

# EXHIBIT F

# **Stanislaus National Forest**

## **Forest Plan Direction**

### **March 2017**



# Stanislaus National Forest

## Forest Plan Direction

### March 2017

Alpine, Calaveras, Mariposa and Tuolumne Counties, California

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**Abstract:** The Forest Service completed the Stanislaus National Forest Land and Resource Management Plan (Forest Plan) and Environmental Impact Statement (EIS) on October 28, 1991. This document, the Stanislaus National Forest "Forest Plan Direction" presents the current Forest Plan management direction, based on the original Forest Plan as modified through the Forest Plan amendment process.



**Cover Photo:** Fahey Cabin (Jerry Snyder, Forest Service; September 27, 2008)

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Table 2 Motor Vehicle Travel Management Objectives (MVTM)

Motor Vehicle Travel Management Objectives	Ranger Districts				Forest Totals
	Mi-Wok	Calaveras	Summit	Groveland	
<b>Motor Vehicle (acres)</b>					
1. Closed Motor Vehicle (10-G-1)	23,975	100,000	190,000	44,140	358,115
2. Restricted Motor Vehicle (10-G-2)	145,350	152,640	79,350	162,545	539,885
Total	<b>169,325</b>	<b>252,640</b>	<b>269,350</b>	<b>206,685</b>	<b>898,000</b>
<b>Off-Highway Vehicle (miles)</b>					
Motorcycle (MC)	100.0	45.0	0.0	0.0	145.0
All-Terrain Vehicle (ATV)	125.0	45.0	10.0	45.0	225.0
Off-Highway Vehicle (OHV)	360.0	400.0	135.0	253.0	1,148.0
4 Wheel Drive (4WD)	40.0	40.0	21.0	50.0	151.0
Total	<b>625.0</b>	<b>530.0</b>	<b>166.0</b>	<b>348.0</b>	<b>1,669.0</b>
<b>California Backcountry Discovery Trail</b>					
CBDT Segments (miles)	82.8	58.6	3.0	77.0	221.4
<b>Over-Snow Vehicle (acres)</b>					
Available OSV	145,350	152,640	79,350	162,545	539,885
<b>Over-Snow Vehicle (miles)</b>					
Groomed	0.0	40.0	30.0	0.0	70.0
Un-groomed Marked	25.0	50.0	50.0	0.0	125.0
Un-groomed Un-marked	275.0	240.0	116.0	40.0	671.0
Total	<b>300.0</b>	<b>330.0</b>	<b>196.0</b>	<b>40.0</b>	<b>866.0</b>
<b>Wheeled Over-Snow (miles)</b>					
Wheeled Over-Snow (WOS)	5.0	9.0	26.0	0.0	40.0

Practices	General Direction	Standards and Guidelines
	<p><b>4. Range:</b> Follow Forestwide Standards and Guidelines for Range. In addition:</p> <ul style="list-style-type: none"> <li>a. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize conflicts with range caused by motorized use.</li> </ul> <p><b>5. Recreation:</b> Follow Forestwide Standards and Guidelines (as amended) for Recreation. In addition:</p> <ul style="list-style-type: none"> <li>a. Designate a managed system of existing motorized routes maintained to standards.               <ul style="list-style-type: none"> <li>1. Conduct route condition ratings, using the Route Condition Rating form and its instructions.                   <ul style="list-style-type: none"> <li>a. Utilize interdisciplinary skills and public participation.</li> </ul> </li> <li>b. Manage routes as follows:                   <ul style="list-style-type: none"> <li>1. For routes rated Green (OK): Sign open to motorized use with width restrictions, if any. Schedule maintenance to remain in Green.</li> <li>2. For routes rated Brown (Needs maintenance): Sign open to motorized use with width restrictions, if any. Schedule maintenance to move up to Green, with priorities set to avoid moving into Orange.</li> <li>3. For routes rated Orange (Needs Major Attention): Close to motorized use. Schedule maintenance, rehabilitation or mitigation to move up to Brown, then Green; or, obliterate.</li> </ul> </li> </ul> </li> <li>b. <b>Designated Routes:</b> include roads, routes and trails as described below. If resource damage or unresolvable conflicts are likely, the route should be repaired, relocated or closed. Designated routes may be installed, signed and maintained by Special Use Permittees.               <ul style="list-style-type: none"> <li>1. <b>Off-Highway:</b> include Motorcycle, ATV, OHV, 4WD and Combined Use routes as described below.                   <ul style="list-style-type: none"> <li>a. <b>Designated Motorcycle Routes:</b> include narrow single track trails. Designated Motorcycle Routes are open only to single track vehicles less than 24 inches wide (Motorcycles Only).</li> <li>b. <b>Designated ATV Routes:</b> include narrow double track trails. Designated ATV Routes are open only to vehicles less than 50 inches wide (Motorcycles and ATVs Only).</li> <li>c. <b>Designated OHV Routes:</b> include full width roughly graded (level 2) Forest System roads which are open to public motorized use. Designated OHV routes also include other full width routes and trails which are open to motorized use. Designated OHV Routes are open to all vehicles, but not maintained for conventional highway vehicles.</li> <li>d. <b>Designated 4WD Routes:</b> include full width roads, routes or trails which are not maintained for conventional highway vehicles; 4WD travel is recommended.</li> <li>e. <b>Designated Combined Use Routes:</b> include portions of high standard roads for Combined Use by street legal and non-street legal vehicles.</li> </ul> </li> <li>2. <b>Over-Snow:</b> include Wheeled Over-Snow (WOS) routes and Over-Snow Vehicle (OSV) routes as described below.                   <ul style="list-style-type: none"> <li>a. <b>Designated WOS Routes:</b> include surfaced roads and other routes which are open for WOS use by ATVs.</li> <li>b. <b>Designated OSV Routes:</b> include roads, routes and trails which are open to motorized use. Cross-country over snow travel, by vehicles designed specifically for that purpose, will be permitted when there is 12 inches or more of snow and no contact is made with native soil or vegetation.</li> </ul> </li> </ul> </li> <li>c. Provide comprehensive user information and education programs.               <ul style="list-style-type: none"> <li>1. Renew the "Host" program emphasis and provide training.</li> <li>2. Include well done entry stations and bulletin boards at staging areas and contact stations.</li> <li>3. Provide professional quality signs, maps and brochures.</li> <li>4. Emphasize a conservation ethic through literature, handouts and radio announcements with the message being the same: tread lightly, stay on roads and trails to protect our sport, our meadows and our environment.</li> <li>5. Encourage motorized use in appropriate areas.</li> </ul> </li> <li>d. Provide comprehensive project level planning, perhaps within a watershed analysis.               <ul style="list-style-type: none"> <li>1. Incorporate control measures such as fencing and rehabilitation measures for presently disturbed areas.</li> <li>2. Involve interdisciplinary skills and public participation in route condition ratings, nominations, designations, closures, construction and maintenance.</li> <li>3. Include sign planning, installation and maintenance in contracts for construction and maintenance of routes.</li> <li>4. Strategically locate staging areas serving as trailheads near street legal access points.</li> <li>5. Consider future changes, additional designations and route developments to enhance OHV opportunities for loop travel.</li> <li>6. Consider other selected maintenance level 3, 4, and 5 Forest roads for Combined Use where this would enhance OHV opportunities.</li> </ul> </li> </ul>	

Practices	General Direction	Standards and Guidelines
		<p>7. Provide motorcycle and ATV trail riding opportunities in the Hull Creek, Crandall, Penny Pines, Liberty and Pilot Ridge areas.</p> <p>e. Prepare California Backcountry Discovery Trail (CBDT) nominations after project level analysis and sign routes that are accepted by the California Department of Parks and Recreation.</p> <p>1. Provide maps and other information on CBDT segments. Include information on segments open to OSV use and other similar OSV opportunities.</p> <p>f. Seek opportunities to increase OSV route grooming as additional non-Forest Service funding is available.</p> <p>g. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize conflicts with other recreationists caused by motorized use.</p> <p><b>6. Riparian:</b> Superseded by <b>SNFPA</b>.</p> <p><b>7. Sensitive Plants:</b> Follow Forestwide Standards and Guidelines for Sensitive Plants. In addition:</p> <p>a. Protect sensitive plants from motorized activities which might cause the plants to become federally threatened or endangered.</p> <p>1. Allow OHV use through populations of sensitive plants only where the planned impacts are considered acceptable and where proliferation of routes into adjacent parts of the population does not occur.</p> <p>2. Locate OHV staging areas where associated off-site use does not damage sensitive plants.</p> <p>b. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize damage to sensitive plants caused by motorized use.</p> <p><b>8. Soils:</b> Follow Forestwide Standards and Guidelines for Soils. In addition:</p> <p>a. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize soil loss caused by motorized use.</p> <p><b>9. Special Areas:</b> Follow Management Area Direction (as amended) for Special Interest Areas, Research Natural Areas, and Experimental Forest. In addition:</p> <p>a. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize damage to special area values caused by motorized use.</p> <p><b>10. Transportation:</b> Follow Forestwide Standards and Guidelines for Transportation. The existing direction to manage the road system to protect wildlife and riparian values also applies to OHV routes and OSV routes. In addition:</p> <p>a. Prohibit non-street legal vehicles on roads or routes not designated for OHV use.</p> <p>b. Consider closing to all motorized use those roughly graded roads that do not enhance motorized opportunities.</p> <p>c. Comply with the Highway Safety Act and prepare Combined Use orders as necessary.</p> <p>d. Utilize seasonal closures to protect road and route surfaces.</p> <p>e. Develop entrance strategies to discourage normal passenger vehicle travel on designated OHV routes.</p> <p>f. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize traffic conflicts caused by motorized use.</p> <p><b>11. Vegetation:</b> Superseded by <b>SNFPA</b>.</p> <p><b>12. Visual Resource:</b> Follow Forestwide Standards and Guidelines for Visual Resource. In addition:</p> <p>a. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize damage to the visual resource caused by motorized use.</p> <p><b>13. Water:</b> Follow Forestwide Standards and Guidelines for Water. In addition:</p> <p>a. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize damage to water quality caused by motorized use.</p> <p><b>14. Wild and Scenic Rivers:</b> Follow Management Area Direction (as amended) for Wild and Scenic Rivers. In addition:</p> <p>a. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to mitigate and minimize damage to Wild and Scenic River values caused by motorized use.</p> <p><b>15. Wilderness:</b> Follow Management Area Direction (as amended) for Wilderness. In addition:</p> <p>a. Conduct surveys, observe conditions and carry out rehabilitation, as needed, to eliminate evidence of, and access by, unauthorized motorized use.</p> <p><b>C. Management Setting</b></p> <p><b>1. Administration:</b></p> <p>a. Prohibit motorized use and close motorized routes in non-motorized areas, except for: 4N80Y; 5N02R (<b>NMFPA</b>).</p> <p>b. Prohibit cross-country overland OHV travel.</p> <p>c. Recognize OHV activities as legitimate uses of the National Forest and provide opportunities, where compatible the other direction and guidelines established in the Forest Plan.</p>



Practices	General Direction	Standards and Guidelines
		<ul style="list-style-type: none"> <li>d. Manage OHV activities to meet the intent of the Executive Orders 11644 and 11989.</li> <li>e. Control and direct OHV use to protect resources, promote the safety of all users, and minimize conflicts among the various uses of the Forest (36 CFR 219.21 (g)).</li> <li>f. Resolve motorized activity problems presenting an immediate threat to life or property through an immediate closure to vehicle type(s) causing the problem.</li> <li>g. Include an evaluation of motorized activities in timber sale, reforestation, fuelbreak, fire suppression and other projects that may affect Motor Vehicle Travel Management. For traffic safety, roads or routes may be temporarily closed during management activities.</li> <li>h. Consider applications for organized events on a case-by-case basis.</li> <li>i. <b>Treat different types of motorized use fairly.</b> <ul style="list-style-type: none"> <li>1. Motor vehicle travel is restricted to designated routes. Manage motorized routes as open unless signed or physically closed. <ul style="list-style-type: none"> <li>a. Cross country overland travel is not permitted.</li> <li>b. Cross country over snow travel, by vehicles designed specifically for that purpose, is permitted when there is 12 inches or more of snow and no contact is made with native soil or vegetation.</li> </ul> </li> <li>2. Prohibit public motor vehicle travel off NFTS routes except as allowed by permit or other authorization. Allow parking within one vehicle length (vehicle and trailer) off of NFTS routes unless otherwise prohibited. (<b>FFPA</b>)</li> </ul> </li> <li>j. Provide consistent signing. <ul style="list-style-type: none"> <li>1. <b>Roads:</b> Forest roads are signed as described below. <ul style="list-style-type: none"> <li>a. Roads maintained for conventional highway vehicles: standard highway sign, or Forest Service sign with horizontal route number, installed at road intersections.</li> <li>b. Roads not maintained for conventional highway vehicles: standard Forest Service sign, or carsonite type marker (on Designated OHV Routes), with vertical route number, installed at road intersections.</li> </ul> </li> <li>2. <b>Off-Highway:</b> Forest roads, routes and trails are signed as described below. <ul style="list-style-type: none"> <li>a. <b>Designated Motorcycle Routes:</b> carsonite type marker with motorcycle symbol (vertical route number, if shown) installed at access points and intersections with other designated routes.</li> <li>b. <b>Designated ATV Routes:</b> carsonite type marker with ATV or motorcycle/ATV symbol (vertical route number, if shown) installed at access points and intersections with other designated routes.</li> <li>c. <b>Designated OHV Routes:</b> standard Forest Service sign, or carsonite type marker, with vertical route number, installed at access points and intersections with other designated routes.</li> <li>d. <b>Designated 4WD Routes:</b> standard Forest Service sign, or carsonite type marker, with 4WD (Jeep) symbol and vertical route number, installed at access points and intersections with other designated routes.</li> <li>e. <b>Designated Combined Use Routes:</b> yellow diamond shaped highway sign with ATV symbol in addition to standard signs indicating Combined Use by street legal and non-street legal vehicles, installed at both ends of the Combined Use segment.</li> </ul> </li> <li>3. <b>Over-Snow:</b> Forest roads, routes and trails are signed as described below. <ul style="list-style-type: none"> <li>a. <b>Designated WOS Routes:</b> ATV symbol installed at access points from winter parking areas.</li> <li>b. <b>Designated OSV Routes:</b> snowmobile symbol installed at access points from winter parking areas.</li> </ul> </li> <li>4. <b>Closed:</b> Forest roads, routes and trails that are closed to motorized use are indicated by: <ul style="list-style-type: none"> <li>a. the presence of closed signs, gates or barriers.</li> </ul> </li> </ul> </li> <li>2. <b>Law Enforcement:</b> <ul style="list-style-type: none"> <li>a. Provide appropriate levels of enforcement: <ul style="list-style-type: none"> <li>1. A Forest Service presence in the use area and application of law enforcement based on the need are essential.</li> <li>2. Forest Service personnel riding the type of vehicles used in the area; these contact persons must be well equipped with machine and safety gear and they must be qualified riders or drivers.</li> </ul> </li> <li>b. Update Forest Orders and enforce closures and other restrictions.</li> </ul> </li> </ul>
Mountain Bicycle Management (10-H)	Mountain bicycle management applies Forestwide. Every acre of National Forest land treated by this Forest Plan fits into one of the categories listed below (no open use is included). Special Note: Mountain bicycle management applies to and includes all forms of non-motorized mechanical transport, except wheelchairs used for access by the physically impaired.	
1. Restricted Mountain Bicycle Management	Mountain bicycle use will be controlled and directed to protect resources, promote the safety of all	Mountain bicycle use is restricted to existing roads and trails, subject to seasonal closures as resource conditions warrant. Roads and trails are considered open to mountain bicycle use unless signed closed to bicycles.

Practices	General Direction	Standards and Guidelines
	users, and minimize conflicts among the various users of the Forest.	Mountain bicycle use will be monitored for signs of overuse, conflicts and threats to public safety. Mountain bicycle-related problems presenting an immediate threat to life or property will be resolved through an immediate mountain bicycle closure, as it relates to the problem.
2. Closed Mountain Bicycle Management	Areas of the Forest in which mechanized use is prohibited are closed to mountain bicycle use.	Wilderness and proposed Wilderness are closed to mountain bicycles. Mountain bicycles may be prohibited from using other specific areas or trails by Forest Order.
Trail Management (10-I)	Maintain trails for their intended use. Regulate and restrict trail use as mandated by law or policy. Protect resource values and user safety while reducing conflicts. Emphasize and utilize volunteers, through the Adopt-A-Trail program and other agreements whenever possible.	Follow Forest Service Manual direction for trail management. Implement trail use regulations. Manage the Pacific Crest Trail as outlined in USDA Forest Service "Comprehensive Management Plan for the Pacific Crest National Scenic Trail", January, 1982.
Trail Construction and Reconstruction (10-J)	Develop a trail system that accommodates different types of users such as foot, equestrian, OHVs and mountain bicycles. Construct or reconstruct trails so as to avoid impacts to sensitive areas such as meadows.	Construct or reconstruct trails to accommodate the predicted type of use and capacity while providing the desired recreation experiences. Design equestrian trails to safely accommodate pack horses as well as horse and rider use. Design trails for OHVs to provide an enjoyable experience. When applicable, utilize closed or obliterated roads as trails.
Trail Construction and Reconstruction - Special Purpose (10-K)	Provide for special purpose trails such as physically impaired, educational, bicycle, and over-snow.	Separate bicycle trails from other uses except when incorporated into selected roads. Over-snow trails may be installed, signed and maintained by special use permittees.
Interpretive Services Planning (10-L)	An Interpretive Services plan for the Forest will establish objectives, priorities, evaluation criteria, and coordinate programs. Each District with an Interpretive Services Program will develop a Plan.	Maintain and update visitor information, interpretive and environmental education plans including natural, cultural and management themes according to the direction of FSM 1661.
Interpretive Services Management (10-M)	Develop and maintain interpretation and visitor information programs.	Provide appropriate levels of information programs to enhance visitor understanding of the Forest environment and Forest Service management activities. Develop new programs. Present quality programs for large and small audiences that may include staffed information offices, guided and unguided activities, displays, exhibits, brochures and campfire programs.

## Sensitive Plants

Practices	General Direction	Standards and Guidelines
Sensitive Plants Interim and Recovery Management (12-A)	Provide for protection and habitat needs of sensitive plants, so that Forest activities will not jeopardize their continued existence.	<p>Protect sensitive plants from activities which might cause them to become Federally listed as Threatened or Endangered.</p> <p>Identify populations of sensitive plants which occur in areas planned for timber sales or other projects.</p> <p>Modify planned projects to avoid or minimize adverse impacts to sensitive plants.</p> <p>Where projects may jeopardize a sensitive plant species perform a Biological Evaluation, botanical investigation and develop management guidelines, as necessary, for the species involved.</p> <p>Prepare species management guidelines for all sensitive species in order of the degree of risk posed by management activities.</p> <p>Conduct surveys and monitoring necessary to detect potentially damaging disturbances, changes in known populations and locations of new populations.</p>



Practices	General Direction	Standards and Guidelines
Sensitive Plant Surveys (12-A) <b>SNFPA</b> <sup>31</sup>	Conduct field surveys for TEPS plant species early enough in the project planning process that the project can be designed to conserve or enhance TEPS plants and their habitat. Conduct surveys according to procedures outlined in the Forest Service Handbook (FSH 2609.25.11). If additional field surveys are to be conducted as part of project implementation, survey results must be documented in the project file.	

## Soils

Practices	General Direction	Standards and Guidelines
Soil Support Services (13-A)	Forest projects and activities shall be conducted to maintain or improve soil productivity. (36 CFR 219.27(a) (1), 219.27(a)(2), 219.27(b)(5), 219.27(f)). Forest Soil Quality Standards and Best Management Practices will be implemented.	<p>Soil properties or conditions should not be altered to the degree that would result in a 15 percent or more reduction in the inherent productivity potential of the soil.</p> <p><b>Soil Cover:</b> Manage soil cover to avoid a High Erosion Hazard condition, as defined by the R-5 Erosion Hazard Rating method. Soil cover should be in place prior to seasonal precipitation.</p> <p><b>Soil Porosity:</b> Maintain soil porosity above 90 percent of its natural condition on at least 85 percent of a treatment unit or activity area (90 percent where aerial logging systems are used). Plantable landings and skid trails will be tilled, if compacted. Standard does not apply to system roads, administrative sites, or livestock driveways and bedding grounds.</p> <p><b>Surface Organic Matter:</b> Provide an organic mulch on approximately 50% of the soil surface after site preparation. Provide for a mix of duff, small woody debris less than 3 inches in diameter, and large woody debris, mostly decaying and unmerchantable logs (minimum 5 logs per acre)., Desired logs are about 20 inches in diameter, about 10 feet long, and represent a range of decomposition classes as defined in the Soil Management Handbook, FSH 2509.18, Chapter 2. Standard may be waived in fuel break areas where fuel loading would be a safety hazard.</p> <p><b>Soil Organic Matter:</b> Maintain topsoil organic matter to at least 85 percent of its original total in the top 12 inches. Applies to areas dedicated to growing vegetation, i.e., timber and forage production, vegetation that contributes to the quality of the recreational experience, and for watershed protection. Stockpile topsoil to rehabilitate disturbed areas such as borrow pits, mined areas, material storage sites, etc.</p> <p><b>Best Management Practices (BMPs):</b> Implement BMPs to mitigate the environmental impacts of erosion, compaction, and soil displacement. Require special soil mitigation to use ground skidding equipment on slopes steeper than 35%. Require special soil mitigation to use ground skidding equipment on soils that erode, displace, or compact easily. Where actual or potential slope instability is identified, specific mitigating measures will be developed by an interdisciplinary team including a geologist.</p>
Soil Resource Improvement (Planning, Treatment and Maintenance) (13-B)	Improve the inherent productivity of the soil, or return degraded soils to the productivity consistent with Regional Soil Quality Standards and resource objectives. (36 CFR 219.27 (f))	<p>Identify and evaluate the need for soil fertilization and other soil improvement techniques in areas where the soil is likely to respond to treatment. (36 CFR 219.27(b)(2)). Treat areas that are found to be cost effective and that will respond favorably.</p> <p>Productivity lost as a result of soil erosion, soil compaction, loss of organic matter, or soil displacement, will be restored as practical to meet Soil Quality Standards. Include these areas in the Forest WINS inventory (Watershed Improvement Needs Survey), and in project K-V plans for restoration and improvement.</p>
Soil Hydrologic Functions Soil Environmental Health (13-C)	Design and implement management practices that maintain or improve soil hydrologic function and soil environmental health.	<p>Soil Moisture Regime is unchanged where productivity or potential natural plant community are dependent upon specific soil drainage classes.</p> <p><b>Soil Hydrologic Function</b></p> <p>Infiltration and permeability are not reduced to ratings of 6 or 8 as defined in Region 5 Erosion Hazard Rating System (Chapter 50, R-5 FSH 2509.22). Use Region 5 Cumulative Watershed Effects Analysis (Chapter 20, R-5 FSH 2509.22) to determine the extent of area needed to meet the soil hydrologic function threshold defined above.</p>

<sup>31</sup> 1920-2, April 19, 2005; Corrected Errata - SNFPA 2004 ROD - TEPS Plant Survey Standard and Guideline. Does not apply within the Experimental Forest, Wilderness or Wild and Scenic Rivers (SNFPA ROD, p. 15, 49; USDA 2004)

Practices	General Direction	Standards and Guidelines
		<b>Soil Environmental Health</b> Soil reaction class, buffering or exchange capacities, or biological populations are not altered to the degree that significantly effects soil productivity, soil hydrological function, or the health of humans and animals. Develop local threshold values and submit to Regional Forester for standardization among forests.

## Special Areas

Practices	General Direction	Standards and Guidelines
Cave Resources Inventory and Evaluation (14-E)	Follow criteria and procedures for identification and evaluation of individual caves consistent with 36 CFR 290, in accordance with P.L. 100-691, 36 CFR 290, and FSM 2356. This should be accomplished within one year of final rule making.	Compile information regarding cave location, condition, and characteristics from readily available sources including the National Speleological Society and other interested publics. Inventory should be based on existing, readily available data. Apply the legal criteria to evaluate the significance of each cave. Prepare nominations for significant caves and submit to the Regional Forester for designation.
Cave Resources Planning and Management (14-F)	Administer significant caves in accordance with provisions of P.L. 100- 691, 36 CFR Parts 260 and 290, and FSM 2356.	Incorporate significant caves, when identified, by amendment into the Forest Plan as a Forest Cave Management Plan. This will take the form of provisions to protect and maintain significant cave resources. The Forest Cave Management Plan will be written in conjunction with the National Speleological Society and other interested publics. Protect caves from vandalism by physical protection, cooperative efforts with user groups, signing, or other activities associated with cave resources protection developed in the Forest Cave Management Plan. Conduct law enforcement investigations when cave resources are impacted, using 36 CFR 290 and other applicable laws and regulations.

## Transportation and Facilities

Practices	General Direction	Standards and Guidelines
Road Construction and Reconstruction (16-A)	Construct and reconstruct Forest roads including long-term and temporary roads.	Conduct an integrated interdisciplinary transportation analysis, following the national roads analysis procedures, as part of landscape analysis. Complete unclassified road inventories for each national forest within 10 years. Geometric standards and location will be planned to provide acceptable levels of service and traffic safety and meet resource management needs. Traffic Service Level C (see Appendix G of the Plan for descriptions of traffic service levels) or higher should be used where a significant mix of public and commercial traffic is planned. Alignment, width and passing facilities should provide appropriate speed, traffic safety and flow on roads with high traffic volumes or public traffic. Traffic Service Level D may be used on roads where use will be primarily commercial and traffic volumes will be low. On Traffic Service Level D roads limited turnouts and sight distance may be acceptable in combination with traffic management for safety. Surfacing will be planned with consideration for the total cost of transportation, including construction, operation and maintenance costs, while meeting resource management objectives. Roads with weak subgrades which are susceptible to rutting may require surface stabilization. Traffic Service Level will be considered when public use justifies smooth dust-free surfaces. Roads with higher traffic volumes, often arterial and collector roads, may need more stable and higher-speed surface types. Economic analysis and road management objectives will be used to determine improvement needs. Location, design and construction standards will protect soil, watersheds, fisheries and other resources.

Practices	General Direction	Standards and Guidelines
Road Construction, Reconstruction, and Relocation (16-A) SNFPA <sup>32</sup>	70. To protect watershed resources, meet the following standards for road construction, road reconstruction, and road relocation: (1) design new stream crossings and replacement stream crossings for at least the 100-year flood, including bedload and debris; (2) design stream crossings to minimize the diversion of streamflow out of the channel and down the road in the event of a crossing failure; (3) design stream crossings to minimize disruption of natural hydrologic flow paths, including minimizing diversion of streamflow and interception of surface and subsurface water; (4) avoid wetlands or minimize effects to natural flow patterns in wetlands; and (5) avoid road construction in meadows.	
Transportation Management, Roads - Obliteration (16-D)	Obliterate roads not needed for continuing management so as to protect resources and restore resource productivity.	<p>The Forest Road Obliteration Plan will identify and prioritize roads to be obliterated.</p> <ul style="list-style-type: none"> <li>▪ Obliterated roads will be closed to motor vehicles with barricades of natural materials, such as logs, or by restoring the natural slope.</li> <li>▪ Where economically feasible, the natural slope of the obliterated road will be restored.</li> <li>▪ The roadbed will be scarified when necessary to encourage revegetation.</li> <li>▪ The obliterated road will be cross-drained to prevent erosion.</li> <li>▪ The roadbed will be reseeded or replanted.</li> </ul>

## Visual Resources

Practices	General Direction	Standards and Guidelines
Visual Resource Inventory and Planning (17-A)	Maintain current data files for: Visual Quality Objectives (VQOs), Visual Absorption Capability (VAC), and Existing Visual Condition (EVC). Provide visual resource recommendations to land managers and interdisciplinary team members who are assessing land altering projects with a VQO of Partial Retention or Retention.	Provide visual analysis using aerial photos, existing VAC maps, field analysis, computer perspective plots or simulations for projects with a VQO of Partial Retention or Retention. Predict future visual condition on a project basis.
Visual Quality Objectives (VQOs) (17-B)	Manage areas to provide a characteristic natural appearing landscape commensurate with the description stated for each VQO practice. Resource management activities will be guided by the appropriate Landscape Management handbooks and Forest Landscape Architects' recommendations. The adopted VQOs are displayed on Map 8, Appendix I. VQOs are desired ratings outlined under the Forest Service system of Visual Resource Management. VQOs apply Forestwide; every acre of National Forest land treated by this Forest Plan fits into one of the VQO classes listed below (No Maximum Modification):	Meet the adopted VQO for all landscape altering projects. VQOs will be compatible with the applicable ROS classes. Maintain visual quality by including mitigation measures for all activities that have the potential to alter the landscape beyond the adopted Visual Quality Objective. Specific facility and vegetative treatment within major highway view sheds will be guided by approved View shed Plans.
1. VQO Preservation	Allow ecological changes only, except for trails.	Design and locate trails, trail bridges, and other trail related improvements as unobtrusive as possible in the landscape.
2. VQO Retention	Provide a natural appearing landscape where changes are not readily evident.	<p><b>Foreground Distance Zone</b> Impacts of management activities in highly visible foreground areas will be reduced through special treatments.</p> <p><b>Middleground and Background Zones</b> Visual diversity shall relate to the concept of a "natural appearing forested landscape" in a sequence and continuity of a view in the middleground or background. Special cutting may be applied.</p>
3. VQO Partial Retention	Provide a natural appearing landscape where changes are evident but are subordinate to the surrounding characteristic landscape.	<p><b>Foreground Distance Zone</b> Where safe, maintain old-growth specimen character trees in the immediate foreground distance zone.</p>

<sup>32</sup> Does not apply within the Experimental Forest, Wilderness or Wild and Scenic Rivers (SNFPA ROD, p. 15, 49; USDA 2004)

Practices	General Direction	Standards and Guidelines
		<p>Visual diversity shall relate to the concept of a “natural appearing forested landscape” in a sequence and continuity of a view in the foreground.</p> <p>Special cutting permitted. Impacts of management activities in highly visible foreground areas will be reduced through special treatments.</p> <p><b>Middleground and Background Zones</b></p> <p>Visual diversity shall relate to the concept of a “natural appearing forested landscape” in a sequence and continuity of a view in the middleground or background.</p>
4. VQO Modification	Allow for modified conditions where changes are readily evident and may dominate the surrounding characteristic landscape.	
Visual Resource Improvement (17-C)	Apply to areas created by management activities or where existing conditions require improvement.	Schedule and carry out rehabilitation to upgrade landscapes that do not meet the adopted VQO for the area. Undertake enhancement measures where it is determined that there is potential for greater natural appearing variety.

## Water

Practices	General Direction	Standards and Guidelines
Water Quality Management (18-A)	<p>Comply with all applicable Federal and State water quality standards. Prevent or minimize as much as possible any water quality impacts which may be caused by Forest management activities.</p> <p>Achieve the goals for preventing or minimizing water pollution as stated in the Federal Clean Water Act. Implement water quality BMPs as specified in the Management Agency Agreement with the California Water Resources Control Board for protection of non-point water pollution sources. Comply with applicable provisions of the Water Quality Control Plan (Basin Plan) of the California Central Valley Regional Water Control Board.</p>	<p>Implement water quality BMPs as needed for all Forest management activities. BMPs are a system of nearly 100 practices designed to minimize or prevent water pollution from Forest management activities. They cover such activities as timber harvest, road construction, mining, recreation, fire management and grazing. See Appendix K of the EIS for a discussion and listing of the water quality BMPs.</p> <p>Monitor the implementation and effectiveness of BMPs in selected areas to determine if they are being carried out and if they are accomplishing their objectives.</p> <p>Analyze cumulative watershed effects (CWE) on all applicable proposed Forest management activities to determine off-site effects on the beneficial uses of water.</p>
Water Quantity Management (18-B)	<p>Support water yield increase where economically feasible and environmentally acceptable. Follow FSM policy for proposed weather modification projects, especially in designated Wilderness.</p> <p>Provide input to proposals for water supply and hydroelectricity which may alter fluvial systems by construction of facilities such as dams, diversions and tunnels. Such input will support valid proposals provided they are consistent with sound watershed resource protection measures.</p> <p>Support all valid uses of water from the National Forest. Insure that such uses are carried out commensurate with Federal and State laws and regulations.</p>	<p>Follow all Federal and State regulatory practices required in responding to proposals to develop the water resource.</p> <p>Keep current all water rights management for beneficial uses of water on the Forest.</p>

Practices	General Direction	Standards and Guidelines
Watershed Maintenance and Improvement (18-D)	<p>Maintain or improve watershed condition to provide stewardship of water and soil resources. Survey Forest watersheds and restore degraded areas to improve watershed condition.</p> <p>Establish a Forestwide water resources inventory (WRI) to determine needs for maintenance and improvement of the water resource. The WRI is a comprehensive data base of water resource information for each Forest watershed. It is used to determine watershed condition to (1) protect or enhance the water resource when planning forest management activities and (2) to determine watershed improvement needs (WIN).</p>	<p>Conduct periodic watershed surveys to determine the current condition of the water resource, identify potential WIN projects and assess the potential for cumulative watershed effects.</p> <p>Conduct disaster surveys as needed and prescribe applicable emergency rehabilitation treatments. Such disasters include wildfires, floods, earthquakes and damage from high winds and avalanches.</p> <p>Implement the following watershed recovery practices following major wildfires, except in Wilderness in most cases:</p> <ol style="list-style-type: none"> <li>1. Restore ground cover as soon as possible when necessary to reduce flood flows to protect life and property, to maintain soil productivity and/or to minimize stream sedimentation and cumulative watershed effects.</li> <li>2. Conduct reforestation activities in a manner which reduces the potential for cumulative watershed effects, such as dispersing site preparation adequately over time and space and/or using techniques which minimize land disturbance.</li> </ol>