reduction in maximum people per day in Yosemite Valley, and management of user capacity and visitor use would reduce the potential for visitor use impacts.

Cultural ORV-10 – Yosemite Valley Historic Resources

As described in Chapter 5, the Yosemite Valley Historic Resources represent a linked landscape of river-related or river-dependent, rare, unique or exemplary buildings and structures that bear witness to the historical significance of the river system. Protective actions to address management concerns related to the Yosemite Valley Historic Resources ORV-10 include:

- Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.
- Develop a Historic Structures Report for the LeConte Memorial Lodge NHL to determine the rehabilitation needs to bring the building to "good" condition.
- Rehabilitate the Superintendent's House (Residence 1) per the Historic Structure Report (Lingo 2012) to bring the building to "good" condition. This rehabilitation of the building will occur under all action alternatives, regardless of whether the building is relocated.

Relocation of the Superintendent's House (Residence 1) is proposed under Alternative 6 to address the 1982 Guidelines for the Wild and Scenic Rivers Act that requires managing agencies to consider relocation of major public use facilities outside of the river corridor. The Superintendent's House

TABLE 8-127: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-10

Location	Action in Alternative 6	Effects toORV-10
Curry Village and Campgrounds		
Stoneman Meadow and Curry Orchard parking lot	Restore Stoneman Meadow including removal of 1,335 feet of Southside Drive and re-alignment of road through Boys Town area. Extend the meadow boardwalk through wet areas to Curry Village (up to 275').	Change would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Curry Village Lodging	Total would be 453 guest units, including: 290 tents in Curry Village retained; 98 hard-sided units in Boys Town constructed; 18 units at Stoneman House retained; and 47 cabin-with-bath units in Curry Village retained.	Mitigation measures would contribute to documentation and interpretation of historic cultural resources during facility removal. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective. The ORV would be protected segmentwide.
Huff House Employee Housing	Temporary housing at Huff House and Boys Town is removed. Construct 16 buildings, housing 164 employees using the same dormitory prototype.	Mitigation measures would protect cultural resources during facility removal and construction. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective. The ORV would be protected segmentwide.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts. Tennis courts are located in a sensitive cultural area	Mitigation measures would protect cultural resources during facility removal. Change would not affect contributing element of the Yosemite Valley Historic Resources ORV collective.
Ahwahnee Parking Lot	Follow the recommendations from the Ahwahnee Historic Structures Report (1997) and the Ahwahnee Cultural Landscape Report (2010) when redesigning the Ahwahnee Parking Lot to bring the Ahwahnee stone gate house and the Ahwahnee Parking Lot to "good" condition.	Redesign of the Ahwahnee Parking Lot would rehabilitate contributors to the cultural ORV thereby enhancing the Yosemite Valley Historic Resources ORV locally and segmentwide.
Yosemite Village Day-Use Parking Area	Remove Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Re-align the intersection at Northside Drive and Village Drive. Add a three-way intersection at Sentinel Drive and the entrance to the parking area. Provide on-grade pedestrian crossings.	The removal of historic and non-historic properties and re-alignment/re-establishment of the intersections would affect circulation patterns locally. Change is not likely to affect buildings and structures included in the Yosemite Valley Historic Resources ORV collective.
Superintendent's House (Residence 1)	Relocate outside the river corridor to the NPS housing area. Rehabilitate historic structure in new location.	The action would remove a contributor to the Yosemite Valley Historic Resource ORV resulting in localized effects. Mitigation measures include documenting and interpreting the resource. The loss of this resource would not result in a segmentwide adverse effect of the collective of resources.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	The action would affect trails that are connected by the historic footbridges which are components of the Yosemite Valley Historic Resources ORV. Mitigation measures and Section 106 review would ensure the protection of the historic resources and the redesign could result in enhancement of the ORV locally.

(Residence 1) is a component of the Yosemite Valley Historic Resources component of the cultural ORV in Segment 2. The NPS would document and interpret any building or structure threatened with removal or relocation. In this manner, while the individual tangible element or elements may be lost or moved, a record of their existence and historical significance would still be available to the public.

To address management considerations, the *Merced River Plan/DEIS* proposes continuing the active program of maintenance for historic buildings and structures; employing existing design guidelines to ensure that new development or redevelopment complements the ORV and the Yosemite Valley Historic District; and periodically assessing and updating professional documentation for the historic resources.

Ecological and scenic value restoration actions in Segment 2 would enhance the cultural landscape which contributes to the historic setting of the resources that comprise the ORV-10. There are no construction actions associated with Alternative 6 that would affect the spatial organization of the historic resource collective, though changes in the circulation patterns as a result of re-routing roads at the Yosemite Village day-use parking area and at Stoneman Meadow would affect circulation patterns that are associated with this ORV. These effects would be localized and would not affect the condition of the ORV on a segmentwide level.

Conclusion: Under Alternative 6, the historic resources component of the cultural ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Relocation of the Superintendent's House (Residence 1) would result in localized effects that would be mitigated through documentation and interpretation. Once removed or relocated, these resources would no longer be considered part of the ORV collective. All disturbances to circulation and spatial organization associated with ecological restoration actions; removal of buildings and infrastructure; re-routing of roads; and, parking lot and campground construction under this alternative would be subject to park standard operating procedures, subject matter expert review, and documentation (as needed) to ensure that historic resources are protected.

Scenic ORV-16 – Iconic Scenic Views in Yosemite Valley

Visitors to Yosemite Valley experience scenic views of some of the world's most iconic scenery, with the river and meadows forming a placid foreground to towering cliffs and waterfalls. Actions intended to manage natural resources may include the use of prescribed fire or controlled burns to thin forests that are encroaching on meadows; cutting trees, tree branches or other vegetation by mechanical means; and the application of herbicides to control invasive species. Related actions intended to protect the Recreation ORV would limit the number of visitors to lessen visitor density and congestion at attraction sites and make improvements to the transportation system that would reduce automobile congestion. Air quality can affect visitors' ability to experience scenic values in Segment 2. The NPS would cooperate with regional authorities to reduce airborne contaminants caused by combustion, including carbon dioxide emissions, smoke caused by fire, particulate matter generated by construction, and to improve air quality conditions.

In consideration of Wild and Scenic River Act requirements that the NPS consider the presence of existing structures, major facilities and services provided for visitor use, the NPS would eliminate several structures and facilities in Segment 2 under this alternative. Under Alternative 6 actions would remove structures at the Ahwahnee pool and tennis court. Removal of these structures could enhance scenic resources from specific

locations. Ecological restoration actions in Segment 2 would enhance the meadow and riparian communities which contribute to the scenic values in Yosemite Valley. This recreational river segment would remain readily accessible by road and will continue to have appropriate development along the shorelines (a comprehensive list of facilities in Segment 2 is included in table 7-1). Facilities that would remain in this segment of the river have no direct impact on the scenic river value as indicated in the baseline condition assessment. Changes to parking and vehicle traffic in Yosemite Valley to enhance Recreational ORV- 20 particularly the removal of roadside parking along Sentinel Drive and restoration to natural conditions would enhance Scenic ORV-16.

TABLE 8-128: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR SCENIC ORV-16

Location	Action in Alternative 6	Effects to ORV-16
Select Scenic vista Points	(Common to All) Selectively thin conifers and other trees and shrubs that encroach on selected scenic vista points. Remove unnecessary facilities and ensure that all future development satisfies objectives that provide low contrast ratings.	Changes would enhance the scenic values on a segmentwide level.
Yosemite Valley Concessioner Housing	Temporary employee housing would be removed and replaced with permanent housing at Huff House (164 beds), Lost Arrow (50 beds) and Yosemite Lodge (104 beds).	Mitigation measures would avoid or mitigate effects to iconic scenic vistas. Actions would continue to protect the ORV locally.
Curry Village and Campgrounds		
Yosemite Valley Campgrounds	All campsites within 100 feet of the river removed. New campsites installed at Upper Pines, Upper River and Lower River, Backpacker's and Camp 4 and Eagle Creek campgrounds.	Changes to campgrounds would not interfere with iconic scenery and given the location of the facility would not cause impact scenic resources. Removal of the campgrounds near the river will enhance viewsheds locally.
Yosemite Village and Housekeeping Camp		
Yosemite Village Day Use Parking Area/Village Center Parking Area	The Concessioner General Offices, Concessioner Garage, and the Bank Building are removed. Move the Yosemite Village Day Use Parking Area day-use parking area northward 150 feet away from the river to facilitate restoration goals. Formalize parking area with a total of 850 parking places.	Removal of buildings would enhance viewsheds locally.
Yosemite Lodge and Camp 4		
Yosemite Lodge Parking	Construct 300 vehicle parking spaces and 15 tour bus parking spaces. 25 additional spaces at Yosemite Lodge due to redesign, improving parking efficiency near Northside Drive.	Changes to parking would be in keeping with current facility and given the location of the facility would not interfere with iconic scenery. Actions would continue to protect the ORV locally.
Yosemite Lodge Visitor Facilities	Construct new 3 story-lodging structure(s) with the pre-flood number of 440 units (redesign Yosemite Lodge out of the 100-year floodplain).	Rebuild of existing facility is in an already developed area and would not interfere with iconic scenery. Actions would continue to protect the ORV locally.
Yosemite Lodge Road and Northside Drive	Construct a pedestrian underpass to address congestion at intersection and alleviate pedestrian/vehicle conflicts.	Change would not be visible post construction and would not interfere with iconic scenery. Actions would continue to protect the ORV locally.

Conclusion: Under Alternative 5, the scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. Tree thinning and ecological restoration actions would improve natural scenic conditions. Removal of buildings at Housekeeping Camp, the Concessioner Garage, the Concessioner General Offices, and the Concessioner Stables would reduce intrusions on scenic resources. All parking lot and campground construction under this alternative would be subject to park standard operating procedures and subject matter expert review to ensure that scenic resources are protected.

Recreational ORV-20 – River-related Recreation in Yosemite Valley

Visitors to Yosemite Valley enjoy a wide variety of river-related recreational activities in the Valley's extraordinary setting along the Merced River. Throughout the Yosemite Valley segment, the river has provided the setting for recreational experiences such as fishing, floating, and sightseeing. Transportation is considered an important part of the visitor experience in Yosemite Valley because it is the means of access to recreational opportunities in Yosemite Valley. Management considerations address the amount of vehicle traffic and the number of people at one time in Yosemite Valley at the peak times of day during the park's busy summer season.

All restoration actions to protect and enhance biological, cultural, geologic/hydrologic, and scenic ORVs would further enhance visitors' connections to the river and its values, which are essential to the recreational ORV in this segment. These actions would ensure that the increase in day-use, camping, and lodging opportunities would not cause adverse effects or degradation to ORV-20 on a segmentwide basis. Camping and overnight lodging would be available segmentwide, and essential aspects of the recreational ORV would not be affected. There are also actions proposed in Alternative 6 that would improve picnicking, and wayfinding. Finally, commercial boating is limited to 100 boats at one time and private boating is limited to 150 trips per day in Segment 2, in this alternative which reduces crowding and increases the stretches of the river on which private boating and paddling is allowed, thereby enhancing key aspects of this recreational experience.

TABLE 8-129: SEGMENT 2 ACTIONS AND THEIR IMPLICATIONS FOR RECREATIONAL ORV-20

Location	Action in Alternative 6	Effects toORV-20
Segmentwide visitation	21,800 visitors per day	This managed change in visitation would reduce crowding and congestion thereby enhancing the recreation ORV on a segmentwide level.
Concessioner Stables	Retain Concessioner Stables to support Merced Lake High Sierra Camp and overflow parking for campgrounds. Commercial equestrian day rides would be eliminated. Kennel service remains. Retain associated housing (25 beds).	Changes similar to current conditions and would not substantially alter components of the river recreation experience.
Curry Village Lodging	Lodging would include 453 units, as compared with 400 under Alternative 1.	Changes to Lodge would be in keeping with current facility. Lodge itself is not part of the ORV-20 but does facilitate access to ORV-20 for certain visitors. This use would remain.
Lower Rivers Nature Walk	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.	Change would improve interpretation of the river and its values, and would enhance the recreation ORV in this segment.
Yosemite Village and Housekeeping Camp		
The Ahwahnee Pool and Tennis Courts	Remove the pool and tennis courts	Removal of facilities would reduce opportunities for one type of recreation activities, but would not substantially alter components of the river recreation experience.
Segment wide River Access	Swimming and water play allowed in all segments except 6, impoundment. No commercial boating. Boating allowed on all segments except 6, impoundment. Private use limited to 150 trips per day/commercial to 100 boats at one time in Segment 2 between the Pines Campgrounds and Sentinel Beach.	Change would limit commercial boating and would limit the number of private boating. However, this change does not affect components of the recreational ORV. This reduction in boats enhances dispersed recreation along the river corridor.
Housekeeping Camp Lodging	Retain 232 lodging units, and remove 34 units out of observed ordinary high water mark. Retain Housekeeping Camp shower houses, restrooms, and laundry, and remove grocery store. Restore one acre of the riparian ecosystem.	Changes similar to current conditions and would not substantially alter components of the river recreation experience.
Bridalveil Falls Trail	Redesign trails, boardwalks, and viewing at the base of the falls to improve wayfinding and pedestrian circulation. Restore informal trails. Improve ADA compliance of pedestrian walkways and restrooms.	Change would bring about localized improvements in aspects of the visitor experience (circulation and wayfinding) thus enhancing ORV-20.
Yosemite Lodge And Camp 4		
Yosemite Lodge Visitor Facilities	Construct new 3 story-lodging structure(s) with the pre-flood number of 440 units (redesign Yosemite Lodge out of the 100-year floodplain).	Lodge itself is not part of the ORV-20 but does facilitate access to ORV-20 for certain visitors. This use would remain
Yellow Pine, Camp 4, Yosemite Lodge, and West Valley Campgrounds.	Remove camping and restore the 100-year floodplain to natural conditions. Camp 4 expanded eastward to provide 35 additional walk-in sites. Retain 35 walk-in campsites at Camp 4. Retain 4 group administrative use sites (up to 120 people).	Improvements to campgrounds would improve recreational experience.
Recreational Experience Quality	Reduction in available day-use parking, and implementation of an East Yosemite Valley Day-use Parking Permit system	This will enhance the recreational experience of segment 2 by reducing crowding at key attraction sites as well as access to these areas (along roadways, in parking lots, etc).

Chapter 6 provides a more detailed description of the day-visitor capacity management strategies that directly measure aspects of the Recreation ORV and outlines specific actions. These actions include:

- Utilize parking and traffic management staff to improve parking efficiency and traffic flow in Yosemite Valley and other locations where needed.
- Institute a transportation fee at entrance stations (for peak-use season).
- Divert vehicles to other destinations outside of Yosemite Valley when parking in the Valley fills.
- When all parking fills to capacity, day visitors would be diverted at checkpoints throughout the park and at entrance stations.
- East Valley day-use parking permits would be issued by advanced reservation and on a first-come-first-serve basis.

NPS would use the Highway Capacity Manual Pedestrian Level of Service (discussed further in Chapter 5) for evaluating the capacity and quality of service of transportation facilities, including walkways, multi-use paths, and similar pedestrian facilities. NPS would also monitor parking rates and vehicles at one time to ensure that they are not exceeding the management standard. Should specific trigger points be reached, the NPS would implement a series of specific actions to improve parking to an acceptable level. Similarly, should visitor densities begin to approach specific triggers; NPS would take steps to keep such densities within the management standard.

Conclusion: Under Alternative 6, the recreation ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season will significantly reduce crowding thereby enhancing the recreational ORV. All restoration actions would enhance opportunities to connect with the river and its values. The reduction in commercial services would affect opportunities for particular types of recreational activities, but would not affect the essential components of the recreation ORV on a segmentwide basis.

Segment 3 – The Merced Gorge (Scenic Segment)

Scenic ORV-17 – Scenic View in the Merced River Gorge

The Merced River drops 2,000 feet over 14 miles; a continuous cascade under spectacular Sierra granite outcrops and domes. There are no existing management considerations with respect to the Scenic ORV in the Merced River Gorge. Although there are some localized visual intrusions from essential facilities such as visitor parking areas, restrooms, the Arch Rock entrance station and the El Portal Road, these facilities are consistent with the scenic classification of this river segment. As explained in Chapter 5, this ORV is currently protected and enhanced.

This alternative does not propose any new development or landscape changes within the river corridor aside from improvements to existing roadside pullouts and drainage. These changes would not degrade or adversely impact the scenic ORV on a segmentwide basis. Although private vehicles and overall visitation during peak periods will be managed for East Yosemite Valley only, it is probable that visitation and visitors

at one time in Segment 3 will also witness a reduction under this alternative. This reduction in visitation and visitors at one time may reduce vehicles per viewshed, thereby enhancing the scenic ORV. Monitoring associated with this ORV would ensure that the attributes that comprise this ORV remain within the accepted management class rating.

Alternative 6 would accommodate the same kinds and amounts of use that exist today in Segment 3. The types and levels of use in Segment 3 under this alternative would remain largely unchanged. Actions considered under Alternative 6 would cause no adverse effects or degradation to ORVs on a segmentwide basis.

Conclusion: Under Alternative 6, this scenic river segment would show little evidence of human activity and remain largely free of structures. The scenic ORV in Segment 2 of the Merced River corridor would continue to be absent of adverse effects and degradation on a segmentwide level. The reduction in camping and lodging opportunities, as well as reduction in visitation particularly during the peak season in Yosemite Valley will significantly reduce the number of vehicles per viewshed in this segment. All restoration actions would further enhance scenic characteristics in this segment.

Segment 4 – El Portal (Recreational Segment)

Geological/Hydrological ORV-7 – The Boulder Bar in El Portal

Natural processes would continue to shape the landscape and the geologic ORV. The NPS has not identified any management considerations with respect to the El Portal boulder bar. Land use and facility actions proposed in this alternative would not affect this ORV. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection are necessary. Moreover, the types and levels of visitor and administrative use (e.g., housing, maintenance operations, office space, passive recreation) allowed under this alternative would not affect this ORV. Therefore, the NPS would not monitor the condition of this ORV as part of the *Merced River Plan/DEIS.*

Conclusion: Under Alternative 6, the geologic values of this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no actions that would affect the boulder bar in El Portal, and there are no ongoing concerns or considerations associated with this resource.

Cultural ORV-11 – The El Portal Archeological District

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. Four sites are known to have experienced particularly severe damage, most notably a large ancient village and cemetery.

To address management considerations pertinent to this river value, the NPS would undertake the following actions:

- Protective measures would ensure that exceptional sites would be protected from unmitigated effects that could lead to adverse effects or degradation on a segmentwide level. A plan of action for addressing the abandoned infrastructure on sites would be developed in consultation with traditionally-associated American Indian tribes and groups. Any solution(s) developed would also include a recommended approach for deterring visitor use within the sites.

- Informal trails, non-essential roads, and abandoned infrastructure would be removed to protect and enhance the archeological resources contributing to the ORV in Segment 4.

- Remove informal trails and non-essential roads.

There are no existing instances of adverse effect or degradation to this ORV. As discussed above, management considerations are present associated with abandoned infrastructure that remains on an exceptional site containing diverse components and extremely sensitive cultural materials that are highly valued by traditionally associated American Indians. Management considerations are also associated with non-essential roads and trails that impact archeological sites. In recognition of the high cultural significance of these sites, this alternative requires the park to develop plans to remove abandoned infrastructure and non-essential roads. Restoration actions to establish a 2.5 acre recruitment area for Valley Oaks would further protect adjacent archeological resources. Construction of employee housing in Old El Portal, Abbieville, and Rancheria would be designed to avoid or mitigate threats and disturbances to archeological sites. Monitoring and protective measures would ensure that new use patterns associated with the new housing would not affect contributing elements of the El Portal Archeological District.

TABLE 8-130: SEGMENT 4 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-11

Facility	Action in Alternative 6	Effects toORV-11
El Portal		
Abbieville, Old El Portal, and Rancheria Flat Concessioner Employee Housing	New concessioner employee housing in Abbieville (258 beds), Old El Portal (12 beds), and Rancheria Flat (9 beds).	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Abbieville Trailer Park Area	Develop El Portal Remote Visitor Parking Area in the Abbieville/Trailer Park area to provide 200 spaces of visitor parking serviced by regional transit. Adjacent to cultural resources, however only suitable location proximate with direct access to Highway 140	Design, follow-on compliance, and mitigation measures would avoid and/or mitigate adverse effects to sensitive archeological resources. The El Portal Archeological District would continue to be protected at a segmentwide level.
Odger's Bulk Fuel Storage	(Common to All) Remove Odger's bulk fuel storage facility and restore the rare floodplain community of valley oaks. Create a valley oak recruitment area of 2.5 acre in the vicinity of the current Odger's bulk fuel storage area, including the adjacent parking lots.	Mitigation measures would protect cultural resources during facility removal and ecological restoration. Change would continue to protect archeological resources locally.

Conclusion: Under Alternative 6, the archeological resources in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Removal of abandoned infrastructure, informal trails and non-essential gravel roads would enhance protection of archeological resources. Valley Oak restoration actions would protect adjacent archeological resources from further ground disturbance, Construction of new employee housing would be designed to avoid or mitigate effects

to the El Portal Archeological District. New or altered visitor use patterns associated with the new housing development would be monitored and protective actions would occur if effects triggered responses.

Segment 5 – South Fork Merced River Above Wawona (Wild Segment)

Biological ORV-1 – High-elevation Meadows and Riparian Habitat

The Merced River sustains numerous small meadows and riparian habitat with high biological integrity. Restoration actions to remove informal trails and charcoal rings to protect cultural resources proposed under this alternative would not affect high-elevation meadows. The NPS proposes no major facility or visitor use actions for Segment 5 under Alternative 6. The biological ORV in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level.

Cultural ORV-12 – Regionally rare archeological features representing indigenous settlement including archeological sites with rock ring features

Three regionally rare prehistoric archeological sites are located along this segment of the South Fork of the Merced Wild and Scenic River corridor. The sites contain unique stacked rock ring constructions and rock alignments. Two sites also contain pine timber remains within the ring interiors or incorporated into the stacked rock courses. Rock constructions are considered fragile and highly subject to human alteration from camping and campfire building disturbances. Two of the South Fork sites are adjacent to formal NPS trails, increasing the likelihood of disturbance. The vicinity of the sites has not been systematically surveyed, and it is possible that additional rock ring sites may be present along the South Fork. Should additional rock ring sites be discovered in the monitoring process, they would also become a part of the South Fork ORV. To remedy these considerations, NPS would:

- Complete documentation of the features. Restrict Wilderness camping in the area of the rock rings (camping allowed past particular marker). Remove informal trails and charcoal rings.
- Increase education and outreach to Wilderness travelers.

Conclusion. Under Alternative 6, the archeological resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. There are no specific actions to manage user capacity, land use, and/or facilities under Alternative 6 within Segment 5 beyond those designed to protect and enhance ORV-12 that would impact components of Cultural ORV-12. Monitoring activities described in Chapters 5 and 8 would continue to protect and enhance Cultural ORV-12 to ensure there are no adverse effects or degradation to ORV-12 on a segmentwide basis.

Scenic ORV 18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no

considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

Conclusion. Under Alternative 6, the scenic resources in this wild river segment would continue to be absent of adverse effects and degradation on a segmentwide level. The scenic ORV for Segment 5 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.

Segment 7 – Wawona (Recreational Segment)

Biological ORV-3 – The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV would be determined by comparing populations located near Wawona Campground (an area that is likely to be disturbed by humans) with more remote populations that are less likely to receive such disturbance. This population of Sierra sweet bay is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

To ensure that this biological ORV is protected and enhanced through time, the NPS would monitor the condition of the Sierra sweet bay population to ensure early warning of conditions that require management action before impacts occur.

Conclusion. Under Alternative 6, the Sierra Sweet Bay in this recreational river segment would continue to be absent of adverse effects and degradation on a segmentwide level. Reduction in camping and visitor activity in the vicinity of Wawona Campground would enhance this resource.

TABLE 8-131: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR BIOLOGICAL ORV-3

Facility	Action in Alternative 6	Effects toORV-3
Wawona		
Wawona Campground	Retains 72 sites and one group site. Remove 27 sites that are either within the 100-year floodplain or in culturally sensitive areas.	Action would improve the condition of the ORV by reducing the potential effects on this species associated with campground visitation.

Cultural ORV-13 – Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This district spans segments 5, 6, 7, and 8. Accordingly, the condition of this historic property is assessed at the property-level, rather than the segmentwide level. 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. There are several management considerations for this ORV: the Wawona Archeological District is subject to site-specific impacts from park operations, visitor

use, artifact collection, vandalism, and ecological processes. The following actions would help to address these issues:

- Increase monitoring frequency at affected sites.
- At the district-wide level, revise the existing National Register nomination to reflect changes since its original writing, for example, incorporating newly discovered resources and documenting impacts.
- The Wawona Campground capacity would be reduced to 67 sites (including one group site). 32 sites are removed because they are either within the 100-year floodplain or in culturally sensitive areas.
- Remove informal trails and fire rings to prevent continuing disturbance.
- Develop site management plans as needed for sites with complex uses. Remove shoulder and off-road parking. Limit facility and concessionaire off -road vehicle travel/parking on hotel grounds
- Consider need for archeological site treatment measures to address impacts to shallow deposits of artifacts and features.

TABLE 8-132: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR CULTURAL ORV-13

Facility and Land Use	Action in Alternative 6	Effects toORV-13
Wawona		
Wawona Campground Septic System	Remove septic system, and connect to the sewer system. Build a lift station above the campground to connect to the existing water treatment plant.	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Wawona RV dump site	Relocate the dump site to an appropriate location away from the river.	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Wawona Store	Replace the existing public restroom facilities with larger restrooms to accommodate visitor use levels. Improve picnic area, redesign bus stop.	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide.
Wawona Swinging Bridge	Provide access to Swinging Bridge with access on the south side of the river, delineate trail, restrooms, waste disposal and parking.	Mitigation measures would include avoidance, documentation, data recovery, and interpretation of cultural resources during facility construction. Local impacts to the ORV may occur; however, actions would continue to protect the ORV segmentwide. Restrooms and waste disposal will reduce threats and disturbances to adjacent archeological resources.

The NPS would delineate trails, roads, and other infrastructure away from sensitive cultural and ethnographic resource areas; conduct public education to discourage disturbance to sensitive features. To prevent these considerations, or others, from redeveloping, the NPS would monitor the condition of the ORV, and take specific actions should conditions exceed specific trigger points.

Cultural ORV-14 – Wawona Historic Resources

The Wawona Historic Resources ORV includes one of the few covered bridges in the region and the National Historic Landmark Wawona Hotel complex. The Wawona Hotel complex is the largest existing Victorian hotel complex within the boundaries of a national park, and one of the few remaining in the United States with this high level of integrity. The Wawona Covered Bridge is in good condition, and there are no current management considerations associated with it, however the bridge requires maintenance to keep the historic structure in good condition in the face of adverse weather and visitor use.

The Wawona Hotel complex continues to serve its original purpose as a guest lodging facility. Management considerations related to the hotel complex involve concessioner operations, the need for regular and routine preservation maintenance, and periodic rehabilitation to ensure visitor safety.

- Regular and routine preservation maintenance, conducted in accordance with the Secretary of the Interior's Standards, would ensure that this upkeep protects the historic character of the buildings
- Periodic rehabilitation would involve subject-matter specialists in planning, design and implementation to ensure actions do not compromise the historical integrity of the complex
- Concessioner operations would ensure that any operational modifications or updates are appropriate and in keeping with the historic character of the complex.

TABLE 8-133: SEGMENT 7 ACTIONS AND THEIR IMPLICATIONS FOR WAWONA HISTORIC RESOURCES ORV-14

Facility	Action in Alternative 6	Effects toORV-14
Wawona		
Wawona Hotel	Retain 104 lodging units at the Wawona Hotel Retain hotel restaurant, swimming pool and tennis court. Retain golf course and golf shop.	The action would retain contributors to the Wawona Historic Resource. The ORV would continue to be protected locally.

To prevent future impacts, the NPS would monitor the condition of the bridge, and take specific actions should conditions exceed trigger points. Trigger points are selected to inform managers well in advance of adverse effects or degradation on the Wawona Covered Bridge. Management considerations for the Wawona Hotel complex include the need for regular and routine preservation maintenance, periodic rehabilitation, and ongoing operations that serve its continuing function as a historic lodging facility. To address these management considerations, the NPS would ensure that these activities would conform to the Secretary of the Interior's Standards for Treatment of Historic Properties.

Segment 8 – South Fork Merced River below Wawona (Wild Segment)

Biological ORV-3 — The Sierra sweet bay (Myrica hartwegii)

As described in Chapter 5, the NPS would monitor the condition of this ORV through time using Sierra Sweet Bay Population Decline as its indicator. The health of this ORV in Segment 8 is in good condition, with no management considerations present. Management action to enhance the population is not required at this time.

Cultural ORV 13— Wawona Archeological District

The Wawona Archeological District encompasses numerous clusters of resources spanning thousands of years of occupation, including evidence of continuous, far-reaching traffic and trade. This ORV in Segment 8 is in good condition, with no management considerations present. Management actions are not required at this time.

Scenic ORV-18 – Scenic Wilderness Views along the South Fork Merced River

The South Fork Merced River passes through a vast area of natural scenic beauty. The NPS has no immediate management considerations with respect to the Scenic Wilderness Views along the South Fork Merced River as this scenic ORV is determined to be absent of adverse effects and degradation. No new development or landscape changes are proposed within the river corridor. Because there are no considerations regarding the condition of this ORV, no actions other than continued protection is necessary. It is unlikely that this ORV would be affected by human intervention in the future.

The scenic ORV for Segment 8 is determined to be absent of adverse effects, degradation, management concerns, and management considerations. The NPS would not monitor the condition of this ORV.