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Lower Kern Canyon and Greenhorn Mountains Off-Highway Vehicle (OHV) Restoration Project

Kern River Ranger District, Sequoia National Forest
Kern County, California

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Cover photo: Easily accessed and popular recreation site located along the lower Kern River

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SUMMARY

The Kern River Ranger District of the Sequoia National Forest proposes the Lower Kern Canyon and Greenhorn Mountains Off-Highway Vehicle Restoration Project (Project). This Project would result in:

- Closure of non-system routes and site restoration within four recreation sites. Three of the four recreation sites (Black Gulch North, Black Gulch South and China Garden) are located in the Lower Kern Canyon. The fourth recreation site (Evans Flat Campground) is located in the Greenhorn Mountains near Evans Flat.
- Relocation of campsites and site restoration within one recreation site (Evans Flat).
- Rerouting and site restoration of sections of two OHV trails: one mile of the Woodward Peak Trail (Trail #32E53) and two miles of the Kern Canyon Trail (Trail #31E75).

Unauthorized routes targeted for closure in this proposal were considered, but not added to the National Forest Transportation System (NFTS) in the Sequoia National Forest Motorized Travel Management Project (2009). That decision did not preclude the closure, rerouting, or site restoration of either unauthorized or system roads and trails in future travel management actions.

The proposed action addresses the needs to: (1) manage developed recreation sites and the NFTS to assure resource protection; (2) provide safe access and accommodate management needs; (3) establish partnerships with trail groups to help manage, protect, and patrol those areas where they can be an influence; (4) allow changes to the existing trail system to eliminate resource or facility damage; (5) prevent user conflicts; (6) place or construct some hard barricades, such as boulders or fences, to limit vehicular access to closed routes; and (7) improve signage within these recreation sites.

The proposed action is also designed to protect threatened, endangered, and sensitive species; to protect known cultural resources; to minimize impacts to sensitive botanical species; to reduce the potential for the introduction or spread of noxious weed species; and to protect watershed resources and water quality by employing best management practices (BMPs).

Based upon the effects of the alternatives, the responsible official will decide whether or not to:

- adopt and implement the proposed action, which would: (1) close and restore the sites of non-system routes in three dispersed recreation sites in the Lower Kern Canyon and one developed recreation site in the Greenhorn Mountains; (2) relocate campsites and restore the vacated sites within one recreation site; and (3) reroute sections of two OHV trails, closing and restoring their old sites, one in the Lower Kern Canyon and one in the Greenhorn Mountains;
- modify the proposed action; or
- take no action.

BACKGROUND

This environmental assessment (EA) documents the analysis performed by an interdisciplinary team for the Lower Kern Canyon and Greenhorn Mountains Off-Highway Vehicle (OHV) Restoration Project (Project) in the Kern River Ranger District of the Sequoia National Forest. The Project consists of analyzing proposed actions for the closure of non-system routes and site restoration within four recreation sites, the relocation of campsites and site restoration within one recreation site, as well as the rerouting of sections of two off-highway vehicle (OHV) trails located in the Kern River Ranger District of the Sequoia National Forest. Three of the four recreation sites and one of the OHV trails are located in the Lower Kern Canyon near the lower Kern River, while the fourth recreation site and the second OHV trail are located in the Greenhorn Mountains.

The Forest Transportation System is used by recreationists to pursue dispersed activities with designated roads and trails open and available for public travel (LRMP, pg. 4-8). Routes targeted for restoration in this proposal were considered but not designated in the Sequoia National Forest Motorized Travel Management Project (finalized in 2009). However, the unauthorized roads and trails not included in this decision are not precluded from future consideration for either removal from the landscape and/or restoration to the natural condition. This project's proposed restoration work would be completed by a restoration trail crew and volunteers using a small trail dozer and conventional hand tools. Following implementation, the Project area would be patrolled to monitor effectiveness. Additionally, the project area would be monitored to identify impacts to and recovery of sensitive resources in order to assess the effectiveness of restoration measures.

Rapid expansion of OHV use on national forests and grasslands was identified to be impacting the natural heritage resources of federal lands. The Chief of the Forest Service identified unmanaged recreation as one of the key threats facing the nation's forests. Unmanaged OHV use resulted in unplanned roads and trails, erosion, watershed and habitat degradation, and impacts on heritage resource areas. In 2003, the Forest Service in California outlined a strategy for establishing a sustainable system of designated routes for off-highway vehicle use, known as Route Designation. In 2005, the Forest Service issued a national rule for local forests to use in designating a sustainable system of roads, trails and areas for all motor vehicle use, not just off-highway vehicles. The goal remained the same, to secure a wide range of recreation opportunities while ensuring the best possible care of the land.

National Forests began working with the OHV, environmental, and other communities to identify existing routes and areas in order to develop each forest's route designations. In 2009, Sequoia National Forest issued a decision for its Motorized Travel Management Project in order to implement provisions of the 2005 Travel Management Rule (Subpart B). By doing so, this decision created a manageable transportation system protecting resource values while providing a fun and challenging road and trail system for local residents and other forest visitors. The system includes interconnected roads and trail loops for all riders – from novice to expert levels of use.

The Project will provide continued opportunities for motorized vehicles, while reducing potential impacts to natural resources.

The analysis documented in this EA provides the Forest Service (FS) responsible official with current information to aid in the decision-making process. It complies with the Council of Environmental Quality's Regulations for Implementing the Procedural Provisions of the National

Environmental Policy Act (NEPA; 40 Code of Federal Regulations (CFR) Parts 1500-1508) and the Forest Service's Environmental Policy and Procedures Handbook (Forest Service Handbook (FSH) 1909.15).

PROJECT LOCATION

Lower Kern Canyon:

The North Fork of the Kern River divides the Greenhorn Mountains from the Kern Plateau. The Greenhorns rise from the floor of the San Joaquin Valley with annual grassland and oak savannas at low elevations, a chaparral belt at mid elevations and a broad belt of conifer forests at higher elevations. The eastern side of the Greenhorn Mountains drops steeply into the Lower Kern Canyon.

Water stored in Isabella Reservoir is released into the lower Kern River, which drains westward, toward Bakersfield. The Lower Kern has been determined as eligible for Wild and Scenic status, but has not yet had a suitability study conducted; in the interim, the river must be managed to protect the outstandingly remarkable values which make it eligible for designation. This section of the Kern River offers both one and two day commercial and private whitewater boating opportunities and has five designated launch sites. Four commercial river outfitters operate on the Lower Kern run and each outfitter has a designated overnight camp along this segment of the river. Two developed campgrounds are situated on the Lower Kern River between Lake Isabella and the Democrat Dam. Private boaters and other river users utilize both developed and dispersed camping sites or seek in-town overnight accommodations. Other recreational activities pursued include: fishing, hiking, biking, equestrian use, nature viewing, and OHV use.

Black Gulch North, Black Gulch South, and China Garden are all popular dispersed recreation areas managed by the Forest Service. All three dispersed recreation sites are located in the Lower Kern Canyon where the proliferation and expansion of unauthorized routes has resulted in significant impacts to sensitive resources. The proposed re-route of approximately two miles of the Kern Canyon Trail (Trail #31E75) would protect sensitive resources.

- Black Gulch North is located 8 miles west of Lake Isabella off of State Highway 155, on the northwest side of the Kern River, across from Black Gulch South. This dispersed recreation site offers both overnight and day use opportunities, as well as access to the river's edge. It has not been improved; offers no facilities; and is open from May to October. Parking is uncontrolled. The proposed project area within this site is approximately 828 acres. Its legal description is Section 9, Township 27 South, Range 32 East, Mount Diablo Base and Meridian (MDB&M). (See Map 1: Vicinity Map 4, pg. 27).
- Black Gulch South is located 8 miles southwest of Lake Isabella along the Lower Kern River off of State Highway 178. This dispersed recreation site offers both overnight and day use opportunities, as well as access to the river's edge. Portable toilets and dumpsters are provided during the summer season. Parking is uncontrolled. The managed use season for this area is Memorial Day weekend through Columbus Day weekend. The proposed project area within this site and Black Gulch South is approximately 800 acres. Its legal description is Section 10, Township 27 South, Range 32 East, MDB&M. (See Map 1: Vicinity Map 3, pg. 26).
- China Garden is located 10 miles west of Lake Isabella off of State Highway 178, on the south side of the lower Kern River about two miles upstream of the Democrat Dam. This dispersed recreation site offers both overnight and day use opportunities, as well as walk-in

only access to the river's edge. One dumpster is provided during the summer season in an unimproved parking area located off the main highway. No other facilities are provided, and the area is open year-round. The proposed project area within this site is approximately 15 acres. Its legal description is Section 33, Township 27 South, Range 31 East, MDB&M. (See Map 1: Vicinity Map 2, pg. 25).

- Kern Canyon Trail (Trail #31E75) is located 27 miles northeast of Bakersfield via State Highway 178 and Delonegha Road (Forest Service Road #27S12). The trail parallels the Kern River through open hillsides of grass and oak and provides good wildflower viewing opportunities, particularly from mid-March through late April. This project proposes to reroute approximately 2 miles of this trail. The trail also provides access for OHV riders traveling through portions of the Lower Kern Canyon into the Greenhorn Mountains. Its legal description is Section 3, Township 27 South, Range 32 East, MDB&M (See Map 1: Vicinity Maps 3and 4, pgs. 26-27).

Greenhorn Mountains:

The Greenhorn Mountains offer a quiet high elevation camping experience. While the river corridor is managed for more intensive recreation purposes particularly during the summer holiday weekends, the Greenhorn Mountains receive light to moderate usage. The Greenhorn Mountains lie northeast of Bakersfield via State Highway 178 and 155 making this area readily accessible to a variety of recreation users.

Within the Greenhorn Mountains, the Forest Service operates three developed campgrounds with a total of 43 units. Evans Flat Campground is one of three campgrounds located here. On the average, about 25 percent of the total available developed camp units are utilized on a seasonal basis, however, during the general hunting season, 80-100 percent campground utilization occurs.

Routes, leading away from the campgrounds, were developed in part by recreationists exploring the area and seeking a four-wheel drive experience. In many cases, routes were developed across steep terrain on small hills.

OHVs on the Woodward Peak Trail (Trail #32E53) have increased the potential for erosion by channeling runoff and introducing sediment into the East Fork of Greenhorn Creek.

- Evans Flat Campground is located 45 miles northeast of Bakersfield via Highway 155 and Rancheria Road (Forest Service Road #25S15) and is entirely within Kern County. This developed recreation site offers 21 family units (5 designated for equestrian use); one vault toilet building; no drinking water; accommodates trailers up to 20 feet in length; and is open from May to October based upon snow conditions. The proposed project area within this site is approximately 6 acres. Its legal description is Section 25, Township 26 South, Range 32 East, MDB&M. (See Map 1: Vicinity Map 5, pg.28).
- Woodward Peak Trail (Trail #32E53) is located 45 miles northeast of Bakersfield via State Highway 155 and Rancheria Road (Forest Service Road #25S15). This OHV trail is an important component of the travel system as it provides OHVs the ability to access the larger system of OHV routes without riding on Rancheria Road which is open only to highway legal vehicles. This project proposes to reroute approximately 1 mile of this trail and restore the site. Its legal description is Section 30, Township 26 South, Range 32 East, MDB&M. (See Map 1: Vicinity Map 5, pg.28).

PURPOSE OF AND NEED FOR ACTION

The purpose of this proposed restoration project is to both improve and enhance resources where needed and restore recreation areas, while continuing to improve and sustain quality recreation opportunities.

Black Gulch South where a sign marks an area closed to motorized uses

The first phase of this project proposes to implement provisions identified in the Sequoia National Forest Motorized Travel Management Project for the closure of non-system routes and site restoration in the vicinity of Black Gulch North, Black Gulch South, and China Garden Dispersed Recreation Areas. Proposed activities include decommissioning approximately 38 unauthorized routes and hill climbs, as well as the old sections of two system OHV trails, by scarifying, cross-ripping, re-contouring affected areas; installing water bars; and planting native vegetation along route prisms. Additionally, some hard barricades, such as boulders and/or fences may be placed and/or constructed to prevent vehicular access to closed routes. Barriers and signage would also be used to discourage further route proliferation.

The second phase of this project proposes to implement provisions identified in the Sequoia National Forest Motorized Travel Management Project for the restoration of an interior access road and two associated campsites within Evans Flat Campground by relocating two campsites and decommissioning approximately 1/8 mile of road within Evans Flat Campground where conflicts among OHV users and the non-motorized public are a consequence of unmanaged OHV use.

The third phase of this project proposes to implement monitoring by OHV personnel and resource specialists on a routine basis to determine the effectiveness of the Project. If restored areas are

observed to require additional treatment, further restoration work and resource protection measures would be implemented, incorporating appropriate strategies to eliminate unauthorized OHV use. This combination of decommissioning and restoring the sites of user-created routes would provide a foundation for a safe, responsible, and well managed OHV program that focuses on providing a quality OHV riding experience while minimizing impacts to natural resources.

The 1982 Kern River Whitewater Floating Plan (Kern River WW Floating Plan) provides direction for managing whitewater boating on the Lower Kern River while providing quality recreation experiences for all river users. The 2009 Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project implements provisions of the 2005 Travel Management Rule (36 CFR Part 212, Subpart B) designed to enhance management of National Forest System lands, sustain natural resource values through more effective management of motorized vehicle use, and enhance opportunities for motorized recreation experiences on National Forest System lands. The Sequoia National Forest Land and Resource Management Plan (LRMP 1988) as amended by the Sierra Nevada Forest Plan Amendment Record of Decision, 2004, (SNFPA ROD) provides direction that offering recreation opportunities is one of the Forest Service's major missions in California, along with providing sustainable, healthy ecosystems (SNFPA ROD, p. 11).

The goal of this project is to move the area toward the objectives or implement actions as defined by the Kern River WW Floating Plan, the 2009 Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project; and the Sequoia National Forest LRMP, and the SNFPA discussed below. Due to impacts to natural resources caused from motor vehicle use by forest visitors within the identified project area there are needs to:

1. **Manage developed recreation sites to assure resource protection, provide safe access and accommodate management needs during periods of use at these facilities:** Recreation use will continue to increase steadily as individuals, primarily from the heavily populated areas in Southern California, seek open space and abundant recreation opportunities. Some of the primary recreation pursuits are developed camping, fishing, and picnicking. Manage the area to achieve user safety and experience levels (Kern River WW Floating Plan, p. 27). The highest concentration of use will be within water-oriented sites during warm weather periods (LRMP, pp. 4-8). Relocating campsites in order to provide better protection of sensitive species found in the vicinity of a recreation site like Evans Flat Campground provides a means for forest visitors to continue using these developed or dispersed recreation sites while protecting resources.

2. **Manage the road system to assure resource protection, provide safe access and accommodate resource management needs:** Develop and maintain the Forest transportation system to appropriate standards for management purposes, while providing efficient routes for Forest users and protecting resources (LRMP, p. 4-4). Forest facilities direction indicates to maintain selected roads for OHV enthusiasts and open roads to public travel unless closure is necessary to ensure resource protection, road investment protection, or for other management reasons (LRMP, p. 4-38). Closure of the non-system routes and site restoration within the Black Gulch North, Black Gulch South, and China Garden dispersed recreation areas would allow the Forest Service to focus its limited transportation funds on arterial roads and high volume collector roads. Dust pollution and public safety concerns would also be addressed by planting native vegetation along route prisms adjacent to these easily accessed and popular recreation sites.

3. **Establish partnerships where trail groups help manage, protect, and patrol those areas where they can be an influence:** Trips to either the Lower Kern Canyon or the Greenhorn

Mountains are an easy drive from Southern California metropolitan areas. Forest management direction is to manage existing destination sites to compliment dispersed activities (LRMP, p. 4-17). Developed areas are scattered along the edges of the forest and concentrated on or near the larger parcels of private lands within the forest boundary (LRMP, p. 3-49). The proposed restoration activities would provide volunteer opportunities for both individuals, as well as organized groups who either reside within the Kern River Valley or travel in from nearby metropolitan areas. Proposed restoration activities would include planting native vegetation, installing water bars as needed, plus using barriers and signage to discourage further route proliferation. Pre-and post-project photos and observations would document bare soil, erosion, and vegetative conditions. These photo points and observations would determine if vegetative cover is increasing as a result of project activities. Project areas would be routinely patrolled with formal site visits following implementation. The proposed use of volunteers to work in concert with the Forest Service on this project allows OHV enthusiasts and others a chance to contribute to the improved management of wheeled motor vehicle use on National Forest System lands and would result in all forest users being better served.

4. **Allow changes to the existing trail system on the Forest to eliminate resource and/or facility damage; to prevent user conflicts; and/or to meet other needs (LRMP, pg. 4-24):** Participation in dispersed recreation activities on the Sequoia Forest is significant (LRMP, p. 3-44). There is increasing use and demand for dispersed motorized activities on the forest and the popularity of dispersed land recreation will continue to grow (LRMP, p. 3-45). In the Lower Kern Canyon, OHV riders can access trails year-round, while areas within the Greenhorn Mountains are open during the majority of the year. Proposed restoration activities at or near Evans Flat Campground would improve public health and safety, as well as complement efforts by the Forest Service to maintain system trails like Woodward Peak Trail #32E53 and the Kern Canyon Trail #31E75. Trail degradation would be minimized and off-site resources protected adjacent to a moderately used recreation site.

5. **Improved signage within recreation sites:** Forest signing, both directional and informational, will assist the public to ensure they stay on designated trails and out of the wilderness and other sensitive areas. Adding signage along the primary access roads, travel routes, and at trailheads would help disburse information, control congestion, and avoid conflicts. Improved signing is a simple and inexpensive way to address safety and user conflict problems and would result in all forest users being better served.

In meeting the needs for improved recreation sites, decommissioning and restoring the sites of unauthorized routes, and public safety, the following purposes must be met:

1. Protect threatened, endangered, and sensitive (TES) species as outlined in the Sequoia LRMP, as amended by the SNFPA.
2. Protect known cultural resources per the Sequoia LRMP and according to standard protection measures outlined in II (A) *First Amended Regional Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer, Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region* (Region 5 Programmatic Agreement, 2001).
3. Minimize impacts to Region 5 Forest Service sensitive botanical species and their habitat areas.
4. Reduce potential for the introduction and/or spread of noxious weed species in the Project area.
5. Protect watershed resources and water quality by employing best management practices (BMPs).

The Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project EA implements the Sequoia National Forest LRMP as amended by the SNFPA and consistent with the Mediated Settlement Agreement for the Sequoia National Forest Land and Resource Management Plan. The action alternative described in this document responds to the issues developed through the scoping and public involvement process. The proposed action alternative is designed to implement treatments that will respond to agency goals described in the LRMP as amended by the SNFPA; the Kern River WW Floating Plan (1982); and the 2009 Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project.

PROPOSED ACTION

The Forest Service proposes to manage and enhance opportunities for motor vehicle use, while protecting sensitive resources, as identified in the 2009 Sequoia National Forest Motorized Travel Management Project. The Project includes the closure of non-system routes and site restoration in the vicinity of Black Gulch North, Black Gulch South, and China Garden dispersed recreation areas. The second phase of this project includes the restoration of an interior access road and two associated campsites in Evans Flat Campground. The third phase includes monitoring by OHV personnel and resource specialists on a routine basis to determine the effectiveness of project activities. Proposed restoration activities include: (1) decommissioning approximately 38 unauthorized routes and hill climbs, as well as the old sections of two system OHV trails, by scarifying, cross-ripping, and re-contouring affected areas; (2) installing water bars and planting native vegetation along route prisms; (3) placing and/or constructing some hard barricades, such as boulders or fences to limit vehicular access to closed routes; (4) adding barriers and signage to discourage further route proliferation; (5) restoring an interior access road and two associated campsites within a developed recreation site; and (6) monitoring by OHV personnel and resource specialists on a routine basis to determine the effectiveness of the Project. A detailed description of the Proposed Action improvements at each location can be found on pages 11 to 14.

The Kern River Ranger District proposes to implement this project in the fall of 2013.

DECISION FRAMEWORK

Specific Federal regulations govern forest management activities on the Kern River Ranger District, including:

- The Kern River Whitewater Floating Plan (1982) provides direction for managing whitewater boating on the Lower Kern River while providing quality recreation experiences for all river users;
- The Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project (2009) implements provisions of the 2005 Travel Management Rule (36 CFR Part 212, Subpart B) designed to enhance management of National Forest System lands, sustain natural resource values through more effective management of motorized vehicle use, and enhance opportunities for motorized recreation experiences on National Forest System lands; and
- The Sequoia National Forest Land and Resource Management Plan (LRMP 1988), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision, 2004, (SNFPA ROD) provides direction for managing recreation activities and evaluating existing uses in riparian conservation areas (RCAs) (SNFPA ROD, pg. 11).

The goal of this project is to move the identified areas toward the objectives or implement actions as defined by the Kern River Whitewater Floating Plan (Kern River WW Floating Plan (pgs. 20, 27-28, 47-49); the 2009 Sequoia National Forest Motorized Travel Management Project (pgs. 364, 365, 437 and 438); and the LRMP 1988 (pgs. 4-4, 4-8, 4-17, 4-18, 4-19 and 4-24). The Lower Kern Canyon

and Greenhorn Mountains OHV Restoration Project Environmental Assessment is tiered to the Sequoia National Forest LRMP (1988) as amended by the SNFPA (2004); the Kern WW Floating Plan (1982); and the 2009 Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project.

Examples of forest recreation, transportation, and trail system management activities include:

- Actions or Objectives from the Kern River WW Floating Plan: The Lower Kern segment of the Kern River is heavily used by whitewater boating enthusiasts, as well as other river users. Experience over the years shows little displeasure exhibited by river users as they encounter private and commercial boaters but great resistance to actions that deny river access or favor one group over another. Address the general degradation of the area by providing facilities for public health and safety while conflicts between river users can be addressed by providing a variety of activities consistent with demonstrated and projected recreation needs (Kern River WW Floating Plan, pgs. 27-28, and 47).
- Decommissioning of unauthorized routes and site restoration would better meet the expectation of being both physically and psychologically at a distance from a main highway and any other roads: the recreational benefits most sought and received by river users in a semi-primitive non-motorized description benefit all river users (Kern River WW Floating Plan, pgs. 20, 47-49).
- Public safety would be improved by eliminating those unauthorized routes that cross each other and cross or closely parallel NFTS Roads. Deleting roads and trails, and changing use type on existing trails may decrease problems such as noise and dust, as well as the potential for user conflicts (Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project, pp. 364, 365, and 437).
- Other roads and trails that are not part of the NFTS include private, permitted, temporary, and unauthorized routes. Many unauthorized routes originated as temporary logging or mining roads, skid trails, or fire lines which were never rehabilitated, and have remained open to use by the public, even though they are not maintained. Most unauthorized routes have worn in by the travel of vehicles using the same wheel tracks repeatedly. Since most of these were not "engineered," they lack features such as drainage structures, signage, and other items associated with constructed roads. (Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project, pg. 431 and 432).
- Develop and maintain the Forest transportation system to appropriate standards for management purposes, while providing efficient routes for Forest users and protecting resources (LRMP, pg. 4-4).
- The highest concentration of use will be within water-oriented sites during warm weather periods (LRMP, pg. 4-8).
- The Forest transportation system will be used by recreationists to pursue dispersed activities with designated roads and trails open and available for public travel (LRMP, pg. 4-8).
- Rehabilitate developed sites (on an average 20-year cycle) using established Forest priority lists (LRMP, pg. 4-17).
- Manage vegetation to maintain or improve recreation values (LRMP, pg. 4-17).
- OHVs are legitimate uses of the National Forest. They may be used on designated routes except where closed by law or by Forest Supervisor order to prevent: Resource damage (e.g., soil compaction, vegetation damage, wildlife disturbance, fire); Facility damage (e.g., roads,

trails, signs, fences); and User conflicts (e.g., motorized and non-motorized use) to maintain specific recreation opportunities/experiences (LRMP, pg. 4-18).

- Coordinate OHV planning and management with Federal, State and local agencies, adjacent landowners, and other interested individuals and organizations (LRMP, pg. 4-19).
- Monitoring of the effects of OHV use will be undertaken (LRMP, pg. 4-19).
- Implement mitigation measures in all projects posing an impact on the long-term Forest trail system. Measures will include such items as signing, protection of visual quality values, rehabilitation of trails following project completion, and/or relocation of trails around areas where impacts dictate (LRMP, pg. 4-24).
- Prohibit wheeled vehicle travel off of designated routes, trails, and limited OHV use areas (SNFPA ROD, pg. 59).

ISSUES AND ALTERNATIVES

PUBLIC INVOLVEMENT

The Project was listed in the Sequoia National Forest Schedule of Proposed Actions for April 1, 2011 through June 30, 2011, and was updated periodically during the analysis. The proposed action was provided to 158 individuals; local tribal organizations; federal, state, and local agencies; and groups potentially interested in or affected by this project for comment during scoping between October 26 and November 28, 2011.

There were three projects that were distributed to the public in the same time period for scoping, including the Lower Kern and Greenhorn Mountains OHV Restoration project, the Boulder Gulch Off-Highway Vehicle (OHV) Restoration project, and the Borel Relicensing Recreation Enhancement project. In response to this public scoping for the Project, nine public comment letters were received from six different parties. In addition, three calls were received. Using the comments from the public and other agencies, the interdisciplinary team developed a list of issues to address.

On March 6, 2013, the Preliminary EA for the Project was released for public review and comment, with a legal notice published in the newspaper of record (the *Porterville Recorder*). Documents were sent to the twelve respondents who had participated in the initial scoping process. The comment period closed on April 5, 2013. The District Ranger received five letters in response, from five individuals representing two individuals, three conservation groups, and one state agency, which are filed in the project record at the Kern River Ranger District Office. The comments and responses are included in Appendix A of the EA.

ISSUES

An issue is a point of debate, dispute, or disagreement regarding anticipated effects of implementing the proposed action. The Forest Service separates potential issues into two groups: significant and non-significant issues. Significant issues are used to formulate alternatives to the proposed action, develop design features to reduce or avoid adverse effects, or prescribe mitigation and monitoring measures. Significant issues are also used for analyzing environmental effects and comparing trade-offs for the decision-maker and public to understand.

Many of the scoping comments were positive and in support of the Project. Some of the comments received were outside the scope of the proposed project. Some of the respondents voiced complaints about the closure of any areas now open to vehicular traffic; some suggested that routine road maintenance would be all that is needed.

The most extensive reply was submitted jointly from Sequoia ForestKeeper and the Kern-Kaweah Chapter of the Sierra Club, who sent four comment letters, dated November 13, 14, 17, and 18, 2011. Their concerns included off-highway vehicle use conflicts, trail relocation, erosion control, and wildlife habitat. One of their concerns is that OHV use should be eliminated in some areas where it is currently permitted. However, the 2009 Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project determined where motorized travel is and is not permitted. Therefore, this issue is outside the scope of this project.

Another concern expressed was the impact of the Project on sensitive species. California condors, southwestern pond turtles, hardhead minnow, ensatina and slender salamanders, California legless lizard, Pacific fisher, California spotted owl, and northern goshawk are known to occur in the surrounding area and may exist within or use the project area. The biological evaluation/ biological assessment (BE/BA) documented the determination that the Project would have no adverse effect on these species as a result of implementing the proposed action. Best Management Practices (BMPs) have been established to prevent impacts to sensitive watershed habitats. No significant environmental impacts are expected as a result of this project, as described in Appendices A-E.

Non-significant issues are identified as those: 1) outside of the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; and/or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)…" A list of non-significant issues and reasons regarding their categorization as non-significant may be found in the project record maintained at the Kern River Ranger District, Sequoia National Forest.

DECISION TO BE MADE

The District Ranger, Kern River Ranger District, Sequoia National Forest, is the official responsible for making this decision. Given the need, the District Ranger reviews the proposed action, the other alternatives, and the environmental consequences in order to make the following decisions:

- Whether to adopt and implement the proposed improvement actions as proposed or modified, as described in an alternative, or take no action to improve recreation sites or OHV trails at this time;
- Determine project design and/or mitigation features are needed; and that
- Monitoring is required.

The identified trail closures and relocation of the Kern Canyon and Woodward Peak Trails were identified in the 2009 Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Record of Decision. This documents is not intended to revisit those decisions. This document provides site specific analysis of how the Forest Service proposes to implement the closure of unauthorized routes and mitigation of the resource concerns that were identified for the relocated segments of the two trails.

The proposed action is consistent with the 1988 Sequoia National Forest LRMP as amended by the SNFPA; the 1982 Kern River WW Floating Plan; and the 2009 Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project. In addition this project is consistent with the 1990 MSA.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

A Forest Service interdisciplinary team (IDT), consisting of Sequoia National Forest staff having a variety of natural resource management backgrounds, used information from scoping, in conjunction with field-derived resource data, to formulate a range of alternatives. Alternative development was also guided by and is consistent with direction of the LRMP as amended by SNFPA; the Kern River WW Floating Plan; and the Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project. The IDT considered two alternatives.

Alternatives Considered but Eliminated From Detailed Study

No public comments were received that provided information which required development of additional alternatives to the No Action and Proposed Action alternatives.

Alternatives Considered in Detail

Two alternatives are considered in detail in this document: the No Action and the Proposed Action.

Alternative 1 (No Action)

In the no action alternative, the sites of unauthorized routes would not be restored at three dispersed recreation areas in the Lower Kern Canyon or at one developed recreation site in the Greenhorn Mountains. The relocation of campsites and restoration of the vacated sites within one developed recreation site, as well as the rerouting of sections of two (2) OHV trails would not occur.

- Unauthorized routes and hill climbs would remain at the following sites: Black Gulch North, Black Gulch South, and China Garden. The proliferation and expansion of unauthorized routes would continue to impact sensitive resources.
- The interior access road and two associated campsites at Evans Flat Campground would remain in place with no changes. Conflicts among OHV users and the non-motorized public would continue as a consequence of unmanaged OHV use. Routes, leading away from the campground would remain. In many cases, these routes were developed across steep terrain on small hills.
- Continued OHV use of the Woodward Peak Trail (Trail #32E53) would increase the potential for erosion by channeling runoff and introducing sediment into the east fork of Greenhorn Creek. A section of the Kern Canyon Trail (Trail #31E75) would not be re-routed and impacts to sensitive resources in and adjacent to the trail corridor (e.g., from channeling runoff) would continue.
- Planned monitoring by OHV personnel and resource specialists on a routine basis would be lacking. Diligent effort would be made to provide a quality OHV riding experience while minimizing impacts to natural resources. However, current recreation management budgets are not adequate to patrol all of these developed and dispersed recreation sites during the peak summer use season.
- Areas would not be restored and treatments would not occur. No additional restoration work, resource protection measures, or treatments would be implemented. The combination of decommissioning and restoring the sites of user-created routes to provide a foundation for a safe, responsible, and well managed OHV riding experience, while minimizing impacts to natural resources, would not be implemented at the identified sites.

Alternative 2 (Proposed Action)

The proposed action includes the following restoration activities:

<u>Lower Kern Canyon and Greenhorn Mountains Restoration - First Phase</u>

Black Gulch North Dispersed Recreation Area:

1. Decommission and restore the sites of approximately 26 unauthorized routes and hill climbs within Black Gulch North Dispersed Recreation Area by scarifying, cross-ripping, re-contouring affected areas; installing water bars; and planting native vegetation along the route prism. Routes whose sites would be restored include: U01237, U01239, U01192, U01236, U01187, U01214, U01215, U01216, U01217, U01220, U01179, U01170, U01187, U01213, U01172, U01190, U01191, U01173, U01169, U01168, U01167, U01211, U01208, U01207, U01238, and U01165.
2. Site restoration activities would include breaking up compacted soils and vertical mulching with native materials to restore identified areas to natural conditions.
3. Some hard barricades, such as boulders, fences and/or pipe gates may be placed and/or constructed to limit vehicular access. Barriers and signage would be used to discourage further route proliferation.
4. Installation of approximately one mile of range fencing along both sides of Black Gulch Creek to protect the riparian corridor.
5. Complete restoration work using volunteers and a restoration crew in combination with a small trail dozer and conventional hand tools.
6. Install a gate on Forest Service Road #27S30A where it crosses through Black Gulch Creek. This road provides access to a mining claim and will only be available for administrative use (e.g. agency personnel and/or the mining claimant).

Black Gulch South Dispersed Recreation Area:

1. Decommission and restore the sites of approximately nine unauthorized routes and hill climbs within Black Gulch South Dispersed Recreation Area by scarifying, cross-ripping, re-contouring affected areas; installing water bars; and planting native vegetation along the route prism. Routes whose sites would be restored include: U01178, U01180, U01181, U01182, U01221, U01222, U01177, U01174, and U01219.
2. Some hard barricades, such as boulders, fences and/or pipe gates may be placed or constructed to limit vehicular access.
3. Site restoration activities would include breaking up compacted soils and vertical mulching with native materials to restore identified areas to natural conditions.
4. Barriers and signage would be used to discourage further route proliferation.
5. Complete restoration work using volunteers and a restoration crew in combination with a small trail dozer and conventional hand tools.

China Garden Dispersed Recreation Area:

1. Decommission and restore the sites of two unauthorized routes identified as U01059 and U01061.
2. Restore a portion of the Patch Corner Trail #31E82 from the dirt parking area down to the river.
3. Decommission and restore the sites of unauthorized routes along Forest Service Roads #27S37 and #27S37A, in an effort to restore approximately ¾ mile of the Patch Corner Trail #31E82 located within China Garden dispersed recreation area by scarifying, cross-ripping, re-contouring affected areas; installing water bars; and planting native vegetation along the route prism.
4. Some hard barricades, such as boulders, fences and/or pipe gates may be placed or constructed to limit vehicular access.
5. Site restoration activities would include breaking up compacted soils and vertical mulching with native materials to restore identified areas to natural conditions.

6. Barriers and signage would be used to discourage further route proliferation.
7. Complete restoration work using volunteers and a restoration crew in combination with a dozer, a small trail dozer and conventional hand tools.

Lower Kern Canyon and Greenhorn Mountains Restoration - Second Phase

Evans Flat Campground:

1. Relocate two campsites by removing both the picnic tables and fire rings at each campsite and install them in a new location within the campground's interior. Restore the vacated campsites to natural site conditions.
2. Decommission approximately 1/8 mile of the road which led to the two campsites.
3. Remove the existing cattle gate and relocate in the campground.
4. Install a pipe gate to prevent motor vehicle access to restored area. There would be no change to the remainder of the existing campground and its associated facilities.

Livestock gate located at Evans Flat Campground and proposed for relocation

Woodward Peak Trail (Trail #32E53):

Reroute approximately one mile of the trail to protect sensitive resources. The trail decommissioning and reroute will remove the stream crossing from the meadow. The new crossing will include an arch culvert or a squashed culvert to allow for aquatic organism

passage. Boulders will be placed to prevent use of the decommissioned trail segment, and the older trail prism will be further screened with hand-scattered slash or straw.

Kern Canyon Trail (Trail #31E75):

Reroute approximately two miles of the trail to protect sensitive resources. The 2 miles of the old trail will be closed, decommissioned, and restored. Boulders will be placed to prevent use of the decommissioned trail segment, and the older trail prism will be further screened with hand-scattered slash or straw. Water bars and other mitigations to protect soils and water quality will be placed where necessary.

Lower Kern Canyon and Greenhorn Mountains Restoration - Third Phase
Common to All Restoration Activities Identified in the Project:

1. Implement monitoring by OHV personnel and resource specialists on a routine basis to determine the effectiveness of the restoration efforts.
2. If restored areas are observed to require additional treatment, further restoration work and resource protection measures would be implemented, incorporating appropriate strategies to eliminate unauthorized OHV use.
3. Establish photo point monitoring and record observations prior to implementation of the project's activities. Pre and post project photos and observations would document bare soil, erosion, and vegetative conditions. These photo points and observations would determine if vegetative cover is increasing as a result of project activities.
4. Maintain a successful project outcome by using increased OHV patrols with citation authority to regularly conduct site visits to ensure greater compliance.
5. Utilize OHV patrols, Forest Protection Officers (FPOs) and Law Enforcement personnel for public contact purposes.
6. Implement use of Best Management Practices (BMPs) where ground disturbing activities are proposed.

MITIGATION MEASURES

- Restoration activities should be implemented outside of the riparian zones and capture project-generated sediment before it reaches the lake/river/streams where possible. The proposed reroute at Evans Flat would be located high in the watershed where there is little riparian vegetation. The new crossing would be at an ephemeral to intermittent channel. The proposed reroute would not remove any large riparian vegetation and should have little to no effect on the age class, structural diversity, composition, or cover of riparian vegetation.
- State certified Best Management Practices (BMPs) would be implemented (see Appendix A).
- All standards and guidelines associated with Riparian Conservation Objectives (RCOs) would be implemented as described in SNFPA 2004. See Appendix C: RCO Analysis.
- Measures to prevent noxious weed infestation would be enforced and monitored under appropriate contract clauses. Equipment will be free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds prior to entering the project areas.
- Measures for protection of known cultural properties would be enforced and monitored. Provisions would be incorporated in service contracts and implementation plans to assure that cultural resource damage during operations is avoided or minimized.

COMPARISON OF ALTERNATIVES

No Action - Unauthorized routes and hill climbs would remain at the following sites: Black Gulch North, Black Gulch South, and China Garden. Proliferation and expansion of these unauthorized routes would continue to impact sensitive resources. Restoration of an interior access road and two

associated campsites at Evan Flat Campground would not occur. Conflicts among OHV users and the non-motorized public would continue as a consequence of unmanaged OHV use. Routes leading away from the campground would remain. In many cases, these routes were developed across steep terrain on small hills. OHVs on the Woodward Peak Trail (Trail #32E53) would continue to indirectly create opportunities for erosion by channeling runoff and potentially introducing sediment into the East Fork of Greenhorn Creek. The proposed re-routing of a portion of the Kern Canyon Trail (Trail #31E75) would not be undertaken. Planned monitoring by OHV personnel and resource specialists on a routine basis would be lacking. However, current recreation management budgets are not adequate to patrol all these developed and dispersed recreation sites during the peak summer use season. Areas would not be restored, treatments would not occur, and no additional site restoration work or resource protection measures or treatments would be implemented.

Table 1 summarizes and compares the features of the No Action and Proposed Action alternatives.

Table 1: Features of the Alternatives

Proposed Activities	No Action	Proposed Action
Complete restoration work using volunteers and a restoration crew in combination with a small trail dozer and conventional hand tools	None	Black Gulch North Black Gulch South China Garden
Decommission and restore the sites of unauthorized routes and hill climbs by scarifying, cross-ripping, re-contouring affected areas; installing water bars; and planting vegetation along route prisms	None	Black Gulch North Black Gulch South China Garden
Place or construct some hard barricades, such as boulders, fences, and/or pipe gates to limit vehicular access	None	Black Gulch North Black Gulch South China Garden Evans Flat Campground
Break up compacted soils and use vertical mulching with native materials to restore identified areas to natural conditions	None	Black Gulch North Black Gulch South China Garden
Use barriers and signage to discourage further route proliferation	None	Black Gulch North Black Gulch South China Garden
Install approximately one mile of range fencing along both sides of Black Gulch Creek to protect the riparian corridor	None	Black Gulch North
Restore a trail from the dirt parking area down to the Kern River	None	China Garden
Install a gate on Forest Service Road #27S30A where it crosses Black Gulch Creek for administrative use	None	Black Gulch North
Relocate two campsites by removing picnic tables and fire rings found at each site to new locations within the interior of the campground. Restore vacated sites.	None	Evans Flat Campground
Decommission approximately 1/8 mile of road leading to the two campsites	None	Evans Flat Campground
Remove existing cattle gate and relocate within campground	None	Evans Flat Campground
Reroute sections of trail and restore sites to protect sensitive species.	None	Woodward Peak Trail Kern Canyon Trail

As displayed in Table 2, the action alternative addresses the need for the proposal. This alternative addresses the needs for: (1) closing and restoring the sites of non-system routes in the vicinity of Black Gulch North, Black Gulch South, and China Garden Dispersed Recreation Areas; (2) decommissioning approximately 38 unauthorized routes and hill climbs, as well as the old sections of two system OHV trails, by scarifying, cross-ripping, and re-contouring affected areas; (3) installing hard barricades, such as boulders, gates or fences to limit vehicular access to closed routes; (4) planting of native vegetation along route prisms to restore the landscape within heavily used recreation sites; (5) relocating campsites so use by forest visitors can continue, while restoring an

interior road and campsites that are vacated; (6) rerouting sections of two OHV trails for resource protection; (7) adding signage to discourage further route proliferation; and (8) monitoring by OHV personnel and resource specialists to determine effectiveness of the Project.

Table 2: Comparison of the Environmental Effects by Alternative

Feature	No Action	Proposed Action
Manage recreation sites to provide a means for visitor use to continue while protecting resources	None	Black Gulch North Black Gulch South China Garden Evans Flat Campground
Manage the forest transportation system and recreation facilities to focus on providing efficient routes adjacent to easily accessed and popular recreation sites	None	Black Gulch North Black Gulch South China Garden Evans Flat Campground
Establish partnerships where trail groups help manage, protect, and patrol in order to allow OHV enthusiasts and others alike a chance to contribute to the improved management of wheeled motor vehicle use and would result in all forest users being better served	None	Black Gulch North Black Gulch South China Garden Evans Flat Campground Woodward Peak Trail Kern Canyon Trail
Allow changes to the existing trail system to minimize trail degradation and to protect off-site resources. Restoration activities at or near recreation sites would complement efforts to maintain system trails	None	Black Gulch North Black Gulch South China Garden Evans Flat Campground Woodward Peak Trail Kern Canyon Trail
Improved signage at these sites, and along primary access roads and designated routes, to help disburse information, control congestion, and avoid conflicts	None	Black Gulch North Black Gulch South China Garden Evans Flat Campground Woodward Peak Trail Kern Canyon Trail

ENVIRONMENTAL CONSEQUENCES

EFFECTS RELATIVE TO SIGNIFICANCE FACTORS

Context and Intensity

Context

Significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, affected interests, and the locality. Significance varies with setting. In the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

In this case, proposed recreation facility improvements are limited to specific developed and dispersed recreation sites and trails located either in the Lower Kern Canyon or in the Greenhorn Mountains within the Sequoia National Forest. This is a site-specific action with minor localized effects on access and the resources in the area.

Activities protective of cultural resources, water quality, and threatened, endangered, and sensitive plant and animal species are included in the proposed action. In the context of short- or long-term effects, there are other recreation sites located on the Kern River Ranger District where similar improvements have been implemented. Observation and anecdotal evidence of the improvements

installed at Delonegha Bridge, Cyrus Canyon Off-Highway Vehicle Park, Camp 3 Campground, Brush Creek Flat, and the Johnsondale Bridge show that these improvements have not resulted in long-term adverse effects.

Intensity

The following were considered in evaluating intensity, or severity of impact, as defined by NEPA, 40 CFR 1508.27.

(1) Impacts may be both beneficial and adverse. A significant effect may exist even if, on balance, effects are believed to be beneficial. Ripping and obliteration of unauthorized routes has the potential to temporarily affect aquatic resources while soil displacement could cause an effect on watershed condition and aquatic habitat. Both were identified as possible short-term effects. By incorporating project design features such as water bars and other protection of soils, the potential for, and intensity of, adverse effect is considered low. Implementation of restoration treatments is expected to improve hydrologic resources over the long-term. Restoration activities at or near recreation sites would complement efforts to maintain system trails. The Project would also provide efficient routes for forest visitors who use these developed or dispersed recreation sites while protecting resources (see EA, pgs. 11 -14).

(2) The degree of effects on public health or safety. The proposed action would have the effect of reducing potential adverse conditions for public health and safety by closing and restoring the sites of unauthorized routes, improving access to and within recreation sites, and by providing hard barricades and signage to discourage route proliferation where there are none currently. Alternative 1 (No Action), on the other hand, would perpetuate the proliferation and expansion of these unauthorized routes, while failing to address risks to public health and safety, as well as to forest workers, as hill climbs and non-standard routes on steep terrain would remain. Planned monitoring by OHV personnel and resource specialists on a routine basis would be lacking. Conflicts among OHV users and the non-motorized public would continue as a consequence of unmanaged OHV use. (see EA, pg. 11).

(3) Unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. No park lands, prime farmlands, wetlands, or ecologically critical areas would be adversely affected by the proposed improvements. The Project area has been surveyed and analyzed for cultural resources. A total of twenty-four cultural resources have been identified within the area of potential effect (APE) from the proposed restoration measures. Under the no-action alternative impacts to cultural resources stemming from the use of unauthorized routes would continue unabated. The proposed action would directly benefit the resource by eliminating routes that bisect cultural resources and, by limiting route proliferation in the Black Gulch North, Black Gulch South, and China Garden project areas (route proliferation poses an impact to the integrity of setting and feeling of cultural resources located within its viewshed), the project could indirectly benefit cultural resources by restoring some of the landscape to a condition similar to its prehistoric and historic-period aspect. The proposed improvements would implement the direction in the 1982 Kern WW Floating Plan and are consistent with the Sequoia National Forest Land and Resource Management Plan (LRMP 1988) as amended by the Sierra Nevada Forest Plan Amendment Record of Decision, dated January 21, 2004. In addition, the proposed project would protect the ecological resilience of the natural and cultural resources, as well as Wild and Scenic River eligibility outstandingly remarkable values associated with the Lower Kern.

Evans Flat Campground interpretive sign noting historical nature of site

(4) The degree to which the effects on the quality of human environment are likely to be highly controversial. The effects of the proposed action on the quality of the human environment are not likely to be highly controversial because this project would close and restore the sites of unauthorized routes in the vicinity of Black Gulch North, Black Gulch South, and China Garden dispersed recreation areas. The Project area has been impacted by heavy recreation use, the proposal is limited in scope, and the project design features, including standard management requirements, are demonstrably effective in reducing impacts to national forest resources. The action alternative addresses the need for recreation facilities for all users; and would be beneficial by providing a foundation for a safe, responsible, and well managed OHV program that focuses on providing a quality OHV riding experience while minimizing impacts to natural resources (see EA pgs.11 - 14).

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. The conditions present in the Project area and the proposed action are similar to recreation facility improvement projects that have been implemented on the Sequoia National Forest in the past. BMPs have been shown to be effective in minimizing or eliminating off-site sediment transport when properly implemented. These effects have been monitored for several years and are displayed in annual forest reports (see Appendix B, Best Management Practices).

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The precedent for constructing recreation facility improvements has been well established in the Forest Service Manual and National Forest Plans. This action does not set a precedent for future actions or represent a

decision in principle about a future consideration. Future actions will be analyzed on their own merits in compliance with NEPA.

Regarding the potential for significant effects, the Sequoia National Forest has implemented such practices for many years. Projects are designed with protection measures to prevent adverse effects from occurring. Based upon the analysis of the proposed action alternative, as documented herein, none of the proposed activities should result in significant effects.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. In order to understand the contribution of past actions to the cumulative effects of the proposed action, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of prior human actions and natural events that have affected the environment and might contribute to cumulative effects. This analytical approach was taken to assure the inclusion of the residual effects of past human actions and natural events, regardless of which particular action or event contributed to these effects, and allows the analysis to "concentrate on the issues that are truly significant to the action in question" 40 CFR § 1500.1(b). Also, public involvement for the proposed project did not identify any public interest or need for detailed information on individual past actions. Finally, on June 24, 2005, the Council on Environmental Quality (CEQ) issued an interpretive memorandum regarding analysis of past actions, which states, "agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." The CEQ memorandum "Guidance on Consideration of Past Actions in Cumulative Effects Analysis" June 24, 2005, quoted above, is incorporated by reference. For these reasons, the analysis of past actions in this section is based on current environmental conditions.

No reasonable foreseeable actions were identified.

Cumulative Effects

Wildlife and Rare Plant Effects - The *Biological Evaluation and Resource Analysis for the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project* (Wildlife BE) (Anderson 2013) documents that no federally listed Threatened, Endangered or Sensitive species proposed for listing are affected by the proposed action or action alternatives. The Project is within the range of the California condor which is known to forage in the general vicinity of the southern San Joaquin Valley and occasionally roost in the Greenhorn Mountains north and west of the project area or south in the Breckenridge Mountains. There are cacti in the project area, but they were determined to be the common subspecies of prickly pear and not the federally protected Bakersfield cactus (*Opuntia basilaris treleaseii*). The project sites are within the range of several special status wildlife and plant species including the southwestern pond turtle, hardhead minnow, ensatina and slender salamanders, legless lizard, Pacific fisher, California spotted owl, and northern goshawk.

However, the location of the sites in moderate to heavily used existing recreation sites and the nature of the Project, which is focused on restoration of habitat in areas with existing heavy use, limits the potential for impacts and results in the determination that there will be no loss of suitable habitat or significant adverse effect that would result in a trend leading to listing or loss of viability for any sensitive species. Restoring the sites of rerouted trail sections will further improve habitat. Realignment of the trail and elimination of the existing stream crossing and campsites at Evans Flat Campground would have a potential beneficial effect. The *Biological Evaluation and Resource Analysis for the Lower Kern Canyon and Greenhorn Mountain OHV Restoration Project* (Wildlife BE) (Anderson 2013) is hereby incorporated by reference.

Management Indicator Species (MIS) - Management Indicator Species (MIS) for the Sequoia National Forest are animal species identified in the Sierra Nevada Forests Management Indicator Species (SNF MIS) Amendment Record of Decision signed December 14, 2007. The *Biological Evaluation and Resource Analysis for the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project* (Wildlife BE) (Anderson 2013) documents that no habitat monitored through Management Indicator Species would be adversely affected. Actions would take place within the habitats represented by yellow warbler, but no habitat would be removed or adversely affected by the project except a small area less than 0.1 acre that would be affected by the new trail stream crossing to replace the existing road crossing of the stream. The net effect would be to diminish by 50% the existing habitat alteration. The riparian enhancement proposed for Black Gulch North, would result in habitat improvement with a net gain of 1-5 acres. No suitable habitat monitored for sooty grouse would be affected by the proposed action. The *Biological Evaluation and Resource Analysis for the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project* (Wildlife BE) (Anderson 2013) is hereby incorporated by reference.

Watershed Effects - Based on the *Hydrology Working Paper for the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project* (Hydrology Report) (Stewart 2012) Alternative 1 (No Action) has the potential for continued motorized use on all unauthorized routes within the project area. With continued motorized traffic, increased peak flow effect would remain over the long-term because the road templates would continue to intercept and concentrate surface and subsurface runoff. Additionally, without vegetative recovery, unauthorized routes with continued motorized use would not show a decrease in erosion and sediment delivery to nearby stream channels. Instead routes would have the potential to continue to erode and deliver sediment to nearby stream channels. Erosion and sedimentation have the potential to increase if unauthorized routes remain untreated under the no action alternative.

The proposed action could help protect water quality and other designated beneficial uses. This would be completed through implementation of road and trail maintenance standards, as well as conservative measures to control erosion and sedimentation. The trail reroute near Evans Flat Campground would remove the stream crossing from the meadow while the new crossing would add an arch culvert to allow for aquatic organism passage. Best Management Practices (BMPs) as documented would be implemented and monitored during and following facility construction.

Cultural Resources - The proposed action would reduce the cumulative effect of future agency undertakings upon cultural resources in the Black Gulch North, Black Gulch South and China Garden project areas by limiting route proliferation and thus reducing the scope of any future agency undertakings to address the impact of unauthorized routes.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources.

Impacts to cultural resources will be avoided, according to standard protection measures outlined in II (A) of the *First Amended Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer, Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region* (Region 5 Programmatic Agreement, 2001), by establishing exclusion areas around the twenty-four archaeological sites located within or adjacent to the Project APE. Such exclusion areas would be flagged prior to project implementation and monitored by the heritage resources staff during the course of the project to ensure that no ground-disturbing restoration

measures occur within site boundaries. Hand-scattering slash or straw within site boundaries to promote natural restoration is permitted. Conducted within the parameters of these stipulations, the Project would not pose an adverse effect to cultural resources. If any new heritage resources are discovered during project implementation, operations will cease in the area of new discovery until adequate protection measures are agreed upon with SHPO.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. As discussed above in (7), according to the *Plant BA/BE* and the *Wildlife BE* (EA Appendix E) there is low to no risk to known threatened or endangered plants or wildlife species, (terrestrial or aquatic) in the Project area.

(10) Whether the action threatens a violation of Federal, State, or local law or other requirements imposed for the protection of the environment. None of the proposed activities would threaten violation of applicable Federal, State, or local environmental protection laws or requirements.

The effects of the action alternative are consistent with the 1990 *Sequoia National Forest Land Management Plan Mediated Settlement Agreement* (MSA). The MSA includes a set of resource protection/management guidelines/standards with which the Forest Service has agreed to comply when implementing resource management actions. The MSA is a settlement agreement stemming from appeals to the 1988 Sequoia National Forest Land and Resource Management Plan. Management requirements and constraints are set in place to protect wildlife, other resources, the public, and employees throughout the project area (See Appendix D: MR&Cs) during the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project. These requirements assure that project activities of all action alternatives are consistent with the LRMP, as amended by the SNFPA by following the standards and guidelines during project implementation. The effects of the action alternative are consistent with the 1990 *Sequoia National Forest Land Management Plan Mediated Settlement Agreement* (MSA).

The Forest Service Manual (FSM) provides additional National Forest Management Act (NFMA) management direction regarding species viability. FSM 2670.32 provides direction to avoid or minimize impacts to species whose viability has been identified as a concern. This includes federally listed threatened or endangered species, and Forest Service sensitive species. Effects on threatened and endangered species and critical habitat are noted in the discussion of cumulative effects presented above. The biological evaluation documented the determination that the proposed action would not lead to loss of viability or contribute to a trend leading to federal protection under the Endangered Species Act for Forest Service sensitive species, because there would be little or no impact to suitable habitat for southwestern pond turtles, hardhead minnow, yellow-blotched ensatina and slender salamanders (Kern Canyon, Greenhorn Mountain, or relictual), California legless lizard, Pacific fisher, California spotted owl, Shevock's golden aster and northern goshawk are known to occur in the surrounding area and may exist within or use the project area. The realignment of the trail and elimination of the existing stream crossing and campsites in Evans Flat Campground would have a beneficial effect. The No Action alternative would also not likely have a significant effect on populations of these species. No MIS habitat would be adversely affected.

The proposed action alternative (2) would comply with the Clean Water Act, by implementing watershed best management practices (BMPs). Applicable BMPs have been identified to maintain water quality and reduce potential for soil movement resulting from this project. According to the *Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project Hydrology Report*, the long-term effects on the hydrologic resources are expected to improve. This would be accomplished

by the closure and implementation of the restoration treatments on the unauthorized routes. Proper drainage on these features would reduce water concentration and runoff. Restoring the sites after closing unauthorized routes would return the sites closer to pre-disturbed condition faster. BMPs will be implemented and monitored. Along with these BMPs, implementation of the SNFPA Riparian Conservation Areas and Objectives, Sequoia National Forest Riparian and Wetland Standards and Guidelines, and Regional Soil Quality Standards and Guidelines have also been included as design criteria common to the proposed action alternative (Appendix D: Management Requirements and Constraints, Appendix B: Best Management Practices, and Appendix C: Riparian Conservation Objectives Analysis).

CONSULTATION AND COORDINATION - AGENCIES AND PERSONS CONSULTED

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

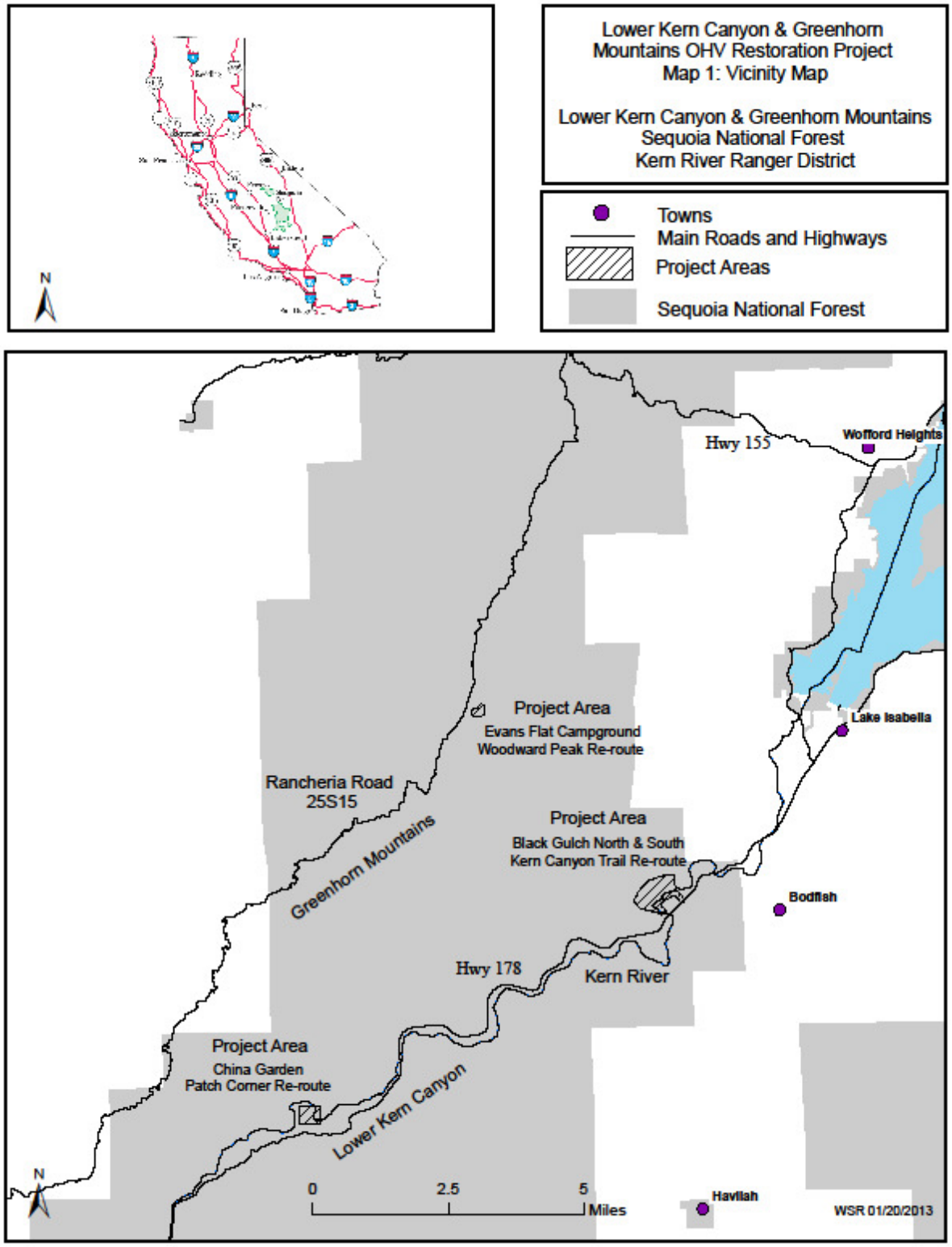
Interdisciplinary Team Members: Steve Anderson, Cheryl Bauer, Mary Cole, Dennis Dougherty, Bob Frenes, Mark Howe, Tim Kelly, Cody Norris, Roger Porter, Wendy Rannals, Steven Ray, Penelope Shibley, Chris Stewart and Mark Stieler.

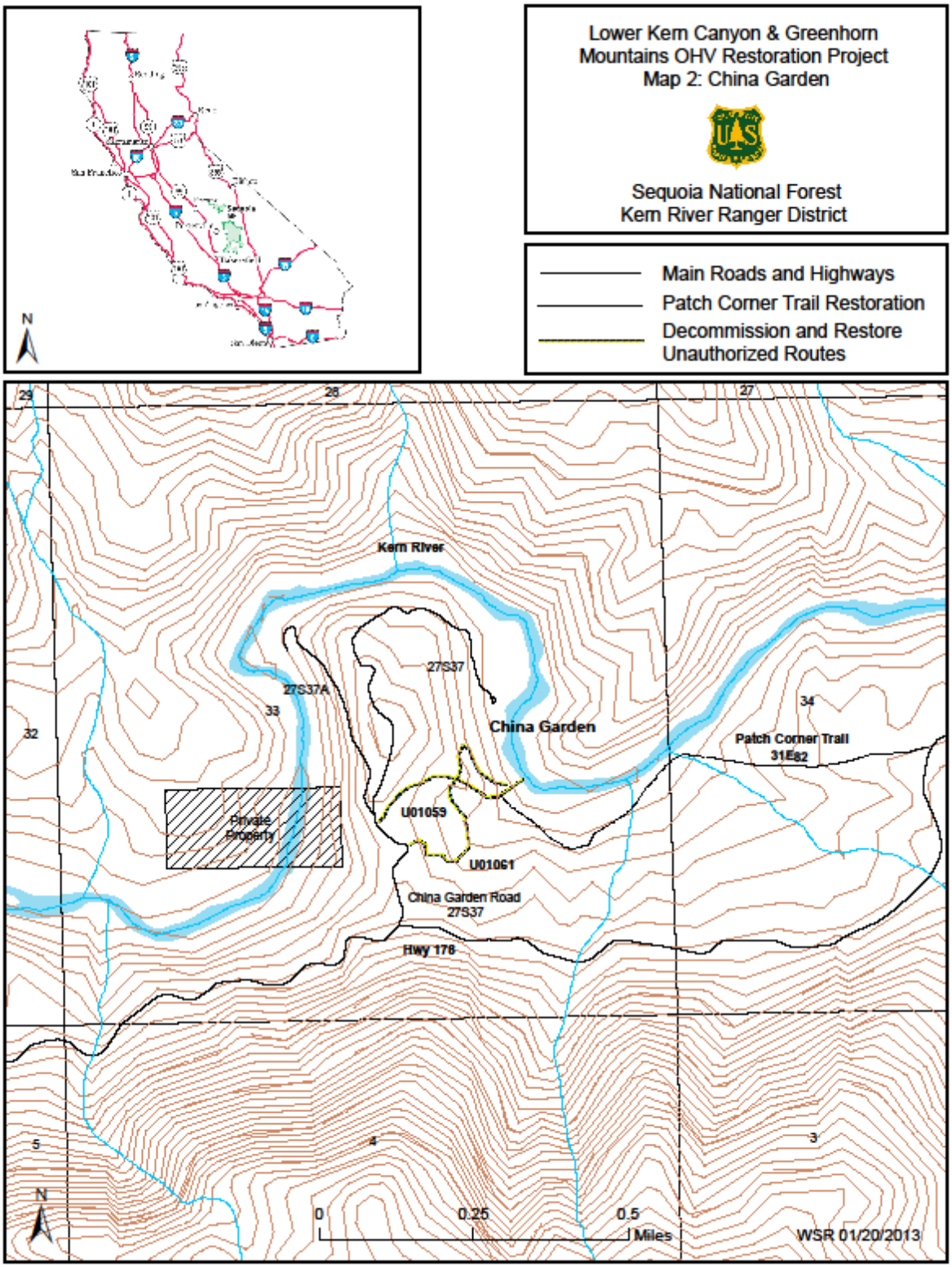
Other Agencies: Bureau of Land Management, California Department of Fish & Game, California Department of Parks & Recreation, California State Attorney General, and San Joaquin Valley Air Pollution Control Board.

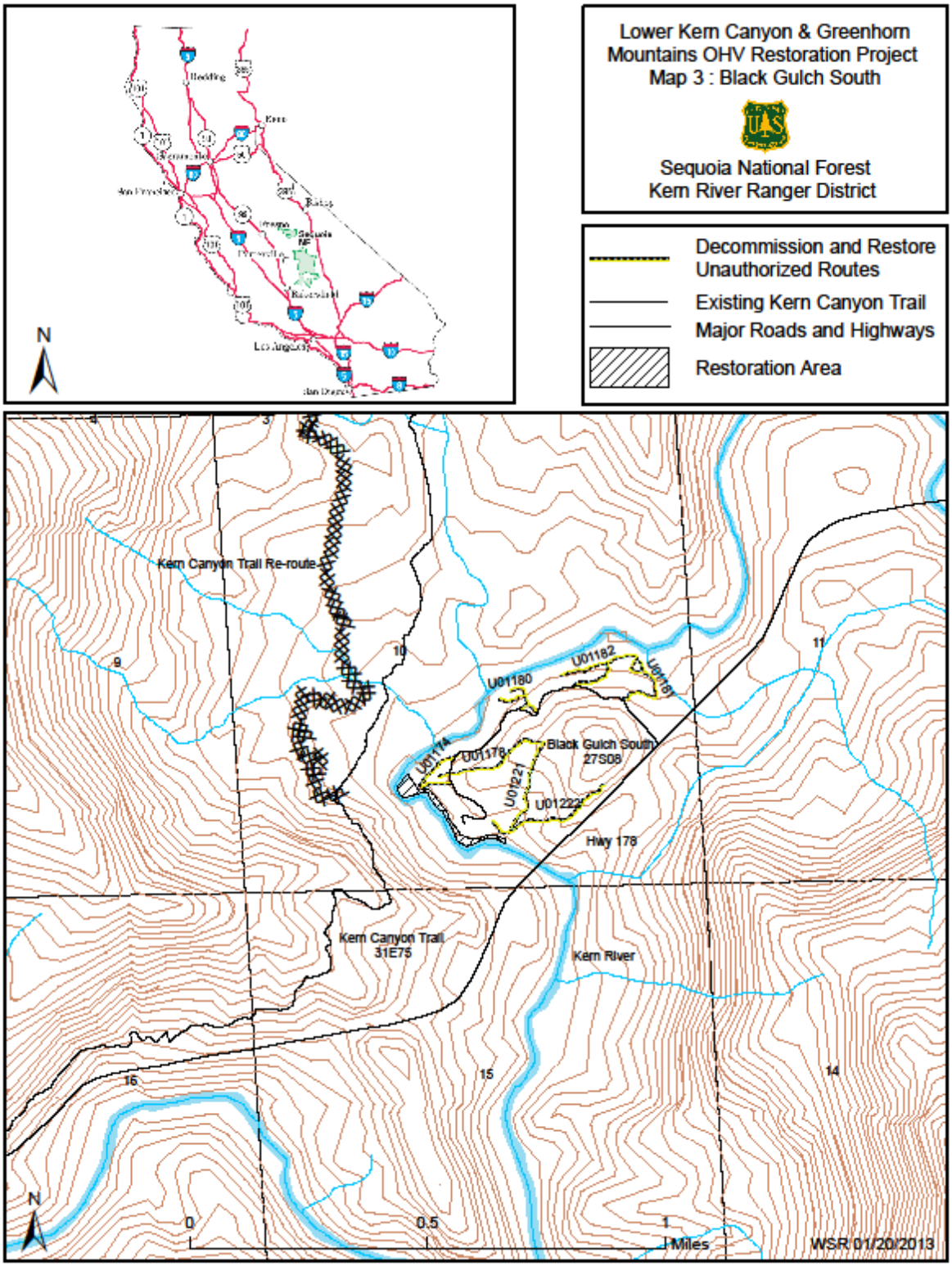
Tribes: Kawaiisu Tribe, Kern River Paiute Council, Kern Valley Indian Council and Community, Monache Intertribal Association, Tubatulabals of Kern Valley, and Tule River Tribal Council.

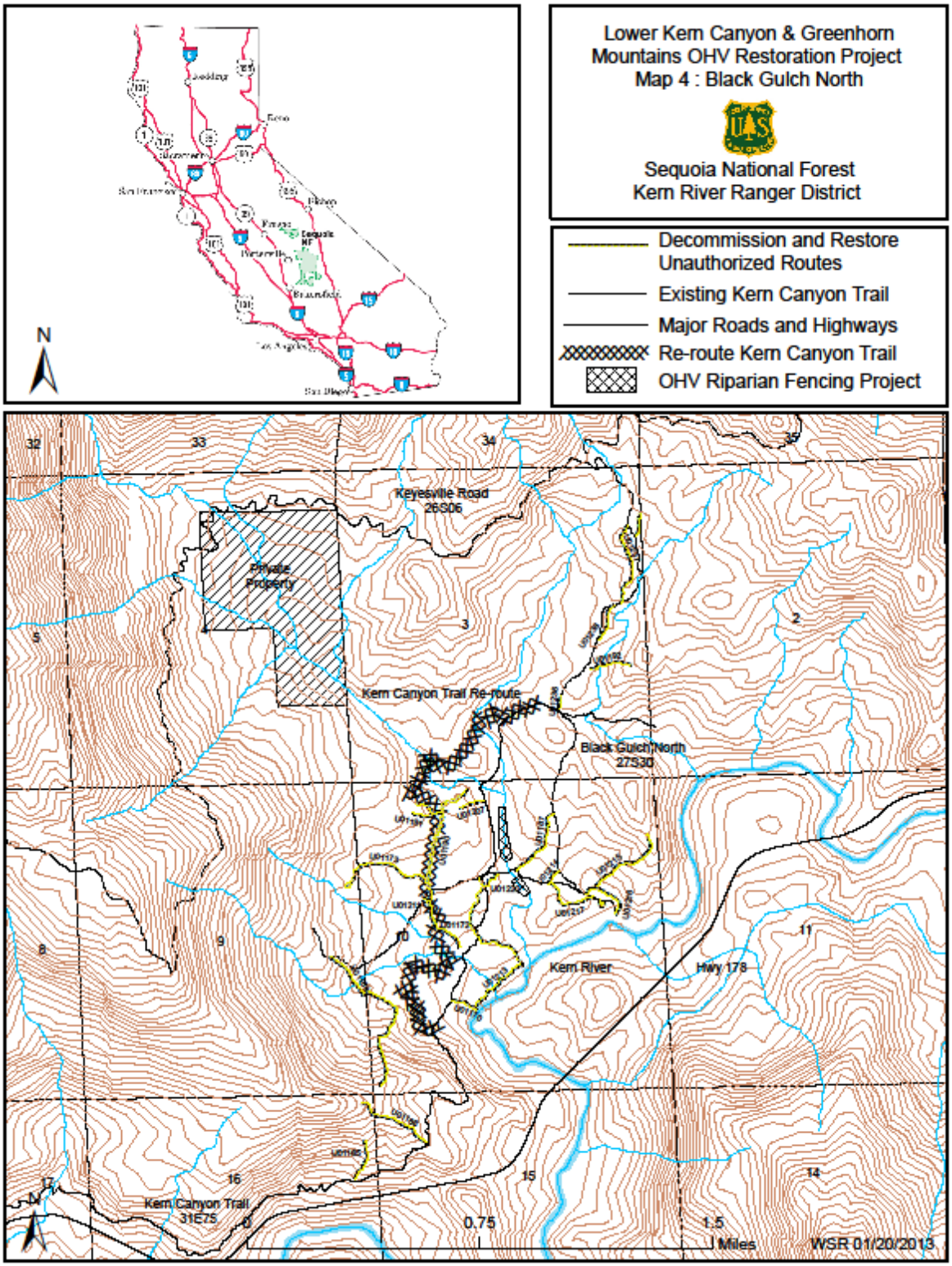
Others: California Cattlemen's Association, California Native Plant Society, California Trout, California Wilderness Coalition, California Land Management, Sierra Club - Sequoia Task Force, Sequoia Forest Keeper, California Lands Commission, Sierra Forest Products, Sierra Forest Legacy, Center for Biological Diversity, High Desert Multiple Use Coalition, California Association of 4WD Clubs, Southern California Edison, American Motorcycle Association, Kern Valley River Council, American Whitewater - California, Stewards of the Sequoia, Southern Sierra Fat Tire Association, Kern Valley Hiking Club, the Kern Outfitters, as well as several Backcountry Horsemen of California units and Off-Highway Vehicle (OHV) clubs who use the Lower Kern Canyon, Greenhorn Mountains, and other recreation areas.

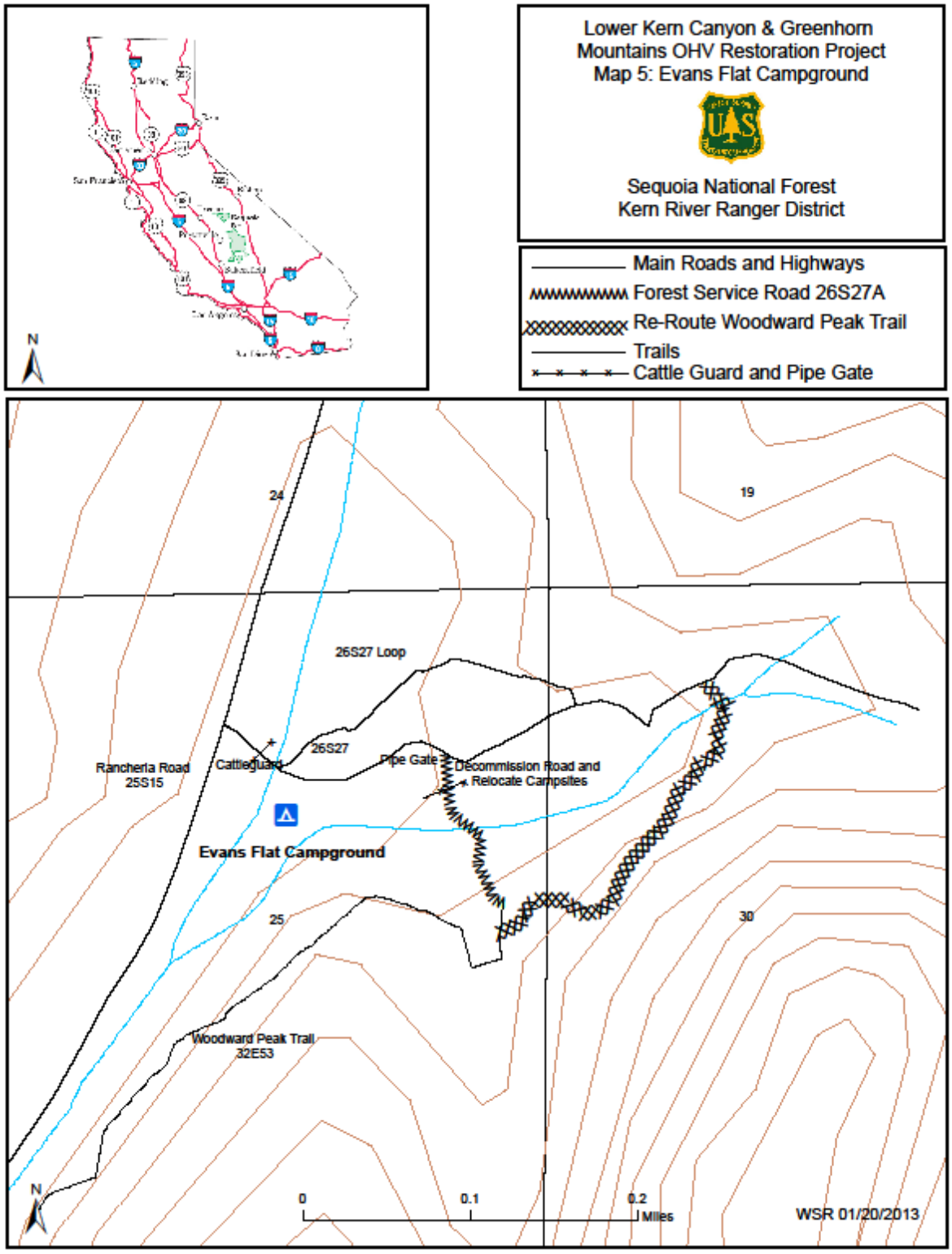
MAPS
MAP 1: VICINITY MAP




Lower Kern Canyon & Greenhorn Mountains OHV Restoration Project
Map 2: China Garden
Sequoia National Forest
Kern River Ranger District
Main Roads and Highways
Patch Corner Trail Restoration
Decommission and Restore Unauthorized Routes
N
29
28
27
Kern River
27S37
27S37A
33
32
34
China Garden
Patch Corner Trail
31E82
Private Property
U01059
U01061
China Garden Road
27S37
Hwy 178
5
4
3
0
0.25
0.5
Miles
WSR 01/20/2013


Lower Kern Canyon & Greenhorn Mountains OHV Restoration Project
Map 3 : Black Gulch South
Sequoia National Forest
Kern River Ranger District
Decommission and Restore Unauthorized Routes
Existing Kern Canyon Trail
Major Roads and Highways
Restoration Area
N
Kern Canyon Trail Re-route
U01180
U01182
U01178
U01221
U01222
Black Gulch South 27S08
Hwy 178
Kern Canyon Trail 31E75
Kern River
9
10
11
14
15
16
0
0.5
1
Miles
WSR 01/20/2013


Lower Kern Canyon & Greenhorn Mountains OHV Restoration Project
Map 4 : Black Gulch North
Sequoia National Forest
Kern River Ranger District
Decommission and Restore Unauthorized Routes
Existing Kern Canyon Trail
Major Roads and Highways
Re-route Kern Canyon Trail
OHV Riparian Fencing Project
N
Keyesville Road 26S06
Private Property
Kern Canyon Trail Re-route
Black Gulch North 27S30
Kern River
Hwy 178
Kern Canyon Trail 31E75
0.75
1.5
Miles
WSR 01/20/2013


Lower Kern Canyon & Greenhorn Mountains OHV Restoration Project
Map 5: Evans Flat Campground
Sequoia National Forest
Kern River Ranger District
Main Roads and Highways
Forest Service Road 26S27A
Re-Route Woodward Peak Trail
Trails
Cattle Guard and Pipe Gate
N
24
19
26S27 Loop
26S27
Cattleguard
Pipe Gate
Decommission Road and Relocate Campsites
Rancheria Road 25S15
Evans Flat Campground
25
30
Woodward Peak Trail 32E53
0
0.1
0.2
Miles
WSR 01/20/2013

APPENDIX A: Response to Comments

On March 6, 2013, the Preliminary EA for the Project was released for public review and comment, with a legal notice published in the newspaper of record (the *Porterville Recorder*). Documents were sent to the twelve respondents who had participated in the initial scoping process. The comment period closed on April 5, 2013. The District Ranger received responses from two individuals, two conservation groups, and one state agency, which are filed in the project record at the Kern River Ranger District Office. The respondents were:

C-1 Rene Voss, representing Sequoia ForestKeeper and the Kern-Kaweah Chapter of the Sierra Club (3/15/2013)
C-2 Neil Olsen (2/27/2013)
C-3 Jeffrey Single, representing State of California Department of Fish and Wildlife (4/2/2013)
C-4 Mesonika Piecuch, representing ORV Watch, Kern County (3/8/2013)
C-5 Harold Sprayberry (3/29/2013)

Comment	Response
C- 1a: Thank you for the opportunity to comment on the proposed Lower Kern Canyon and Greenhorn Mountains Off-Highway Vehicle (OHV) Restoration Project EA. Sequoia ForestKeeper (SFK) and the Kern-Kaweah Chapter of the Sierra Club (SC) are generally supportive of efforts to close or restore areas damaged by OHVs to avert erosion, to deter illegal uses, to protect natural resources, and to reduce user conflict with non-motorized uses.	Supportive comment.
C-1b: SFK & SC support the restoration aspects of this project except the proposals to build reroutes for the Kern Canyon and Woodward Peak Trails. They urge the Forest Service to drop those aspects of the proposal but proceed with the remaining aspects.	Rerouting sections of two OHV trails, one mile of the Woodward Peak Trail (Trail #32E53) and two miles of the Kern Canyon Trail (Trail #31E75), would reroute the existing trail system in order to eliminate resource damage that is occurring. The Project will provide motorized opportunities, while protecting sensitive resource (EA p. 17) The mitigation measures for this project are designed to reduce potential impacts to natural resources. See EA, p. 14.
C-1c: Moreover, they also urge the Forest Service to improve signage and take a closer look at user conflicts on these multiuse trails.	The Project will add signage along primary access roads and travel routes, and at trailheads, to help disburse information, control congestion, and avoid user conflicts. Improved signing is a simple and inexpensive way to address safety and user conflict problems and would result in all forest users being better served. See EA, p. 6, 12-14. Rerouting 1 mile of the Woodward Peak Trail (Trail #32E53) will move it away from campsites at Evans Flat to reduce conflicts (EA p. 13-14).
C-1d: The re-routing of the existing Kern Canyon and Woodward Peak Trails should be removed from this decision because they are not authorized and will do more harm than good.	The Woodward Peak Trail (Trail #32E53) and the Kern Canyon Trail (Trail #31E75) are part of the Sequoia National Forest's transportation system. See EA, p. 3. The type of motor vehicle use allowed on these trails was not changed in the Sequoia National Forest Motorized Travel Management Project (2009). Rerouting sections of these trails will protect sensitive resources, and help protect water quality and other designated beneficial uses. See EA, pp. 20-22.

Comment	Response
C-1e: First, the Sequoia National Forest Travel Route Management Plan (2010) is incomplete because the 36 C.F.R. §212, Subpart A has not yet begun, which is required for the Forest Service to determine whether or not these trails should continue to be used by OHV use. Therefore, the Forest Service should delay the decision of any new ground-disturbing activities in the form of rerouting the Kern Canyon Trail (31E75) and the Woodward Peak Trail (32E53) until the Subpart A analysis has been completed, especially where the activities would cut a new route into undisturbed areas (more on this below).	Outside the scope of project. The purpose of the Sequoia National Forest Motorized Travel Management Project (2009) was to implement provisions of Subpart B of the 2005 Travel Management Rule (36 CFR Part 212). That project was considered in a separate environmental review process with a record of decision in 2009. The travel analysis process required by Subpart A of the Travel Management Rule will analyze current system roads but not motorized trails (except as affected by roads); the report generated for this analysis does not include a decision, but rather identifies opportunities to carry forward into future environmental analyses..
C-1f: Moreover, the Sequoia National Forest Travel Route Management Plan (2010) only authorizes the route system in locations of the Kern Canyon Trail and Woodward Peak Trail where they currently exist, and does not provide authorizations for new routes in different locations without an amendment of that plan.	The Sequoia National Forest Motorized Travel Management FEIS (p. 370) states "*Road and trail maintenance and construction are essential for creating and managing a cohesive motorized recreation system… In the long term, a lack of maintenance could result in the closing of routes in order to prevent resource damage.*" The decision for the Travel Management Project in 2009 did not preclude the closure, rerouting, or site restoration of either unauthorized or system roads and trails in future travel management actions. See EA, p i. The rerouting of sections of the Kern Canyon Trail and Woodward Creek Trail does not constitute adding new routes as the existing segments will be decommissioned, and would protect sensitive resources while maintaining motorized use on these popular trails. The EA has been modified to clarify that sections of Woodward Peak Trail #32E53 and the Kern Canyon Trail #31E75 will be closed and their sites restored to protect sensitive resources. See EA, p. 13-14. The maps have been modified to clarify the closure and decommissioning of the old route sections (Maps 3-5, pp. 25-27).
C-1g: It is unclear what is being proposed with respect to the Kern Canyon Trail rerouting proposal. From the map of the Kern Canyon Trail reroute on p. 27 of the PEA, it appears that the Forest Service does not plan to close and restore the old section of the Kern Canyon Trail and that the Forest Service will continue to have two parallel trails open. This impression may be caused by the inadequacy of the map, which is nearly impossible to read and therefore incomprehensible. For example, the present Kern Canyon Trail is not highlighted yellow, which leads the reader to assume that both the original and rerouted sections will be available to users. If, however, the map is correct, the action proposed would not be authorized by the Travel Management Plan because it creates a new trail in addition to the existing trail. SFK & SC urge the Forest Service to provide the public with an adequate and accurate map and explain whether or not the existing trail will remain open.	The maps have been corrected to more clearly display the closure and decommissioning of the old route sections (Maps 3 -5, pp. 25-27). During project implementation, the section of the Kern Canyon Trail (Trail #31E75) proposed for rerouting would be closed to public use. The new section would open following the project's completion. The old trail section would be closed to all public use and the site restored. Implementation of the Kern Canyon Trail (Trail #31E75) reroute will not result in two parallel trails being left open for public use. The EA has been modified to clarify that a one-mile section of the Kern Canyon Trail (Trail #31E75) will be closed and its site restored to protect sensitive resources. See EA, p. 13-14.

Comment	Response
C-1h: The PEA never provides an explanation for why rerouting the Kern Canyon Trail is necessary. C-1i: At least for the Woodward Peak reroute, there is a cursory explanation: "The trail reroute at Evans Flat Campground would remove the stream crossing out of the meadow and the new crossing would install an arch culvert which would allow for aquatic organism passage." PEA, p. 41. No similar explanation, however, is evident anywhere in the PEA for the Kern Canyon Trail. C-1j: Before new ground is broken for a trail reroute, which would permanently scar the contour, result in new potential for erosion, and potentially adversely affect rare plants, the Forest Service must provide an adequate explanation for why it is preferable to cut the new trail over improving the trail at its existing location. Without this explanation, the rerouting decision is arbitrary. C-1k: With respect to rerouting both trails, SFK & SC have concerns over increased erosion and sedimentation from breaking new ground.	The proposed reroutes of the Kern Canyon Trail (Trail #31E75) and Woodward Peak Trail #32E53 and closure of unauthorized routes will protect sensitive cultural resources, and help protect water quality and other designated beneficial uses. See EA, pp. 20-22. Exact locations of cultural sites cannot be released to the public due to confidentiality of site information. Best Management Practices (BMPs) have been shown to be effective in minimizing or eliminating off-site sediment transport when properly implemented. Project-applicable BMPs described in Appendix B of the EA would be implemented and monitored during and following facility construction.
C-1l: SFK & SC have experienced and documented the rerouting of the Freeman Creek trail using bulldozers with five-foot wide blades when told the project would be a simple trail maintenance project. They are concerned that such equipment would be used again to create a trail up to six feet wide with up to four-foot high contour cuts into the hillsides so OHVs can ride on a relatively flat trail. Bulldozing the trail will forever alter sediment flows and change the hydrologic function of the soil in the area of the trail. Many trees, especially oaks, were cut by the crew that cut the trail through the Freeman Creek grove. Here, however, there is no disclosure of whether the rerouting proposals for the Kern Canyon and Woodward Peak trails entail cutting live trees. This must be disclosed and the effects must be analyzed. The following photographs show the equipment used and the damage caused in the Freeman Creek Trail Maintenance Project in June and July of 2006. SFK & SC would like the Forest Service to avoid this type of unnecessary damage in this project.	The first phase of the Project includes closing and restoring the sites of heavilty impacted non-system routes in the vicinity of Black Gulch South, Black Gulch North, and China Garden dispersed recreation areas. Project implementation would include the use of a small trail dozer and conventional hand tools to decommission and restore the sites of unauthorized routes and hill climbs, as well as the old sections of two system OHV trails, by scarifying, cross-ripping, and re-contouring affected areas; installing water bars; and planting native vegetation along the route prisms. See EA p. 12. Project implementation requires compliance with all applicable Best Management Practices (BMPs). Implementing these BMPs would prevent or minimize the potential for sediment and erosion from sites during the construction of the rerouted sections of OHV routes and the site restoration for the closed routes. See Appendix B of the EA for a detailed description of all applicable BMPs. No live trees would be removed in the implementation of this project; however, brush and shrubs may be removed.

Comment	Response
C-1m: The routes where OHV are permitted must be designated by better signage that indicates that these specific routes are designated for OHV's. Such signage is not currently present, yet motorized users are clearly evident based on the ground disturbance that results when these OHVs widen the trail as they drive off the route. For example, it is clear that there is no signage to designate 32E49 as an OHV designated route, but OHVs definitely use this area. (32E49 is not discussed in this PEA, but it is an example of the routes that are poorly signed and being damaged by OHVs that do not stay on the trails even if they are designated.)	The proposed action addresses the need to improve signage in the project area. See EA p. 6. The Project will add signage along primary access roads and travel routes, and at trailheads, to help disburse information, control congestion, and avoid user conflicts. Improved signing is a simple and inexpensive way to address safety and user conflict problems and would result in all forest users being better served. Project activities include adding barriers and signage to discourage further route proliferation. See EA p. 12-14.
C-1n: While the PEA claims to have addressed the issue of user conflicts, it concludes that user conflicts are outside the scope of this project because the Sequoia Travel Management Plan allows OHV use.	The EA addresses the issue of user conflicts. It states public safety would be improved by eliminating those unauthorized routes that cross each other and cross or closely parallel National Forest Transportation System (NFTS) roads. Deleting roads and trails, and changing use type on existing trails may decrease problems such as noise and dust, as well as the potential for user conflicts (Sequoia National Forest Motorized Travel Management/Motorized Vehicle Route Designation Project, pgs. 364, 365, and 437). See EA p. 8.
C-1o: The PEA, however, fails to address the Forest's responsibility to minimize both user conflict and resource damage, both of which OHVs continue to produce.	The purpose of the Project is to both improve and enhance resources where needed and restore recreation areas, while continuing to improve and sustain quality recreation opportunities. See EA p. 4. See Response C-1n. A detailed description of the activities included in the proposed action is in the EA on pp. 11-20.

Comment	Response
C-1p: Forest Service employees have, for years, been receiving comments of concern about the conflicts encountered, apprehensions, philosophical aversions, reduction or loss of the experience sought, and safety considerations expressed by hikers, back packers, and horsemen (non-mechanized users of the trails) when sharing trails with mechanized equipment users of trails. Moreover, organizations and individuals, including SFK & SC, have reported their concerns over the years about the lack of safety and tranquility when high-speed motorized vehicles and bicycles share trails with non-motorized users. The Forest Service has documented many current objections about multiple-use trails in the Sequoia National Forest Trail Plan FEIS, on page 5 paragraph 3, under "Trail Use", where it states that, "Many people expressed concerns with shared use, especially on trails where motorized users, bicycles, horses, hikers, or skiers are mixed together." The motorized-users' intimidation of non-motorized users has, by itself, caused the loss of the experience sought by hikers, back packers and horsemen. Non-motorized trail users have stated that by requiring the coexistence of motorized and non-motorized trail access in the National Forest, the Forest Service is not fulfilling its obligation to manage the National Forest so as to avoid or even minimize user conflict. The PEA analysis entirely fails to discuss user conflicts from motorized vehicles on non-motorized user on the Kern Canyon or Woodward Peak Trails.	Existing system routes and motorized uses are authorized under the existing SQF Motorized Travel Management project. See Response C-1n.
C-1q: Moreover, the PEA analysis also fails to discuss the effects of noise from OHVs on non-motorized users who are seeking a quiet forest experience. These types of analyses are not outside the scope of this project and must be addressed in the PEA.	Existing system routes and motorized uses are authorized under the existing SQF Motorized Travel Management project. Restoration of unauthorized routes and relocation of existing trails as proposed, and changing use type on existing trails may decrease problems such as noise and dust, as well as the potential for user conflicts. See EA p. 8.
C-2a: I have read the Environmental Assessment for the Lower Kern Canyon OHV restoration project and I have to say that I am rather shocked by the recurring theme of barriers, boulders, gates and fences.	Existing system routes and motorized uses are authorized under the existing SQF Motorized Travel Management project The Project will close and restore the sites of non-system routes in the vicinity of Black Gulch North, Black Gulch South, and China Garden Dispersed Recreation Areas. The proposed action includes placing some hard barricades, such as boulders and/or fences to prevent vehicular access to closed routes. Barriers and signage would also be used to discourage further route proliferation. See EA p. 4. Without these types of restoration activities, the proliferation and expansion of unauthorized routes would continue to impact sensitive resources.

Comment	Response
C-2b: I am especially concerned about the gate that will be installed at the crossing of Black Gulch creek on Forest Service Road #27S30A. For some reason, this part of the proposed project was grouped with the China Garden area of the project. I feel that this was done intentionally to mislead the people because this gate will actually block access to much of the Black Gulch North Recreation Area and adjoining river frontage while only allowing access for Forestry personnel and one other individual. The environmental assessment states that "this is a site specific action with minor localized effects on access." The way I see it, placing a gate on the main thoroughfare through Black Gulch North will have a major effect on access. The general public has already lost too many areas where they can go to enjoy the lower river.	Forest Service Road #27S30A was mistakenly listed in the draft EA as part of the China Garden dispersed recreation area. It is actually part of the Black Gulch North dispersed recreation area and this has been corrected in the Final EA (p. 12, 15). However, all restoration and closure activities identified for this road were correctly listed. Project implementation will install a gate on Forest Service Road #27S30A where it crosses Black Gulch Creek. This road was designated as administrative use only in the 2009 Sequoia National Forest Motorized Travel Management Project. While the road does provide access to a mining claim, the miner would need to have a current Plan of Operation on file with the Forest Service to use the road as part of his or her mining activities. Forest Service Road #27S30 will continue to serve as the primary route into Black Gulch North and remains open to public access. (EA p. 12)
C-2c: Some of these roads have been here since the Gold Rush days and they themselves should be considered historic.	An archaeologist considered the potential impacts to historic cultural resources. None of the routes affected by the project are old enough (50 years or older) to be treated as historic properties, and none of the project work would affect cultural resources. Proposed activities would tend to remove modern impacts on the landscape and restore the project area to a condition more similar to its aspect during historic times. In this sense the project is a benefit to cultural resources associated with the Gold Rush mining industry. (EA p. 20-21)
C-2d: I have always considered the Black Gulch area to be one of the most beautiful areas of the valley and it would be a travesty to see it ruined with boulders, gates, and fences, not to mention the ripping and shredding that will be caused by the bulldozers.	Restoration activities will include breaking up compacted soils and vertical mulching with native materials to restore the sites of old sections of old OHV routes back to their natural condition. Some hard barricades, such as boulders, fences, or pipe gates may be placed or constructed to limit vehicular access. Barriers and signage would be used to discourage further route proliferation. A detailed description of the activities included in the proposed action is in the EA on pp. 11-20.
C-2e: This area was once devastated by mining operations and has since recovered almost entirely on its own, but if the Forest Service follows through with its plan, this area will only become a prime example of Government waste and mismanagement.	The Project addresses the needs to manage developed recreation sites and the road system to assure resource protection; provide safe access and accommodate management needs; establish partnerships with trail groups to help manage, protect, and patrol those areas where they can be an influence; allows changes to the existing trail system to eliminate resource or facility damage; prevent user conflicts; place or construct some hard barricades, such as boulders or fences to limit vehicular access to closed routes; and improves signage within recreation sites. A detailed description of the activities included in the proposed action is in the EA on pp. 11-20.
C-2f: Fencing off Black Gulch Creek could have a dire effect on predatory animals such as mountain lions, bobcats, foxes and coyotes. Any one of these animals could sustain injury while chasing smaller prey through this fence. A broken bone or infected wound is usually a death sentence for a wild animal. Fencing will become a barrier for other animals such as deer and bears.	Properly designed fencing is not a barrier to these animals and will improve riparian habitat. (Appendix E, p. 62, 66).

Comment	Response
C-2g: Cows will be routed along the fence line causing an erosive trail that will contaminate the creek.	Cows currently use the riparian area and follow the intermittent stream channel. Fencing will actually provide a buffer for the riparian area and will improve habitat. (Appendix E, p. 62, 66).
C-2h: The fence itself could gather debris during a flooding event and actually change the natural course of the stream.	Fences can gather storm debris. Standard Best Management Practices (BMP's) require maintenance of drainage stuctures, and require any material resulting from project activities causing obstruction of storm flows to be removed. (Appendix B, p. 40)
C-2i: As for boulders, you only need to look at what has already been done in the China Garden area. The boulders placed here greatly detract from the beauty of the natural landscape and are a distracting eyesore as you drive by on Highway 178. I would hate to see this happen in Black Gulch.	Some hard barricades such as boulders will be placed to limit vehicular access in all three dispersed recreation areas. See EA pp. 11-13. Barriers and signage will also be used to discourage further route proliferation. The protection of visual quality values was considered in the development and analysis of project activities. See EA p. 8. No adverse effects are anticipated.
C-2j: Scarifying, cross-ripping and re-contouring does not sound pleasant, and it isn't when look at places where this has already been done. If you look at the picture on page 4 of the EA, you can see that a simple sign seems to help. This picture appears to show a once popular route now covered with grass.	The Project calls for a variety of practices, including scarifying, cross-ripping, re-contouring affected areas where needed; installing water bars; and planting native vegetation along the route prisms to restore old routes to natural conditions. Natural reseeding will also occur in some areas. Barriers and signage will be used to discourage further route proliferation. See EA p. 12.
C-2k: The Forest Service states that much of this proposed action is to help avoid conflict among users but when you force more people into smaller areas this will only create <u>more conflict.</u> When this conflict gets out of hand it will create a strain on Law Enforcement and lead to an increase in undesirable incidents.	Outside the scope of the project since system routes were identified by the Sequoia National Forest Motorized Travel Management project. The Project will close and restore the sites of non-system routes in the vicinity of Black Gulch North, Black Gulch South, and China Garden Dispersed Recreation Areas. This project will also reroute sections of two popular OHV routes, restoring the sites of the old sections to protect sensitive resources. See EA p. 2. See Response C-1p. The EA states if restored areas need additional treatment, further restoration work and resource protection measures will be implemented, incorporating appropriate strategies to eliminate unauthorized OHV use. See EA p. 14. The Forest Service will use OHV patrols, Forest Protection Officers (FPOs), and law enforcement personnel for public contact purposes.
C-2l: I see a couple of other things wrong with this EA. First, these areas should not have been grouped together. Black Gulch, China Garden and Evans Flat are too far apart from one another to be considered under one circumstance.	The three dispersed recreation areas include in the Project are located geographically near one another. The purpose and need for the project, as well as the restoration activities are the same or similar in the three areas and have been combined for efficiency in both planning and implementation. See EA p. 17.

Comment	Response
C-2m: Second, it doesn't seem to mention costs. Moving in boulders, building and installing fences and gates, the continual upkeep and replacement, and the monitoring of such devices becomes an ever increasing burden on the Tax Payer. I do not like seeing the peoples' money spent blocking them from using public land.	The purpose of the Project is to both improve and enhance resources where needed and restore recreation areas, while continuing to improve and sustain quality recreation opportunities. See EA p. 4. Closure and restoration activities are identified in the EA. See EA pp. 11-14. Monitoring will be performed by OHV personnel and resource specialists, most likely using available funding from a restoration grant. The grant was awarded to the Sequoia National Forest through the State of California Off-Highway Motor Vehicle Division Grants & Agreements Program.
C-2n: I realize that with all the rules and regulations the Forest Service must abide by, it is hard to please everyone. I just hope that this sudden onslaught of projects in the Kern River Ranger District is not an attempt to inflate someone's budget ahead of the looming budget cuts.	The Kern River Ranger District staff has worked diligently to complete required environmental documentation for recreation and OHV-related projects. This step must be completed prior to projects being considered for federal or non-federal funding sources. The Project expects to use funding from a restoration grant from the State of California Off-Highway Motor Vehicle Division Grants & Agreements Program.
C-2o: In closing I would like to say that being of Native American decent, I feel that the land belongs to all living things and should be shared by all living things. My ancestors have lived in this area for thousands of years and I am saddened by the fact that I will never know the freedom my ancestors once had. What is worse is my descendents will never know the freedom I once had.	While these concerns are important, they are outside the scope of this specific project.
C-2p: After reading the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project Environmental Assessment I have to ask the Forest Service to please choose Alternative 1 (No Action). I feel this would be the best choice for everyone.	The Deciding Official looked at two alternatives for the Project. The Decision Notice and Finding of No Significant Impact selects Alternative 2 for implementation and discusses the reasons and rationale for this decision.
C-3a: Though the Project area is disturbed, the Department has concerns regarding potentially significant Project-related impacts to flora and the Kern River and associated riparian habitat. Specifically, the Department is concerned with the potentially significant impacts to the California Rare Plant Rank 1B listed pale-yellow layia (*Layia 35eterotricha*), Kern River evening-primrose (*Camissonia integrifolia*), Shevock's golden-aster (*Heterotheca shevockii*), and rose-flowered larkspur (*Delphinium purpusii*). The Project's Biological Assessment and Biological Evaluation (BA/BE) states surveys were conducted in fall 2011 and spring 2012 for special status species, but it is unclear what type of surveys were conducted.	Shevock's golden aster has been historically documented in the Sandy Flat Day Use Area. Botanical surveys were conducted in the project area for rare plants including pale-yellow layia, Kern River evening primrose, Shevock's golden-aster, rose-flowered larkspur, calico monkey-flower, and Greenhorn fritillary. None of these plants were found during the surveys in 2013. The Biological Evaluation (BE) has been modified to document these results. The BE in Appendix E discusses the potential for effects to the pale-yellow layia, Kern River evening primrose, Shevock's golden aster, and androse-flowered larkspur. See EA Appendix E, pp. 60-68. As documented in the BE there is low to no risk to known threatened or endangered plants or wildlife species (terrestrial or aquatic) in the project area.

Comment	Response
C-3b: In addition, the Department notes that the tabulation in the BA/BE of species considered to potentially be present and impacted by the project does not include botanical species. C-3c: Based on the information provided in the BA/BE, the Department is unclear if protocol level surveys for special status plants were conducted. C-3e: It is unclear in the information provided if the Forest Service did conduct or will conduct rare plant surveys. The only plant surveys discussed in the EA and the BA/BE are for the elderberry shrub and Bakersfield cactus. It appears that the Project has the potential to impact California Rare Plant Rank 1B listed species. C-3f: The Department recommends following the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (November 24, 2009). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. In the absence of protocol-level surveys being performed, additional surveys may be necessary. Survey results can then be used to assist with designing the Project to avoid, minimize and mitigate potential impacts to these species.	Botanical surveys and protocol level surveys for special status plants were conducted in 2013 and have been documented in the project record (see the Botanical Surveys for the Borel Relicensing Recreation Enhancement Project and the Project). The Biological Evaluation (BE) has been modified to document these results. See EA Appendix E, pp. 60-68.
C-3d: According to the EA a biological monitor will be on site if construction will occur during the nesting bird season, however, it is unclear what avoidance and minimization will be taken if nesting birds are found. The Department recommends a minimum no-disturbance buffer of 250 feet be delineated around active nests of migratory birds until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.	Avoidance and minimization measures are only required if nesting birds are found. Project implementation will not take place during the breeding season. Avoidance and minimization measures would occur, on a case by case basis, as needed. See EA Appendix E, pp. 67-68.
C-3i: The Regional Water Quality Control Board (Board) has jurisdiction over discharge and pollution of "Waters of the State", and it is recommended the Board be consulted regarding a National Pollutant Discharge Elimination System (NPDES) permit.	There is no expected discharge resulting from implementation of this project, therefore an NPDES permit will be not required.
C-3j: If biological surveys result in the detection of any federally listed or candidate species, the Department recommends survey results be submitted to the United States Fish and Wildlife Service who has jurisdiction over species listed under FESA.	The BE in Appendix E of the EA documents that no federal-listed threatened, endangered, or sensitive species or candidate species would be affected by either of the alternatives. The project is within the range of the California condor, but there are no known roost sites, or other essential or critical habitat for this species, in the Project area.
C-4a: We wish that you will provide a "fun road and trail system" that takes into consideration the fact that most visitors to California National Parks and Forests are those who seek quiet recreation.	The EA states this project would decommission and restore the sites of user-created routes to provide a safe, responsible, and well managed OHV program that focuses on providing a quality OHV riding experience while minimizing impacts to resources. See EA p. 5.

Comment	Response
C-4b: You have allowed the proliferation of OHV abuse to escalate to the point where "conflicts among OHV users and the non-motorized public are a consequence", Page 4. The tragedy, is that the conflict is entirely preventable with good management practices.	The Project will close and restore the sites of non-system routes in the vicinity of Black Gulch North, Black Gulch South, and China Garden Dispersed Recreation Areas. This project will also reroute sections of two popular OHV routes, restoring the sites of the old sections to protect sensitive resources. See EA p. 2. See Response C-1p.
C-4c: Repairing illegal OHV trails is effective only if your ranger district has a plan to actively protect the rights of non-motorized users so that everyone has the opportunity to enjoy the National Forest.	The Project proposes closure and restoration of non-system (unauthorized) routes in the vicinity of Black Gulch North, Black Gulch South, and China Garden Dispersed Recreation Areas. This project will also reroute sections of two popular OHV routes, restoring the sites of the old sections to protect sensitive resources. See EA p. 2. See Response C-1n.
C-4d: It is mentioned once again that there will be an implementation of OHV personnel and resource specialists to monitor the effectiveness of the projects. • Precisely how long after the restoration will the restored sites be assessed? • Which agency is in charge of 'OHV personnel' listed on page 7? • How are the 'OHV personnel' going to be funded? • What plans are in place for patrols to prevent further degradation of forest land?	The third phase of the Project includes monitoring by forest OHV personnel and resource specialists on a routine basis to determine the effectiveness of project activities. See EA pp. 4-5. This monitoring will be conducted after completion of the first and second phases of this project. The Forest Service will be responsible for the monitoring done by OHV personnel and resource specialists. These forest personnel will be funded by a restoration grant awarded to the Sequoia National Forest through the State of California's Off-Highway Motor Vehicle Division Grants & Agreements Program. The EA states if restored areas need additional treatment, further restoration work and resource protection measures will be implemented, incorporating appropriate strategies to eliminate unauthorized OHV use. See EA p. 14. The Forest Service will use OHV patrols, Forest Protection Officers (FPOs), and law enforcement personnel for public contact purposes.
C-4e: We agree that illegal OHV routes need to be restored and decommissioned.	Supportive comment.
C-4f: However, we disapprove of the USFS providing more OHV riding opportunities until your agency can clearly demonstrate that there is sufficient oversight in place to preserve the work that is being proposed in the projects.	The purpose of the Project is to both improve and enhance resources where needed and restore recreation areas, while continuing to improve and sustain quality recreation opportunities. See EA p. 4. The Project will close and restore the sites of non-system routes in the vicinity of Black Gulch North, Black Gulch South, and China Garden Dispersed Recreation Areas. This project will also reroute sections of two popular OHV routes, restoring the sites of the old sections to protect sensitive resources. See EA p. 2. The third phase of the Project includes monitoring by OHV personnel and resource specialists on a routine basis to determine the effectiveness of project activities. See EA pp. 4-5. This monitoring will be conducted after completion of the first and second phases of this project.

Comment	Response
C-5a: This 2 time the kern canyon trail has been removed in back gulch, It was move from next to the river to where it is today, I had showed Dave Baskin in 1983 the rout Bobby starts with and was told the wildlife expert said no we couldn't put the trail there in 1983 to 1985 I think it was, we had to use existing trails, that why the trail has that steep section in it, I wish these expert would make up their minds,	The Kern Canyon Trail (Trail #31E75) reroute was evaluated by Forest Service resource specialists at its current location as found on the ground today. Forest Service biologists conducted all botanical and wildlife surveys for this project. See the BE in Appendix D of the EA pp. 60-68. The BE/Biological Assessment (BE/BA) documents the determination that the alternatives for the Project would have no adverse effects on either plant or wildlife species.
C-5b: I'm ok with the idea of a new reroute if it was built with BMP this new trail doesn't fallow trail standards bob should have used inclimtor for fixing grade, trail standards are 5% grade and you can have a 10% for less than 100 feet, this new trail dose not meet these standards, there we be hikers, horsemen, mt. bikes, not just motorcycle on this trail, so we need to keep to trail standards.	All ground-disturbing project activities will use Best Management Practices (BMPs). See EA p. 22. All trail work will be done to Forest Service trail standards. The Project follows the guidance of the Kern River Whitewater Floating Plan to address the general degradation of the area by providing facilities for public health and safety and address conflicts between river users by providing a variety of activities consistent with demonstrated and projected recreation needs (Kern River WW Floating Plan, pgs. 27-28, and 47). See EA p. 8. Restoration activities at or near recreation sites will complement efforts to maintain system trails. See EA p. 18.
C-5c: The new creek crossing has silt lumus soil, and will cause more soil in the creek than what is happening now.	Cumulative watershed effects, and riparian conservation objectives have been addressed in EA Appendix C, D and E.
C-5d: These unauthorized road you talk about in black gulch and china garden are roads to active mining claims, these roads go back to open range management and are access to active mining claims, Donna C. said there no active mining claims in this area, that's not true, BLM and the kern county.	The routes targeted for restoration (including those that access mining claims) were considered but not designated in the 2009 Sequoia National Forest Motorized Travel Management Project. An active mining claim does not guarantee or imply any right of access via unauthorized routes on national forest land. If a miner requires road access to his or her claim via a non-system route, a Notice of Intent with a description of the needed road access needs to be filed with the Forest Service. The agency would then analyze the proposed use. If use of the route would cause significant disturbance to surface resources, the agency would require the miner to file a Plan of Operation. Plans of Operation need to meet the requirements of NEPA. EA p. 12.
C-5e: These roads give access to firefighter, these roads will save species lives if a firefighter can get instance access to fight fires than having to wait for a dozer to come knock down water bar and barricades, this is not BMP (best management practice)	The unauthorized routes being closed were considered but not designated in the Sequoia National Forest Motorized Travel Management Project. They were not considered necessary for emergency access. The two OHV routes with sections to be rerouted, and other system routes in the project area, are designated routes that will still be available for use by the public and for emergency access.

Comment	Response
C-5f: and there a camp site at the end of each of these road giving dispersed camping, you're trying to keep people out, this is a forest for the people, not from the people, 60% of these roads could be removed, they go to the same place, but not all these roads, by blocking access to the river by roads you keep old people and the handicap from fishing and just sitting next to the river or dispersed camping.	The purpose of the Project is not to block all access to the dispersed camping areas in the project area. The purpose of this project is to both improve and enhance resources where needed and restore recreation areas, while continuing to improve and sustain quality recreation opportunities. See EA p. 4. The first phase of the Project closes and restores the sites of unauthorized routes considered but not added to the NFTS in the vicinity of Black Gulch North, Black Gulch South, and China Garden dispersed recreation areas. The second phase includes the restoration of an interior access road and two associated camp sites in Evans Flat Campground. EA pp. 11-14.

APPENDIX B: BEST MANAGEMENT PRACTICES FOR SOIL AND WATER QUALITY PROTECTION

Mechanical Treatments

1.8, 1.19 Streamside Management Zone (SMZ) Designation, Streamcourse and Aquatic Protection

The objectives of these measures are to designate a zone along riparian areas, streams, and wetlands that would minimize potential for adverse impacts from adjacent management activities. Management activities in these zones are designated to improve habitat for riparian dependent species. Additionally, objectives of SMZs are to provide for unobstructed passage of storm flows, control sediment and other pollutants from entering streamcourses, and restore the natural course of any stream as soon as practicable, where diversion of the stream has resulted from management activities.

It is expected that development of RCAs (Riparian Conservation Areas) are included under these BMPs. RCAs include aquatic and terrestrial ecosystems and lands adjacent to perennial, intermittent, and ephemeral streams, as well as around meadows. The purposes of RCAs are to protect these areas as well as dependent natural resources during site-specific project planning and implementation[1]. Forest Strategy also maintains or restores soil properties and productivity to ensure ecosystem health, soil hydrologic function and biological buffering capacity[2].

Forest strategy provides direction to maintain or improve conditions for riparian dependent resources. Riparian dependent resources are those natural resources that owe their existence to the presence of surface or groundwater.

SMZ should not be considered replacement of RCAs, but a nested zone contained in the RCA developed for the filtering capability of the streamside zone. All streamcourses would be protected and assigned SMZs.

- All activities within this project are expected to take place outside of the SMZs and the RCAs except the Kern Canyon OHV Trail reroute and the Evans Flat Campground road reroute, however if restoration activities were to cross any stream the Project would implement the following:
- Any material resulting from project activities causing obstruction of storm flows would be removed.
- Ephemeral drainages would have a minimum SMZ of 50 feet, intermittent and perennial streams as well as springs and meadows would have a minimum SMZs of 100 feet based on field investigations. Table 4 below provides a summary of SMZ by Stream Class.
- Within RCAs reduce as much as possible ground disturbing impacts (i.e., soil compaction, vegetation disturbance, etc.).

[1] Sierra Nevada Forest Plan Amendment ROD, 2004, page 42
[2] Sierra Nevada Forest Plan Amendment ROD, 2004, page 42-43

Table 4: Streamside Management Zones Widths by Stream Class

Stream Class	**SMZ Width by % Slope**					**Stream Order**
	<30%	**>30%**	**>40%**	**>50%**	**>70%**	
Meadows	100	N/A	N/A	N/A	N/A	**-**
Seeps Springs Bogs	100	N/A	N/A	N/A	N/A	**-**
I	100	150	200	250	1.5 times the distance to slope break	**4+**
II	100	100	150	200		**3-4**
III	50	100	100	150		**2-3**
IV	≤50	≤50	75	100		**1-2**
IV	≤50	≤50	≤50	≤50		**1-0**

Riparian Conservation Objectives provide direction for the RCAs and prescribe widths of 300 feet either side for perennial streams (which includes the Kern River), 150 feet for seasonally flowing streams, and 150 feet for special aquatic features. Within this area all standards and guidelines for RCAs need to be met. This area is a zone of closely managed activities and not a zone of equipment exclusion like SMZs.

Roads

2.3 Timing of Construction Activities

This practice is to minimize erosion by conducting operations during minimal runoff periods. Operations should be scheduled and conducted to minimize erosion and sedimentation when ground conditions are such that excessive rutting and soil compaction would not occur. Roads would be maintained when conditions are dry.

2.7 Control of Road Drainage

The objective of this practice is to minimize the erosive effects of water concentrated by road drainage features; to disperse runoff form disturbances within the road clearing limits; to lessen the sediment yield from disturbances within the roaded areas; to minimize erosion of the road prism by runoff from road surfaces and uphill areas. Standard maintenance practices would be implemented on all decommissioned unauthorized routes to meet the above objectives, including but not limited to rolling dips and water bars.

Erosion control measures would be implemented on the rerouted trails as well as on restored areas. Erosion control measures must include, but are not limited to, cross ditches (water bars) and planting of restored areas. Cross drains (waterbars or rolling dips) must be spaced according to the following table, maintained in a functioning condition, and placed in locations where drainage would naturally occur (i.e., swales). Cross drain requirements for the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project are listed in Table 5.

Table 5: Cross Drain Requirements

% Slope	Spacing
1 – 6	300 feet
7 – 9	200 feet
10 – 14	150 feet

15 – 20	90 feet
21 - 40	50 feet

2.11 Control of Sidecast Material during Construction and Maintenance
The objective of this practice is to minimize sediment production originating from sidecast material during roadway maintenance. Construction and maintenance of routes utilized by the Project would not create sidecast materials onto the side of the road. All materials would either be consolidated onto the roadbed or moved to a stable location.

- BMPEP form E11 would be utilized to evaluate implementation on reroutes and unauthorized routes decommissioned during this project.

2.12 Servicing and Refueling of Equipment
The objective of this practice is to prevent pollutants such as fuels, lubricants, bitumens and other harmful materials from being discharged into or near rivers, streams and impoundments, or into natural or man-made channels. Service and refueling locations of all equipment would be located on landings or roads and would be located outside of the RCA. These refueling locations would follow forest spill plan direction. The forest would have a spill plan if the volume of fuel on site exceeds 660 gallons in a single container or a total storage at the site exceeds 1,320 gallons. It is not expected that any sites would exceed 660 gallons.

- BMPEP form E12 would be utilized to evaluate implementation on those areas that meet the requirements for servicing and refueling of equipment.

2.13 Control of Construction and Maintenance Activities Adjacent to SMZs
The objective of this practice is to protect water quality by controlling construction and maintenance actions within and adjacent to any streamside management zone so that the following SMZ functions are not impaired:

1. Acting as an effective filter for sediment generated by erosion from bare surfaces, road fills, dust drift, and oil traces;
2. Maintaining shade, riparian habitat (aquatic and terrestrial), and channel stabilization effects;
3. Keeping the floodplain surface in a resistant, undisturbed condition to slow water velocities and limit erosion by flood flows.

Construction and maintenance activities within SMZs would only occur in Evans Flat Campground (pulling the old culvert and installing the new culvert upstream) and at two stream crossings along the Kern Canyon OHV Trail. All these locations are located on intermittent channels and work would be conducted when the stream channels are dry. Construction and maintenance activities would only occur in the width of the road or trail bed and no materials would be side casted or left in channels or within SMZs.

2.14 Controlling In-channel Construction
The objective of this BMP is to minimize stream channel disturbances and related sediment production. In channel construction would occur at Evans Flat (pulling existing culvert and installing a new culvert upstream) and along the Kern Canyon OHV Trail (concrete pavers would be installed at crossings). These activities are all located within intermittent channels and work would be conducted

when the channels are dry. All construction activities would only occur within the width of the road or trail bed and no materials would be side casted or left in stream channels.

2.16 Stream Crossings
The objective of this practice is to ensure that roads/trails do not unduly damage stream channels and to ensure that fish passage is unimpeded by stream crossing structures. This applies to both trail reroutes included in this project. The trail reroute in the lower Kern Canyon would include concrete pavers at all new crossings to reduce potential of sediment entering the ephemeral channels from the trail. The reroute at Evans Flat would include a culvert at the one stream crossing location. This culvert would be large enough to pass 30 cubic feet per second (cfs) of water. This culvert needs to be designed to accommodate for aquatic organism passage. This crossing would either be; one arch culvert or a squashed culvert with natural bed material filling the bottom of the culvert with at least one floodplain relief culvert. Either culvert option would be designed to pass at least 30 cfs.

2.17 Bridge and Culvert Installation
The objective of this BMP is to minimize sedimentation and turbidity resulting from excavation for in-channel structures. A new culvert would be installed in Evans Flat Campground upstream from the existing culvert. This is an intermittent stream and the installation would be completed when the channel is dry. No material would be side casted into the channel.

2.21 Water Source Development consistent with Water Quality Protection
The objective of this practice is to supply water for roads and fire protection while maintaining existing water quality. Water drafting would occur with screens on all pump intakes and would occur in streams with flows 3 CFS or greater. The location identified for water drafting is the Kern River at the end of Black Gulch South Road (FS Road #27S08) (SE1/4, Sec 10, T27S, R32E, MDBM).

- BMPEP form E16 would be utilized to evaluate implementation on those areas identified for water source development.

Watershed Management
BMP 7.4 Oil and Hazardous Substance Spill Contingency Plan and Spill Prevention Control and Countermeasure (SPCC) Plan
The objective of this BMP is to prevent contamination of waters from accidental spills. The forest has a SPCC spill plan designed to guide the emergency response to spills during construction. Even though BMP 7.4 is a preventative BMP and used to insure a spill does not occur, it is used to make management aware of a possible spill. In the event of a hazardous spill, i.e. refueling of machinery BMP 7.4 would assist in documenting where the spill occurred and how the problem was resolved. Please refer to the SPCC for further information regarding pollutants and their associated spill plan design for this project.

7.8 Cumulative Watershed Effects
The objective of this practice is to protect the identified beneficial uses of water from the combined effects of multiple management activities when individually may not create unacceptable effects but collectively may result in degraded water quality conditions. See the Cumulative Watershed Effects discussion in the Environmental Consequences section of this report.

APPENDIX C: RIPARIAN CONSERVATION OBJECTIVES ANALYSIS

Purpose and Need for Action

Water-oriented outdoor activities constitute a major use of the Lower Kern Canyon's water and land areas. The Kern River is a popular camping destination with heavy use during the summer months. Other forms of recreation available include picnicking, off-road motorcycling, hunting, sight-seeing, bicycling, golfing, and hiking. The Forest Transportation System is used by recreationists to pursue dispersed activities with designated roads and trails open and available for public travel. Routes targeted for restoration in this proposal were considered but not designated in the Sequoia National Forest Motorized Travel Management Project (finalized in 2009). However, the unauthorized roads and trails not included in this decision are not precluded from future consideration for either removal from the landscape and/or restoration to the natural condition. This project's proposed restoration work would be completed by a restoration trail crew and volunteers using a small trail dozer and conventional hand tools. Following implementation, the Project area would be patrolled to monitor effectiveness. Additionally, the project area would be monitored to identify impacts to and recovery of sensitive resources in order to assess the effectiveness of restoration measures.

Rapid expansion of OHV use on national forests and grasslands was identified to be impacting the natural heritage resources of federal lands. The Chief of the Forest Service identified unmanaged recreation as one of the key threats facing the nation's forests. Unmanaged OHV use resulted in unplanned roads and trails, erosion, watershed and habitat degradation, and impacts on heritage resource areas. In 2003, the Forest Service in California outlined a strategy for establishing a sustainable system of designated routes for motor vehicle use, known as Route Designation. In 2005, the Forest Service issued a national framework for local forests to use in designating a sustainable system of roads, trails and areas for motor vehicle use. In order to align with the national framework, Route Designation became Travel Management. The goal remained the same, to secure a wide range of recreation opportunities while ensuring the best possible care of the land.

National Forests began working with the OHV, environmental, and other communities to identify existing routes and areas in order to develop each forest's route designations. In 2009, the Sequoia National Forest issued a decision for its Motorized Travel Management Project in order to implement provisions of the 2005 Travel Management Rule. This decision created a manageable transportation system protecting resource values while providing a fun and challenging road and trail system for local residents and other forest visitors. The system includes interconnected roads and trail loops for all riders – from novice to expert levels of use. Access to Lake Isabella shoreline was provided by implementing 16 open areas. Highway legal motor vehicles may travel directly to the lake's edge, following a designated route delineated with these open areas. Once near the lake's edge, vehicles are allowed to travel parallel to and within 300 feet of the water's edge. The location of the 300-feet wide designated area where vehicles are allowed to travel will be adjusted as the lake level changes. Sediment production within these open areas is intended to be reduced by this mitigation measure.

The Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project as proposed here provides the Forest Service with a great opportunity to both improve and enhance resources where needed and restore areas while continuing to improve and sustain quality recreation opportunities. By implementing

the Forest's Travel Management Project's decision, the agency would provide more motorized opportunities, while the implementation of its mitigation measures are designed to reduce potential impacts to natural resources. The Forest Service wants to demonstrate its response to the significant issue of access and motor vehicle recreation opportunity while balancing natural resource protection.

Affected Environment

Soils

Soils in the Project area are mainly of granite origin and display signs of the classic decomposed granitics, which include low productivity with high erosion risk from sheetwash and dry ravel. These soils have low clay content and therefore resist compaction. The soils in this group are somewhat excessively drained due to a high percentage of sand. Rock outcrops are numerous in many areas. In the Black Gulch and China Garden areas slopes range from 15 to 50 percent, elevations are around 2,000 to 2,500 feet, annual precipitation is 18 inches, and the frost-free season is 180 to 300 days. Major soil series is Cieneba (USDA 1996). This soil has a high erosion hazard rating (EHR). In the Evans Flat area slopes range from 15 to 50 percent, elevations are around 6,000 feet, annual precipitation is 30 to 51 inches, and the frost-free season is 120 to 300 days. Major soil series are Shaver and Chaix (USDA 1996). These soils have a high erosion hazard rating[3] (EHR). Table 1 lists the soil characteristics within the project area.

Table 1: Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project: Soil Characteristics Table

Project Area	Map Unit Number	Map Unit Name	% of Project Area	Slope	Soil Components	Maximum EHR (bare ground)	Runoff	Limiting Factors
Black Gulch and China Garden	201	Cieneba-Rock Outcrop Complex	100%	15-50%	Cieneba-65% Rock Outcrop-25% Other-10%	High	Rapid	-Rock Outcrop -Shallow Soils -High Erosion Hazard
Evans Flat	661	Shaver-Chaix Complex	100%	15-50%	Shaver – 50% Chaix – 35% Other – 15%	High	Rapid	-Plant Competition -Steep Slopes

Hydrology

The Proposed Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project is located within the Tulare Lake Basin, Kern River/Clear Creek 5th field Watershed. The Black Gulch project area is in the Kern River/Bodfish Creek 6th field watershed, and Kern River Inter-fluvial 7th field watershed. The Evans Flat project area is in the Kern River/Mill Creek 6th field watershed and Greenhorn Creek 7th field watershed. The China Garden project area is located in the Kern River/Lucas Creek 6th field watershed and Kern River Inter-fluvial 7th field watershed. Sixth field watersheds are nested within the larger 5th field (or HUC5) watersheds. Seventh field watersheds are nested within 6th field watersheds. Table 2 identifies the characteristics and beneficial uses for the effected watersheds. Beneficial uses are designated by the Central Valley Water Quality Control Board and are listed in the Water Quality Control Plan for the Tulare Lake Basin (California 2004).

[3] EHR is based on total vegetative removal.

Table 2. Attributes of the watershed effected by the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project

Project Area	5th Field HUC Watershed (Name/#)	6th Field HUC Watershed (Name/#)	7th Field Watershed (Name/#)	Stream Class	Beneficial Uses (Existing)	Acres
Black Gulch	Kern River/Clear Creek 1803000301	Kern River/Bodfish Creek 180300030102	Kern River Inter-fluvial 14A-	I	Municipal, Agriculture, Hydro Power, Recreation[1], Coldwater Fishery, Wildlife	22,105
Evans Flat		Kern River/Mill Creek 180300030104	Greenhorn Creek 14AE	III	Agriculture, Recreation[1], Wildlife, Rare[2]	1,308
China Garden		Kern River/Lucas Creek 180300030105	Kern River Inter-fluvial 14F-	I	Municipal, Agriculture, Hydro Power, Recreation[1], Wildlife, Rare[3], Industrial	23,906

1: Contact and Non-Contact Recreation
2: Greenhorn Mountains Slender Salamander
3: Western Pond Turtle, Hardhead Minnow, Relectual Salamander, Kern Canyon Slender Salamander

Stream Classes are identified by the following (FSM 2500, 1974):

Class I Streams: These are perennial streams, or segments thereof, which meet one or more of the following criteria:

a) Are habitats for large numbers of resident and/or migratory fish for spawning, rearing, or migration.
b) Furnish water locally for domestic and/or municipal supplies.
c) Flows are large enough to have a major influence on downstream water quality.
d) Are major stream, characterized by existing or anticipated fishing and/or other water-oriented recreational uses.
e) Are streams of which a major portion can be seen.
f) Are streams that have special features, classification, or designation.
g) Are habitats of threatened and endangered fish species.

Class II Streams: These are perennial and/or intermittent streams or segments thereof which meet one or more of the following criteria:

a) Are used by moderate numbers of fish for spawning, rearing, or migration.
b) Furnish water locally for industrial or agricultural use.
c) Have enough water flow to exert a moderate influence on downstream quality.
d) Are used moderately for fishing and other recreational purposes.

e) Are occasionally seen from well-traveled routes.

Class III Streams: These include perennial and/or intermittent streams or segments thereof which meet one of more of the following criteria:

a) Are habitats for few fish for spawning, rearing, or migration.
b) Are used rarely for fishing or other recreational purposes.
c) Have enough water flow to exert minimum influence on downstream water quality.
d) Are seldom seen from well-traveled routes.

Class IV Streams: These are intermittent and ephemeral streams or segments thereof not previously classified.

Existing Conditions

Kern River Inter-fluvial (180300030102-14A-)

The Kern River Inter-fluvial 14A is located in the Lower Kern Canyon along State Highway 178. Most of this watershed is typified by high and moderate gradient ephemeral streams. The Kern River is controlled within this area by the Lake Isabella Dam, which is located approximately 10 miles upstream. This watershed has been previously impacted by Forest Service roads and trails, grazing, unauthorized OHV routes, past mining, and dispersed camping.

Greenhorn Creek (180300030104-14AE)

The Greenhorn Creek watershed 14AE is located in the Greenhorn Mountains north of the lower Kern Canyon. This watershed provides habitat for the Greenhorn Mountains Slender Salamander, a forest service sensitive species. This watershed has been previously impacted by Forest Service roads and trails, grazing, unauthorized OHV routes, and other recreational uses like camping and dispersed camping. The current route through Evans Flat Campground has an existing culvert that is half plugged and is located in a stringer meadow above Evans Flat Meadow. This culvert has potential to be a migration barrier for the Salamanders.

Kern River Inter-fluvial (180300030105-14F-)

The Kern River Inter-fluvial 14F is located in the Lower Kern Canyon along State Highway 178 north-east of Bakersfield. Most of this watershed is typified by high and moderate gradient ephemeral streams. The Kern River is controlled within this area by the Lake Isabella Dam, which is located approximately 30 miles upstream. This watershed provides habitat for the Western Pond Turtle, Hardhead Minnow, Relectual Salamander, and the Kern Canyon Slender Salamander, all these are Forest Service sensitive species. This watershed has been previously impacted by Forest Service roads and trails, grazing, and unauthorized OHV routes.

Environmental Consequences
No Action Alternative

The No Action Alternative proposes no change from the existing condition. There would be no closures or site restoration of existing unauthorized OHV routes, or trail reroutes to avoid sensitive areas.

Direct and Indirect Effects

Direct and indirect effects associated with not implementing the Project would be that restoration of soil vegetative productivity would not occur on the unauthorized routes. Without vegetative recovery, unauthorized routes would not regain their hydrologic and geomorphic functions. Trail reroutes around sensitive areas would not occur.

Without closing and restoring the sites of these unauthorized routes, there is potential that they would still receive motorized traffic. With continued motorized traffic, increased peak flow effect would remain over the long term because the road templates would continue to intercept and concentrate surface and subsurface runoff. Additionally, without vegetative recovery, unauthorized routes with continued motorized traffic would not show a decrease in erosion and sediment delivery to nearby stream channels.

Cumulative Effects

Past and present activities within the analysis area include wildfire and wildfire suppression, road maintenance, trail construction and maintenance and recreational uses like camping. Future management activities in the Project area include the continuation of trail maintenance, road maintenance, and recreational uses.

Restoration treatments would not be implemented on previously compacted unauthorized routes. These routes would have the potential to continue to erode and deliver sediment to nearby stream channels. Erosion and sedimentation have the potential to increase if unauthorized routes remain untreated.

Proposed Action Alternative

The proposed action includes the following activities:

<u>Lower Kern Canyon and Greenhorn Mountains Restoration Area – First Phase</u>

<u>Black Gulch North Dispersed Recreation Area</u>:

1. Complete restoration work using volunteers and a restoration crew in combination with a small trail dozer and conventional hand tools.
2. Decommission and restore the sites of approximately 26 unauthorized routes and hill climbs within Black Gulch North Dispersed Recreation Area by scarifying, cross-ripping, re-contouring affected areas, as well as, installing water bars, and planting native vegetation along the route prism. Routes whose sites would be restored include: U01237, U01239, U01192, U01236, U01187, U01214, U01215, U01216, U01217, U01220, U01179, U01170, U01187, U01213, U01172, U01190, U01191, U01173, U01169, U01168, U01167, U01211, U01208, U01207, U01238, and U01165.
3. Some hard barricades, such as boulders, fences and/or pipe gates may be placed and/or constructed to limit vehicular access to closed routes. Barriers and signage would be used to educate the public and discourage further route proliferation.
4. Restoration activities would include cultivation or ripping compacted soils and vertical mulching with native materials to restore identified areas to a more natural condition.
5. Installation of approximately one mile of range fencing along both sides of Black Gulch Creek would be installed to protect the riparian corridor.

Black Gulch South Dispersed Recreation Area:

1. Complete restoration work using volunteers and a restoration crew in combination with a small trail dozer and conventional hand tools.
2. Decommission and restore the sites of approximately nine unauthorized routes and hill climbs within Black Gulch South Dispersed Recreation Area by scarifying, cross-ripping, re-contouring affected areas, as well as, installing water bars, and planting native vegetation along the route prism. Routes whose sites would be restored include: U01221, U01222, U01177, U01174, U01180, U01181, U01182, U01219 and U01178.
3. Some hard barricades, such as boulders, fences and/or pipe gates may be placed and/or constructed to limit vehicular access to closed routes.
4. Restoration activities would include cultivation or ripping compacted soils and vertical mulching with native materials to restore identified areas to a more natural condition.
5. Barriers and signage would be used to educate the public and discourage further route proliferation.

China Garden Dispersed Recreation Area:

1. Complete restoration work using volunteers and a restoration crew in combination with a dozer, a small trail dozer and conventional hand tools.
2. Decommission and restore the sites of two unauthorized routes identified as U01061 and U01059.
3. Restore a portion of the Patch Corner Trail #31E82 from the dirt parking area down to the river.
4. Decommission and restore the sites of unauthorized routes along Forest Service Roads #27S37 and #27S37A in an effort to restore approximately ¾ mile of the Patch Corner Trail #31E82 located within China Garden dispersed recreation area by scarifying, cross-ripping, re-contouring affected areas, as well as, installing water bars, and planting native vegetation along the route prism.
5. Some hard barricades, such as boulders, fences and/or pipe gates may be placed and/or constructed to limit vehicular access to closed routes.
6. Install a gate on Forest Service Road #27S30A would be installed where it crosses Black Gulch Creek. This road provides access to a mining claim and will only be available for administrative use (e.g. agency personnel and/or the mining claimant).
7. Restoration activities would include cultivation or ripping compacted soils and vertical mulching with native materials to restore identified areas to a more natural condition.
8. Barriers and signage would be used to educate the public and discourage further route proliferation.

Lower Kern Canyon and Greenhorn Mountains Restoration Area – Second Phase

Evans Flat Campground:

1. Relocate two campsites to a new location within the campground's interior by removing both the picnic tables and fire rings. Restore the vacated campsites to a more natural condition.
2. Decommission approximately 1/8 mile accessing the relocated campsites.
3. Remove the existing cattle gate and relocate within the campground.
4. Install a pipe gate to prevent motor vehicle access to restored area. There would be no change to the remainder of the existing campground and its associated facilities.

Woodward Peak Trail (Trail #32E53) (Evans Flat Area):

1. Reroute approximately one mile of the trail to protect sensitive resources. The trail reroute would remove the stream crossing from the meadow. The new crossing would include an arch culvert or a squashed culvert to allow for aquatic organism passage. Boulders would be placed to prevent use of the decommissioned trail segment and the older trail prism would be further screened with hand-scattered slash or straw.

Kern Canyon Trail (Trail #31E75) (Black Gulch Area):

1. Reroute approximately two miles of the trail to protect sensitive resources. Boulders would be placed to prevent use of the decommissioned trail segment and the older trail prism would be further screened with hand-scattered slash or straw.

Lower Kern Canyon and Greenhorn Mountains Restoration Area – Third Phase:

All Restoration Areas:

1. Implement effectiveness monitoring by OHV personnel and resource specialists to evaluate restoration efforts.
2. If restored areas are observed to require additional treatment; further restoration work and resource protection measures would be implemented, incorporating appropriate strategies to eliminate unauthorized OHV use.
3. Maintain a successful project outcome by using increased OHV patrols with citation authority to conduct site visits to ensure greater compliance.
4. Utilize OHV patrols, Forest Protection Officers (FPOs) and Law Enforcement personnel for public contact purposes.
5. Establish photo point monitoring and record observations prior to implementation of the project. Pre and post project photos and observations would document bare soil, erosion, and vegetation conditions. These photo points and observations would determine if vegetative cover is increasing as a result of project activities.
6. Implement use of Best Management Practices (BMPs) where ground disturbing activities are proposed.

Direct and Indirect Effects

The proposed action alternative has the potential to temporarily affect aquatic resources; primarily, as a result of ripping and obliteration of unauthorized routes. Each activity has the potential to disturb soil. Soil displacement could cause an effect on watershed condition and aquatic habitat. Conservation measures incorporated into the Project would be implemented to control erosion and sedimentation. The

implementation of BMPs which includes an erosion control plan would avoid or minimize potential increases in sediment loads to streams during project implementation. Long term effects on hydrologic resources are expected to improve. The trail reroute at Evans Flat Campground would remove the stream crossing out of the meadow and the new crossing would install an arch culvert which would allow for aquatic organism passage.

A wide range of activity-specific BMPs are designed to minimize detrimental soil disturbance, protect water quality, and maintain physical stability and hydrologic connectivity of riparian and aquatic habitats (see Appendix A for a list of applicable BMPs). There is little potential for the proposed action alternative to adversely affect the geomorphic, hydrologic, or riparian characteristics and aquatic habitats in the affected watershed. This is due to limited ground disturbance, operation limitations within Riparian Conservation Areas (RCAs) and Streamside Management Zones (SMZs), and use of activity-specific BMPs.

Cumulative Effects

Past and present activities within the analysis area include wildfire and wildfire suppression, road maintenance, trail construction and maintenance and recreation uses. Future management activities in the Project area include the continuation of trail maintenance, road maintenance, and recreation uses.

Restoration treatments would be implemented on unauthorized routes. Proper drainage on these features would reduce water concentration and runoff. Water barring or rolling dips would reduce sedimentation and erosion. Restoring the sites of unauthorized routes would return the sites closer to pre-disturbed condition faster.

Law, Regulation, and Policy Applicable to Hydrology

Laws, regulation and policy applicable to managing soil and water quality include the Clean Water Act and 1988 Sequoia National Forest Land and Resource Management Plan (LRMP) as amended by the 2004 Sierra Nevada Forest Plan Amendment (SNFPA). Applicable management requirements and constraints provided by the 2004 Sierra Nevada Forest Plan Amendment:

X_Aquatic Management Strategy (AMS) goals and objectives
X_Riparian Conservation Areas
X_Riparian Conservation Objectives (RCO) Analysis standards and guidelines
__Critical Aquatic Refuges
__Long-term strategy for anadromous fish-producing watersheds

Long-term strategy for anadromous fish-producing watersheds applies only to the Lassen National Forest and is therefore not applicable to this project area.

Riparian Conservation Objectives Analysis

The RCOs listed in the Sierra Nevada Forest Plan Amendment Record of Decision were reviewed for applicability to the project. The need to define riparian conservation areas exists in the Project area. RCOs 1, 2, 4, and 6 apply to the project and are further reviewed below. RCO 3 does not apply because this project would have no effect on coarse woody debris. RCO 5 does not apply because the Project does not include grazing. RCOs 1, 4 and 6 contain standards and guidelines. These are outlined and explained in the next section.

X RCAs and CARs. Conduct a site specific project area analysis to determine the appropriate level of management within RCAs or CARs. Determine the type and level of allowable management activities by assessing how proposed activities measure against the riparian conservation objectives and their associated standards and guidelines.

X RCO 1. Ensure that identified beneficial uses for the water body are adequately protected. Identify the specific beneficial uses for the project area, water quality goals from the Regional Basin Plan, and the manner in which the standards and guidelines will protect the beneficial uses.
X RCO 2. Maintain or restore: (1) the geomorphic and biological characteristics of special aquatic features, including lakes, meadows, bogs, fens, wetlands, vernal pools, springs; (2) streams, including in stream flows; (3)hydrologic connectivity both within and between watersheds to provide for the habitat needs of aquatic-dependent species.
RCO 3. Ensure a renewable supply of large down logs that: (1) can reach the stream channel and (2) provide suitable habitat within and adjacent to the RCA.
X RCO 4. Ensure that management activities, including fuels reduction actions, within RCAs and CARs enhance or maintain physical and biological characteristics associated with aquatic- and riparian-dependent species.
RCO 5. Preserve, restore, or enhance special aquatic features, such as meadows, lakes, ponds, bogs, fens and wetlands, to provide the ecological conditions and processes needed to recover or enhance the viability of species that rely on these areas.
X RCO 6. Identify and implement restoration actions to maintain, restore or enhance water quality and maintain, restore, or enhance habitat for riparian and aquatic species.

Riparian Conservation Areas and Critical Aquatic Refuges

Standards and Guidelines Associated with RCAs and CARs:

1. *Designate riparian conservation area (RCA) widths as described in Part B of the SNFP ROD appendix A. The RCA widths displayed in Part B may be adjusted at the project level if a landscape analysis has been completed and a site-specific RCO analysis demonstrates a need for different widths.*

   Streamside Management Zones are required under Region 5 Water Quality Management for Forest System Lands in California, Best Management Practices. The authority for Water Quality Protection Measures or Best Management Practices (BMPs) is section 208 and 319 of the Clean Water Act (CWA) as amended. The Sierra Nevada Forest Plan Amendment directs us to meet the goals of the CWA on page 42 of the ROD under desired conditions. This requires following all applicable BMPs. The following BMPs are appropriate for SMZ development, filtering, and water quality protection:

   Development of SMZ's, BMP 1.8;
   Stream course protection, BMP 1.19

   The following explains how SMZ distances work in Table 3: SMZ width is designated for the first 100 feet on both sides of Class I and II perennial streams or Class III intermittent stream with side slopes greater than 30%. SMZ width is 50 to 75 feet or more on both sides of a Class IV ephemeral stream and may be adjusted based on slope. Previous Forest SMZ direction

provided the following widths in slope distance in feet. The values provided in Table 3 are used as a guide. Field conditions including stream type and project objectives should dictate the streamside management zone widths.

Table 3: SMZ Widths by percent slope

Stream Class	**SMZ Width by % Slope**					**Stream Order**
	<30%	**>30%**	**>40%**	**>50%**	**>70%**	
Meadows	100	N/A	N/A	N/A	N/A	**-**
Seeps Springs Bogs	100	N/A	N/A	N/A	N/A	**-**
I	100	150	200	250	1.5 times the distance to slope break	**4+**
II	100	100	150	200		**3-4**
III	50	100	100	150		**2-3**
IV	≤50	≤50	75	100		**1-2**
IV	≤50	≤50	≤50	≤50		**1-0**

SMZs are nested inside RCAs and define an equipment exclusion zone immediately adjacent to the streamside for the purpose of creating a filter strip to trap potential sediment. Treatments in this zone would be dependent on treatment objectives. Objectives for the SMZ portion of the RCA are maintenance or improvement of riparian values, to provide unobstructed passage of storm flows, to control sediment and other pollutants entering the stream course, and to restore the natural course of any stream as soon as practicable when diversion of the stream has resulted from management activities. Prescribed widths for RCAs are 300 feet either side for perennial streams, 150 feet for seasonally flowing streams, and 150 feet for special aquatic features. This area is a zone of closely managed activities and not a zone of equipment exclusion like SMZs.

Design Features

Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project objectives are to restore the sites of unauthorized OHV routes and to reroute two trails outside of sensitive areas within Black Gulch, China Garden, and Evans Flat. In order to achieve these objectives, both mechanical and non-mechanical activities would be allowed with this project. All project activities would be located outside of the SMZs, except at Evans Flat where the trail reroute would include installing an arch culvert and removing the existing culvert at the old crossing. This crossing would meet all applicable BMPs (see BMPs in Appendix A). This project is anticipated to fully meet the objectives stated in the Aquatic Management Strategy due to the previously mentioned design features.

2. *Evaluate new proposed management activities within CARs and RCAs during environmental analysis to determine consistency with the riparian conservation objectives at the project level and the AMS goals for the landscape. Ensure that appropriate mitigation measures are enacted to (1) minimize the risk of activity-related sediment entering aquatic systems and (2) minimize impacts to habitat for aquatic- or riparian-dependent plant and animal species.*

The RCA and SMZ prescription described above in the previous S&G provide appropriate mitigation measures to minimize the risk of activity related sediment entering aquatic systems and minimizing impacts to habitat for aquatic or riparian dependent plant and animal species. A more detailed description of BMP applications may be found in Appendix A of the EA. The BMP section of the *Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project Hydrology Report* provides documentation of the evaluation of effects to the watershed and the Project's consistency with riparian conservation objectives. No additional mitigations are required.

3. *Identify existing uses and activities in CARs and RCAs during landscape analysis. At the time of permit re-issuance, evaluate and consider actions needed for consistency with RCOs.*

The Project does not include a landscape analysis. However the proposed actions are consistent with the RCOs as discussed in this document. All streams will be evaluated and assigned a RCA and SMZ appropriate for local field conditions (see Table 3).

4. *As part of project-level analysis, conduct peer reviews for projects that propose ground-disturbing activities in more than 25 percent of the RCA or more than 15 percent of a CAR.*

Ground disturbance by the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project would not to affect 25% of any RCA. There are no CARs located in or affected by this project.

5. *Determine which critical aquatic refuges or areas within critical aquatic refuges are suitable for mineral withdrawal. Propose these areas for withdrawal from location and entry under U.S. mining laws, subject to valid existing rights, for a term of 20 years.*

This project is not associated with mineral extraction.

6. *Approve mining-related plans of operation if measures are implemented that contribute toward the attainment or maintenance of aquatic management strategy goals.*

There is no mineral extraction being proposed for this project.

Riparian Conservation Objective #1

Ensure that identified beneficial uses for the water body are adequately protected. Identify the specific beneficial uses for the project area, water quality goals from the Regional Basin Plan, and the manner in which the standards and guidelines will protect the beneficial uses.

Standards and Guidelines Associated with RCO #1:

1. *For waters designated as "Water Quality Limited" (Clean Water Act Section 303(d)), implement appropriate State mandates for the water body, such as Total Maximum Daily Load (TMDL) protocols.*

There are no waters designated as water quality limited within or affected by this project.

2. *Limit pesticide applications to cases where project level analysis indicates that pesticide applications are consistent with riparian conservation objectives. Prohibit application of pesticides to livestock in RCAs and CARs.*

This project would not use pesticides, this does not apply.

3. Within 500 feet of known occupied sites for the California red-legged frog, Cascade frog, Yosemite toad, foothill yellow-legged frog, mountain yellow-legged frog, and northern leopard frog, design pesticide applications to avoid adverse effects to individuals and their habitats.

This project would not use pesticides, this does not apply.

4. Prohibit storage of fuels and other toxic materials within RCAs and CARs except at designated administrative sites. Prohibit refueling within RCAs and CARs unless there are no other alternatives. Ensure that spill plans are reviewed and up-to-date.

To protect resources in the event of a spill, the construction contractor must use a containment device in which to store hazardous fuels. The device would be large enough to contain all spilled materials per BMP 2.12, Servicing and Refueling Equipment. In addition, a spill prevention and countermeasure plan must be submitted and approved by the Forest Service as warranted by the amount of fuel stored on site per BMP 7.4. Oil and Hazardous Substance Spill Contingency Plan and Spill Prevention Control and Countermeasure (SPCC) Plan. Service and refueling locations of all equipment would be located on roads and would be located outside of the RCA. These refueling locations would follow forest spill plan direction. The forest would have a spill plan if the volume of fuel on site exceeds 660 gallons in a single container or a total storage at the site exceeds 1,320 gallons. It is not expected that any sites would exceed 660 gallons. If this project exceeds this, the spill plan would include: the types and amounts of hazardous materials located within the project area, Forest Service approved locations for hazardous materials storage and fueling/maintenance activities (should be located outside of the RCAs), methods for containment of hazardous materials in the event of a spill, and a contingency plan to implement in the event of a spill. The Forest Service must approve the SPCC plan for this project.

Riparian Conservation Objective #2

Maintain or restore: (1) The geomorphic and biological characteristics of special aquatic features, including lakes, meadows, bogs, fens, wetlands, vernal pools, springs; (2) streams, including in stream flows; and (3) hydrologic connectivity both within and between watersheds to provide for the habitat needs of aquatic-dependent species.

Standards and Guidelines Associated with RCO #2:

1. *Maintain and restore the hydrologic connectivity of streams, meadows, wetlands, and other special aquatic features by identifying roads and trails that intercept, divert, or disrupt natural surface and subsurface water flow paths. Implement corrective actions where necessary to restore connectivity.*

   Trail reroutes and restoration/obliteration of unauthorized routes is included in this project. During all of these activities water quality protection would be provided by minimizing drainage problems and removing/fixing blockage of drainage facilities. Implementation of SMZs would result in protection of stream function and eliminate/reduce the potential for diversion/disruption of water flow.

2. *Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species. Locate water-drafting sites to avoid adverse effects to in stream flows and depletion of pool habitat. Where possible, maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows, wetlands, and other special aquatic features.*

Stream flows would not be affected by this project. The location identified for water drafting is the Kern River at the end of Black Gulch South Road (FS Road #27S08) (SE1/4, Sec 10, T27S, R32E, MDBM).

3. *Prior to activities that could adversely affect streams, determine if relevant stream characteristics are within the range of natural variability. If characteristics are outside the range of natural variability, implement mitigation measures and short-term restoration actions needed to prevent further declines or cause an upward trend in conditions. Evaluate required long-term restoration actions and implement them according to their status among other restoration needs.*

   The Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project would not adversely affect streams. The small area affected by this project and the implementation of SMZs would result in protection of stream function. There are no streamcourse inventory sites located in the Kern River due to safety concerns.

4. *Prevent disturbance to streambanks and natural lake and pond shorelines caused by resource activities (for example, livestock, off-highway vehicles, and dispersed recreation) from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines. Disturbance includes bank sloughing, chiseling, trampling, and other means of exposing bare soil or cutting plant roots. This standard does not apply to developed recreation sites; sites authorized under Special Use Permits and designated off-highway vehicle routes.*

   Implementation of SMZs during the Project would serve to prevent disturbance to streambanks during the project.

5. *In stream reaches occupied by, or identified as "essential habitat" in the conservation assessment for, the Lahontan and Paiute cutthroat trout and the Little Kern golden trout, limit streambank disturbance from livestock to 10 percent of the occupied or "essential habitat" stream reach. (Conservation assessments are described in the record of decision.) Cooperate with State and Federal agencies to develop streambank disturbance standards for threatened, endangered, and sensitive species. Use the regional streambank assessment protocol. Implement corrective action where disturbance limits have been exceeded.*

   This project does not include grazing of livestock.

6. *At either the landscape or project-scale, determine if the age class, structural diversity, composition, and cover of riparian vegetation are within the range of natural variability for the vegetative community. If conditions are outside the range of natural variability, consider implementing mitigation and/or restoration actions that will result in an upward trend. Actions could include restoration of aspen or other riparian vegetation where conifer encroachment is identified as a problem.*

   This project is located outside of riparian areas and SMZs, except at Evans Flat where the trail reroute would occur. The new crossing at this location would be at an ephemeral to intermittent channel and is located high in the watershed where there is little riparian vegetation. This reroute would not remove any large riparian vegetation. This reroute should have little or no effect on the age class, structural diversity, composition, or cover of riparian vegetation.

7. *Cooperate with Federal, Tribal, State and local governments to secure in stream flows needed to maintain, recover, and restore riparian resources, channel conditions, and aquatic habitat. Maintain in stream flows to protect aquatic systems to which species are uniquely adapted. Minimize the*

effects of stream diversions or other flow modifications from hydroelectric projects on threatened, endangered, and sensitive species.

Instream flows would not be affected by this project.

8. *For exempt hydroelectric facilities on national forest lands, ensure that special use permit language provides adequate in stream flow requirements to maintain, restore, or recover favorable ecological conditions for local riparian- and aquatic-dependent species.*

   There are no hydrologic facilities affected by this project.

Riparian Conservation Objective #4:

Ensure that management activities, including fuels reduction actions, within RCAs and CARs enhance or maintain physical and biological characteristics associated with aquatic- and riparian-dependent species.

Standards and Guidelines Associated with RCO #4:

1. *Within CARs, in occupied habitat or "essential habitat" as identified in conservation assessments for threatened, endangered, or sensitive species, evaluate the appropriate role, timing, and extent of prescribed fire. Avoid direct lighting within riparian vegetation; prescribed fires may back into riparian vegetation areas. Develop mitigation measures to avoid impacts to these species whenever ground disturbing equipment is used.*

   There are no CARs within or effected by the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project.

2. *Use screening devices for water drafting pumps. (Fire suppression activities are exempt). Use pumps with low entry velocity to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats.*

   During management activities water drafting may occur to help reduce dust in the project area. Utilization of a screening device to protect aquatic species during the use of water drafting pumps would occur.

3. *Design prescribed fire treatments to minimize disturbance of ground cover and riparian vegetation in RCAs. In burn plans for project areas that include, or are adjacent to RCAs, identify mitigation measures to minimize the spread of fire into riparian vegetation. In determining which mitigation measures to adopt, weigh the potential harm of mitigation measures, for example fire lines, against the risks and benefits of prescribed fire entering riparian vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions could be damaging to habitat or long-term function of the riparian community.*

   There are no prescribed fire treatments as part of the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project.

4. *Post-wildfire management activities in RCAs and CARs should emphasize enhancing native vegetation cover, stabilizing channels by non-structural means, minimizing adverse effects from the existing road network, and carrying out activities identified in landscape analyses. Post-wildfire operations shall minimize the exposure of bare soil.*

   This requirement is not applicable at this time because this project is not a post-wildfire management activity.

5. *Allow hazard tree removal within RCA's or CAR's. Allow mechanical ground disturbing fuels treatments, salvage harvest, or commercial fuelwood cutting within RCA's or CAR's when the activity is consistent with RCO's. Utilize low ground pressure equipment, helicopters, over the snow logging, or other non-ground disturbing actions to operate off of existing roads when needed to achieve RCO's. Ensure that existing roads, landings, and skid trails meet Best Management Practices. Minimize the construction of new skid trails or roads for access into RCA's for fuel treatments, salvage harvest, commercial fuelwood cutting, or hazard tree removal.*

   This project does not propose tree removal.

6. *As appropriate, assess and document aquatic conditions following the Regional Stream Condition Inventory protocol prior to implementing ground disturbing activities within suitable habitat for California red-legged frog, Cascades frog, Yosemite toad, foothill and mountain yellow-legged frogs, and northern leopard frog.*

   There is no known suitable habitat within or effected by the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project.

7. *During fire suppression activities, consider impacts to aquatic- and riparian-dependent resources. Where possible, locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of RCAs or CARs. During presuppression planning, determine guidelines for suppression activities, including avoidance of potential adverse effects to aquatic- and riparian-dependent species as a goal.*

   This requirement is not applicable because no fire suppression activities are proposed.

8. *Identify roads, trails, OHV trails and staging areas, developed recreation sites, dispersed campgrounds, special use permits, grazing permits, and day use sites during landscape analysis. Identify conditions that degrade water quality or habitat for aquatic and riparian-dependent species. At the project level, evaluate and consider actions to ensure consistency with standards and guidelines or desired conditions.*

   The Project does not include a landscape analysis. However the proposed actions are consistent with the RCOs as discussed in this document.

Literature Cited

USDA Forest Service. 1974 FSM 2536.1 Classification of Streams.

USDA Forest Service. 1996. Soil Survey Sequoia National Forest. Pacific Southwest Region, Vallejo, California.

USDA Forest Service. 2000, Water Quality Management for Forest Systems Lands in California – Best Management Practices. Pacific Southwest Region, Vallejo, California

APPENDIX D: MANAGEMENT REQUIREMENTS & CONSTRAINTS

The items listed below were determined by the ID team to be actions necessary to carry the results of their analysis into the design phase of the Lower Kern Canyon and Greenhorn Mountains OHV Restoration Project planning. Implementation of best management practices (BMPs) is mandatory even though they may not necessarily be required to avoid unacceptable environmental effects.

Specialty	Action or Requirement	Responsibility & When to Accomplish	*How & When Accomplished
Heritage	Develop resource protection measures, site treatments, and recommended mitigation measures in consultation with the Office of Historic Preservation	Heritage Resource Staff, Office of Historic Preservation; Prior to project implementation	
Wildlife	Minimize disturbance of riparian vegetation, capture project generated sediment before it reaches the stream where possible	Engineering Contract Inspector; During project implementation	
Wildlife	Implement objectives of Aquatic Management Strategy with installation of an arch or squashed culvert as part of trail reroute portion of project located near Evans Flat Campground	Engineering Contract Inspector; During project implementation	
Wildlife	If construction of trail segments occurs during nesting periods, a biological monitor should check the path of any new construction	Wildlife Resource Staff; Prior to project implementation	

* This section will be filled in during project implementation.

APPENDIX E: BIOLOGICAL EVALUATION AND RESOURCE ANALYSIS

Supplement Background: A short-form biological evaluation (BE) is used for projects that are expected to have minimal controversy and are low risk for potential adverse effects. The original BE for this project primarily addressed wildlife with the expectation that another BE would cover plants. This document replaces the original BE to provide better documentation for plants and to address issues raised during public comment regarding the preliminary environmental assessment (EA). The original BE addressed that plant surveys had occurred but did not specifically address plants other than the Bakersfield cactus.

Habitats/Acres Affected: Sandy Flat Campground and portions of the day use area are a disturbed context with little wildlife and limited botanical habitat value due to the level of human disturbance, compaction and foot traffic. The access trail at Sandy Flat would consit of less than 100 yards of construction over existing trails in chapparal and foothill woodland habitat. No trees or riparian vegetation would be removed in the construction of the accessible trail or other proposed improvements. Black Gulch South is in annual grass, foothill woodland and chaparral habitats and would affect approximately 20 acres (~5 acres of actual disturbed sites). The existing road at Black Gulch South is heavily rutted and becoming impassable except with high clearance or four-wheel drive vehicles. All three project sites are in heavily disturbed and high use recreation sites. The proposed toilet and dumpster pad locations are in areas that are already compacted with little or no vegetation. There is an existing access road to the preferred toilet site at the northern toilet site at Black Gulch South. The proposed action would retain this access road as administrative use only with a gate to restrict use. This preferred location for the toilet would be within the Riparian Conservation Area land management allocation identified in the Sierra Nevada Forest Plan Amendment (2004), but is not in the active flood plain (flood level is controlled by an upstream dam and restricted to no more than 5,000 cfs) and would not affect or be in close proximity to riparian vegetation or wetlands (RCA width is 300 feet from bankfull width. Distance from the toilet installation to the river and riparian vegetaion is over 100 feet, outside of the Stream Management Zone identified in the 1988 Sequoia National Forest Land and Resource Management Plan).

Surveys Needed/Completed: In fall 2011 and spring 2012 the Project areas were surveyed and Forest and State databases were queried to determine if there were populations of federal or state protected species, or Forest Service sensitive species. Specific species addressed are noted in Appendix A, but included amphibians, Bakersfield cactus, Shevock's golden aster, noxious weeds, valley elderberry long-horn beetle and host plant, California legless lizard, salamanders (including Kern Canyon, Greenhorn Mountain and relictual slender salamanders) yellow-blotched ensatina), foothill yellow-legged frog and western pond turtle. No special status species were found in areas that would be disturbed by the Project. Based on comments from the public and the California Department of Fish and Wildlife, additional surveys were conducted in April 2013 for the California Rare Plant Rank 1B (California Native Plant Society ranking) pale-yellow layia (tidytips) (*Layia heterotricha*), Kern River evening primrose (*Camissonia integrifolia*), calico monkey flower (*mimulus pictus*), Shevock's golden aster (*Heterotheca shevockii*) (Forest Service sensitive and included in previous surveys), Greenhorn fritillary (*Fritillaria brandegeei*) and rose-flowered larkspur (*Delphinium purpusii*), and Shevock's golden aster, Forest Service sensitive. The rose-flowered larkspur and Greenhorn fritillary were added to the Regional Forester's sensitive plant list effective August 16, 2013. The other added species have no special protective status and previous surveys did not specifically address these species, but they were specifically targeted in the 2013 surveys based on the CDFW comments. The 2013 surveys were not effective in detecting annual species due to severe drought conditions that limited or precluded development of annual plants in the project area in 2013. No further surveys are planned other than monitoring during project activities.

Habitat Assessment Methods: personal visit, observation, historical files, project description, Google earth, RAREFIND and CWHR.

Account Summaries for Species w/Potential Occupancy or Habitat in Project area (see App. A): The Sierra Nevada Forest Plan Amendment (USDA 2001) (SNFPA), volume 4 and SNFPA biological assessment and opinion with updates in the 2004 supplemental FEIS, biological assessment and opinion for federally listed species has greater detail for species accounts. This format is intended for a brief summary for projects with relatively low or no risk to special status wildlife and plant species. The species accounts are summarized here and the parent documents listed above are incorporated by reference for more detail.

Valley elderberry long-horned beetle (VELB): VELB larvae are found in elderberry shrubs, generally with a base diameter of at least 1 inch, in foothill woodland, chaparral communities below 2,900 feet in elevation. Primary method of survey/observation is location of exit holes in elderberry stems. The closest detection of exit holes to the Project area is in the vicinity of Borel Hydroelectric plant. The proposed projects were surveyed, no elderberry shrubs were found that may be affected by the proposed project.

Determination of effects: No effect.

Bakersfield Cactus (OPBAT): Bakersfield cactus is a subspecies of beavertail cactus. It is found in annual grassland from the mouth of the Kern Canyon south and west to Arvin. Nearest confirmed location is near the Hwy 178 hydroelectric Powerhouse at the mouth of the Kern River Canyon. A possible OPBAT plant has been located near lower Richbar. Surveys along proposed relocation routes for the Kern Canyon OHV trail in Black Gulch north detected a beaver tail cactus near several segments. Further examination determined that the cactus within the Project area is the more common O. b. basilaris, not O. b. treleasei. No cacti were found in the areas directly disturbed by this project (cacti were found within 5 feet of the new trail, but would not be directly removed as part of trail construction).

Determination of effects: No effect.

California Condor: California condor are known to forage in the general vicinity of the southern San Joaquin Valley and occasionally roost in the Greenhorn Mountains north and west of the project or south in the Breckenridge Mountains. The proposed projects would not directly affect any known historic roosting or foraging areas.

Determination of effects: No effect.

Southwestern pond turtle (SWPT): SWPT are found along the lower Kern River. They may travel away from the river to lay eggs. SWPT may be affected indirectly by sedimentation which fills pools. The proposed toilet installations at Black Gulch South have the greatest potential to produce off-site sediment delivery.

Determination of effects: Potential effects are indirect deposition of sediment from erosion. This is mitigated by the distance to the river, mulching as needed and spreading of any excess soil. Best management practices are applied as prevention and mitigation for potential sediment delivery. Overall, the Project should reduce off site sediment delivery from the existing hill climbs and unauthorized trails.

Hardhead minnow are found adjacent to the Project area in the lower Kern segment. Hardhead minnow may be affected indirectly by sedimentation which fills pools. This potential indirect effect would be reduced by implementation of the project and restoration of eroded and eroding areas. Off-site sediment delivery as a result of implementing this project would be eliminated or minimized to negligible amounts through implementation of Best management Practices, water-barring, mulching and seeding of disturbed areas as well as by distance from the river. The net effect would be a significant reduction of sediment and potential future sediment delivery through site restoration of the abandoned trail segments and incorporated design features in the rerouted trails.

Determination of effects: Potential effects are indirect deposition of sediment from erosion. This is mitigated by the distance to the river, mulching as needed and spreading of any excess soil. Best

management practices are applied as prevention and mitigation for potential sediment delivery. Overall, the Project should reduce off site sediment delivery from the existing hill climbs and unauthorized trails.

Yellow-Blotched Ensatina and slender salamanders (Greenhorn Mountain, Kern Canyon and Relictual): These species are generally found in moist areas and retreat underground during dry periods. No salamanders or ensatina were found. Black Gulch Canyon is identified as having slender salamanders and as an area of observed conflict between protection of salamander habitat with effects of recreational and grazing use of the area (Germano 2006). The areas of greatest potential conflict are the stream crossings in the two rerouted trail segments. Both relocated trail segments move the trail stream crossings from areas of higher potential conflict to areas of lower conflict (smaller footprint, higher in the stream course, from areas of intermittent or ephemeral flow to areas of lower flow and narrower area of overlap with potential habitat). The fenced area in Black Gulch North will significantly improve habitat on several acres of suitable habitat and protect approximately .25 mile of intermittent or ephemeral streamcourse with wetland vegetation.

Determination of effects: There is low potential for harm to these species since the bulk of project activities would take place on relatively dry sites with low potential for occurrence of these species. The proposed trail relocations will reduce existing impacts and improve trail design will continue to reduce impacts into the future. The fencing of the riparian area will result in a significant improvement of suitable habitat.

California Legless Lizard: This species is found in loose sandy soils with litter in chaparral and foothill woodland. There is potential habitat within the Project area, but there are no historic or current records of this species within the project area. The potential for adverse effect is limited to disturbance during obliteration of abandoned trail segments or construction of relocated trail segments. The areas proposed for obliteration are already compacted and disturbed such that they would be unlikely to support current occupancy by this species. There is potential habitat for this species along the rerouted portion of the Kern Canyon trail.

Determination of effects: There is low risk to this species cue to the small area of potential habitat affected. Legless lizards within the area affected by new construction are likely to leave area curing construction due to influence of noise and vibration. As such, past trail construction has had no observed mortality or effects on this species and none are anticipated during this project. Obliteration of abandoned trail segments would restore currently degraded habitats and the net effect would be an increase in potential habitat.

Pacific fisher (MAPE): The Evan's Flat portion of the Project is within the southern edge of the range of the Pacific fisher and the Southern Sierra fisher Conservation Area. There have been no detections this far south and west, but there is suitable habitat within the project area. There is a low risk of potential disturbance during removal and site restoration of the creek crossing and camp sites west of the creek. However, since this is within a campground, the potential for disturbance is not likely to be any greater than the normal use of the campground. There would be a small benefit to eliminating camping sites and reducing disturbance on the west side of the creek since animals tend to use creeks as travel corridors and the current camp sites are on both sides of the creek. A short section of OHV trail would be rerouted from the existing stream crossing on the section of road to be decommissioned to align with an old road bed and crossing further upstream where the crossing gradient would be less.

Determination of effects: Realignment of the trail and elimination of the existing stream crossing and campsites would have a potential beneficial effect. The adverse effects of the existing OHV trail are addressed in the Sequoia National Forest Travel Route Management Plan FEIS.

California spotted owl (CASPO); California spotted owls are found adjacent to the Evan's Flat portion of the Project area. There is a PAC adjacent to the project area. Potential disturbance would not be any greater than the existing disturbance from normal campground use. No habitat would be removed or altered other than restoration

and reduction of disturbance by removing the camp sites and the road crossing of the creek that accesses the camp sites on the west side of the creek.

> **Determination of effects**: Realignment of the trail and elimination of the existing stream crossing and campsites would have a potential beneficial effect. The adverse effects of the existing OHV trail are addressed in the Sequoia National Forest Travel Route Management Plan FEIS.

Northern Goshawk (NOGO): Northern Goshawks are found adjacent to the Evan's Flat portion of the Project area. A Protected Activity Center (PAC) for NOGO has been established around the campground due to consistent detection and observation of this species in the area. No nests or young have been found to date. Potential disturbance would not be any greater than the existing disturbance from normal campground use. No habitat would be removed or altered other than restoration and reduction of disturbance by removing the camp sites and the road crossing of the creek that accesses the camp sites on the west side of the creek.

> **Determination of effects**: realignment of the trail and elimination of the existing stream crossing and campsites would have a potential beneficial effect. The adverse effects of the existing OHV trail are addressed in the Sequoia National Forest Travel Route Management Plan FEIS.

Plants

The following plants were noted by the California Department of Fish and Wildlife as California Rare Plant Rank 1B. They are not listed as Forest Service Sensitive, except for Shevock's golden aster and the new Forest Service sensitive listings for rose-flowered larkspur and Greenhorn fritillary effective August 16, 2013. Additional surveys were conducted in April of 2013 specifically for these species in addition to previous surveys of federal and state protected species as well as Forest Service Sensitive species. Surveys were conducted by personnel familiar with these species using standard survey techniques for location and identification of plants. Previous surveys were conducted for both plants and animals but focused on federally protected species and Forest Service Sensitive Species. Due to extreme drought, few annual species grew or were recognizable during the 2013 survey. Perennial species were recognizable but none of the species of concern were found within or adjacent to the disturbed areas of the project. One Forest Service Sensitive plant is known from the Project area along the river at several locations further west along the river. It is outside of the areas identified as having potential disturbance for this project, but is addressed below.

Pale-yellow layia (Layia heterotricha): Layia heterotricha is a flowering plant in the daisy family known by the common name pale yellow tidytips, or pale yellow layia. It is endemic to California, where it is known from several areas in the west-central part of the state, such as the Santa Monica Mountains and lower San Joaquin Valley. Habitat is open, clay soils in grasslands, foothill woodlands at elevations between 960 - 5120 feet. Layia heterotricha is an annual herb producing a thick, erect stem to a maximum height near 90 centimeters. The stem and foliage are covered thinly in dark glandular hairs and the plant has a scent similar to apples or bananas. The leaves are oval-shaped, fleshy, and sometimes slightly toothed. It is known from the general area of the project in the lower Kern Canyon upper banks of Kern River at Miracle Hot Springs (approximately 1 mile west of Sandy Flat, none known near Black Gulch). (http://en.wikipedia.org/wiki/Layia_heterotricha, http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Layia+heterotricha, http://www.blm.gov/ca/st/en/prog/ssp/plants/layia_heterotricha.html).

> **Determination of effects:** Since the species is of concern but not formally protected by either state or federal statue or regulation, there is no established threshold of effect. The standard threshold of effect for Forest Service designated sensitive species has been applied. The proposed project is not likely to lead to loss of viability or contribute to a trend leading to federal protection under the Endangered Species Act for Layia heterotricha.

Rationale for effects determination: There are no known populations that would be directly affected. The plant is an annual herb that would have seed reserves in the soil that would remain undisturbed if there were an

inadvertent impact to an unknown population. The abandoned trail segments to be restored to their natural condition are heavily compacted with low or no potential for existing populations. Some potential habitat may be disturbed as a result of new trail construction on the kern River Trail Overall the proportion of the available potential habitat that may be affected is small enough to be discountable. The net result is beneficial through reduction of compacted sites.

Kern River Evening-primrose (Camissonia integrifolia): Camissonia integrifolia is an uncommon annual herb native to California, endemic to Kern County. It is found in the Sierra Nevada foothills in chaparral and annual grass at elevations between 2,000 and 3,000 feet. The species California Rare Plant Rank is 1B.3 (1B: Rare, threatened, or endangered in California and elsewhere, 0.3: Not very endangered in California), with a global ranking of G2 (G2: 6-20 occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres). There is one observation of this species noted on the old Kern Canyon Road near Miracle Hot Springs which is in the general vicinity of Sandy Flat Campground (http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=1428, http://plants.usda.gov/core/profile?symbol=CAIN22&mapType=nativity&photoID=, http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/Go?_id=camissonia_integrifolia&sort=DEFAULT&search=primrose, http://en.wikipedia.org/wiki/Heterotheca_shevockii).

> **Determination of effects:** Since the species is of concern but not formally protected by federal statute or regulation, there are no established thresholds of effect. The standard threshold of effect for Forest Service designated sensitive species has been applied. The proposed project is not likely to lead to loss of viability or contribute to a trend leading to federal protection under the Endangered Species Act for Camissonia integrifolia.
>
> **Rationale for effects determination**: There are no known populations that would be directly affected. The plant is an annual herb that would have seed reserves in the soil that would remain undisturbed if there were an inadvertent impact to an unknown population. The abandoned trail segments to be restored to their natural condition are heavily compacted with low or no potential for existing populations. Some potential habitat may be disturbed as a result of new trail construction on the kern River Trail Overall the proportion of the available potential habitat that may be affected is small enough to be discountable. The net result is beneficial through reduction of compacted sites.

Shevock's golden-aster (Heterotheca shevockii): Heterotheca shevockii is a Forest Service designated sensitive perennial herb in the aster family known by the common names Kern Canyon false golden-aster and Shevock's golden-aster. It is endemic to Kern County where it grows along a 21-mile stretch of the Kern River. This plant has hairy to bristly stems, often growing 10 to 50 inches in height. Flowering occurs mostly in August and September, but it may be seen in flower between January and November. This plant grows in chaparral and woodland habitat in sandy soils in crevices and ditches near the river. There are about 8 populations of this plant, totaling 246 individuals. The species California Rare Plant Rank is 1B.3 (1B: Rare, threatened, or endangered in California and elsewhere, 0.3: Not very endangered in California), with a global ranking of G2 (G2: 6-20 occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres). There are no known populations within the disturbed area of the project, but there are known locations along the river near the Sandy Flat Day Use Area and further downstream near Miracle and Delonegha Hot Springs. There are no known locations near Black Gulch. (http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/Go?_id=heterotheca_shevockii&sort=DEFAULT&search=heterotheca%20shevockii, http://en.wikipedia.org/wiki/Heterotheca_shevockii)

> **Determination of effects:** The proposed project is not likely to lead to loss of viability or contribute to a trend leading to federal protection under the Endangered Species Act for Heterotheca shevockii.
>
> **Rationale for effects determination:** There are no known populations that would be directly affected. The plant is a perennial herb that would be readily visible during surveys and project work, even in severe

drought years. Therefore there is low potential for unknown populations within the area of potential effect. The areas of potential effect are generally drier site and there are none immediately adjacent to the river where this species appears to occur.

Rose-flowered larkspur (Delphinium purpusii): Delphinium purpusii is a perennial larkspur known by the common names Kern County larkspur and rose-flowered larkspur. It is endemic to Kern and Tulare Counties in the southern Sierra Nevada foothills. It grows on rocky cliffs and talus. This wildflower reaches between 1 to 3 feet in height. The erect thin stem has deeply lobed leaves around the base and a small, narrow inflorescence of generally ten to 20 flowers at the top. The flowers of this species are bright pink, making it unusual among the mainly blue-flowered plants of this genus. The sepals curl either forward or back. The species California Rare Plant Rank is 1B.3 (1B: Rare, threatened, or endangered in California and elsewhere, 0.3: Not very endangered in California), with a global ranking of G2 (G2: 6-20 occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres). This species was designated Forest Service sensitive was removed from the list of designated plants due to low potential for effects within the rocky talus inhabited by the species and a more common occurrence than originally known. It was added to the Regional Forester's sensitive species list effective August 16, 2013. There are several observations of this species within 1 to 4 miles west of Sandy Flat near Miracle and Delonegha Hot Springs. It is a perennial erect herb that would be relatively easy to find during surveys or operations. This species was not found within the area of potential effect for either project. (http://en.wikipedia.org/wiki/Delphinium_purpusii, http://www.calflora.org/cgi-bin/species_query.cgi?special=calflora&where-calrecnum=2672&one=T)

Determination of effects: The proposed project is not likely to lead to loss of viability or contribute to a trend leading to federal protection under the Endangered Species Act for Delphinium purpusii.

Rationale for effects determination: There are no known populations that would be directly affected. The plant is generally found in rocky areas where there would be low potential for effect. It is a perennial plant that would be identifiable during surveys even during drought years. The area of disturbance in any single location is relatively small such that seed reserves in the soil that would remain undisturbed if there were an inadvertent impact to an unknown population and recolonization would be likely. This species is also partially protected by its occurrence in rocky areas that limit options for trail construction.

Greenhorn fritillary (Fritillaria brandegeei): Fritillaria brandegeei is a perennial herb (bulb) native to California and endemic to Kern and Tulare counties. It is found in the yellow pine forest at elevation of 5,000 to 7,000 feet. This species is within the range of the Evan's Flat portions of this project. This species was delisted as Forest Service Sensitive because it appears to be more abundant and widespread than previously believed and not subject to the degree of threats to warrant status according to notice of review, as published in Federal Register Volume 50, Number 188, Pages 39526 - 39584, September 27, 1985. It was returned to the Forest Service sensitive species list effective August 16, 2013. (http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Fritillaria+brandegei, http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=810309

Determination of effects: The proposed project is not likely to lead to loss of viability or contribute to a trend leading to federal protection under the Endangered Species Act for Fritillaria brandegeei.

Rationale for effects determination: There are no known populations that would be directly affected. The project trail relocation in the Evans Flat location follows a constructed road that is converted from maintenance level 1 (closed to the public, administrative use) to a trail which would have less impact.

Calico monkey flower (Mimulus pictus): Annual herb found in bare, sunny areas around shrubs, rock outcrops on granitic soils. There are occurrences of this species identified along Highway 178 in the lower Kern Canyon near Lilly Canyon, Little Creek Canyon, Richbar and Miracle Hot Springs. They range from Castaic Lake to Porterville. There were no observations in the immediate area of the Project. (http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/Go?_id=mimulus_pictus&sort=DEFAULT&search=Mimulus%20pictus,

http://ucjeps.berkeley.edu/cgi-bin/get_JM_treatment.pl?7177,7386,7433, http://ucjeps.berkeley.edu/cgi-bin/get_consort.pl?taxon_name=Mimulus+pictus, http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q185)

Determination of effects: Since the species is of concern but not formally protected by either state or federal statue or regulation, there is no established threshold of effect. The standard threshold of effect for Forest Service designated sensitive species has been applied. The proposed project is not likely to lead to loss of viability or contribute to a trend leading to federal protection under the Endangered Species Act for Mimulus pictus.

Rationale for effects determination: There are no known populations that would be directly affected. The plant is an annual herb that would have seed reserves in the soil that would remain undisturbed if there were an inadvertent impact to an unknown population. The areas to be disturbed in the trail restorations are heavily compacted with low potential for existing populations. The trail reroute at Evan's Flat is above the range for this species. The trail reroute for the Kern Canyon Trail would affect a relatively small area in a small proportion of the range for this species. Overall the proportion of the available potential habitat that may be affected is small enough to be discountable. The net result is beneficial through a net reduction of disturbed habitat through site restoration of abandoned trail segments.

Cumulative Effects Determination: The contribution of the proposed action to cumulative effects on the above species is small in scale or proportion of potential habitat affected, intensity of the change. The areas are mostly in disturbed context and the proposed improvements will reduce off site impacts by providing toilet and garbage collection facilities with better and more focused access rather than the more diffuse and widespread impacts that currently exist. Primary cumulative effects derive from existing recreational use, grazing and wildfire. There are no proposed changes to these existing uses and there are reduced impacts from both this project and reduction of user created OHV trails in the Black Gulch North OHV trail restoration project.

Determination for state- and federally-protected species: No Threatened or Endangered species protected under state or federal endangered species acts or their designated critical habitats would be affected by the proposed action. This is a determination of **no effect**.

Forest Service Sensitive Species Determinations

It is my determination that the proposed action would **not cause or contribute to a trend leading to the loss of viability or listing** for protection under federal law for the following Forest Service designated sensitive species: western pond turtle, slender salamanders (Kern Canyon, Greenhorn Mountain or relictual), yellow blotched ensatina, California legless lizard, hardhead minnow, northern goshawk, Pacific fisher, California spotted owl or Shevock's golden-aster.

Management Indicator Species (MIS)

No habitat monitored through Management Indicator Species would be adversely affected. Actions would take place within the riparian habitats represented by yellow warbler, but no habitat would be removed or adversely affected by the Project except a small area less than .1 acres that would be affected by the new trail stream crossing to replace the existing road crossing of the stream. The net effect would be to diminish by 50% the existing habitat alteration and when considered with the riparian enhancement proposed for Black Gulch north, the net effect would be habitat improvement with a net gain of 1-5 acres. Approximately 1-5 acres of potential yellow warbler habitat would be restored through decommissioning campsites and the road stream crossing at Evan's Flat and fencing of riparian habitat at Black Gulch north. Statewide this improvement would not affect trends in availability of habitat or population trends for yellow warbler. Concerns were raised regarding potential effects on sooty grouse. This MIS is a representative of open mature forest habitat. Sooty grouse are not known to inhabit this area, but it may have been within the historic range of the species. No suitable habitat monitored for

sooty grouse would be affected by the proposed action, no trees would be removed. There would be no effect on habitat availability or population trends for this species at a local, regional or state level.

Migratory Bird Act Compliance

No snags for migratory birds would be affected. There is a low potential for affecting nesting migratory birds that nest on the ground during construction of new trail reroutes. Actions would most likely take place after fall migration and before spring migration. The potential for effect should be minimized by presence of a biological monitor if trail construction takes place during spring nesting periods.

Other species of concern:

Bald eagles use the area for winter roosting. Construction/installation would be unlikely to temporarily displace wintering birds since the activities are not immediately adjacent to the river locations where the eagles winter. The proposed activities and locations would not interfere with vital life functions or displace the birds from critical resources.

The following plants were address due to concerns raised during public comment: pale-yellow layia, Kern River evening primrose, and rose-flowered larkspur. None of these species are known to inhabit the area of potential effect for the Project. It was determined that there would be no effect on the rose flowered larkspur since it is a perennial that would have been observed during project surveys. Surveys for the layia and primrose are less certain since they are annuals and there was little or no annual growth this year. There would be no impact during the fall on these species and the potential for inadvertent impact on unknown populations is small due to the area of effect, the existing disturbed and compacted context of the areas to be affected and seed reserves in the soil that would remain viable to recolonize areas affected if unknown populations exist.

Other species of concern identified through public comment

Low elevation:

Lark Sparrow, Kern Redwing Blackbird, Lawrence's Goldfinch, Long eared owl, Great Horned owl, Barn owl, Western Screech owl, Cooper's hawk, Golden Eagle, Burrowing owl, Loggerhead shrike, Nuttall's woodpecker, Oak titmouse, Yellow warbler, and Lark Sparrow.

Evan's Flat area:

California Spotted owl, Goshawk, and Pileated woodpecker, Coopers Hawk, Northern, Flamulated owl, White-headed woodpecker, Red Breasted sapsucker, Olive sided flycatcher, hermit warbler, chipping sparrow, Kern Redwing Blackbird, Lawrence's Goldfinch, 18 species of bats listed as of concern (most not there) - but pallid bat, horny bat, and Western Small-footed myotis, Fringed myotis, Long-eared myotis, Yuma myotis, and western mastiff bats, Northern flying squirrels, the Lodgepole chipmunks, and the Pacific fisher.

Other than for fisher, no specific concerns, indication of extraordinary circumstances, identification of actual conflicts or even presence of the above species was indicated for the Project area. The Federal and State protected species as well as Forest Service sensitive and management indicator species are addressed above. These special status or at risk species include California spotted owl ,fisher, goshawk, pallid bat, sooty grouse and yellow warbler.

Since there is no proposal that would affect potential tree habitats, it is assumed that ground nesters would be the only species from the above list that would be likely to be adversely affected from the above listing. Ground nesting birds would be unlikely to be affected by most of the restoration activity since the existing unauthorized routes don't have enough cover to support ground based animals or nesting birds this leaves the potential for disturbance primarily with construction of new routes during the nesting season or in proximity of burrowing owl colonies. No burrowing owl colonies or suitable sites were observed in near proximity during survey of the Project

area for potential reroute locations. Potential for disturbance of this species would be relatively low since there are no historical colonies known within the project area.

Nesting Migratory Birds

No snags for migratory birds would be affected. Actions would most likely take place after fall migration and before spring migration. In the event that actions take place during nesting periods, the area will be monitored and nesting birds will be avoided. Extent of buffering will vary by potential effect at the discretion of the biological monitor (e.g. hand construction of a trail reroute adjacent to a heavily used OHV trail would have less potential for impact than new construction in an area with no other impacts in the immediate area.

Recommendations

If construction occurs during nesting periods, a biological monitor will apply appropriate buffers to avoid flushing or abandonment of nests. Buffers may vary with topography, type of activity, sensitivity of wildlife to activity and other factors.