Los Padres National Forest
Travel Analysis Report

September 29, 2015

Approved By:

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2015 Travel Analysis (TAP) Update Process

The Los Padres National Forest completed the Roads Analysis Process (RAP) from 2001 through 2004 as part of the Land Management Plan Revision for the four Southern California Forests which include the Angeles, Cleveland, Los Padres and San Bernardino National Forests. Within this effort, the Roads Analysis Process was conducted to analyze all maintenance level 1 through 5 roads on each of the forests. The process was a six-step process and the documents are available for review with references for their location documented in this report, see page 21. The process involved a large interdisciplinary team of specialist from all fields and from all four forests as well as representation from four Regional Office road engineers. The science-based process was used to assess benefits, problems and risks of the current road system. The process included four rounds of public meetings with over 10,000 comments received pertaining specifically to access. The roads analysis was incorporated into the Land Management Plan (LMP) Revision final 2006 Record of Decision (ROD). That effort defined the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. This effort constituted Subpart A. The Regional Office reviewed the Roads Analysis Process for the four Southern California Forests and agreed that the process met the requirements of the Travel Analysis Process. The four Southern California National Forests conducted Travel Management (Subpart B) during the period from 2006 to 2008. Roads and motorized trails were analyzed with the objective of designating those open for motorized public use. The end result of this process was the development of the Motorized Vehicle Use Map (MVUM). In 2011, the four Southern California Forests convened an Inventoried Roadless Area (IRA) Road and Trail Analysis Collaborative Group to develop criteria for decommissioning roads and trails in IRA's. From 2011 through 2013 the Los Padres NF has conducted NEPA processes on a number of projects and has implemented decommissioning of roads identified as no longer needed under the Subpart A process. In 2014 an amendment to the LMP was issued, re-zoning 250,000 acres to Back Country Non-Motorized (BCNM). There were no changes to system roads associated with this Amendment.

The public has submitted thousands of road related comments during these efforts. The key issues they identified were economic and natural resource sustainability of the existing road system, the effects of roads in watersheds and on species of animals and plants, too much or too little public motorized access, and the need for more public rights-of-way.

This Travel Analysis Update Report describes that previous work and the progress made on the Los Padres NF to implement the recommendations and decisions made to date. The recommendations

from RAP, Subpart A and the IRA Collaborative group were reviewed. The report also incorporates decisions made during the LMP Revision, Travel Management and subsequent project-level NEPA decisions. The national direction on completing Subpart A has evolved since the forest completed the Roads Analysis Process and Subpart A. Each forest is now required to produce a map displaying roads that are likely needed and roads likely not needed for future use. To meet this current requirement, the forest has reviewed the previous work and considered changes that have occurred in the available road maintenance funding. The determination of the current list of roads as likely needed or not likely needed is not a decision and only a recommendation at this time. Further site specific NEPA would be needed to change a road from its current maintenance level to a decommissioned status or to an alternate use such as a trail. The forest has developed the current list of opportunities for change with input from multiple disciplines and will pursue opportunities to implement the recommendations as they arise.

All of the LPNF current ML1 - ML5 National Forest System Roads (NFSR) (805 miles, 277 roads) were reviewed during the collection and update of the GIS and Infra Travel Routes data. The importance rankings of 38 roads (181 miles) from the 2005 RAP and 2011 Collaborative were validated during the review. Other roads were now identified as having a revised ranking of low importance. Thirty one roads, (69 miles) have been identified as Likely Not Needed for Future Use (LNN) (Table 1 and Figure 1). The review also identified thirteen roads that should be shown in INFRA Travel Routes (Forest Service data base) as temporary and decommissioned when the permits expire. The GIS data was also updated to show that 82 miles of former NFSR from the 2005 inventory had been converted to Motorized Trails during the past decade. Four other High Resource Impact, Low Importance (HRLI) roads (19 miles) from the 2005 RAP have been decommissioned and are not part of this update.

Table 1 - LPNF TAP Update Summary of 277 Roads, 805 Miles Reviewed for Importance

Review Category		Likely Needed		Likely Not Needed		Total	
		Number of Roads	Miles	Number of Roads	Miles	Number of Roads	Miles
2005 RAP	HRLI	4	5	5	12	9	17
	HPM	4	17	0	0	4	17
	LPM	7	62	2	3	9	65
	Total	**15**	**84**	**7**	**15**	**22**	**99**
2011 Collaborative	LH	8	58	3	3	11	61
	LL	0	0	1	5	1	5
	HH	3	14	0	0	3	14
	HL	1	1	0	0	1	1
	Total	**12**	**73**	**4**	**8**	**16**	**81**
RAP and Collaborative	**Total**	**27**	**157**	**11**	**23**	**38**	**181**
All Other ML1-ML5 Reviewed	**Total**	**219**	**588**	**20**	**46**	**239**	**625**
Total Current NFSR		**246**	**746**	**31**	**69**	**277**	**805**
Potential Adjusted NFSR						**246**	**746**

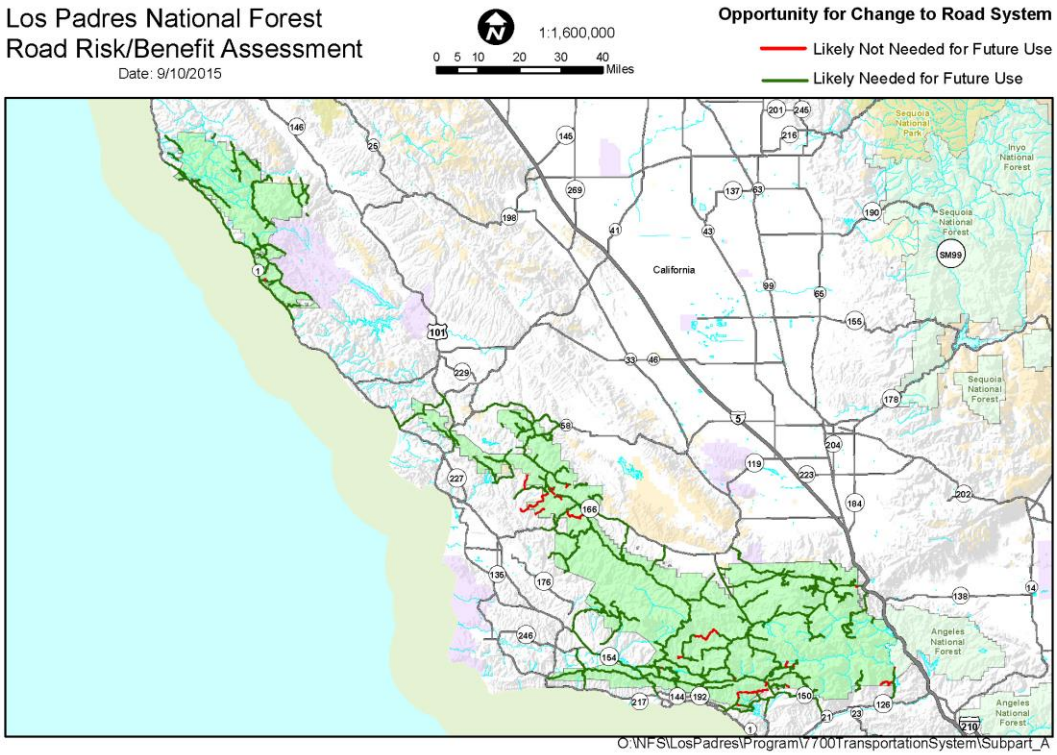
HRLI High Resource Risk Low Importance; **HPM** High Priority for Mitigation**; LPM** Low Priority for Mitigation

LH Low Importance High Resource Risk; **LL** Low Importance Low Risk

HH High Importance High Resource Risk; **HL** High Importance Low Resource Risk

ML Maintenance Level, 1 Closed, 2 High Clearance Vehicles, 3, 4, 5 Passenger Cars (4 and 5 paved)

Figure 1. LPNF Map Showing Likely Needed and Likely Not Needed NFSR



Background of Travel Analysis Process

The current Forest Service direction for travel analysis is the result of a series of agency decisions over the last decade concerning the management of motorized vehicle use on National Forest System lands. The initial policy included only roads, but evolved over time through additional policy decisions to address all motorized travel: on roads, trails, and in areas designated as open for cross-country motorized travel.

Agency policy requiring a science-based analysis for travel management decisions began in August 1999, when the Washington Office of the United States Department of Agriculture (USDA) Forest Service published Miscellaneous Report FS-643 titled "Roads Analysis: Informing Decisions about Managing the National Forest Transportation System." The objective of the roads analysis was to provide decision-makers with critical information to develop road systems that were safe and responsive to public needs and desires, were affordable and efficiently managed, had minimal negative ecological effects on the land, and were in balance with available funding for needed management actions.

In October 1999, the agency published Interim Directive 7710 authorizing units to use, as appropriate, the road analysis procedure embedded in FS-643 to assist land managers making major road management decisions. In January 2001, the Forest Service issued the final National Forest System Road Management Rule. This Roads Rule revised regulations concerning the management, use, and maintenance of the National Forest Transportation System (NFTS) to make them consistent with changes in public demands and use of National Forest System resources and in response to the need to better manage funds available for road construction, reconstruction, maintenance, and decommissioning. The final Roads Rule removed the emphasis on transportation development and added a requirement for sound science-based transportation analysis. The final Roads Rule was intended to help ensure that additions to the National Forest System road network were those deemed essential for resource management and use; that construction, reconstruction, and maintenance of roads minimized adverse environmental effects; and that unneeded roads were decommissioned and restoration of ecological processes was initiated.

In November 2005, the USDA promulgated the final rule for "Travel Management: Designated Routes and Areas for Motor Vehicle Use," otherwise known as the Travel Management Rule, which is current policy. The Federal Register renamed "Road Analysis" as "Travel Analysis," and streamlined some of its procedural requirements for the purpose of designating roads, trails, and areas for motor vehicle use, and to expand the scope of roads analysis to encompass trails and areas.

The Forest Service revised regulations regarding travel management on National Forest System lands in 2005 to clarify policy related to motor vehicle use, including the use of off-highway vehicles. The travel management rule requires designation of those roads, trails, and areas that are open to motor vehicle

use. Designation is made by class of vehicle and, if appropriate, by time of year. The final rule prohibits the use of motor vehicles off the designated system; as well as use of motor vehicles on routes, and in areas that are not consistent with the designations. The clear identification of roads, trails, and areas for motor vehicle use in each national forest:

- Enhances management of National Forest System (NFS) lands;
- Sustains natural resource values through more effective management of motor vehicle use;
- Enhances opportunities for motorized recreation experiences on NFS lands;
- Addresses needs for access to NFS lands; and
- Preserves areas of opportunity in each National Forest for non-motorized travel.

The current designated transportation system open for motor vehicles is shown on the motor vehicle use maps (MVUMs).

Travel Analysis is required to inform decisions related to identification of the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands (36 CFR 212.5); and to inform decisions related to the designation of roads, trails, and areas for motor vehicle use.

Travel Analysis Process (TAP) is a science-based analysis; it neither produces decisions nor allocates NFS lands for specific purposes. Rather, responsible officials, with public involvement, make future travel management decisions regarding the National Forest Transportation System (NFTS), which is informed by travel analysis to move administrative units towards the minimum road system. The ultimate goal of the TAP is management and sustainability of a road system that minimizes adverse environmental effects by assuring roads are in locations only where they are necessary to meet access needs, and can be maintained within budget constraints.

The TAP is based on the consideration of ecological, social, and economic impacts. The TAP must be documented in a Travel Analysis Report (TAR), which includes:

- Information about the analysis as it relates to the criteria found in 36 CFR 212.5(b)(1).
- Maps displaying opportunities for all system roads that differentiates between those roads that are likely needed for future use (LNN) and which will potentially remain, and those that may be likely not needed for future use (LN) and removed or changed. The maps will be used to inform future proposed actions subject to National Environmental Policy Act (NEPA) compliance.

This TAR documents the changes to the LPNF NFSR from 2005 to 2015 and validates the measures of public and administrative importance to the HRLI list from the 2005 RAP and the LH and LL lists from the 2011 Socal Collaborative Study, and other roads identified during the review process. Some HRLI and LH, LL roads may now be more important than in 2005 and 2011, some additional roads may now be LN.

Purpose of 2015 LPNF Travel Analysis (TAP)

This Los Padres National Forest (LPNF) Travel Analysis Report (TAR) focuses on what is different today with importance of the Maintenance Level (ML) 1-ML5 roads since the Road Analysis Process (RAP) of 2005 was completed as part of the Land Management Plan (LMP) Revision process, which concluded in 2006 with the issuance of the final Record of Decision (ROD). Over 10,000 road-related comments were received from the public during this process. The natural resource concerns and risks are similar by specific location today to those identified in the RAP and subsequent studies since 2005.

Two major forest wide Travel Analyses occurred in the decade: 2005 RAP and 2011 Southern California Collaborative Study (2011 Collaborative) of roads and trails in and near Inventoried Roadless Areas (IRA's). Both were Geographic Information System (GIS) based analyses weighing the risk to natural resources with the benefits for access to the National Forest. The results of these analyses are not decisions, rather the results are used to inform decisions during the NEPA process. The public involvement included representatives from a spectrum of diverse groups meeting and working towards consensus.

Changes since 2005 Affecting Los Padres National Forest Road System

Since 2005, the populations of Monterey, San Luis Obispo, Santa Barbara, Kern, and Ventura Counties have grown by approximately 7 percent. In addition, all of the counties adjacent and nearby have grown as well. The Los Padres National Forest is within an hour's drive of the San Francisco Bay Area to the North, Los Angeles to the South, and the San Joaquin Valley to the East. The Big Sur Coast drive along CA Highway 1 attracts visitors from all over the world, and the road system provides the portal for the public as well as administrative use. The supply of developed and dispersed recreation opportunities will likely remain level or even decline given current funding trends, unless a national program encourages and funds major new and expanded recreation sites, trails, campgrounds, and roads to access them. As population grows both outside the Forest and in the communities surrounded by the Forest, use and competition for the limited supply of popular Forest recreation sites will lead to capacity issues. Public use of the open system roads will likely increase and 1930's CCC era roads may need widening, turnouts, enhanced signing, and possibly surfacing.

The Federal Highway Administration's (FHWA) Moving Ahead for Progress in the 21st Century (MAP-21) Program from 2013 includes the Federal Lands Transportation Program (FLTP) and Federal Lands Access Program (FLAP formerly Forest Highway Program). The LPNF has three FLTP roads, 10.8 miles, of the highest ranking, that are eligible for competitive gas tax funds.

Requests for lands special uses on the Los Padres National Forest will continue to grow with more demand for infrastructure to support communications, wind and solar electricity generation, energy transmission, and oil and gas.

The Forest's LMP Amendment ROD of October 2014, however, changed the land use zone (LUZ) allocation by re-zoning 293,000 acres to Back Country Non-Motorized (BCNM) from Back Country (BC). The BCNM acres are more restrictive and special uses are subject to stricter suitability requirements described in the FSEIS. Currently authorized activities will continue but future proposals will likely be located on suitable acres already supporting non-recreation special uses outside of Existing Wilderness (EW), Recommended Wilderness (RW), BCNM, Back Country Motorized Use Restricted (BCMUR), and Critical Biological (CBZ) zones, using existing NFSR for access.

The Forest planned annual road maintenance budget has declined in the past nine years from $239,000 in 2006 to $112,000 in 2015, which is only enough to maintain about 2 percent of the miles. Road maintenance has an emphasis on watershed protection and restoration, allowing the roads to deteriorate with drastically reduced maintenance may actually increase watershed degradation.

Large fires, floods, landslides, earthquakes, windstorms, tree mortality, and drought have occurred between 2005 to 2015. The LPNF road system has been critical in providing access to accomplish fire suppression, and to complete post-event restoration, such as: Burned Area Emergency Rehabilitation (BAER) restoration, watershed restoration, Emergency Relief for Federally Owned Roads (ERFO) road system repairs, hazardous fuels reduction and community protection. Subsequent repair and restoration programs like Wildland Fire Preparedness funds (WFPR), Construction and Maintenance Legacy (CMLG), Emergency Supplemental (CMES), Roads (CMRD) Supplemental, American Recovery and Reinvestment Act (ARRA) and ERFO have funded the major restoration and repairs of roads.

The Los Padres National Forest has 265 roads (totaling 792 miles) of ML 2 through ML 5, (ML 1 roads are closed to all motorized use). Of these roads, 249 (645 miles) are open to public motorized use. The LPNF ML 1 – 5 maintained system totaled 1,177 miles in 2004; in 2015 it totals 805 miles, 372 fewer miles, (with a reduction in road density from 0.43mi/sqmi to 0.29mi/sqmi). The Forest embarked on a strategic program to analyze roads, informed by the 2005 RAP, and reduced the Forest maintained road system by decommissioning 22.7 miles (including four HRLI high resource impact and low importance

roads from the 2005 RAP), and converting 73.9 miles to trails, some non-motorized and some motorized prior to the development of the Motorized Visitor Use Map (MVUM). The other 275 miles of NFSR were historically used as rugged 4 Wheel Drive, and off-highway quad runners and dirt bike trails. The INFRA database was corrected to identify these as OHV motorized trails. This information is summarized in Tables 2 and 3.

Table 2 - LPNF Road Miles by Operating Maintenance Level

Category	LPNF Infra 2004	LPNF Infra2014	Net Change
Maintenance Level			
5	56	38	-18
4	134	101	-33
3	215	186	-29
2	724	467	-257
1	48	13	-35
Total road miles	1,177	805	-372
Level 3-5	405	325	-80
Level 1-2	772	480	-292
Rd Density ML 1-5 (Mile/mi^2)	0.43	0.29	-0.14
Rd Density ML 3-5 (Mile/mi^2)	0.32	0.26	-0.06
Rd Density ML 1-2 (Mile/mi^2)	0.89	0.19	-0.7

Source: INFRA Travel Routes Database 2004 and 2014 (Red means lower)

As noted in Table 6 above, the Forest has reduced the system of roads maintained by appropriated road maintenance funds, CMRD, by identifying the governing jurisdiction, converting many miles most suitable for OHV and 4WD use to motorized trails, decommissioning 23 miles of system roads, and reducing road density, a concern mentioned in the RAP and LMP.

Table 3 - LPNF Road INFRA Data 2015 Decommissioned Roads

Road ID#	Name	Mi	System	Route Status	Operating Maintenance Level	District	RAP2005
19S10A	MIDNIGHT CYN.	1.3	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	51	
5N13A	JUNCAL C.G.	0.3	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	54	
5N18E	SANTA YNEZ CG.	0.9	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	54	
5N26	BEAVER DUA TH	0.5	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	55	HRLI
6N31A	LION CYN. CG	0.8	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	55	HRLI
21S02	SANTA LUCIA	17	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	51	HRLI
5N16A	PENDOLA STA.	0.5	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	54	
20S05C	COOK SPRING	0.4	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	51	
21S02A	PINYON PEAK	1.0	NOT NEEDED	DECOMMISSIONED	NOT MAINTAINED	51	HRLI

Existing Transportation System

Background

Most of the roads were constructed by the Civilian Conservation Corps in the 1930's for fire and watershed protection. These roads are narrow, steep, native-surfaced travel ways with few, if any, turnouts and few minimal drainage features. These roads are designated as Level 2 maintenance and make up the bulk of the road system. The amount of use these roads currently receive was not anticipated in the 1930's, nor was the size of today's fire engines. As a result of road maintenance budgets not keeping up with inflation and road deterioration, the condition of many roads on the

Forests have fallen below the levels necessary for resource protection and to efficiently support the traffic volumes being carried. About 20 percent of the total ML 2 miles have points of difficulty for the latest generation of wildland fire engines.

In 2003, the Los Padres National Forest received a total of $696,000 (equivalent to $1,113,000 in 2015 dollars) to administer, operate and maintain 1,177 miles of NFSR, of which 190 are Maintenance Levels 4 and 5 (paved higher standard roads). On the average, 35 percent of the Forest's miles received some maintenance in 2003, and only 20 percent of the miles were maintained to standard. The deferred maintenance backlog estimated in 2003 of $74,000,000 ($117,000,000 in 2015) represents the dollars needed to bring Level 2 through 5 roads back up to their designated standards in regards to health and safety, protection of resources, and to support the mission of the Forest Service. The forest CMRD road budget has declined each year to $448,000 in 2015, of which 75 percent of this is salary. Only 2 percent of LPNF's miles receive some maintenance each year. Very few miles can be maintained with such a severely reduced budget.

The deferred maintenance backlog continues to grow each year that maintenance needs were unable to fulfill. Erosion of the drivable surface on some of the 1930's era Level 2 roads has left portions of uneven exposed bedrock. These portions are impassable by today's fire equipment. Other problems have contributed to the loss of available drivable width. Other problems include: small slides; heavy brush encroachment; eroded out-sloped sections; lack of improved water crossings; and tight horizontal radius curves through vertical solid rock cuts.

NFSR are not public roads in the same sense as roads that are under the jurisdiction of state and county road agencies. NFSR are not intended to meet the transportation needs of the public at large. Instead, they are authorized for the use and administration of NFS lands. Although roads are generally open and available for public use, that use is at the discretion of the Secretary of Agriculture. Through authorities delegated by the Secretary, the Forest Service may restrict or control traffic to meet specific management direction. The majority of travel on the National Forest Transportation System (NFTS) is linked to resource management and outdoor recreation. These roads provide access for multiple uses. An appropriate level of maintenance is designated for every road depending on the traffic permitted or required by on-going resource programs. See definitions of maintenance levels in Appendix A: Glossary.

Current Transportation System

The Los Padres National Forest currently manages and maintains a NFSR of approximately 805 miles of system roads The NFSR is managed and maintained to various road standards depending on management objectives. The roads range from paved roads to roughly graded high clearance roads, depending on the type of access necessary. In some cases, where no access is currently needed, roads are "stored" for future management use by closing them to all motor vehicle traffic. See definitions of maintenance levels (ML) in Appendix A.

A road is defined as a motor vehicle travel-way more than 50 inches wide that is not designated and managed as a trail. The quality of roads varies by number of lanes, surfacing, by low/medium/high standard, and by functional classification (local, collector, arterial) in a general relation to ML. Each of these road types requires a different level of maintenance for upkeep. The mileage of each type of road is shown in Table 2. Each road also has a functional designation as a local, collector, or arterial road.

Table 4 – Miles of LPNF Roads by Operations ML and Objective ML [a]

ML	Objective	Operating
	LPNF	**LPNF**
ML 1	15	13
ML 2	516	467
ML 3	138	186
ML 4	98	101
ML 5	38	38
Total Miles	**805**	**805**

[a] This data was taken from the USDA Forest Service Infrastructure resource information database system (INFRA) in February 2015.

Maintenance levels are defined by the USDA Forest Service Handbook (FSH) as the level of service provided by and maintenance required for a specific road. Maintenance levels must be consistent with road management objectives and maintenance criteria. Roads may be currently maintained at one level (Operational ML) and planned to be maintained at a different level (Objective ML) at some future date.

The operational maintenance level is the maintenance level currently assigned to a road, considering today's needs, road condition, budget constraints, and environmental concerns. The objective maintenance level is the maintenance level to be assigned at a future date, considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level. The transition from operational maintenance level to objective maintenance level may depend on reconstruction or improvement to a higher standard, or disinvestment (i.e., conversion to trail or decommissioning).

Sustainability Including Fiscal Capacity

NFSR require administration, management and maintenance to safely accommodate their intended use, and to avoid problems that can arise when routes fall into disrepair. Maintenance costs include work that should be performed routinely to maintain the system to its current standard (annual maintenance), and costs of needed maintenance that either isn't needed on an annual basis or has not

been completed for various reasons (deferred maintenance). Additional costs may include operations, management, enforcement, mitigation of safety or resource issues, decommissioning, and improvements associated with proposed changes to the NFTS. Improvements include constructing new routes that could be added to the NFTS, for safety improvements, or for increasing maintenance levels. Maintenance costs may differ based on the designated road maintenance level.

Estimates of the annual maintenance costs for the existing road system are included in the following table (Table 3). Average costs per-mile to maintain each maintenance level were developed and applied to the road system to calculate the estimated total cost. The average unit costs per mile were developed on a regional level (Pacific Southwest Region) but were then adjusted for the high costs of performing work in urban southern California. Some maintenance activities need to be performed annually; others are performed on a less frequent cycle. The costs shown reflect the annualized costs of performing all needed maintenance activities on their required cycle.

Table 5 – Existing Average Annual Maintenance Needs –LPNF

Maintenance Level	Cost/Mile	Forest Miles	LPNF Annual Maintenance
ML 1	$400	13	$5,200
ML 2	$1,000	467	$467,000
ML 3	$6,500	186	$1,209,000
ML 4	$20,000	101	$2,020,000
ML 5	$30,000	38	$1,140,000
		Total Needed	$4,841,200
		2015 Available	$112,000
		2016 Expected	$125,000

Each year, the Los Padres National Forest prepares a road maintenance plan, which identifies the road operation and maintenance priorities for the year, as well as maintenance that needs to be done prior to opening for traffic after seasonal closures. Resource protection and public safety are maintenance priorities. Needed maintenance that is not completed increases the deferred maintenance backlog. Maintenance is completed by Forest Service, contractors, volunteers, user groups, cooperators, and other forest resources, as appropriate.

Road funding includes both routine maintenance and other related activities. Additional maintenance may be accomplished using other funding sources, agreements, partnerships, and other methods. Accomplishments may vary from year to year depending on how the work is accomplished and what gets accomplished. For example, if a mile of road needs blading and vegetation removal, but only

vegetation removal is completed, the mile of road is still claimed as a maintenance accomplishment. The majority of the maintenance done on the road system is vegetation clearing and minor surface repair (pothole patching, slough removal), whereas surface blading and asphalt repair get left out due to the high cost. In the following table, miles maintained means at least one maintenance activity was performed, not that every mile reported was fully maintained to standard.

Table 6 - Road System Appropriated Funding and Maintenance Accomplishments

Road Activity	2006	2007	2008	2009	2010	2011	2012	2013	2014
Roads (CMRD) X 1,000	$341	$626	$716	$1,238.8	$733	$522	$487	$508	$447
Miles Maintained	171	339	428	556	299	112	270	299	105

[a] This data was taken from a variety of Forest Service budget and accomplishment reporting systems.

Road maintenance budgets have declined over the past decade. Annual road maintenance budgets have not been sufficient to accomplish all needed maintenance activities on the Los Padres National Forest. Additional funds are reserved at the regional level for competitive projects throughout the region, and are awarded on a competitive basis. Funded projects typically focus on new construction or reconstruction, which may reduce deferred maintenance, but contributes little to annual maintenance. Although this competitive funding may help accomplish limited additional road maintenance on the Los Padres National Forest, funding still falls far short of the amount needed to adequately maintain the roads system.

While maintenance budgets decrease and the maintenance backlog grows larger, safety standards have become more stringent. Existing warning and regulatory signs placed on ML 3-5 are now required to meet new standards for retro-reflectivity set by the Manual on Uniform Traffic Control Devices (MUTCD). In addition to the higher cost of the signs themselves, a monitoring strategy must be in place to ensure signs are still meeting retro-reflectivity requirements, which increases costs. Increased concern over liability requires engineering studies to be performed on roads to be able to enforce posted warning and regulatory signs.

The NFSR for the LPNF has reduced from 1177 miles in 2004 to the current NFSR of 805 miles and would further reduce to a proposed 746 NFSR if all of the LNN road recommendations were implemented. However, our decreased maintenance budget and our current costs to maintain the LNPF roads system results in only 2% of the system that can be maintained based on the R5 Annual Road Maintenance Calculator, Appendix F.

The resources needed to maintain the entire National Forest Transportation System are significant. The Forest Service has estimated that, at best, the agency has received approximately 12 percent of the actual funding needed for annual maintenance. The management response has been to defer certain

maintenance-related items to a later time and not accomplish some much-needed capital improvements.

Deferred maintenance work is divided into the following categories:

- Health and Safety (clearing along roadsides, repairing potholes, and replacing signs, etc.)
- Resource Protection (installing water bars, rolling dips, over-side drains to prevent or reduce sediment from entering streams, installing larger culverts or bridges for aquatic organism passage, closing roads to protect sensitive plant and animal species, and to encourage animal migration)
- Forest Service Mission (providing access on roads for fire protection, watershed restoration, and vegetation management)

The most recent estimate of deferred maintenance needs in the Los Padres National Forest is $117,000,000 for roads, as projected from the $74,000,000 recorded in the 2002 Forest Service infrastructure resource information database system (INFRA) for maintenance. During the decade the Los Padres National Forest received $3,360,000 from FHWA to repair storm-damaged roads. Other recovery and emergency supplemental programs: WFW3, CMES, and RIRI totaled $3,800,000 to restore roads in burned areas. This work restored the damaged roads to their previous existing condition with an emphasis on grading and drainage repairs. Storm damage and fire area damage to roads that are repaired focuses on restoring equivalent access, not accomplishing deferred maintenance.

The ARRA program in 2010 provided $2,000,000 for road deferred maintenance split between roadside brushing, that had been deferred, and pavement repairs, overlays and seal coats on two roads and at an administrative site. These projects addressed a pressing need for the sustainability of the LPNF road system.

In recent years, the Forest Service has actively assessed the condition of its road network. The network is in a deteriorating condition due to increased use and the continued deferral of maintenance and capital improvement needs. Roads are becoming unusable through lack of maintenance, are causing resource damage, such as in La Brea Canyon, or are no longer needed or desired, for administrative or public access. These increasingly unusable roads are candidates for decommissioning after conducting the appropriate site-specific environmental analysis.

As programs within and outside of the Forest Service become available for competitive grants, the LPNF needs to balance endangered species protection, watershed restoration, and road conditions for public and administrative users to determine the most pressing needs when preparing grants.

External Transportation System Relevant to the Area

Portions of Interstate Highway 5 and State Highways 1, 33, 41, 58, 101, 150, 154, 166, and 192 pass through or near the Forest. Some current coordination issues include: maintaining scenic integrity,

adding scenic and interpretive enhancements, improvements for public safety, erosion, landslides, disposal of landslide debris, protection of plants and wildlife, and introduction of non-native species of plants and wildlife.

The Los Padres National Forest is located in five counties: Monterey, Kern, San Luis Obispo, Santa Barbara and Ventura. Normal annual county maintenance on roads through the Forest is coordinated. With the Federal Lands Access Program (FLAP) the Counties can coordinate with the Forest Service for enhancement projects and erosion protection for county roads going into the forest. Fires require rapid coordination with the Counties, tribes, landowners, and other agencies during suppression activities, and for the post fire rehabilitation and erosion protection.

Table 7 – Miles of Roads with other Jurisdiction

Jurisdiction	Approximate Miles
Interstate Freeway	14
State	72
County	271
Forest Highways	22
Other Forest Service*	4

*** There are a few roads designated under the neighboring forests (ANF) that we maintain, because the road location and main access point is through LPNF.**

Influences on the Transportation System from Previous Efforts

Roads Analysis RAP SoCal National Forests (2005)

The risk-benefit GIS based Roads Analysis process (RAP) was conducted from 2002 to 2004 using an interdisciplinary, science based process described in FS-643 Roads Analysis for the four southern California (SoCal) National Forests.[1] The public was involved during the Land Management Plan (LMP)

[1] The electronic links to the 2005 Southern California Plans EIS, including the Roads Analysis and its maps are posted on the Los Padres National Forest Web site: http://www.fs.usda.gov/lpnf/. The link to the Southern California National Forests Land Management Plan includes all related documents for both the 2014 Amendment and the 2006 Records of Decision, Plans, EIS and supporting documents. The 2005 Roads Analysis completed for the LMP

revision process, which incorporated the RAP. Tens of thousands of comments were received from the public related to travel through five rounds of public involvement.[2] The need for the National Forest System Roads (NFSR) to provide access to protect resources, permitted activities, fire suppression, and hazardous fuels reduction and to provide recreation opportunities for the public was evaluated and measured and compared to the economic costs of the system and the effects to the natural and heritage resources affected by the system. Ranked lists and maps showing natural resource risks and road importance (benefits) were prepared to help Line Officers make informed decisions. All NFSR Maintenance Levels (ML) 1 through 5 were evaluated and ranked in order to support the concurrent LMP revision Process. The analysis yielded lists for each Forest of High Priority for Mitigation (HPM), Low Priority for Mitigation (LPM) and High Risk Low Importance (HRLI). It was further mapped to show ML 3, 4, 5 passenger car roads and ML 2 high clearance vehicle roads, and ML 1 closed roads. Each Forest verified the RAP lists and maps, and the documents were subject to several rounds of public involvement during the Plan Revision process. This report contains information concerning the transportation system, and *does not make road management decisions*. Additional Travel Analysis Process (TAP) and subsequent environmental analyses at a more site-specific level would need to be conducted to make road management decisions.

The Regional Forester signed the Records of Decision (ROD) and Final Environmental Impact Statement (FEIS) on September 20, 2005. “Most of the development (such as roads, developed recreation sites, and administrative structures) that might be expected to occur on the national forest has occurred. The Forest transportation systems (roads) have been built and much expansion should not occur. The decision is based on the concept of gradual change over time, expanding or improving the capacity of existing facilities before building new ones.”[3]

Under 36 CFR 212.5 (b) (1): the National Forests will “…identify the minimum road system needed for safe and efficient travel and for the administration, utilization, and protection of National Forest System lands.” The FEIS confirmed the need for the existing system, and the RODs specifically mentioned that the NFSR is the minimum system needed, minus any roads listed or determined in the future to be HRLI, or High Risk, Low Benefit, and likely not needed for future use. This list will help to inform Line Officers

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Revision was multi-Forest scale and covered the Angeles (ANF), Cleveland (CNF), Los Padres (LPNF), and San Bernardino National Forests (SBNF).

[2] USDA Forest Service Final Environmental Impact Statement, Volume 1 Land Management PIans Angeles, Cleveland, Los Padres, and San Bernardino National Forests R5-MB-074-A September 2005. Pages seven-nine. See link above. Also FEIS Volume 2, Appendix M pages 548-553 Response to Public Comments.

[3] USDA Forest Service Final Environmental Impact Statement Land Management Plan Revision LPNF Record of Decision, September 2005, page 1 (wording similar in ANF, CNF, LPNF, and RODs). See also FEIS Alternative 4a selected pages 46-48, 275-281,and pages 311, 536-537, and 542-543.

of opportunities for road system reduction as future projects are analyzed with site-specific watershed level analysis. The system can be further evaluated to remedy essential road, endangered species, watershed, density, and archaeology impacts (which are studied annually during LMP compliance reviews and Best Management Practice (BMP) reviews). The general plan direction, the Road Maintenance Objectives (RMO)s, compliance reviews and needs for public and administrative access is evaluated in the development of each Forest's Road Maintenance Plan.

Summary of Important 2005 ANF, CNF, LPNF, and SBNF RAP Findings

- NFSR roads provide access for fire suppression, community protection, recreation, landowners, and permittees. Demand is increasing as road conditions deteriorate, while public access is diminishing.
- Of 1,419 NFSR roads (3,780 miles), 279 very important roads (214 miles) and 177 low importance roads (140 miles) have portions in locations of high environmental risk.
- 1,128 miles of State and County roads occupy 23,400 acres of NF land, while 3,780 miles of NFSR occupy 21,000 acres.
- Southern California NFSR road density is 0.69 miles / square mile; the density throughout the rest of Region 5 is 1.61 miles / square mile.
- 25% of Level 2 roads (670 miles) have pinch points that restrict fire engines.

The importance measure of all HRLI roads has been verified in 2015 by interdisciplinary review at the field level, and updated lists are included in this TAR.

Road System Objectives from the Land Management Plan Part 2 Los Padres National Forest Strategy (September 2005)

TRANS 1 - Transportation Management

Plan, design, construct and maintain the National Forest System roads and trails to meet plan objectives, to promote sustainable resource conditions and to safely accommodate anticipated levels and types of use. Reduce the number of unnecessary unclassified roads and restore landscapes:

• Enhance user safety and provide adequate parking at popular destinations on high traffic passenger car roads, while also minimizing adverse resource effects.

• Using priorities identified in the RAP, reduce the road maintenance backlog to provide safe, efficient routes for recreationists and through-traveling public and to safely accommodate fire protection equipment and other high-clearance vehicles.

• Implement landscape and watershed scale transportation system analysis on a priority basis. Coordinate with state, county, local and regional government entities, municipalities, tribal governments, other agencies and the public.

• Add unclassified roads to the National Forest System roads (NFSR) or National Forest System Trails (NFST) when site-specific road analysis determines there is a public need.

• Decommission roads and trails that have been determined to be unnecessary and establish level of restoration during project planning NEPA.

TRANS 2 - Unnecessary Roads

Reduce the number of unnecessary or redundant unclassified roads and restore landscapes:

- Decommission roads determined to be unnecessary for conversion to either the road or trail system through site-specific road analysis.
- Establish level of restoration through project planning.

Motorized Travel Management (2011)

The Los Padres National Forest has had a system of designated Off-Highway Vehicle routes in place for more than 30 years. These existing designated Off-Highway Vehicle routes, together with other roads designated "open for motorized travel" are displayed on recently published Motor Vehicle Use Maps.

The Subpart A analysis of all ML 1 – 5 roads on the four southern California National Forests (RAP, Sep 2005) was used to inform the next phase in the travel management program, Subpart B in order to prepare the LPNF MVUM. The RAP identified a list of HRLI roads; roads located in environmentally sensitive locations, while having lower administrative and public importance. Four of these fifteen roads were decommissioned and five are in ML 1 status, closed to all motorized use status. The LPNF decided to keep the system of motorized roads open to the public that have been authorized since the LMP of 1987 with no changes during the 2005 Plan Revision Process. The MVUM map was issued to the public in 2011.

SoCal Collaborative for Roads in and Adjacent to IRAs (June 2011)

Risk – Benefit GIS Based Process with Collaborative Group

This study developed and applied a Risk – Benefit GIS based process to existing NFS roads, temporary roads, undetermined roads and trails within and adjacent to the Inventoried Roadless Areas on the four Southern California (SoCal) National Forests as a collaborative process with public and private interest groups. http://www.fs.usda.gov/detail/cleveland/landmanagement/?cid=stelprdb5304738

The Cleveland, Angeles, Los Padres, and San Bernardino National Forests (collectively the Southern California National Forests) convened an Inventoried Roadless Area (IRA) Road and Trail Analysis Collaborative Group to develop criteria for decommissioning roads and trails in IRAs. The group identified project priorities based on those criteria. The group was formed in compliance with the Settlement Agreement approved for California Resources Agency, et al vs. United States Department of Agriculture, and Center for Biological Diversity, et al vs. United States Department of Agriculture. The primary purpose of the collaborative group was to develop a mutually acceptable set of criteria and a list of priority road and trail projects for the Forest Service to implement as funding allows. The proposal was developed through collaboration, recognizing the diverse interests of the settlement parties while trying to address all interests within the constraints of the Forest Service's regulatory and administrative responsibilities. The results of the route scoring model for the Los Padres National Forest categorized 20 roads totaling 37.7 miles in Low Importance High Resource Risk (LH), 5 roads totaling 4.9 miles as Low Importance Low Risk (LL), 3 roads totaling 6 miles as High Importance High Risk (HH), and 1 road for 3.4 miles as High Importance Low Resource Risk (HL). The LH and LL roads may be considered candidates for the LPNF Likely Not Needed for Future Use list and map. For the list of the 20 LH and LL roads, 6 have been converted to trails, 3 in LH and 3 in LL for 21.8 miles. Pine Creek, 31S03 is ML 1 and closed. The importance measure of all LH and LL roads has been verified in 2015 by interdisciplinary review at the field level, and updated lists of LN and LNN are included in this TAR.

Final Supplemental Environmental Impact Statement (FSEIS) Southern California National Forests Land Management Plan Amendment (November, 2013)

Roads and Trails (from Page 301)

The overall public transportation system will remain fairly static within the four national forests due to limited funding for new road and trail construction. The public demand for access to National Forest System lands will increase in the future with increasing local and regional population. Conflicts between user groups would also increase as users overlap within a relatively fixed system. Future motorized road opportunities in IRAs areas are restricted throughout the forests by the RACR.

Los Padres National Forest (from Page 118)

The Los Padres National Forest has the most IRAs as well as the most IRA acreage of the four forests. It

also has the most special use authorizations within IRAs, and the greatest acreage of permitted area of those four forests. Of the 16 IRAs on the Los Padres National Forest, only two, Juncal and Diablo, have no non-recreation special use authorizations. Authorizations within IRAs on the Los Padres cover almost the entire variety of Forest Service non-recreation special uses. Authorized uses include apiaries, weather stations, seismic monitoring, communication sites, oil and gas pipelines, water delivery systems, electrical and telephone lines, and roads.

The mileage of special use authorizations for roads within IRAs on the Los Padres National Forest is greater than the other three forests combined (see Table 44 in the Transportation section).

As with the other southern California national forests, a majority of the authorizations within the Los Padres National Forest IRAs are along the edges and are probably a result of mapping inaccuracies. However, many of the authorized facilities, particularly roads and water lines, extend farther into the interior of the IRAs. Fox Mountain, Sawmill Badlands, Sespe Frazier, and Tequepis IRAs all contain water systems that typically run from springs within the IRA to nearby private ranches or communities. Fox Mountain and Sespe Frazier contain communication sites within interior areas, along with associated access roads and electrical lines. There are no designated utility corridors within IRAs on the Los Padres National Forest.

Excerpt from Table 3: Summary of Issues not Considered in the Analysis (page 10 FSEIS)

ISSUE	REASON ISSUE IS OUT OF SCOPE
Travel Management – Many comments noted that the Forest Service has closed and gated many roads, restricting access to the public. Other routes are closed on the motor vehicle use map. Many user created routes were also closed and the decommissioning status is unknown. Numerous commenters requested that those routes be opened as part of this amendment.	These route level decisions are made through the travel management process governed by 36 CFR 212 Subpart B or in subsequent project specific decisions implementing travel management closures. The decisions made as part of the LMP amendment will not include route level decisions, but access to the IRAs is evaluated in the LMP amendment analysis.
IRA Boundary Issues – The IRAs were mapped over several generations of Roadless Area Review and Evaluations starting in the mid 1970s. The current IRA boundaries were established by regulation with the publication	The Roadless Area Conservation Rule (RACR) defines the scope of the IRAs (36 CFR § 294.11). Although the rule suggests that updates and revisions to the IRAs are possible, no process is specified. The rule specifically prohibits changes in

of the Roadless Area Conservation Rule in 2001. The 2001 IRAs occasionally overlap Forest Service system roads, communication sites, and other permitted facilities. Some commenters see this amendment as an opportunity to "clean up" those mapping issues.	the scope of the rule through the Land Management Plan amendment process (36 CFR § 294.14(e)). Until the Forest Service develops additional direction, changing the IRA boundaries is outside the scope of this amendment.

Land Management Plan Amendment ROD (October 30, 2014)

http://www.fs.usda.gov/main/lpnf/home

(The Southern California National Forests Land Management Plan link contains all related documents and maps.)

The Southern California National Forests (the Angeles, Cleveland, Los Padres, and San Bernardino National Forests) completed an amendment for the Land Management Plans (LMPs) adopted in 2006. The amendment revised land use zone allocations for select Inventoried Roadless Areas (IRAs) within the four forests and adjusted LMP monitoring protocols. The LMP amendment is a result of the Settlement Agreement approved January 3, 2011 for California Resources Agency, et al vs. United States Department of Agriculture, and Center for Biological Diversity, et al vs. United States Department of Agriculture. Public scoping began on April 27, 2012 and closed on June 11, 2012. One FSEIS was prepared for the four national forests with a ROD for each, including one for the Los Padres Land Management Plan.

The plan level decision did not change the status of any existing road or trail, did not change public motorized access, did not authorize any specific project activities such as vegetation management, does not amend any permits or contracts or authorize any activity allowed by permit or contract, and does not modify any prohibitions, known as "Forest Orders", issued under 36 CFR § 261 Subpart B. The amendment maintained the current zoning within 200 feet wide corridors (100 feet on either side of the road remains unchanged) for the Forest Service roads and motorized trails shown as open on the MVUM. The decision is consistent with the requirements of 36 CFR § 294 Subpart B, Protection of Inventoried Roadless Areas, also referred to as the Roadless Area Conservation Rule (RACR), which prohibits the construction of new roads in IRAs unless the proposed road meets one of the exceptions provided by the rule.

The following are excerpts from the ROD Key Issues:

Roads and Motorized Trails (pg. 3)

This amendment maintains the current zoning within 200 feet-wide corridors (100 feet on either side of

the road remains unchanged) for the Forest Service roads and motorized trails shown as open on the Motor Vehicle Use Maps. As described in Chapter 4 of the Final SEIS, there will be no change in public motorized access as a result of the amendment.

Road and Motorized Trail Opportunities (page 4)

The RACR prohibits the construction of new roads in IRAs unless the proposed road meets one of the exceptions provided by the rule. Implementation of the RACR is described in more detail in Chapter 2 of the Final SEIS and the effects of the RACR on road and trail opportunities are described in Chapter 4. Road and motorized trail opportunities are also guided by travel management decisions. In addition to the requirements of the RACR and travel management, road construction is not suitable in areas zoned as BCNM.

Motorized trails are an important component of the recreation opportunities provided on the Los Padres National Forest, and new motorized trails are not prohibited by the RACR. Adjustments to the alternatives were made after scoping and in response to comment on the Draft SEIS to maintain motorized trail opportunities. Those include maintaining the current zoning adjacent to the Gold Hill road and the Quail Trail areas. As described on page 1 of the ROD, the decision also includes a forest specific standard (LPNF S2) that would allow motorized use of trails in BCNM if the trail construction is conditioned on permanent closure of the Toad Springs Trail. Based on the analysis in the Final SEIS, the decision will maintain opportunities for motorized trails.

Public Involvement (page 7)

A notice of intent (NOI) to prepare an EIS was published on Friday, April 27, 2012 (77 FR 25128), and direct notice was sent to over 2,500 stakeholders. In addition to these notices, people were invited to review and comment on the proposed action through news releases and public meetings.

The planning team used the comments on the proposed action to identify the relevant issues used to determine the scope of the analysis. The planning team also identified issues that were outside the scope of the analysis, including travel management, IRA boundary issues, wild and scenic river suitability studies, and several others. A full description of the issues found to be outside the scope of the analysis appears in the Final SEIS in Table 3.

Direct notice of the Draft SEIS was mailed to over 2,500 contacts and emailed to over 8,000 contacts. A legal notice was also published in the Santa Barbara News Press on February 20, 2013. The Forest Service held seven public meetings throughout the planning area between March 26 and April 10, 2013, including two meetings hosted by the Los Padres National Forest.

Over 10,000 emails, letters, and post cards were received during the comment period. Because of the exceptionally voluminous response to the Draft SEIS, the Final SEIS Appendix 4 presents a summary of

the substantive comments and the Forest Service response. Appendix 4 also includes copies of all letters received from elected officials or government agencies.

The Reviewing Officer noted that roads shown on the Motor Vehicle Use Map (MVUM) were retained with 200' corridors (LPNF ROD, pg. 3). The 200' corridor was selected to allow for flexibility of road management and maintenance and in some areas wider corridors were retained to address route problems. The roads and trails that are shown in Appendix 1G of the FSEIS are currently part of the NFTS and buffers are established along the existing managed route system. While reroutes may be needed, it is not prudent to assume that a reroute would occur or the location of the reroute known until NEPA analysis has been completed and a decision made. Project specific analysis would include any required plan amendments to adjust zone boundaries, MVUM updates, Travel Analysis, and resource analysis as required by NEPA. As noted in the response to comment #77, (FSEIS, Appendix 4, comment #77, pg. 84-88) "The best approach in our view is to work through any site specific issues, relocation proposals, or other new opportunities through the normal project level planning and analysis process. Any project would need to be consistent with the Roadless Area Conservation Rule (RACR), which does allow relocation of roads for resource protection under conditions outlined in the RACR (see 36 CFR 294.12)."

Los Padres National Forest Road Related NEPA Decisions

ERFO, ARRA, Road Maintenance and related Biological Opinions and Biological Assessments

USDI Fish and Wildlife Service (USFWS) Biological Opinion (BO) for Ongoing Activities related to Transportation Facility Maintenance and Use, Los Padres National Forest, California (8-8-12-F43) September 30, 2013. Incudes project design criteria, BMPs, site work suitability criteria, avoidance and minimization measures, how to proceed at the 49 hardened stream crossings in order to protect Arroyo Toads, California Red-Legged Frogs, Least Bells Vireos, Southern Willow Flycatchers, and Kern Primrose Sphinx Moths. Roads listed are: 4N13.3,(LPM), 5N01,(LH), 5N15.1 (HPM and LH), 5N15.2, 5N16 (both HPM) 6N30, (HRLI), 6N31,(LPM), 7N03.2, 7N03B, 7N08,(HPM), 7N11A, 8N12.1 (HPM and HH), and 9N11.2 (HPM).

Programmatic Biological Assessment of Federally Listed Wildlife Species That may be affected by: Transportation Facility Maintenance (2011-2022) On the Los Padres National Forest, Allison, Bonnie, August 2012.

The purpose of this Biological Assessment (BA) is to evaluate potential effects of proposed transportation system maintenance activities and road use between years 2012-2022 to federally listed species or designated critical habitat on lands managed by the Los Padres National Forest. This BA describes proposed activities, identifies listed species and habitats that occur or are suspected to occur within project areas, and identifies design criteria to minimize effects of proposed activities to listed species and designated critical habitat. Table 1 from Page 3 lists the species addressed:

Table 3: Federally Listed Wildlife Species and Critical Habitats Considered in this BA

CATEGORY	SPECIES (Scientific Name)	FEDERAL STATUS	LOCATION
BIRDS	California Condor (Gymnogyps californianus)	Endangered	LPNF
	Least Bell's Vireo (*Vireo bellii pusillus*)	Endangered	SB, V, SLO
	Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	Endangered	All counties
	Yellow-billed Cuckoo (C*occyzus americanus)*	Candidate	All Counties
MAMMALS	San Joaquin Kit Fox (*Vulpes macrotis mutica*)	Endangered	K, V, SB, SLO
	Giant Kangaroo Rat (*Dipodomys ingens*)	Endangered	K, V, SB, SLO

REPTILES	Blunt-nosed Leopard Lizard (*Gambelia silus*)	Endangered	SB-V
AMPHIBIANS	Arroyo Toad (Anaxyrus californicus)	Endangered	LA, SB, V
	California Red-legged Frog (*Rana draytonii*)	Threatened	All Counties
CATEGORY	SPECIES (Scientific Name)	FEDERAL STATUS	LOCATION
INVERTE-BRATES	Kern Primrose Sphinx Moth (Euproserpinus euterpe)	Threatened	MPRD, SLRD
	Conservancy Fairy Shrimp (*Branchinecta conservatio*)	Endangered	MPRD
	Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	Threatened	MPRD
DESIGNATED CRITICAL HABITAT	California Condor (Gymnogyps californianus)	Finalized 09/24/1976	LPNF
	Least Bell's Vireo (*Vireo bellii pusillus*)	Finalized 1994	LPNF
	Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	Proposed 8/15/2011	LPNF
	California Red-legged Frog (*Rana draytoni*)	Finalized 03/17/2010	LPNF

	Arroyo Toad (Bufo californicus)	Finalized 02/09/2011	LPNF
	Vernal Pool and Conservancy Fairy Shrimp (*Branchinecta lynchi*, *Branchinecta conservatio*)	Finalized 08/11/2005	MPRD
1/ LPNF – Los Padres National Forest, MPRD – Mt Pinos Ranger District, SLRD – Santa Lucia Ranger District, K- Kern Co, LA – Los Angeles Co, SB- San Bernardino Co, SLO – San Luis Obispo Co, V – Ventura Co,			

The Programmatic BA includes a series of maps and tables that identify the LP ML 1-5 roads to be maintained in the habitats of the above species, and the critical improved and unimproved crossings. As mentioned in the USFWS BO many of the roads were listed in the 2005 RAP and 2011 Collaborative as roads with locations of high resource risk and high or low importance.

Forest Plan Standards for resource and wildlife protection listed in Section III (pp. 3-4) and applicable Best Management Practices (BA Appendix A) will be implemented for proposed activities. Additional project design criteria (PDC) are specified to avoid, minimize or mitigate long-term detrimental effects to species listed under the ESA and their habitats, and are applicable to all land allocations (LMP Standards 11, 12 and 24).

USFWS BO for Ongoing Activities associated with the use and maintenance of developed and primitive campgrounds, dispersed recreation sites, stream gauges, weather stations, and administrative facilities affecting riparian species on the Los Padres National Forest, California (8-8-13-F25) September 30, 2013. Requires coordination with qualified biologists during project planning, design and implementation in the sensitive areas where the species are found.

USFWS BO on the Effects to the Smith's Blue Butterflies of Ongoing Activities occurring in the Monterey District of the Los Padres (8-8-12-F-35R) with specific coordination timing and protection measures associated with the use and maintenance of facilities and roads, August 30, 2013.

USFWS BO for Ongoing Activities associated with the Off Highway Vehicle (OHV) program use and maintenance of OHV roads and trails on the Los Padres National Forest, California (8-8-12-F42) September 30, 2013. Requires coordination with qualified biologists during project planning, design and implementation in the sensitive areas where the species are found.

Biological Assessment (BA) for Threatened, Endangered, Proposed, and Petitioned Fish Species that may be Affected by Transportation Facilities Maintenance on the Los Padres National Forest, October 2012, Smith, Francine.

Road Crossing Maintenance Location and Timing (Page 10, BA October 2012)

Work would be conducted on the 182 improved and unimproved low water crossings within the Los Padres National Forest. In an average year, 50 to 60 of these crossings (mostly unimproved) will require maintenance. During heavy storm years most crossings require some amount of maintenance. To minimize potential effects to water quality and wildlife, work will occur during periods of low or no flow (Appendix A, BMP 2-3) unless this restriction prevents the roads from being opened to the public and for fire protection during the high use periods from May through October (Forest Plan Goals 1.1 and 3.1). In the event that any proposed or listed threatened or endangered species or designated critical habitat may be affected by maintenance activities, work shall be restricted to the extent possible to the appropriate season of the year, as determined by a qualified biologist in conformance with the Programmatic Biological Opinion for road maintenance activities. Appendix B describes the maintenance activities and associated BMP's.

NMFS BO for Transportation Facilities Maintenance and Use August 2013

National Marine Fisheries Service (NMFS), United States Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA) Biological Opinion for on-going activities as part of the LMP for the LPNF including hiking trails program, off highway vehicle program, transportation facilities maintenance and use program, and recreation and administrative facilities program. August 2, 2013.

This program does not include new road construction or any stabilization and restoration of unneeded roads to a more natural state (i.e., road decommissioning). Additionally, road improvement is an activity that results in an increase of an existing road's traffic service, maintenance level, expansion of its capacity, or a change in its original design function. However, road improvements are not included within this program (USFS 2012b); nevertheless, LPNF proposes to address current road crossings that are barriers to steelhead passage (six specific crossings) by using the Forest's Aquatic Organism Passage (AOP) design protocol and add the replacement of these six crossings to the LPNF's program of work using the AOP design (USFS 2012b).

There are 12 low-water crossings within 300 feet of either threatened south-central California steelhead or endangered southern California steelhead designated critical habitat (USFS 2012b). Nine of these crossings are within the range of endangered southern California steelhead, and three crossings are within the range of threatened south-central California steelhead. The following creeks either have hard or/and soft bottom low-water crossings that are within the scope of this consultation:

Endangered Southern California Coast Distinct Population Segment (DPS) of steelhead range

Davey Brown Creek – (3) hard bottom, North Fork La Brea Creek – (1) soft bottom, North Fork Matilija Creek – (1) hard bottom, Tule Creek – (1) hard bottom, (1) soft bottom, Santa Paula Creek – (1) soft bottom, Boulder Creek – (1) hard bottom.

Threatened South-central California Coast DPS of steelhead range

East Fork Morro Creek – (1) hard bottom, Piney Creek – (1) soft bottom, Paloma Creek – (1) hard bottom

Improved and unimproved road crossings – Improved crossing maintenance activities do not occur every year, but are generally associated with work that follows high stream flows due to large storms and fires. There are 49 of these structures proposed for maintenance by the LPNF. There are approximately133 unimproved crossings within LPNF proposed for maintenance within the scope of this consultation. The BO sets requirements for the location and timing of road crossing maintenance, with BMP's and Project Design Standards (PDS) with criteria, and annual tracking and monitoring with coordination.

Described in the LPNF's letter of March 25, 2013 (USFS 2013c), LPNF is aware of six specific crossings that pose a barrier to steelhead migration and block access to upstream designated critical habitat: four crossings at Wheeler Gorge on North Fork Matilija Creek and two crossings on Davey Brown Creek. LPNF proposes to design new crossings using the Forest Service's AOP design protocol. LPNF will then add the replacement of these six crossings to the LPNF's program of work using the AOP design as the basis of a National Environmental Protection Act (NEPA) proposed action. The LPNF shall avoid or minimize adverse effects of the proposed action by providing all stream-crossing design plans for review by NMFS to ensure the extent of the de-watered area is minimized and conducting post-construction evaluations and assessments to verify channel slope and bed-load are functioning as predicted in the design model to allow for steelhead passage.

Lower Piru Rangelands Project EA, DN, FONSI (September, 2011)

Lower Piru Rangelands Environmental Assessment (EA), Decision Notice (DN), Finding of No Significant Impact (FONSI) (Three Allotments: 10,895 acres 9,155 NFS 1,740 private)

The Lower Piru Rangelands consists of three grazing allotments and improvements that advance management of the allotments, including a network of NFSR and authorized non-system authorized roads used to provide access. NFSR roads serve multiple uses, and are managed and maintained as part of the National Forest Transportation System. Continued livestock grazing on the allotments was analyzed in the environmental assessment, and incorporated a public involvement phase from 2003 until a decision was reached in 2011. As part of the assessment, the continued use and maintenance of the authorized non-system roads were evaluated for compatibility with wilderness (FSM 2320) and IRA (CFR 294) policy and regulations.

The Decision of September 27, 2011 provided for continued use of the NFS Roads (LN), and determined the suitability and limitations of authorized non-system roads in the wilderness and the IRA. Of the non-system authorized roads, 10 miles are proposed for use. 0.1 miles eliminated. 0.7 miles of road is

converted to trail. In addition, 26 miles of trail was also eliminated. (Decision Notice, pg. 6, Item 3).

Three NFSR's provide allotment and livestock management access to the allotments: 4N13 (Piru Canyon Road), 4N14 (Dominguez Canyon Road), and 4N14A (Lime Canyon Road). The Piru Canyon Road 4N13 is identified in the 2005 RAP as HPM, a road located in a highly environmentally sensitive area, with high administrative and high public importance. The Forest Service maintains these roads in accordance with road management objectives and Forest Service standards and guidelines.

Projects currently under NEPA evaluation

May be reviewed at:

http://www.fs.usda.gov/main/lpnf/landmanagement/planning

NEPA Projects Since 2005 that are Road Related:

The following are road-related NEPA projects with completed decisions since the signing of the LMP ROD. For some of these projects the road component is ancillary to the primary project objective:

ARRA Road Paving Chipseal Surfacing project

ARRA Road Side Brushing project

Big Caliente Road (5N16) Maintenance project

ERFO Repair project. 2011 damage NEPA completed in 2014

Lower Oso Bridge Erosion Repair project

CalTrans Culvert Replacements on State Route 1 Various SUP NEPA Decisions authorizing access use and road maintenance:

Various SUP NEPA Decisions authorizing access use and road maintenance:

Planning, Appeals, and Litigation System (PALS)-web based FS NEPA project number (#)

Frazier Park Utility District SUP Reissuance (PALS #36977);

Special Use Request to Reauthorize an Access Road (PALS # 25919);

Special Use Request to Reauthorize an Access Road (PALS # 25918);

Special Use Request to Reauthorize an Access Road (PALS # 25920);

Bear Trap Road Ranch Road CE (PALS #25669);

Slippery Rock Ranch Road Use Authorization (PALS #24485);

Southern California Gas Company and Cosgrove SUP Renewal (PALS #37025);

SUP Issuance – Road Near Castle Canyon (PALS #19543);

Bryan Halmark SUP for Road, Telephone and Electric Lines (PALS #21740);

Compton Hunting and Fishing Club Road CE (PALS# 25678);

Long Dave Valley Road Access Permit (PALS #25749);

Frontier Organization Camp Road CE (PALS #25688);

Howard Albano Road CE (PALS #25689);

Jerry W. Beem Road CE (PALS #25690);

Schenk and Gonzales Road CE (PALS #25693);

Burbank Organization Camp Road CE (PALS #25671);

Cathy Van Road CE (PALS #25671);

DN and FONSI, Los Prietos Boys Camp Modular Project (PALS #8944);

Mike Cromer – Quail Run Ranch Special Use Permit Re-Issuance Project (PALS #38620);

Special Use Request to Reauthorize a Corral and Associated Outbuildings (PALS #25911);

Santa Barbara County Communications Use Lease – Tepusquet Peak Com Site (PALS #36652);

Livestock grazing projects with use and maintenance of authorized non-system roads:

DN Lower Piru Rangelands project includes authorized non-system roads

DN's Monroe and Sweetwater Allotments

DN Frazier Mountain project included temp road construction and decommissioning

Road-side vegetation treatment projects:

DM Day Fire Hazard Tree Removal

DN Pine Mountain Club project

Identifying Issues (from 2005 RAP)

To adequately identify issues the 2005 RAP interdisciplinary team (IDT) needed to conduct public involvement. Under the 2005 RAP the RAP IDT identified a need to gather information from the public in terms of their lifestyles, attitudes, beliefs and values regarding the forest road system. As noted

earlier all NEPA studies after the 2005 LMP ROD that involved roads conducted public involvement for the LMP Amendment, hazardous fuels reduction projects, rangelands projects, and the watershed protection and restoration projects.

RAP 2005 Public Involvement Subpart A

Public Involvement (See Appendix M pp 520-568 Final EIS Vol 2 Land Management Plans Sept 2005)

Since the RAP Process was conducted simultaneously with the Land Management Plan revision effort, no separate public involvement process was initiated for the roads analysis. Comments received during formal and informal scoping periods and public meetings for the revision, were categorized and entered into a database. Over 10,000 comments were received pertaining specifically to "access", which were then analyzed and reviewed for issue identification prior to the RAP. Internal comments from specialists on each Forest were also documented and considered during the analysis process.

Formal public scoping for the Plan Revision was initiated with the publishing of "the Notice of Intent (NOI) to prepare Environmental Impact Statement for the Forest Plan Revisions" in the Federal Register on September 24, 2001. The NOI asked for public comment on the proposal from September 24 through December 31, 2001. Comments have also been accepted throughout the process and requested at the public meetings and workshops.

Four rounds of public meetings and open houses were held in various locations across southern California. The first series were held from January through March of 2001, and the public was asked to develop a list of values and visions for the Forests. A second round of public meetings ran from March through May of 2001. At these meetings the public was presented with our preliminary significant issues and a range of background data and information. The third round of public meetings was held from October through December 2001. At that time, the public was asked for comments on the proposed action. A fourth round of public workshops held in February and March 2003 showed the public the range of alternatives being considered to address the issues and asked if their concerns were addressed by at least one of the alternatives. In addition, newsletters and information posted on the forest planning website kept the public informed and involved in the planning process.

Other than members of the general public, specific stakeholder groups were invited to participate in the process, including: other federal, state, county, and city agencies; nearby private landowners; Native American tribes; numerous local and national interest groups and community associations.

The main issues associated with roads on the Los Padres National Forest:

- Concern that roads will negatively affect the water flow within the watersheds for various reasons including the shallow, erosive soils, areas of steep terrain and proximity of roads to stream courses, numerous crossings, and endangered and sensitive species habitat.

- Concern that adequate road access is maintained for private landowners, recreation and business users, administrative and vegetation management activities, and for fire protection.
- Concern that motorized use roads for 4WD/OHV associated recreation will have to change because many roads are listed for consideration for closure or conversion to trail.
- Concern that roads have negative effects by allowing people to access and damage cultural resource sites, create visually offensive scars on the land, or negatively affect wilderness resources.
- Concern that roads have negative effects to wildlife or sensitive plants by fragmenting habitat leading to species and suitable habitat declines.

The primary concern for land managers is to provide adequate access for public use; and resource management; including recreation, authorized special uses, private land access, and vegetation treatment for fuels reduction, fire protection, and wildlife and aquatic habitat improvement.

The primary legal constraints on road management are the requirements to protect cultural resources, requirements to allow reasonable access to private in-holdings, the aquatic management strategy, maintaining wilderness characteristics in designated wilderness and IRAs that have not been released for other uses, and the standards and guidelines in the 2005 Los Padres Forest Plan Amendment (USDA 2005). The other constraint is the budgeted road maintenance CMRD allocation.

Public Expectations

Based on current trends, future demand for recreation access is expected to continue to grow while access needs for commodity production is expected to be lower than in the past. Funds to maintain the current road system using current sources are expected to decrease.

The National Survey on Recreation and the Environment 2000 shows surveyed user priorities for Forest Management in descending order:

Manage for Protection (Avg. 74.0 percent)

- Protect streams and other sources of clean water
- Provide habitat and protection for abundant wildlife and fish
- Protect rare, unique or endangered plant and animal species

Manage for Amenities (Avg. 61.6 percent)

- Maintain national forests for future generations to use and enjoy
- Provide quiet, natural spaces for personal renewal
- Use and manage forest areas in ways that leave them natural in appearance
- Provide information and educational services about forests, their management, and the natural life in them

Manage for Outputs (Avg. 38.1 percent)

- Provide access, facilities and services for outdoor recreation
- Emphasize planting and management of trees for an abundant timber supply
- Provide access to raw materials and products for local industries and communities
- Provide roads, accommodations and services to help local tourism businesses
- Provide permits to ranchers for livestock grazing (i.e., cattle and sheep)

Problems, Risks, and Benefits Assessment (RAP 2005)

All topics required by the FS-643 Roads Analysis report were incorporated in the 2005 RAP prepared in conjunction with the Land Management Plan Revision. These topics include ecosystem functions and processes; aquatic, riparian zones and water quality; terrestrial wildlife; economics; commodity production in terms of timber, minerals and range management, water production, and special forest products; special use permits; general public transportation; administrative uses (e.g., resource management); protection (e.g., fire or cultural resources); road-related and unloaded recreation; social issues; and civil rights and environmental justice. The Socal Multi-National Forest RAP was conducted at a broad, multi-forest scale to identify overall trends and to identify priorities for potential future projects. RAP 2005 Chapter 4 documents the assessment of problems, risks and benefits.

Some topic areas are best evaluated at the more site-specific scale than at the multi-forest scale. This is because some of the data becomes so diluted at the broad scale that detail is lost that relates to the effects. Where at the more site-specific scale, effects can be seen and evaluated as has been accomplished successfully at the watershed, sub watershed, and hazardous fuels project levels on studies from 11,000 acres to 1,000 acres.

Civil Rights and Environmental Justice

The National Survey on Recreation and the Environment (NSRE) surveyed individuals to determine if different segments of society differ in their values toward the National Forests. For five National Forest values, the researchers broke down responses by individuals' ages, gender, race, income groups and education. One of these values is "Provide access, facilities and services for outdoor recreation." The importance ratings changed across each category evaluated. This forest value became increasingly important for segments of the population in the following categories:

- As people age (especially from age 45+),
- Females,
- Native Americans (much more important),

- African Americans (slightly higher importance),
- Income of $15,000 to $24,000,
- Individuals attaining up to and including an eighth grade education. (Cordell et. al. 2001)

Information of this type was not requested during the Road Analysis public involvement. However, the change in terms of age does coincide with the RAP responses received (See Appendix E). Further study would be necessary to determine if different segments of society differ in their values toward providing road access within the Monument and non-monument forests.

Economics by Road Maintenance Level

As a rating factor, economics represents the relative value invested to construct the road, the relative cost to maintain the road in its current condition, and the overall importance of the access provided by the road. Higher standard roads cost more to build and maintain, but also typically provide access to larger land areas for a wider variety of uses. In this analysis, higher standard roads (ML 4 – 5) were rated as most important, with medium standard roads (ML 3) rated as moderately important, and high clearance or closed roads (ML 2 - 1) rated as least important.

Opportunities and Setting Priorities (See 2005 RAP Chapter 5)

This portion of the report identifies the management opportunities in terms of risks and benefits, establishes priorities and formulates technical recommendations for the existing and future road system. These opportunities and priorities were developed in response to the issues, benefits, problems and risks identified throughout this report. Economics is a significant influence on opportunities and priorities.

Projected Access Needs - 2015 Review

Overall Economics

As mentioned earlier, the current annual road maintenance budget is only sufficient to cover a very small percentage of the road system forest-wide.

Future Transportation Trends

To support the existing road system with current, and projected appropriated maintenance funding (CMRD) and non-appropriated maintenance funding; routine maintenance is being reduced, maintenance cycles are extended, and selective repairs are made to ensure public safety and prevent significant resource damage. Major repairs are funded by special appropriations outside of the annual forest budget. Current and projected funding levels do not cover deferred maintenance, which means that the deferred maintenance backlog grows annually (e.g., roads that are to be maintained once every

5 years may be maintained only once every 10 years). Over time, roads may develop severe public safety or resource damage issues, and may need to be evaluated for closure to public motorized vehicular use.

The lack of maintenance due to limited available funding, particularly on the lower priority roads (ML 1 and 2), is causing deterioration of the roadways. Some roads and trails have become overgrown with brush and trees, and are impassible to vehicular traffic. Other roads are causing resource damage in the form of sedimentation, as culverts and other drainage structures no longer function properly. The highest priority for road maintenance is expected to be on maintenance levels 3 to 5 roads for public and administrative access, and reasonable access to private property. Other roads that provide access to private lands, important fire protection features, administrative sites, special use permitted areas, and recreation areas are also expected to be priorities to maintain. This means that the ML 1 and 2 roads may receive no annual maintenance.

Road maintenance in the Los Padres National Forest is essential for providing and managing recreation opportunities. The Los Padres MVUM has 249 roads totaling 645 miles of ML 2-5 NFSR available for public motorized use. While recreation demand in the future is expected to increase, appropriated dollars have been decreasing over the past several years. Appropriated dollars alone (CMRD) will not be enough to fully fund the operation and maintenance of roads. Partnerships, including volunteers, are expected to be essential for providing high quality recreation opportunities. Consequently, the forest relies more and more heavily on outside funding, partners, and volunteers to maintain the NFTS. As the population grows and urban development expands, the continuous use of NFS roads is expected to increase, as is the demand for a variety of recreation uses in both motorized and non-motorized settings. Maintenance Level 3 to 5 roads that connect to recreation areas will experience the most increases in day use traffic, particularly on weekends. This traffic adds to the maintenance work required, but no additional funding is available to accomplish the work.

As a result of increasing use and decreasing maintenance funding, fewer roads are being fully maintained to standard. Reduced maintenance could lead to erosion and deterioration of roads; closure due to safety concerns and deferred maintenance needs; and subsequent loss of recreation opportunity and quality of experience. Not performing routine annual maintenance on time has increased the amount of deferred maintenance across the forest. Also, not performing routine annual maintenance may increase the amount of resource damage and safety issues caused by the use of the roads. Roads not properly receiving maintenance would inevitably be affected, and access for both public and administrative use is expected to continue to be degraded, and encourage road decommissioning.

Funding sources to maintain roads are limited. As discussed earlier, the reduction in timber sales has greatly reduced road maintenance funds from timber sale receipts. There are no recreation fees available to supplement the annual maintenance funds, and there is no prospect of recreation fees becoming available in the near future. Gas Tax funds may become available from the Federal Highway

Administration to improve and maintain a subset of the passenger vehicles roads (ML 3 – ML 5) in the forest under the Federal Lands Transportation Program (FLTP) established in 2013. This FLTP designated network consists of roads that provide access to high use recreation sites, special places, and economic generators. The designated network must also be reasonable and manageable to optimize the use of limited funding. Since the program was recently established, designation of the network is ongoing. Since FLTP designated roads are ML 3 – 5 roads, they are subject to the Highway Safety Act.

Risk to Ecosystem Sustainability

The questions under this and the following headings are from the FS-643 report and guide the discussion of these topics.

Does the existing system of roads create an unacceptable risk to ecosystem sustainability?

Portions of the existing road system create risks to ecosystem sustainability. The roads that follow perennial and intermittent creeks generally have a higher impact on water flow and quality. Aquatic species and their habitat are being affected by the road stream crossings and the proximity of roads to creeks. However, the extent of negative effects is not certain at this scale. If the road system is not adequately maintained, the potential risks to the ecosystem are likely to increase in different areas mainly in terms of sediment yield to creeks. The USFWS BO's and FS BA's described on pages 15-18 identify specific measures and practices to follow for LP road maintenance planning and implementation, and the need for monitoring by Qualified Biologists at locations mentioned in the documents.

Budget Constraints-Current and Projected

Can the maintenance requirements of the existing system be met with current and projected budgets?

As stated repeatedly in this report, the current and predicted road maintenance budgets do not adequately fund maintenance of the existing road system (See Table 3). The limiting factor in road management for the past decade, and into the foreseeable future is funding. If the LPNF used the current allocated road maintenance budget to bring roads within the forest up to standard, only some (ML 4-5) would be maintained; none of the native surfaced roads (ML 1-3) would receive maintenance. This has the potential to increase risks to the ecosystems and access needs if the road system continues to deteriorate at the current rate. With current funding minimal road maintenance is accomplished. This Travel Analysis update of the 2005 RAP and 2011 Collaborative has identified some roads that are less important than previously measured, or some that are more important. These are listed and shown on the maps.

The limited CMRD appropriated funding will require decisions on which roads are to receive the funds. Further analysis of the open miles may need to be done to identify the most important for continued

public motorized use. The Forest will have to balance resource considerations with continued public and administrative use, to match available funds to provide necessary access.

Are some existing roads not needed to meet projected access needs?

Some existing roads have been rated low in importance for access both by the public and for administrative purposes. Some of these same roads have moderate to high resource risk factors, which make them likely candidates to consider for decommissioning. Several of the roads have been rated high in importance for vegetation management. This may result in some of the roads becoming available to consider for decommissioning in the next decades.

Conversely, the 2005 RAP noted that the LPNF had 36 roads, 135 miles, needing 500 cases to complete NFS rights-of-way from parties other than state and county. Most state and county roads have no recorded rights-of-way.

2015 Process: What opportunities exist to change the road system to reduce the problems and risks or to be more consistent with forest plan direction and strategic intent of the roads system?

A variety of opportunities exist to change the road system to reduce problems and risks. The 2005 RAP identified roads as High environmental Risk High Priority for Mitigation (HPM) equivalent to the HH rating used in the Roads in IRA's analysis. The HRLI roads would be called LH in the 2011 SoCal Collaborative study. Low Priority for Mitigation (LPM) are a list of roads with moderate importance and moderate to high resource risk. These roads need financing to remedy resource issues and are needed on the system. Obtaining adequate funding for a single HPM project each year is competitive with all other National Forests. Few grants are awarded each year to only a few National Forests. All the other roads on the Forest are Low to Moderate Resource Risk and Low to Moderate Importance. HRLI are LNN and any others identified through the studies and NEPA after 2005 RAP that are no longer needed in order to reduce density or watershed impacts.

From January through August 2015 the LP conducted a field level evaluation of all 2005 HRLI roads, and the LH and LL 2011 Collaborative roads to confirm the importance level assigned in each analysis. Meetings were held with the Santa Barbara RD May 12th, Santa Lucia RD May 13th, Monterey RD May 14th, Ojai RD May 15th, Mt. Pinos RD May 18th. The District Rangers, District Staff Officers, Recreation, Natural Resource Specialists, Law Enforcement and Fire Management, all those with the most current field level knowledge of the District's road and trail systems, reviewed all District roads using maps and tables prepared in April, 2015.

A few HRLI roads have a need in 2015 not known in 2005. A few have been decommissioned or converted to motorized trails. Some LH and LL roads are higher importance, and for others low importance is confirmed. In addition to the two TAPs, the field review found a few other roads as LNN and candidates for further study leading to NEPA decisions. Three roads in the La Brea Canyon area are

under pre-NEPA study for possible relocation or decommissioning since the current locations are subject to recurring major flood damage and are impassable until major restoration repairs can be funded and implemented.

The Road Matrix showing resource risk and access benefit is a tool to identify the equivalent risk and benefit of each road as illustrated in Table 8. This results in a Risk/Benefit rating pair for each road using the results of the 2005 RAP and 2011 SoCal Collaborative. There are four potential rating pairs, displayed in Table 8. The table also displays opportunities for change associated with each rating pair. The roads with Low need or benefit scores are those most likely to be determined as "Likely to be Not Needed for future use" after a more thorough project level NEPA analysis is conducted. In contrast, all of the other roads, are likely to have all or a portion of the road determined as "Likely to be Needed for future use" after a more thorough project level NEPA analysis is conducted.

Table 8 - LPNF RAP Opportunity Categories Matrix (Listed by Risk/Benefit)

	Access Need or Importance	
Resource Risk	High/Low: HRLI Consider for closure or decommissioning (high priority).	High/High: HPM Consider for road maintenance priority, storm proofing, reconstruction, or reroute (high priority).
	Low -Moderate/Low:-Moderate All other LPNF Roads Consider for road maintenance priority, storm proofing, or reconstruction (medium priority).	Moderate/High: LPM Consider for road maintenance priority, storm proofing, or reconstruction (medium priority).

Once roads are sorted into these four rating categories, further screening of individual ratings could be done to further refine opportunities and priorities. As shown in Table 9, one factor is the mileage in each category, and the associated costs depending on maintenance levels.

Table 9 – LPNF Opportunity Category Mileage per Current Rating (Listed by Risk/Benefit)

	Access Need or Importance	
Resource Risk	High/Low: HRLI 8.4miles (15 roads)	High/High: HPM 71.3 miles (97 roads)
	Low-Moderate/Low-Moderate All other LPNF Roads 687.5 miles (93 roads)	Moderate/High: LPM 37.5 miles (72 roads)

Roads to consider changes include:

- Roads rarely used by the public or Forest Service, and are high risk could be considered for decommissioning.
- Roads rarely used by the public or Forest Service, and are low resource risk equivalent could be considered for decommissioning or reduced maintenance level.
- Roads which primarily provide access to another jurisdiction (such as county administered lands or a property owners association) with limited benefit to the Forest Service could be considered for transfer to the benefiting jurisdiction.
- Roads which provide access to a private property inholding or special use permit holder (such as an organization camp) where general public access is not needed or desired could be considered for transfer of maintenance responsibility to the permit holder.
- Roads accessing vegetation that has reached desired condition may be evaluated for decommissioning or reduced maintenance level, unless there is a fire/fuels access need.
- Roads frequently used by the public or Forest Service (i.e., moderate to high need) with moderate to high resource risk equivalent could be evaluated to for storm-proofing, to relocate

portions of the roads away from resource risks, or create alternate access routes with fewer resource risks.

- Two or more roads accessing the same area, where traffic could be directed onto the more stable road and decommission the less stable road(s).
- Create a loop road to eliminate several spurs accessing the same area.

Other Needs and Opportunities

The 2015 review also highlighted other needs and opportunities.

- High Priority for Mitigation (HPM) 2005 RAP roads and High Resource Impact and High Importance (HH) 2011 Collaborative roads need financing to remedy resource issues and are needed on the system. The system in La Brea Canyon under pre-NEPA study is in the 2005 RAP category of HPM.

- Obtaining adequate funding for a single HPM project each year is competitive with all other National Forests. Few grants are awarded each year to only a few National Forests. The LPNF will submit Capital Improvement Projects (CIP) and road-related watershed restoration proposals to compete for any available funding.

- Study the six road crossings identified by the National Marine Fisheries Service (NFMS) Biological Opinion (BO) at Wheeler Gorge 5N24 and Davey Brown Campground (CG) 8N09A as barriers to fish passage to apply for Aquatic Organism Passage (AOP) grants to replace the crossings. NEPA is in progress for three low water crossings near Davey Brown CG.

- Federal Highway Administration's (FHWA) Moving Ahead for Progress in the 21st Century (MAP-21) Program from 2013 includes the Federal Lands Transportation Program (FLTP) and Federal Lands Access Program (FLAP formerly Forest Highway Program). The LPNF has three FLTP roads, 10.8 miles, of the highest ranking eligible for competitive gas tax funds including 19S05 Sycamore Canyon, 5N18 Santa Ynez River Road, and 9N10 Ballinger Canyon. The list includes six other important LPNF roads for 37 miles.

- Evaluate roads and review those that should be open, in NEPA studies associated with Hazardous Fuels projects, Range Allotments, Special Use proposals or re-newels, or Watershed analyses.

- Continue to work with Permit holders, lessees, and adjacent military bases to cooperate in road maintenance.

- Update the Road Management Objectives (RMO's). Road Management Objectives should be updated to discuss the appropriate ML. Possibly, some of the 138 miles of ML 3 can be maintained at a lower level and some of the 515 miles of ML 2 may be candidates for ML1 or potential decommissioning. Since 80 percent of the 805 miles appear on the LP MVUM, any proposed change in public motorized access on an individual road will require some appropriate level of NEPA analysis and decision. This TAP update has provided the opportunity for the Forest to closely evaluate the public and administrative importance of high resource risk roads identified in the 2005 RAP and 2011 Collaborative Study, and to look at any other roads now believed to be more or less important, again requiring further NEPA analysis to change public motorized access, or to decommission a road mapped and listed in the MVUM.

- Explore additional opportunities to reduce the size of the road system. The Forest has reduced the system of roads maintained by appropriated road maintenance funds, CMRD, by identifying the governing jurisdiction, converting many miles most suitable for OHV and 4WD use to motorized trails, decommissioning 23 miles of system roads, and reducing road density, a concern mentioned in the RAP and LMP.

- Build on past successes in accomplishing projects with other funding. The most recent estimate of deferred maintenance needs in the LPNF is $117,000,000 for roads as projected from the $74,000,000 recorded in 2002. The forest has been able to accomplish the following:

    - ARRA: The American Recovery and Reinvestment Act of 2009 provided the LPNF with $2,000,000 for deferred maintenance.
    - FLTP: The forest was successful at obtaining $400,000 of MAP-21 funding to complete the Santa Ynez River Road paving.
    - FLAP: The forest benefitted from the success of our counties in getting projects funded from this MAP-21 program- $4,000,000 Paradise and Gibraltar Roads paving (Santa Barbara County); $3,400,000 Arroyo Seco Road paving (Monterey County).
    - ERFO: The forest has received $3,300,000 from FHWA for Emergency Relief for Federally Owned Roads. Large fires, floods, landslides, earthquakes, windstorms, tree mortality, and drought have occurred in the 2005 – 2015 decade. Funds are granted to repair damaged roads, not to perform deferred maintenance. One concern is that under MAP-21 there has been a reduction in the number of roads eligible for this funding. Roads that are on the FLTP network are eligible for 100% of the cost of repair on qualifying sites. Roads that are not on the FLTP, but that have an engineered surface (pavement,

chip seal or gravel) may be eligible for partial funding of the repairs. Native surface roads will in general be ineligible.

- BAER: The forest has received $3,800,000 for Emergency Supplemental and Burned Area Emergency Rehabilitation for roads.

Results of Forest Road Reviews

Table 10 - Review of 2011 Socal Collaborative Study of LPNF LH and LL Roads in or near IRA's

Current ID	NAME	Length Miles	RoadTrail	TAP Summary Roads Reviewed	August 2015 Final_Class	USFWS BO List AUG 2012
32S16	LOGAN RIDGE OHV	4.0	LH Trail	2011 Collab Roads CV	LNN, CA REC MTC	
32S28	LOS MACHOS OHV	5.0	LH Trail	2011 Collab Roads CV	LNN, CA REC MTC	
9N11B	HAPPY HOLLOW	1.2	LH Road	2011 Collab Roads	LN	
5N15.3	2 ROMERO CAMUESA FDR	1.1	LH Road	2011 Collab Roads	LN	
6N17	HILDRETH PK.	17.8	LH Road	2011 Collab Roads	LN	
6N14	SANTA CRUZ	4.1	LL Road	2011 Collab Roads	LN	
31S02.3	2 BRANCH MTN. OHV	2.3	LH Road	2011 Collab Roads	LN	
5N15.2	1 ROMERO CAMUESA FDR	11.6	LH Road	2011 Collab Roads	LN	
5N01	PENDOLA JEEP	10.3	LH Road	2011 Collab Roads	LN	
5N34A	COZY DEL SPUR	0.1	LH Road	2011 Collab Roads	LN	
7N03D	HALF MOON C.G.	0.6	LH Road	2011 Collab Roads	LN	Yes
5N15A	UPPER OSO C.G.	1.5	LH Road	2011 Collab Roads	LN	
9N11.4	BUCKHORN RD	22.0	LH Road	2011 Collab Roads	LN	Yes
32S23	ALAMO	2.1	LH Road	2011 Collab Roads	LNN	
31S03	PINE CREEK	4.5	LL Road	2011 Collab Roads	LNN	Yes
6N03C	MURIETTA DAM	0.1	LH Road	2011 Collab Roads	LNN	
32S22	CHAMIDE	1.0	LH Road	2011 Collab Roads	LNN	
17 Roads	**Total Miles**	**89.3**				
2 Roads	**Converted to Trails**	**9.0**				
11 Roads	**Likely Needed**	**72.6**				
4 Roads	**Likely Not Needed**	**7.7**				

Table 11 - Review of LPNF HRLI 2005 RAP, Roads Converted to Trails, Others under Study

Old_ID	Current ID	NAME	SEG LTH	Road Trail	TAP Summary Roads Reviewed	August 2015 Final Class
	8N08.1	CACHUMA MTN.	5.0	Road	HRLI from 2005 RAP	LN
	20S05B	COLD SPRINGS	0.7	Road	HRLI from 2005 RAP	LN
	5N15J	MONO C.G.	0.1	Road	HRLI from 2005 RAP	LN
	6N30	OGLIVY RANCH*	2.2	Road	HRLI from 2005 RAP	LN
	11N04A	BROOKSHIRE OHV	1.9	Road	HRLI from 2005 RAP	LN
8N40A	22W13	WEST FORK OHV	2.5	Trail	HRLI from 2005 RAP	LNN
	8N25.2	1 SUTTON RD.	1.0	Road	HRLI from 2005 RAP	LNN
	5N05.1	HOWARD CREEK	1.0	Road	HRLI from 2005 RAP	LNN
	5N12	CAMINO CIELO	1.7	Road	HRLI from 2005 RAP	LNN
	11N04B	LAZY CAMP CG.	0.7	Road	HRLI 2005 RAP Study to Decom or Relo	LN
	10N06.1	LA BREA CYN. OHV	4.1	Road	Under Study to Decom or Relo	LN
	11N04.3	2 LA BREA OHV	8.5	Road	Under Study to Decom or Relo	LN
	11N04.3	2 LA BREA OHV	3.5	Road	Under Study to Decom or Relo	LN
9N05.C	23W12	QUATAL WASH SPUR OHV	0.2	Trail	2015 Not Needed Roads under System CV	CV, LNN
9N47.2	24W09.4	DEER PARK #40 OHV	9.5	Trail	2015 Not Needed Roads under System CV	CV, LNN
23S14	5E08	WILLOW CREEK	5.9	Trail	2015 Not Needed Roads under System CV	CV, LNN,GS
30S18	15E11	GARCIA	4.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
30S17	16E09	PINE MOUNTAIN	7.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
28S02B	15E10	QUAIL OHV	1.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
29S17	15E07	POWERLINE	2.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
30S02B	17E09	BRANCH CREEK	5.5	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
32S25	17E10	BIG ROCKS	4.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
32S27	17E06	SHAW RIDGE	8.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
32S21	17E08	PARADISE	2.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
32S14	17E13	UPPER 35 CANYON	3.3	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
32S25A/ B	17E11	JACK SPRINGS	1.8	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS

32S17	17E12	TWIN ROCKS	3.5	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
Old_ID	**Current ID**	**NAME**	**SEG LTH**	**Road Trail**	**TAP Summary Roads Reviewed**	**August 2015 Final Class**
8N03	29W02	CATWAY	3.5	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
11N06	31W14	BUCKHORN RIDGE	6.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
29S16	16E08	LAS CHICHES	6.0	Trail	CV 2015 vs 2005 RAP Road	CV, LNN,GS
	5N18E	SANTA YNEZ CG.	0.9	Road	NN System& DE Status 2015 vs 2005 RAP data	CV, LNN
	31 Roads	**Total Miles**	**107.0**		**CV LNN Converted to Trail, Not Needed as Road**	
	18 Roads	**Converted to Trails**	**74.1**		**GS: CA Recreation Maintenance**	
	5 Roads	**HRLI Likely Needed**	**9.9**			
	4 Roads	**HRLI Likely Not Needed**	**6.2**			
	4 Roads	**Under Study**	**16.8**		***USFWS BO Aug 2012**	

Table 12 Other LPNF NFSR FS Maintained Likely Not Needed

Current ID	NAME	Segment Length	Operating ML	August 2015 Final_Class
12N03.1	OLD SIERRA OHV	2.4	2	LNN
5N03	LADERA RANCH	0.9	4	LNN
6N24.2	PIE CANYON	2.2	2	LNN
4N06	RICE WILLS	3.2	2	LNN
4N13B	BLUE POINT CG	1.0	4	LNN
23S10	WILLOW CREEK	1.0	2	LNN
20S05F	THREE PK. CG.	1.3	2	LNN
6N31E	ROSE VAL. DUMP	0.3	3	LNN
4N05.2	1 SUPERIOR RI.	12.4	2	LNN
6N11	DON VICTOR	6.8	2	LNN,CV
7N05	LOMA VICTOR	18.3	2	LNN,CV
	11 Roads	**49.8**		
	2 Roads CV to Hiking Trail	**25.1**		
	9 Roads LNN	**24.7**		

Table 13 - LPNF Jurisdiction Privately Maintained NFSR Under Permit LNN

Current ID	NAME	Segment Length Miles	Operating ML	Primary Maintainer	**August 2015 Final_Class**
32S09	JOLLA	7.5	2	P	LNN
4N14	DOMINGUZE CYN.	4.5	2	P	LNN
4N14A	LIME CYN.	2.0	2	P	LNN
4N10.2	1 LAGUNA RIDGE	1.0	2	P	LNN
8N25.1	BURK RD.	0.3	5	P	LNN
12N03.2	1 OLD SIERRA	7.0	2	P	LNN
6N04	TEQUEPIS CYN.	0.3	3	P	LNN
5N05.2	1 HOWARD CREEK	0.7	2	P	LNN
	8 Roads	**23.3**			

Recommendations from the 2015 TAP Review and Update

Funding beyond the LPNF appropriations is needed to relocate, decommission, or convert roads to trails. The long-term effect would be reduced risk to ecosystems from deteriorating roads, and a smaller and more efficient road system to fund. A reduction in the road system mileage should allow the limited maintenance funds to be used on a larger proportion of the transportation system.

Several action items were identified that need to occur for decision-makers to make better informed road management decisions on the road system:

- Update the current Forest Transportation Atlas (FTA) with the information gathered in the TAP, and maintain the FTA. As stated throughout this document, there are several roads in use, and being maintained at a maintenance level different than the recorded operational or objective maintenance level in the Forest Transportation Atlas (FTA). Correcting maintenance levels in the FTA to reflect existing conditions on the ground would improve the information available to resource specialists, and decision-makers in terms of roads, and their effects on other resources. It should also help make administrative decisions regarding road maintenance level more consistent throughout the forest.
- The current operational road maintenance levels need to be verified on the ground and the database needs to be corrected prior to implementation of projects that affect, or are affected by the road system. The forest engineering staff has been updating the FTA.
- Additional evaluation criteria may need to be developed to fully determine effects at a more site-specific level.

- Re-evaluate the objective road ML's in light of the change in management objectives within the forest, and the national and local trends in road maintenance funding since these designations were last made (circa 1986).

- As NEPA decisions are made, update Road Management Objectives (RMO's) to reflect use, resource issues and LN vs. LNN.

- Review high percentage of ML2-ML5 NFSR open to public motorized use (93%).

- CMRD dollars only able to fund about 2 percent of the current NFSR miles. Priority and timing decisions will need to be adjusted to the most pressing public and administrative access needs while protecting the natural resources in watersheds. The costs and mileages described in this report reflect conditions as of August, 2015.

- This TAR update provided the opportunity to closely evaluate the public and administrative importance of high resource risk roads identified in the 2005 RAP and 2011 Collaborative Study, and to look at any other roads now believed to be more or less important, again requiring further NEPA analysis to change public motorized access, or to decommission a road mapped and listed in the MVUM.

- Funding decisions can focus the funds on the ML 3, 4 and 5 miles, the 200 miles of higher-level primary access roads generally surfaced, and not attending to the ML 2 high clearance roads except to ensure compliance with the United States Fish and Wildlife Service (USFWS) and NFMS Biological Opinions (BOs) and watershed protection. Major incident fires would be able to re-establish access needed on ML 2 roads.

- Apply for AOP funds for the six crossings on Wheeler Gorge and Davey Brown roads. NEPA is in progress for 3 low water crossings near Davy Brown CG, and we should be in position to apply in the next grant cycle. The crossings on Wheeler Gorge will undergo NEPA evaluation, as soon as, funding allows.

- The funding eligibility rules changed in 2013 regarding roads that qualify for ERFO funding. Review the LPNF's list of those eligible roads most susceptible to storm damage to help prepare for the next major storm.

- Recognize that the TAP is a "living document" and an iterative process, so as the forest engineering staff updates the FTA based on watershed, landscape and project level analyses, the site-specific projects need to be based on the most current transportation system information available. FSM 7712 offers additional guidance for when a forest-scale TAP is updated with changes in conditions, such as available funding, inventory and monitoring results, severe emergency events (ERFO), or new regulatory requirements.

Table 14 – Questions to Guide Development of More Site-Specific Evaluation Criteria

Questions to be Answered
Ecosystem Functions and Processes: • To what degree do the presence, type, and location of roads contribute to the control of insects, diseases, and parasites? • What are the adverse effects of noise caused by developing, using, and maintaining roads?
Aquatic, Riparian Zone, and Water Quality: • What downstream beneficial uses of water exist in the area? What changes in uses and demand are expected over time? How are they affected or put at risk by road-derived pollutants? • How does the road system alter physical channel dynamics, including isolation of floodplains; constraints on channel migration; and the movement of large wood, fine organic matter, and sediment? • How does the road system affect shading, litter-fall, and riparian plant communities? • How and where does the road system facilitate the introduction of non-native aquatic species? • To what extent does the road system overlap with areas of exceptionally high aquatic diversity or productivity, or areas containing rare or unique aquatic species or species of interest? (CARs, RCAs, etc.)
Terrestrial Wildlife: • How does the road system directly affect unique communities or special features in the area?
Water Production: • How does road development and use affect water quality in municipal watersheds?
Administrative Use: • How does the road system affect investigative or enforcement activities?
Protection: • How does the road system contribute to airborne dust emissions resulting in reduced visibility and human health concerns?
Unroaded Recreation: • What are the adverse effects of noise and other disturbances caused by developing, using, and maintaining roads, on the quantity, quality, and type of unroaded recreation opportunities? (e.g., wilderness and inventoried roadless areas.
Road-Related Recreation: • What are the adverse effects of noise and other disturbances caused by constructing, using, and maintaining roads on the quantity, quality, or type of roaded recreation opportunities?

*** These questions and background information came from the FS-643 report and the public involvement efforts for RAP and Motorized Travel Management and the Roads in IRAs Collaborative.**

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Appendix A - Glossary

Road Definitions:

- **Forest Road:** Any road wholly or partly within, adjacent to, and serving the National Forest System and which is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources (23 USC 101).
- **Public Roads:** Roads that are under the jurisdiction of and maintained by, a public authority that are open to public travel (23 USC 101(a)).
- **National Forest System Roads:** Forest roads under the jurisdiction of the Forest Service (23 USC 101).
- **Forest Transportation Atlas:** An inventory, description, display and other associated information for those roads, trails and airfields that are important to the management and use of National Forest System lands or to the development and use of resources upon which communities within or adjacent to the National Forests depend.
- **Deferred Maintenance:** Maintenance activities that can be delayed without critical loss of facility serviceability until the work can be economically or efficiently performed. (Duck Creek-Swains RAP, version 1, April 2001).
- **Low Standard Roads:** Forest roads constructed and maintained for use by prudent drivers in high clearance vehicles (such as pickup trucks, 4WD vehicles and sport utility vehicles) as opposed to ordinary passenger cars. These roads are low-standard, unsurfaced, single-lane roads with turnouts. They were designed to be driven at five to ten miles per hour.
- **Temporary Roads:** Roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be a part of the forest transportation system, not necessary for long-term resource management, and not included in a forest transportation atlas (36 CFR 212.1) FSM 7705.
- **Maintained for Public Use:** A Memorandum of Understanding with the Federal Highway Administration defines national forest system roads open to the public as those roads open to unrestricted use by the general public in standard passenger cars, including those roads on a seasonal basis or for emergencies. (SNFPA, FEIS).
- **Decommissioning:** is defined as activities that result in the stabilization and restoration of unneeded roads to a more natural state (FSM 7703.2(1)). Decommissioning includes applying various treatments, which may include one or more of the following:

  (1) Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation;

  (2) Blocking the entrance to a road; installing water bars;

(3) Removing culverts, reestablishing drainage-ways, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed;

(4) Completely eliminating the roadbed by restoring natural contours and slopes; or other methods designed to meet the specific conditions associated with the unneeded roads.

Maintenance Levels:

- **Maintenance Level 5** - Assigned to roads that provide a high degree of user comfort and convenience in a standard passenger car. These roads are normally double lane and paved. Some may be aggregate surface and dust abated. MUTCD standards applied.
- **Maintenance Level 4** - Assigned to roads that provide a moderate degree of user comfort and convenience in a standard passenger car with moderate travel speeds. Most roads are double lane and aggregate surfaced. Some roads may be paved or dust abated. MUTCD standards applied.
- **Maintenance Level 3** - Assigned to roads open and maintained for travel for standard passenger car, user comfort and convenience are not considered priorities. MUTCD standards applied.
- **Maintenance Level 2** - Assigned to roads open for use by high clearance vehicles and not suitable for passenger cars. Passenger car traffic, user comfort, and user convenience are not considerations. Warning signs and traffic control devices are not provided with the exception that some signing may be posted at intersections. Motorists should have no expectations of being alerted to potential hazards while driving these roads. Highway vehicles and OHVs are allowed.
- **Maintenance Level 1** - Assigned to roads that have been placed in storage between intermittent uses. The period of storage must exceed 1 year. Basic custodial maintenance is performed to prevent damage to adjacent resources and perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage features and runoff patterns. Closed to all motorized traffic but may be available for non-motorized uses.
- **Forest Service Road Budget Codes**-

  CMES: Construction and Maintenance Emergency Supplemental road funds
  CMII: Construction and Maintenance funds for improvement of roads
  CMLG: Legacy Funds for repair and restoration of roads and trails
  CMRD: Construction and Maintenance funds appropriated for annual road maintenance
  CRRD: ARRA funds for Forest Service Road maintenance and improvements
  RIRI: Restoration of Forest Lands and Improvements funds
  WFW3: Wildland Fire Restoration funds for roads

Appendix B - Commonly Used Acronyms

A

ABAG: Association of Bay Area Governments

ADT: Average Daily Traffic

AIM: Abandoned and Inactive Mines

ANF: Angeles National Forest

ANILCA: Alaska National Interest Lands Conservation Act

APCD: Air Pollution Control District

ARRA: The American Recovery and Reinvestment Act of 2009

ATV: All-Terrain Vehicle

AUM: Animal Unit Month

Avg: Average

B

BA: Biological Assessment

BAER: Burned Area Emergency Rehabilitation

BC: Back Country

BCMUR: Back Country Motorized Use Restricted

BCNM: Back Country Non-Motorized

BLM: Bureau of Land Management

BMP: Best Management Practices

BO: Biological Opinion

C

CAA- Clean Air Act

Cal EPPC: California Exotic Pest-Plant Council

Caltrans: California Department of Transportation

CAT EX: Categorical Exclusion

CBDT: California Backcountry Discovery Trail

CBZ: Critical Biological Zones

CCC: Civilian Conservation Corps

CDF&G: California Department of Fish and Game

CDFA: California Department of Food and Agriculture

CDMG: California Department of Mines and Geology

CE: Categorical Exclusion

CEQ: Council on Environmental Quality

CEQA: California Environmental Quality Act

CERCLA: Federal Comprehensive Environmental Response, Compensation and Liability Act

CFR: Code of Federal Regulations

CHMS: Carbonate Habitat Management Strategy

CIP: Capital Improvement Program

CIWMB: California Integrated Waste Management Board

CMES: Construction and Maintenance Emergency Supplemental road funds

CMII: Construction and Maintenance funds for improvement of roads

CMLG: Legacy Funds for repair and restoration of roads and trails

CMRD: Construction and Maintenance funds appropriated for annual road maintenance

CNF: Cleveland National Forest

CO: Carbon Monoxide

COE: U.S. Army Corps of Engineers

CRRD: ARRA funds for Forest Service Road maintenance and improvements

CRRPT: California Roundtable on Recreation, Parks and Tourism

CS: Consumer Surplus

CUA: Concentrated use areas

CWA- Clean Water Act (federal)

CY: Current Year

D

DAI: Developed Area Interface

DEIS: Draft Environmental Impact Statement

DEM: Digital Elevation Mode

DFG: Department of Fish and Game

DLC: Desired Landscape Character

DM: Decision Memo

DN: Decision Notice

DOC: U.S. Department of Commerce

DOD: U.S. Department of Defense

DOI: U.S. Department of the Interior

DOT: U.S. Department of Transportation

DPS: Distinct Population Segment

E

EF: Experimental Forest

EIS: Environmental Impact Statement

EPA: U.S. Environmental Protection Agency

ERFO: Emergency Relief for Federally Owned Roads (FHWA)

ESA: Endangered Species Act

EUI: Ecological Unit Inventory

EW: Existing Wilderness

F

FAA: Federal Aviation Administration

FEIS: Final Environmental Impact Statement

FSEIS: Final Supplemental EIS

FERC: Federal Energy Regulatory Commission

FHWA: Federal Highway Administration

FIA: Forest Inventory Analysis

FLTP: Federal Lands Transportation Program

FONSI: Finding of No Significant Impact

FR: Federal Register

FSH: Forest Service Handbook

FSM: Forest Service Manual

FTA: Forest Transportation Atlas

FWS: Fish and Wildlife Service (see USFWS) FY: Fiscal Year

G

GIS: Geographic Information System

GPRA: Government Performance and Results Act

GPS: Global Positioning System

H

HH: High Importance High Resource Risk (2011 Collaborative Study)

HL: High Importance Low Resource Risk (2011 Collaborative Study)

HAP: Hazardous Air Pollutants

HRLI: High Risk Low Importance (2005 RAP)

HPM: High Priority for Mitigation (2005 RAP)

HUC- Hydrologic Unit Code

HWY: Highway

I

IDT: Interdisciplinary Team

IMPLAN: IMpact analysis for PLANning

INFRA: Infrastructure database includes Travel Routes NFSR database

IRA: Inventory Roadless Area

ISCST: Industrial Source Complex (Short Term)

IUCN: International Union for Conservation of Natural Resources

L

LH: Low Importance High Resource Risk (2011 Collaborative Study)

LL: Low Importance Low Resource Risk (2011 Collaborative Study)

LEIMARS: Law Enforcement and Investigation Management Reporting System

LMP: Land Management Plan (forest plan)

LN: Likely Needed for Future Use

LNN: Likely Not Needed for Future Use

LPM: Low Priority for Mitigation (2005 RAP)

LPNF: Los Padres National Forest

LRMP: Land and Resources Management Plan

LTA: Land Type Association

LUZ: Land Use Zone

M

M&E: Monitoring and Evaluation

MCP: Market Clearing Price

MIS: Management Indicator Species

MIST: Minimum Impact (Wildland fire) Suppression Techniques

ML: Road Maintenance Level (1 through 5)

MMBF: Millions of Board Feet

MOU: Memorandum of Understanding

MP: Milepost

MUTCD: Manual on Uniform Traffic Control Devices

MUVM- Motor Vehicle Use Map

MW: Megawatts

N

NCCP: Natural Community Conservation Planning

NEPA: National Environmental Policy Act

NF: National Forest

NFMA: National Forest Management Act

NFP: National Fire Plan

NFS: National Forest System

NFSR: National Forest System Roads

NFST: National Forest System Trails

NFTS: National Forest Transportation System

NHPA: National Historic Preservation Act

NMFS: National Marine Fisheries Service

NOAA: National Oceanographic and Atmospheric Administration

NOI: Notice of Intent

NOx: Nitrogen Oxide Gases

NSRE: National Survey of Recreation and the Environment

NVUM: National Visitor Use Monitoring

O

OHMVR: Off-Highway Motor Vehicle Route

OHV: Off-Highway Vehicle

OSHA: Occupational Safety and Health Administration

P

PAC: Protected Activity Centers

PAOT: Persons At One Time (Recreation capacity measurement)

PALS: Planning, Appeals, and Litigation System- web based FS NEPA project documentation

PCH: Pacific Coast Highway (also known as California State Highway 1)

PCT: Pacific Crest Trail (also known as Pacific Crest National Scenic Trail)

PFSR: Public Forest Service Roads

PMx: Particulate Matter less than x Microns

PSW: Pacific Southwest Forest and Range Experiment Station

PURPA: Public Utility Regulatory Policies Act

R

R5- Region 5 of the Forest Service

RACR – Roadless Area Conservation Rule

RAP: Roads Analysis Process (See also TAP)

RCA: Riparian Conservation Areas

RDM: Residual Dry Matter

RFDS: Reasonable Future Development Scenario

RMO: Road Management Objective

RNA: Research Natural Area

ROD: Record of Decision

ROG: Reactive Organic Gases

ROS: Recreation Opportunity Spectrum

RPA: Resource Planning Act

RPS: Renewable Portfolio Standards

RVD: Recreation Visitor Day

RW: Recommended Wilderness

S

SAC: Scenic Attractiveness Class

SANDAG: San Diego Association of Governments

SBNF: San Bernardino National Forest

SCAG: Southern California Association of Governments

SCMFA: Southern California Mountains and Foothills Assessment

SEA: Socioeconomic Assessment

SFP: Special Forest Products

SIA: Special Interest Area

SoCal: Southern California (typically refers to ANF, CNF, LPNF, and SBNF)

SOx: Sulphur Oxide

spp.: Species

SRSJMNM: Santa Rosa and San Jacinto Mountains National Monument

SUDS: Special Uses Data System

SUP: Special Use Permit

SUV: Sport Utility Vehicle

T

TAP: Travel Analysis Process

TAR: Travel Analysis Report

T&E: Threatened and Endangered

TEPCS: Threatened, Endangered, Proposed, Candidate and Sensitive Species

TEPS: Threatened, Endangered, Proposed or Sensitive

TES: Threatened, Endangered or Sensitive (see TEPS)

TMP: Temporary Road authorized by permit, not a forest road

U

URI: Urban and Rural Interface, this zone has been combined with Developed Area Intermix to form the current zone Developed Area Interface).

USDA: United States Department of Agriculture

USDI: United States Department of Interior

USFS: United States Forest Service

USFWS: United States Fish and Wildlife Service

USGS: United States Geological Survey

W

W: Wilderness

WCC: Watershed Condition Class

WD: Wheel Drive (4WD four wheel drive, 2WD two wheel drive)

WFPR: Wildland Fire Preparedness funds

WFW3: Wildland Fire Restoration funds for roads

WSR: Wild and Scenic Rivers

WRCPP: Western Regional Corridor Planning Partnership

WUI: Wildland/Urban Interface

Appendix C 2011 Collaborative Study

Table C1- LPNF LH and LL Roads 2011 Collaborative Study

IRA	Route Number	Access Score	Resource Score	Access Quad	Resource Quad	Quad	Miles	Absolute Score
Big Rocks	32S25A	0.00	5.76	L	H	LH	1.21	32
Big Rocks	32S25B	0.00	3.58	L	L	LL	0.59	20
Big Rocks	30S02.5	0.00	2.63	L	L	LL	0.01	15
Camuesa	5N15.3	1.00	4.88	L	H	LH	0.18	16
Camuesa	5N15A	1.00	5.29	L	H	LH	0.02	18
Camuesa	9N11.4	1.00	3.55	L	L	LL	0.01	9
Diablo	5N01	0.00	5.62	L	H	LH	1.20	31
Diablo	6N17	0.00	4.86	L	H	LH	0.98	27
Garcia Mountain	31S03	1.00	5.99	L	H	LH	1.25	22
Garcia Mountain	31S03	1.00	3.21	L	L	LL	0.11	7
Juncal	5N01	0.00	4.36	L	H	LH	7.64	24
Juncal	5N01	0.00	4.47	L	H	LH	0.01	25
Juncal	6N03C	0.00	5.93	L	H	LH	0.10	33
Juncal	5N13.3	1.00	6.50	L	H	LH	2.24	25
La Panza	29S16	0.00	2.89	L	L	LL	2.78	16
Little Pine	6N14	0.00	4.42	L	H	LH	0.51	25
Little Pine	9N11B	0.00	4.43	L	H	LH	0.56	25
Little Pine	9N11.4	0.00	4.70	L	H	LH	1.00	26
Little Pine	6N14	0.00	3.13	L	L	LL	1.35	17
Los Machos Hills	32S28	1.00	5.16	L	H	LH	1.70	18
Los Machos Hills	31S02.3	1.00	4.88	L	H	LH	0.04	16
Los Machos Hills	32S22	1.00	4.88	L	H	LH	0.97	16
Los Machos Hills	32S23	1.00	4.36	L	H	LH	1.07	13
Machesna Mtn.	30S17	1.00	4.03	L	H	LH	0.93	11
Malduce Buckhorn	6N14	0.00	4.70	L	H	LH	0.56	26
Mono	6N17	0.00	4.89	L	H	LH	0.42	27
Mono	6N17	0.00	4.68	L	H	LH	7.14	26
Mono	6N17	0.00	5.43	L	H	LH	2.59	30
Nordhoff	5N34A	1.00	4.54	L	H	LH	0.12	14
Santa Cruz	5N15.2	1.00	5.36	L	H	LH	2.28	19
Santa Cruz	5N15.3	1.00	4.60	L	H	LH	0.04	14
Sespe – Frazier	7N03D	1.00	5.49	L	H	LH	0.49	19
Stanley Mountain	32S16	0.00	4.88	L	H	LH	1.75	27
White Ledge	5N13.3	0.00	5.21	L	H	LH	0.69	29

LH: Low Importance High Resource Risk

LL: Low Importance Low Resource Risk

Table C2 - LPNF HH and HL Roads 2011 Collaborative Study

IRA	Route Number	Access Score	Resource Score	Access Quad	Resource Quad	Quad	Miles
Big Rocks	30S02B	2.00	5.97	H	H	HH	3.7
Big Rocks	31S02.3	2.00	4.10	H	H	HH	0.8
Big Rocks	32S11A	2.00	5.40	H	H	HH	2.9
Big Rocks	32S25	2.00	5.13	H	H	HH	4.6
Camuesa	5N15.2	3.00	7.09	H	H	HH	7.1
Camuesa	5N15.3	2.00	5.19	H	H	HH	0.5
Camuesa	5N18.4	2.00	5.71	H	H	HH	2.9
Garcia Mountain	30S18	2.00	4.08	H	H	HH	3.8
Garcia Mountain	30S18	2.00	4.02	H	H	HH	0.7
Juncal	5N13.3	3.00	5.20	H	H	HH	0.2
Los Machos Hills	32S20	3.00	4.83	H	H	HH	3.4
Machesna Mountain	30S17	2.00	4.50	H	H	HH	0.8
Malduce Buckhorn	5N15.2	3.00	6.05	H	H	HH	2.3
Santa Cruz	5N15.3	2.00	4.98	H	H	HH	0.3
Santa Cruz	5N15A	4.00	5.00	H	H	HH	0.7
Sespe – Frazier	8N12.1	3.00	5.62	H	H	HH	0.6
Machesna Mountain	30S17	2.00	3.51	H	L	HL	3.4
Sawmill-Badlands	8N43	3.00	3.34	H	L	HL	0.5

GIS Based Risk-Benefit Model Description 2011 Collaborative

The route scoring model is composed of an Excel workbook (IRA_route_scoring_model _4th_draft_7_16_2011.xlsx) with several worksheets. The worksheets are not protected or locked with password control. The following sections describe the individual worksheets.

Summary

The summary page pulls together the key data in a condensed summary, sorted by Forest, IRA, route system group, and resource score. It is dynamically linked to the Model so value updates in the model automatically populate the summary page. Most of the column headings are self-explanatory, but the summary includes some unique columns as follows:

Object ID - this is the index field for all the routes, and the value is what links the data between the workbook and the GIS files. **Status Group –** this column lumps the route status into two groups, classified and unclassified.

Access Score – the access score from the model. **Resource Score –** the resource score from the model **Access Quad –** this links to the scatter plot access “quadrant” (see the scatter plot section

below). The access quad is either high or low. **Resource Quad -** this links to the scatter plot resource "quadrant" (see the scatter plot section below). The resource quad is either high or low. **Quad-**this links to the scatter plot combined quadrant, and comes in four combinations based on the 50th percentile score:

LL – Low access and Low resource impact LH-Low access and High resource impact HL-High access and Low resource impact HH-High access and High resource impact.

Miles – the length of the segment in miles **Access Score %** - this is the access score converted to a % score based on a max score of 100%. **Resource Score %** - this is the resource score converted to a % score based on a max score of 100%. **Absolute Score** – Resource score % - Access score %.

Q75 – this is the quadrant score if high (H) were defined as the 75th percentile.

Scatter Plots

The scatter plot is a chart that plots the resource scores against the access scores. The plot is then divided into quadrants. For this draft final version the quadrants were divided along the median scores for access and resources for the entire data set. Each quadrant is then described as the combination of the access and resource scores, grouped by Forest and route status group for 12 total scatter plots. This approach can provide a way to focus on routes based on the combined percentile instead of scores. For example, the first priority group of routes may be the routes with low access scores and high resource impact (the LH group).scores. For example, the first priority group of routes may be the routes with low access scores and high resource impact (the LH group).

Model and Data Worksheets

The Model pulls together the access and resource data from the data worksheets on a route basis and scores most elements on a 0 to 1 rating. The first few columns (B to E) are self-explanatory, with the remaining attribute columns described below.

Route Status	Description
FDT - Forest Designated Trail	These are non-motorized National Forest System Trails designated by the Forests.

Route Status	Description
FDT_MOTORIZED	Trails designated by the Forests
NFSR - NATIONAL FOREST SYSTEM ROAD	These are National Forest System Roads maintenance level 1-3 in this database.
NOT - NOT NEEDED	These are routes that been determined to be no longer needed through NEPA or other appropriate decision process such as Burn Area Emergency Response (BAER) or fire suppression rehab. Most of these routes have been decommissioned either through natural vegetation or recovery restoration projects.
OHV - Non-System	These are routes mapped between 2003-2005 using GPS and identifying ongoing OHV use on routes not previously mapped by the Forests in the Land Management Plan Road Analysis. These routes are not part of the Forest motorized trail system.
OHV - System	These are routes mapped between 2003-2005 using GPS . These routes may be part of the Forest motorized trail system. These need to be reviewed to see if they duplicate FDT_Motorized routes.
SBNF - Missing	Apparent routes mapped from digital imagery in 2011 by the San Bernardino National Forest.

Route Status	**Description**
TMP - TEMPORARY	These are routes that have been permitted for use by individuals by the Forests, usually by special use authorization (SUA) or other appropriate documents such as easements etc.
UND - UNDETERMINED	These are unauthorized routes that the Forests have not determined a need for their continued use.
UND - Other	These are unauthorized routes (or other features that look like routes) that the Forests have not determined a need for their continued use.
UND - Trail	These are unauthorized routes that appear to be trails or were identified as trails in source data such cartographic feature files (CFF). These are

Access Attribute	Description of source data
Access to Dev Rec Area	National Forest Developed Recreation and Recreation Special Use sites were mapped as part of a built area analysis in the LMP revision. This data is part of the LMP planning record. Routes that intersected these developed recreation site polygons were selected and annotated with a “Yes”. Yes = 1
Access to Disp Rec Area	Access to dispersed sites was mapped as part of the analysis in the LMP revision. This data is part of the LMP planning record. Routes that intersected these areas were selected and annotated with a “Yes”. Yes = 1
Access to Permits	National Forest Special Use sites were mapped as part of a built area analysis in the LMP revision. This data is part of the LMP planning record. Routes that intersected these special use polygons were selected and annotated with a “Yes”. Yes = 1.
Access to FS Facility	National Forest Facility sites were mapped as part of a built area analysis in the LMP revision. This data is part of the LMP planning record. Routes that intersected these developed site polygons were selected and annotated with a “Yes”. Yes = 1.
Allotments	Allotments were mapped as part of a built area analysis in the LMP revision. This data is part of the LMP planning record. Routes that intersected these developed site polygons were selected and annotated with a “Yes”. Yes = 1.
Through Route	Mapped during the collaborative process. Through routes were selected and annotated with a “Yes”. Yes = 1.

Access Attribute	**Description of source data**
Fuel-break	Fuel breaks were mapped as part of a built area analysis in the LMP revision. This data is part of the LMP planning record. Routes that intersected these fuelbreak polygons were selected and annotated with a “Yes”. Yes = 1.
WUI	Mapped as part of the LMP revision. Routes in WUI were annotated with a “Yes”. Yes = 1.
WUI Defense	Mapped as part of the LMP revision. Routes in WUI Defense were annotated with a “Yes”. Yes = 1.
Resource Attributes	
RCA	Riparian Conservation Area (RCA) is described in each southern California LMP and is linked to specific Standards. RCAs are intended to be mapped at the project level however a data layer that represents the approximate extent of the RCA was developed for analysis as part of the FEIS for the LMPs. This data is part of the planning record for the LMP revisions. Yes = 1.
Steelhead - CH	Critical Habitat for all T&E species other than Steelhead. This data is maintained by the US Fish and Wildlife Service and is available at their web site at the following URL:

Access Attribute	Description of source data
	http://criticalhabitat.fws.gov/ Yes = 1.
Other CH	Critical Habitat for all T&E species other than Steelhead. This data is maintained by the US Fish and Wildlife Service and is available at their web site at the following URL: http://criticalhabitat.fws.gov/ Yes = 1.
MFA_AHES	Mountain and Foothills Assessment (MFA) Areas of High Ecological Significance (AHES). This areas are described and shown on maps in Chapter 7 of the Southern California Mountains and Foothills Assessment (General Technical Report – PSW-GTR-172, 1999) Routes were hand selected or selected when they intersected vegetation polygons described in the MFA that fell within the mapped area shown in the report. Yes = 1.
MFA – Rare - Communities	Mountain and Foothills Assessment (MFA) Rare Communities. Table 2.16 page 41 of the MFA shows a list of rare communities. The MFA habitat groups were identified a as part of the Ecological Unit Inventory for southern California. Routes that intersected polygons that represented these rare communities were attributed with the community name. Where more site-specific information was available such as vegetation type for Valley and Engelmann oak and Cuyamaca cypress or management area for carbonate outcroppings or pebble plains then this was used as well. No Santa Lucia fir or Sergeant cypress were found to intersect these routes in IRAs. Yes = 1.

Access Attribute	**Description of source data**
WSR	Currently Established Wild and Scenic Rivers (WSR) including type of designation. This data is maintained and available online at the Remote Sensing Lab (RSL) data clearinghouse at the following URL: http://www.fs.fed.us/r5/rsl/clearinghouse/data.shtml. Yes = 1.
Recommended - WSR	Recommended Wild and Scenic Rivers (WSR) including type of designation recommended by the LMP. This data is maintained and available online at the Remote Sensing Lab (RSL) data clearinghouse at the following URL: http://www.fs.fed.us/r5/rsl/clearinghouse/data.shtml. Yes = 1.
RNA	Research Natural Area (RNA) including name. This data is maintained and available online at the Remote Sensing Lab (RSL) data clearinghouse at the following URL: http://www.fs.fed.us/r5/rsl/clearinghouse/data.shtml. Yes = 1.
SIA	Special Interest Area (SIA) including name. This data is maintained and available online at the Remote Sensing Lab (RSL) data clearinghouse at the following URL: http://www.fs.fed.us/r5/rsl/clearinghouse/data.shtml. Yes = 1.
PCT	Pacific Crest Trail - This data is available online at the Remote Sensing Lab (RSL) data clearinghouse at the following URL: http://www.fs.fed.us/r5/rsl/clearinghouse/data.shtml

Access Attribute	**Description of source data**
	Routes that occur within 500 feet of the PCT were selected and annotated with a “Yes”. Yes = 1.
Erosion Hazard	This is an attribute of the NRCS Soil Inventory. This layer was compiled for LMP analysis and is part of the planning record. The erosion hazard ratings were scaled on a 0 to 1 basis, with very high = 1, high = .75, moderate = .5. There were no low erosion hazard ratings.
Stream Crossings	NHD data is compiled for all of the watersheds in the province as part of the LMP data, (with the exception of the SBNF east desert side). Stream crossings using a 5 meter buffer were calculated for all but the 6 SBNF IRAs on the east side. The number of crossings was converted to crossings per mile. The score is based on the percentile of the crossings per mile.
Geo Stability	Mapped as part of the LMP revision and rated 1 to 10. The rating was divided by 10 to fit within a 0 to 1 scale.
Gradient	Route gradient was modeled by The Wilderness Society and indexed on a scale of 0 to 1. Higher index scores are steeper routes.
Isolation	Route isolation was modeled by The Wilderness Society and indexed on a scale of 0 to 1. Higher index scores are more isolated routes.

Appendix D - 2005 RAP LPNF HRLI, HPM, and LPM Roads

Table D1- LPNF Roads with High Resource Risk Low Importance

Table E-4 LPNF: Roads with High Risk and Low Importance

ID	NAME	Operational Maintenance Level	Environmental Risk Indicators									Benefit Indicators		Weighted Average RAP SCORE	MILES
			Species Risk Indicators					Watershed Risk Indicators							
			RCA	RIP_SCORE	UP_SCORE	XINGS	SPP_SCORE	CONDITION	SLOPE_STAB	Earthquake Hazard	WAT_SCORE	AD_NEED	PU_NEED		
8N40A	WEST FORK OHV	1	1	2	0	100	2	II	7		4	1	0	6	0.70
8N40A	WEST FORK OHV	1	1	2	0	0	1	II	7		4	1	0	5	0.44
8N40A	WEST FORK OHV	1	1	1	0	100	2	II	7		4	1	0	6	0.24
8N40A	WEST FORK OHV	1	1	0	0	100	2	II	7		4	1	0	6	0.21
8N40A	WEST FORK OHV	1	1	1	0	0	1	II	7		4	1	0	5	0.16
8N40A	WEST FORK OHV	1	1	0	0	0	1	II	7		4	1	0	5	0.05
	WEST FORK OHV Total													**5.6**	1.80
11N04A	BROOKSHIRE OHV	2	1	4	1	0	1	III	7		4	2	2	5	0.61
11N04A	BROOKSHIRE OHV	2	1	2	1	0	1	III	7		4	2	2	5	0.19
11N04A	BROOKSHIRE OHV	2	1	4	1	100	2	III	7		4	2	2	6	0.16
11N04A	BROOKSHIRE OHV	2	1	2	1	100	2	III	7		4	2	2	6	0.07
11N04A	BROOKSHIRE OHV	2	1	1	0	0	1	III	7		4	2	2	5	0.07
11N04A	BROOKSHIRE OHV	2	1	0	0	100	2	III	7		4	2	2	6	0.06
11N04A	BROOKSHIRE OHV	2	1	1	1	0	1	III	7		4	2	2	5	0.06
11N04A	BROOKSHIRE OHV	2	1	4	0	0	1	III	7		4	2	2	5	0.05
11N04A	BROOKSHIRE OHV	2	1	0	0	0	1	III	7		4	2	2	5	0.04
11N04A	BROOKSHIRE OHV	2	1	3	1	0	1	III	7		4	2	2	5	0.04
11N04A	BROOKSHIRE OHV	2	1	3	0	0	1	III	7		4	2	2	5	0.03
11N04A	BROOKSHIRE OHV	2	1	3	1	100	2	III	7		4	2	2	6	0.02
	BROOKSHIRE OHV Total													**5.2**	1.41
6N31A	LION CYN.	4	1	102	101	0	4	I	3		1	2	0	5	0.43
6N31A	LION CYN.	4	1	102	11	0	4	I	3		1	2	0	5	0.25
6N31A	LION CYN.	4	1	100	101	0	4	I	3		1	2	0	5	0.23
6N31A	LION CYN.	4	1	100	100	0	4	I	3		1	2	0	5	0.17
6N31A	LION CYN.	4	1	100	11	0	4	I	3		1	2	0	5	0.05
6N31A	LION CYN.	4	1	101	101	0	4	I	3		1	2	0	5	0.01
	LION CYN. Total													**5.0**	1.13
11N04B	LAZY CAMP CG. OHV	2	1	103	1	0	4	I	5		2	2	2	6	0.58
11N04B	LAZY CAMP CG. OHV	2	1	103	1	100	5	I	5		2	2	2	7	0.12
11N04B	LAZY CAMP CG. OHV	2	1	104	1	100	5	I	5		2	2	2	7	0.02
	LAZY CAMP CG. OHV Total													**6.2**	0.71
8N08.1	CACHUMA MTN.	2	0	0	10	0	3	II	7		4	1	2	7	0.38
8N08.1	CACHUMA MTN.	2	0	0	0	0	0	II	10		5	1	2	5	0.27
	CACHUMA MTN. Total													**6.2**	0.65
5N05	HOWARD CREEK	2	1	102	1	0	4	I	3		1	2	1	5	0.14

Table E-4 LPNF: Roads with High Risk and Low Importance

ID	NAME	Operational Maintenance Level	Environmental Risk Indicators									Benefit Indicators		Weighted Average RAP SCORE	MILES
			Species Risk Indicators					Watershed Risk Indicators							
			RCA	RIP_SCORE	UP_SCORE	XINGS	SPP_SCORE	CONDITION	SLOPE_STAB	Earthquake Hazard	WAT_SCORE	AD_NEED	PU_NEED		
5N05	HOWARD CREEK	2	1	102	1	0	4	I	5		2	2	1	6	0.11
5N05	HOWARD CREEK	2	1	103	0	0	4	I	7		2	2	1	6	0.10
5N05	HOWARD CREEK	2	1	100	0	0	4	I	7		2	2	1	6	0.07
5N05	HOWARD CREEK	2	1	103	0	100	5	I	7		2	2	1	7	0.03
5N05	HOWARD CREEK	2	1	102	0	0	4	I	7		2	2	1	6	0.02
5N05	HOWARD CREEK	2	1	102	0	0	4	I	3		1	2	1	5	0.02
5N05	HOWARD CREEK	2	1	100	1	0	4	I	7		2	2	1	6	0.02
5N05	HOWARD CREEK	2	1	102	1	0	4	I	7		2	2	1	6	0.01
	HOWARD CREEK Total													**5.7**	0.53
21S02A	PINYON PEAK	1	0	0	0	0	0	I	10		5	1	1	5	0.37
21S02A	PINYON PEAK	1	0	0	10	0	3	I	10		5	1	1	8	0.08
	PINYON PEAK Total													**5.5**	0.45
6N30	OGLIVY RANCH	1	1	103	1	0	4	I	7		2	1	1	6	0.15
6N30	OGLIVY RANCH	1	1	100	0	0	4	I	7		2	1	1	6	0.14
6N30	OGLIVY RANCH	1	1	101	0	0	4	I	7		2	1	1	6	0.06
6N30	OGLIVY RANCH	1	1	100	1	0	4	I	7		2	1	1	6	0.04
6N30	OGLIVY RANCH	1	1	103	0	0	4	I	7		2	1	1	6	0.02
6N30	OGLIVY RANCH	1	1	104	1	100	5	I	7		2	1	1	7	0.01
6N30	OGLIVY RANCH	1	1	104	1	0	4	I	7		2	1	1	6	0.01
	OGLIVY RANCH Total													**6.0**	0.42
5N26	BEAVER CAMP	4	1	102	1	0	4	I	3		1	2	0	5	0.19
5N26	BEAVER CAMP	4	1	100	0	0	4	I	5		2	2	0	6	0.11
5N26	BEAVER CAMP	4	1	100	1	0	4	I	5		2	2	0	6	0.04
	BEAVER CAMP Total													**5.4**	0.34
21S02	SANTA LUCIA	1	0	0	0	0	0	I	10		5	1	1	5	0.33
	SANTA LUCIA Total													**5.0**	0.33
8N25.2	1 SUTTON RD.	1	0	0	0	0	0	II	3	yes	5	1	0	5	0.30
	1 SUTTON RD. Total													**5.0**	0.30
5N15J	MONO CG.	0	1	301	1	0	4	I	3		1	2	2	5	0.08
5N15J	MONO CG.	0	1	200	1	0	4	I	3		1	2	2	5	0.05
5N15J	MONO CG.	0	1	301	1	100	5	I	3		1	2	2	6	0.04
5N15J	MONO CG.	0	1	200	0	0	4	I	3		1	2	2	5	0.02
	MONO CG. Total													**5.2**	0.20
20S05B	COLD SPRINGS	1	0	0	10	0	3	II	7		4	2	1	7	0.05
20S05B	COLD SPRINGS	1	0	0	11	0	3	II	7		4	2	1	7	0.05
	COLD SPRINGS Total													**7.0**	0.10

Table E-4 LPNF: Roads with High Risk and Low Importance

ID	NAME	Operational Maintenance Level	Environmental Risk Indicators									Benefit Indicators		Weighted Average RAP SCORE	MILES
			Species Risk Indicators					Watershed Risk Indicators							
			RCA	RIP_SCORE	UP_SCORE	XINGS	SPP_SCORE	CONDITION	SLOPE_STAB	Earthquake Hazard	WAT_SCORE	AD_NEED	PU_NEED		
6N01.2	1 CHERRY CYN.	1	1	0	0	0	1	II	7		4	1	1	5	0.02
	1 CHERRY CYN. Total													**5.0**	0.02
5N12	CAMINO CIELO	1	1	0	0	100	2	II	7		4	1	1	6	0.01
	CAMINO CIELO Total													**6.0**	0.01
	Grand Total														8.40

Table D2 - LPNF Roads High Priority for Mitigation 2005 RAP

HPM - RAP NAME	RAP SCORE	MILES
2 ROMERO CAMU*FDR Total	5.6	0.8
BIG CALIENTA Total	5.9	2.6
BLUE POINT Total	6	0.3
BLUE RIDGE OHV Total	7	0.7
BRANCH CREEK OHV Total	7.2	1.9
BUCK CREEK Total	6	1.0
BUCKHORN Total	6.2	3.6
CERRO ALTO Total	6	0.5
GOLD HILL Total	7.1	0.4
HAPPY CANYON Total	7.4	0.3
LA BREA CYN. Total	6.1	1.8
LA BREA Total	6.2	4.4
LOCKWOOD CREEK OHV Total	7.1	0.1
LOS MACHOS OHV Total	7.2	0.2
MILLER JEEP OHV Total	7.5	0.2
PFEIFFER BEACH Total	6	0.1
PLASKETT CREEK Total	6.5	0.0
RANCHO NUEV* Total	5.2	0.6
ROMERO CAMU* Total	5.3	4.4
SAN EMIGDIO OHV Total	7.3	2.6
SANTA PAULA CY. Total	7	0.7
SANTA YNEZ Total	6.7	4.1
SEWART MTN. Total	7	0.8
SUNSET VALLEY Total	8.4	0.8
SYCAMORE CYN. Total	6.2	0.3
UPPER 35 CYN. OHV Total	7.4	0.5
WHITE ROCK D.U. Total	6	0.2
Grand Total		**33.7**

Table D3 - LPNF Roads Low Priority for Mitigation 2005 RAP

LPM - RAP NAME	RAP SCORE	MILES
1 MURIETTA Total	5.3	0.2
1 PINE CANYON Total	5.6	1.9
1 POZO ARROYO OHV Total	5.2	0.5
1 ROMERO CAMU* FDR Total	5.6	2.2
2 HAPPY CANYON Total	5.5	2.6
ALAMO MTN. Total	7	0.2
APACHE SDDL Total	8	0.2
ARROYO BURRO Total	6.4	0.3
BALLINGER CYN. OHV Total	5.7	0.1
BALLINGER SPUR OHV Total	6.9	0.7

LPM - RAP NAME	RAP SCORE	MILES
BARREL SPRING Total	6	0.1
BUCKHORN RD. Total	5.9	3.1
CABALLO CG. Total	6	0.0
CACHUMA CG. Total	5	0.1
CACHUMA MTN. Total	7	0.4
CAMP MARION Total	5.3	0.9
COZY DEL S* Total	5	0.1
COZY DEL Total	5.5	0.3
FALLS DUA. Total	6	0.1
FRAZIER EXT* Total	7	0.2
FREMONT CG. Total	6	0.2
GARCIA RIDG. OHV Total	7	0.4
HAPPY CYN. Total	7	2.2
HILDRETH PK. Total	6.8	0.2
JACK SPRING Total	7	0.2
LAS CHICHES OHV Total	7	0.4
LIVE OAK DUA. Total	8.3	0.1
LOS PRIETOS CG. Total	6	0.1
LOS PRIETOS RS. Total	6	0.1
LOS PRIETOS Total	6	0.1
LOS PRIETOS WH. Total	6	0.4
LOWER OSO CG. Total	6.1	0.3
LP RESIDENCE Total	6	0.1
MIDDLE S.Y. CG. Total	5	0.3
MILLER CYN. Total	5.1	0.5
MURIETA Total	5.1	1.6
NIRA CG. Total	7	0.1
NORDHOFF RD. OHV Total	5	0.2
PARADISE CG. Total	6.3	0.1
P-BAR CG. Total	5	0.1
PENDOLA JEEP Total	5.1	0.1
PENDOLA STA. Total	5	0.1
PIE CANYON Total	5.2	0.6
PIEDRA BLANCO Total	7	0.0
PINE CANYON Total	5	0.0
PINE MTN. OHV Total	7	0.3
PIRU CYN. RD. Total	7.8	0.7
PLIETO CR. OHV Total	5.9	2.3
QUATAL CYN. Total	5.8	0.4
QUATAL WASH SPUR OHV Total	5.2	0.5
RED ROCK Total	6.1	0.1
REDROCK CG. Total	6	0.2
REYES PEAK Total	7	0.4
REYES PEAK Total	7	0.3

LPM - RAP NAME	RAP SCORE	MILES
SAGE HILL CG. Total	6.1	0.7
SALT CREEK OHV Total	5.5	2.1
SANTA CRUZ Total	6.6	1.0
SCOTT RUSSEL Total	6.2	0.2
SESPE ROAD Total	5.2	0.4
SHAW RIDGE OHV Total	5	0.0
SIERRA MADR* Total	7	0.1
SIERRA MADRE Total	7	0.4
SPUR OHV BL* Total	5.6	0.3
STEWART CYN. Total	5.4	0.1
UPPER OSO CG. Total	5	0.8
WAGON ROAD SPRINGS O Total	5	0.5
WEST DRY OHV Total	5	0.6
WEST DRY Total	5.3	1.3
WEST TECUYA Total	7	0.0
WHEELER GOR* Total	5.1	1.6
WHEELER RESI. Total	5	0.1
WHEELER STA. Total	5	0.0
Grand Total		**37.5**

RAP 2005 GIS-Based Risk-Benefit Model

The purpose of this step is to:

- Assess the various benefits, problems, and risks of the current road system and whether the objectives of Forest Service policy reform and forest plans are being met.

The products of this step are:

- A synthesis of the benefits, problems, and risks of the current road system
- An assessment of the ability of the road system to meet objectives.

Model Description Risks

A process for assigning environmental risk scores to road segments was developed by the ID team in order to measure a road's impact on threatened, endangered and sensitive species and the watershed in which it is located. A full description of the risk assessment process, including elements and criteria, is located in Appendix C. Two types of risk scores were generated – a species risk score *(*SPP_SCORE) and a watershed risk score (WAT_SCORE). These two types were combined into a total risk score (RAP_SCORE), which can have a maximum value of "10".

Watershed Risk Rating Components:

- Watershed Condition Class (Condition)
- Slope Stability Hazard (Slope_Stab)
- Earthquake Hazard Rating (Alq_pri)

Species Risk Rating Components:

- Riparian Species – Key, Modeled or Occupied habitat (RIP_Score)
- Stream Crossings (X_ings)
- Key, modeled or occupied habitat for Threatened, Endangered or Sensitive (TES) Species outside of riparian areas (Up_Score)
- Riparian Conservation Areas (RCA)

Benefit Components:

The benefit of a NFS road was gauged by both its public and administrative importance. The process used to assign importance scores is discussed in *Appendix C,* Risk Assessment Process. Scores for importance, as well as for risk, were measured on a scale of 1 to 5 (See Table 4.1).

Table D 4.1 Environmental Risk and Benefit Rating Scale

Risk Rating	Definition
0	No Effect
1	Low
2	Low to moderate
3	Moderate
4	Moderate to High
5	High

Various environmental indicators were used to evaluate the "risk" associated with a road segment. The indicators chosen to evaluate "risk" were based upon the questions provided in *Roads Analysis: Informing Decisions About Managing the National Forest Transportation System* (Forest Service, 1999). A complete list of these questions, along with the indictors used to address them can be found in *Appendix D RAP 2005,* Questions, Issues, and Indicators.

Using GIS, each Forest's existing travel routes road layer was intersected with numerous layers containing spatial distributions of species, riparian habitats, watersheds, etc. These intersections produced thousands of discrete road segments, each with a unique value for the various risk indicators. Risk indicators, as mentioned previously, were grouped into two types - species and watershed indicators. The types of risks analyzed by the value of each indictor are summarized below.

The slope stability indicator measures the geomorphic effects of roads. The effects range from chronic and long-term contributions of fine sediment into streams to catastrophic mass failures of road cuts and fills during large storms. Roads may alter channel morphology directly or may modify channel flowpaths and extend the drainage network into previously unchannelized portions of the hillslope. The magnitude of road-related geomorphic effects varies by climate, geology, road age, construction practices, and storm history (USDA Forest Service, 2000).

The "stream crossings" and "condition class" indicators measure the three main effects roads have on hydrologic processes: they intercept rainfall directly on the road surface, road cutbanks, and subsurface water moving down the hillslope; they concentrate flow, either on the surface or in an adjacent ditch or channel; and they divert or reroute water from flowpaths that it would otherwise take if the road were not present. Problems of road drainage and transport of water and debris--especially during floods--are a primary reason roads fail, often with major structural, ecologic, economic, or other social consequences. The effect of roads on peak streamflow depends strongly on the size of the watershed. For example, capture and re-routing of water can dewater one small stream while causing major channel adjustments in the stream receiving the additional water. In large watersheds, roads constitute a small proportion of the land surface and have relatively insignificant effects on peak flow. Roads do not appear to change annual water yields, and no studies have evaluated their effect on low flows (USDA Forest Service, 2000).

The proximity of roads to TES habitat was measured by "RCA", "Rip_Score", and "Up_ Score" indicators, as referenced in Appendix C. One of the risks roads pose to TES species is habitat fragmentation. Natural populations of animal species are affected by habitat fragmentation caused by roads. Fragmented populations can produce increased demographic fluctuation, inbreeding, loss of genetic variability, and local extinctions. Roads fragment habitat by changing landscape structure, dissecting vegetation patches, increasing the amount of edge, decreasing interior area, and increasing the uniformity of patch characteristics. (USDA Forest Service, 2000)

Roads impose risk to aquatic habitats. At the landscape scale, correlative evidence suggests that roads are likely to influence the frequency, timing, and magnitude of disturbance to aquatic habitat. Increased fine-sediment composition in stream gravel—a common consequence of road-derived sediments entering streams--has been linked to decreased fry emergence, decreased juvenile densities, loss of winter carrying capacity, and increased predation of fishes, and can reduce benthic organism

populations and algal production. Roads can act as barriers to aquatic organism migration, lead to water temperature changes, and alter streamflow regimes. Improper culvert sizing and placement at road-stream crossings can limit or eliminate fish passage.

Roads greatly increase the frequency of landslides, debris flow, and other mass movement that introduce sediment into the watercourses, degrading habitat. Roads can cause a wide variety of effects to terrestrial wildlife. Roads can increase harassment, poaching, collisions with vehicles, and displacement of terrestrial vertebrates, affecting a variety of large mammals such as, bighorn sheep and mountain goat, direct mortality of large mammals on forest roads is usually low, except for those with a home range that straddles a road. Forest roads pose a greater hazard to slow-moving migratory amphibians than to mammals. Nearly all species of reptiles seek roads for cooling and heating. Vehicles kill many of them. Chemicals applied to and adjacent to roads can enter streams by a various pathways. The effect on water quality depends on how much chemical is applied, the proximity of the road to a stream, and the weather and runoff events that move chemicals and sediments. Dust produced by vehicles moving on unpaved roads reduces visibility and generates airborne particulates that can pose health hazards, such as in areas with soils containing asbestiform minerals (USDA Forest Service, 2000).

Benefits

The benefits pertaining to each road in a forest's transportation system were gauged by specialists working on that forest. Generally, benefits can be classified as "administrative" or "public". Examples of each type of benefit are given below:

Administrative Benefits

- Fire suppression, prevention, and prescribed fire
- Vegetation management, resource evaluation and management
- Special use access and administration
- Law enforcement
- Mining, oil and gas, grazing
- Any other roaded access needed to manage the forest

Public Benefits

- Access to developed recreation sites and campgrounds
- Driving for pleasure
- Access to recreational special uses (including Recreational Residences)
- Access to local surrounding communities

Weighing Benefits and Risks

The risks and the benefits of each road on the four Forests were compared, resulting in two classifications of roads. The first group of roads identified contains those that may require mitigation. "*High Priority for Mitigation*" roads are those roads (or segments) that were found to have both higher risk scores and a high level of public or administrative importance. The following criteria were used in their identification:

1. Watershed Risk Score is greater than or equal to 4; OR Species Risk Score is greater than or equal 4.
2. Public Importance Score is greater than or equal 3; OR Administrative Importance Score is greater than or equal 3.
3. Combined Rap Score is greater than or equal 5 (highest possible is "10")

The second group of roads requiring further study is those with "*High Risk and Low Importance*". Roads that fall into this group pose significant risk to either species or watersheds and are of low importance to the public, forest personnel, and special use permittees. The following criteria were used to identify these roads or segments:

1. Watershed Risk Score is greater than or equal 4; OR Species Risk Score is greater than or equal 4.
2. Public Importance Score is less than or equal to 2, AND Administrative Importance Score is less than or equal 2.
3. Combined Rap Score is greater than or equal 5 (highest possible is "10").

Roads identified in chapter 4 as having "High Priority for Mitigation" (HPM) or "High Risk/Low Importance" (HRLI) were further reviewed by road management specialists on each of the four Forests. Mitigation includes site specific repairs, improvements and operational procedures such as: seasonal closures, species exclosures, crossing improvements, rerouting roads and trails out of the riparian areas, surfacing, storm water runoff protection, and scour protection. These specialists applied local knowledge of individual roads and road issues in refinement of the preliminary lists. Based on their recommendations, roads were regrouped into three, instead of two, implementation categories: "High Priority for Mitigation", "Low Priority for Mitigation".

Appendix E Planning Maps Used in the Review Process

Figure E-1 Monterey Ranger District

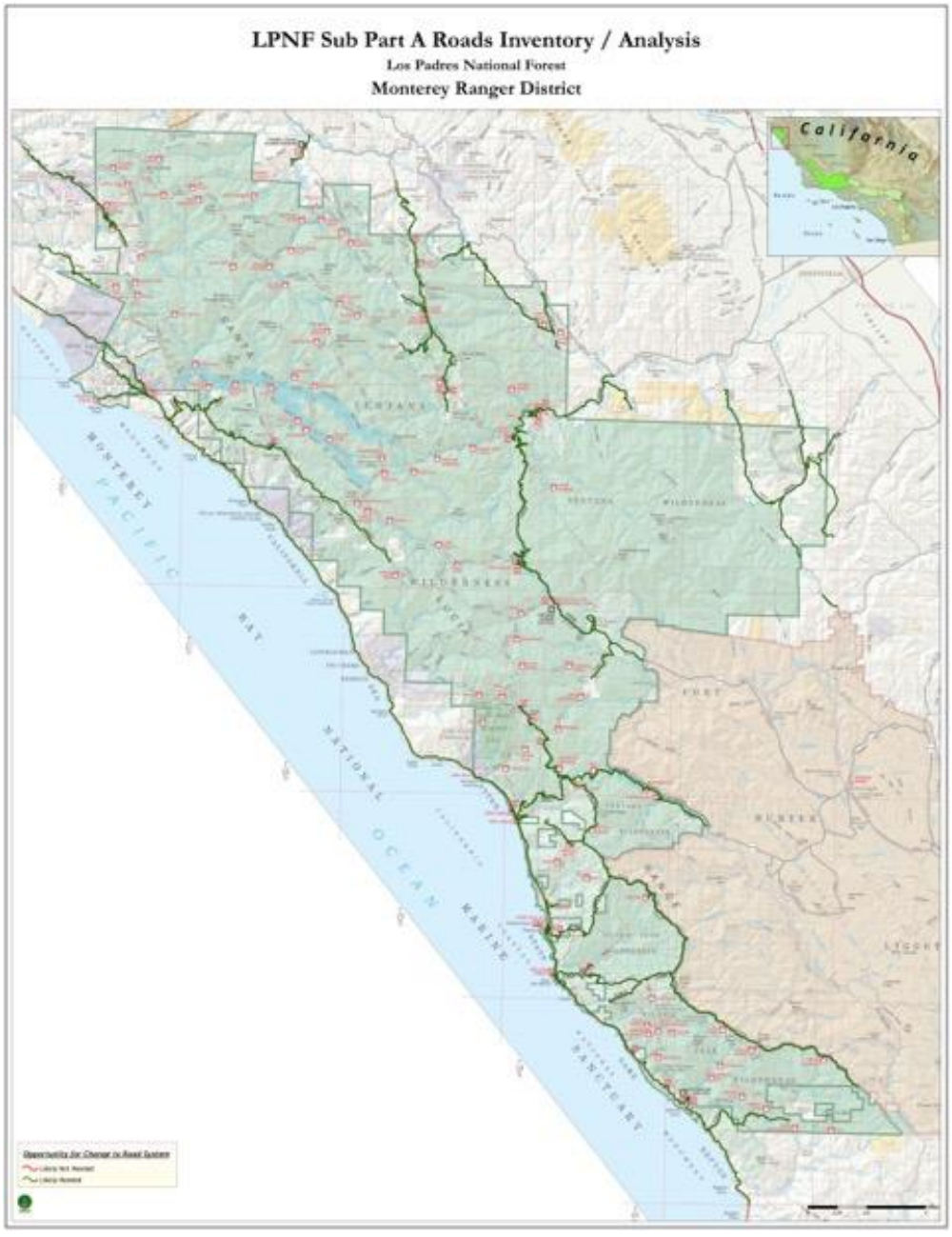


Figure E-2 Santa Lucia Ranger District

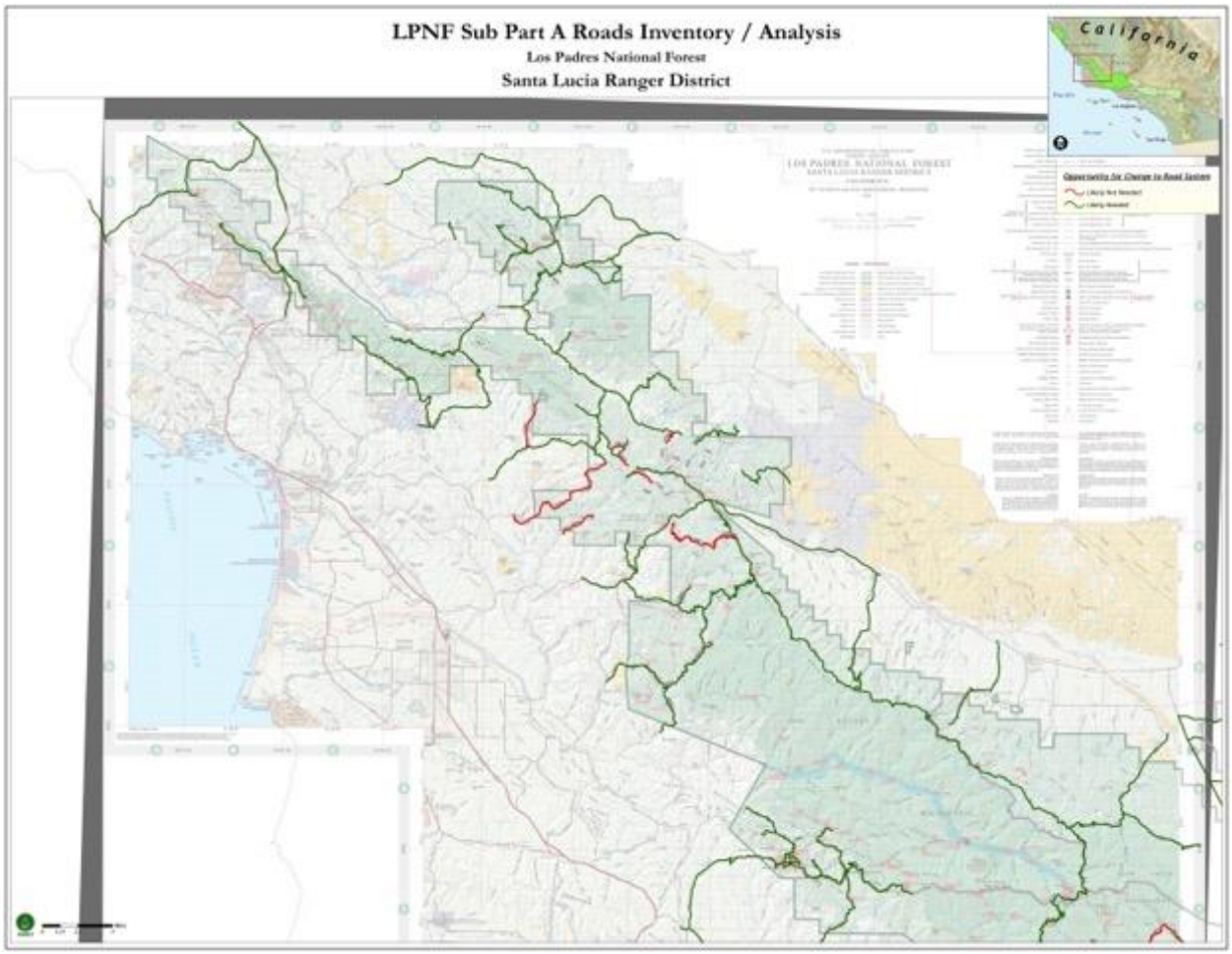


Figure E-3 Santa Barbara Ranger District

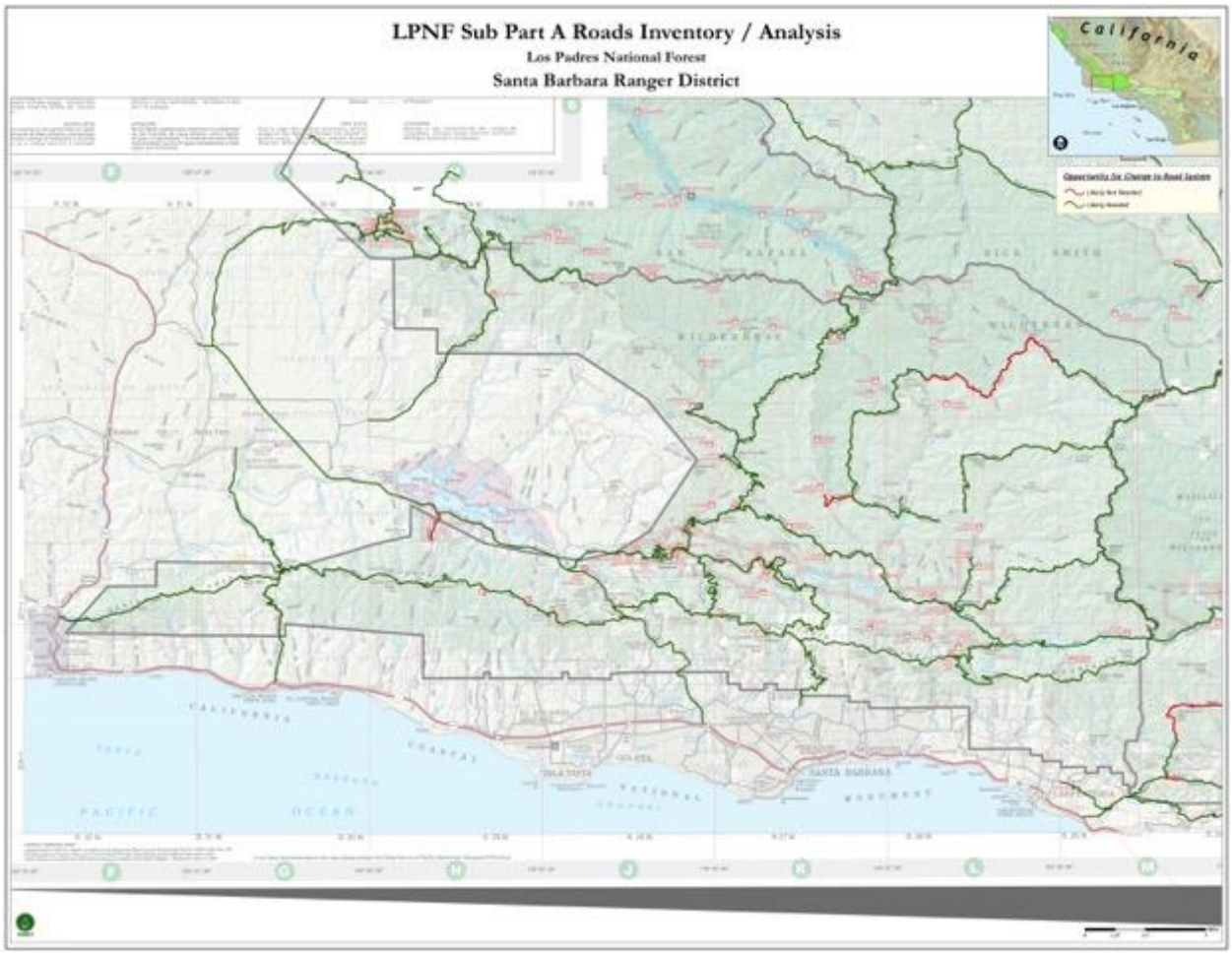


Figure E-4 Ojai Ranger District

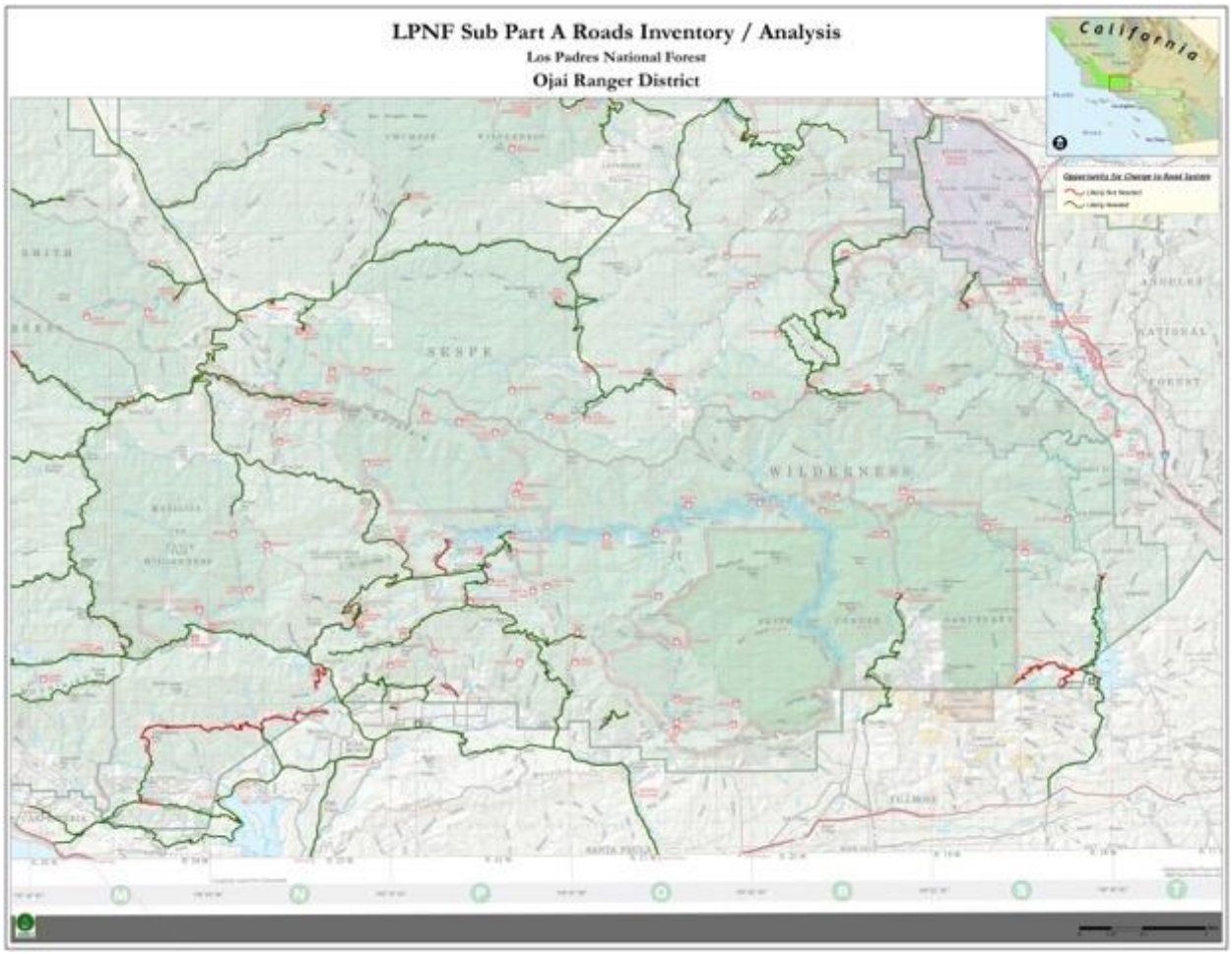
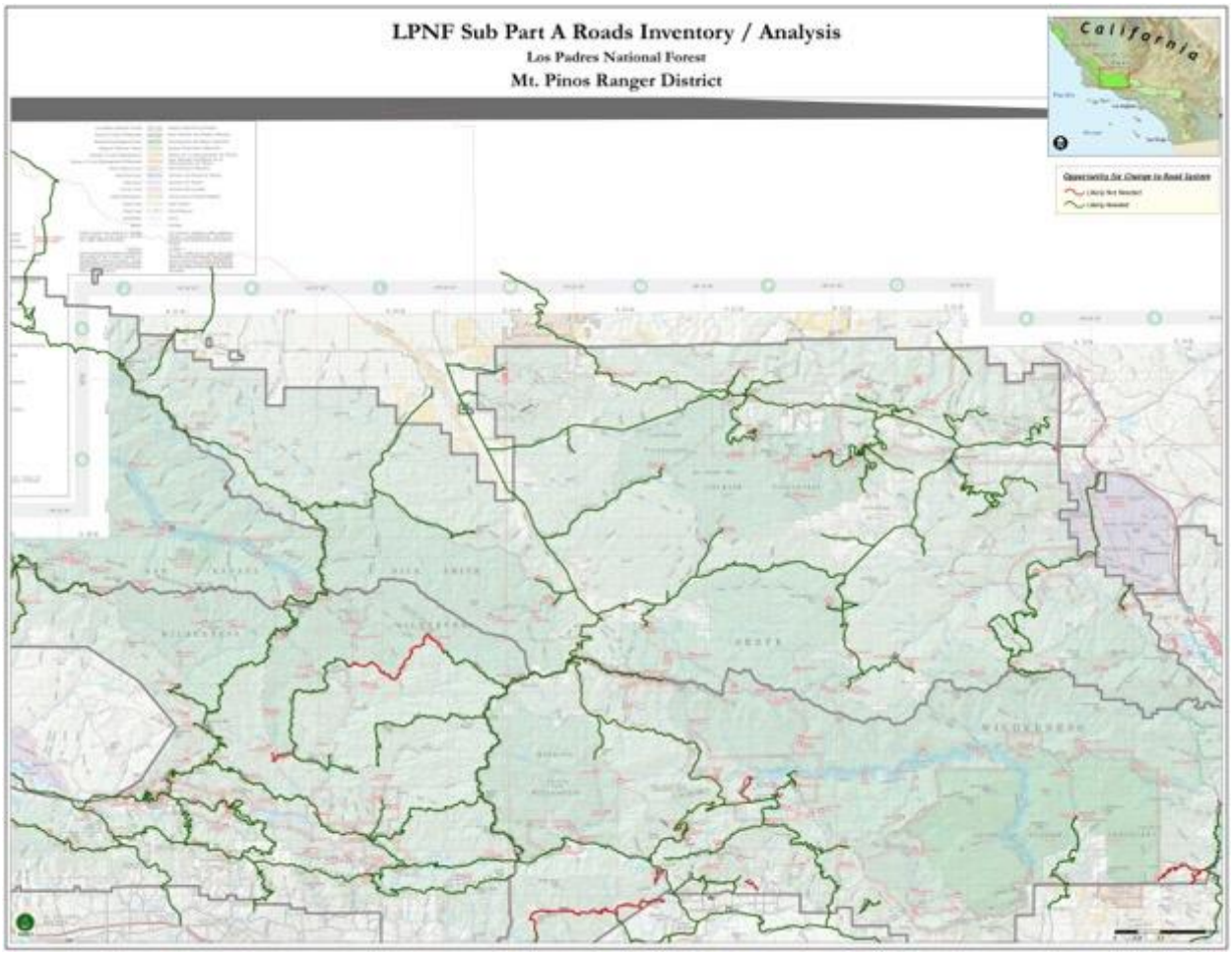


Figure E-5 Mt. Pinos Ranger District



Appendix F - R5 Economic Analysis Calculator - Annual Road Maintenance

Los Padres National Forest

Sum of Segment Length (Miles)		Cost to Maintain/Mile	Mtce Cycle	Total Annual Cost	
Objective Maintenance Level					
1 - BASIC CUSTODIAL CARE (CLOSED)	13.00	$400	Included	$ 5,200	
2 - HIGH CLEARANCE VEHICLES	467.00	$1,000	Included	$ 467,000	
3 - SUITABLE FOR PASSENGER CARS	186.00	$6,500	Included	$ 1,209,000	
4 - MODERATE DEGREE OF USER COMFORT	101.00	$20,000	Included	$ 2,020,000	
5 - HIGH DEGREE OF USER COMFORT	38.00	$30,000	Included	$ 1,140,000	
Grand Total	805.000				**$ 4,841,200**

Estimated Annual Funds Available for Road Maintenance by funding source			
Collected Trust Funds (KV and Agreements) (CWKV, CWK2, CWFS, CWF2)			$ -
Timber Sale Purchaser (PEPE, PEP2 - typically improvement)			$ -
Stewardship Integrated Resource Contracts (SSCC)			$ -
Integrated Resource Restoration (NFRR, currently CMLG in R5)			$ -
Other FS Appropriated Funds			$ -
Other - Non FS (Grants, Partnerships, etc.)			$ -
CMRD allocation to forest	FY 2015	$ 448,000	
% CMRD directly available for Road Maintenance		25	$ 112,000
Other funds available for Road Maintenance (from Step 3)			$ -
Estimated Total Funds Available for Annual Road Maintenance (all sources)			**$ 112,000**
Estimated Additional Funds Needed (RED) or Surplus (BLACK) for Road Maintenance			**$4,729,200**

Projected: **2%** **of the road system is supported using Annual Road Maintenance costs and cycles in Column C above.**

Adjusted Mileage, Objective Maintenance Level, or Funding Assumptions

Objective Maintenance Level	Adjusted Total by Objective Maintenance Level (miles)	Cost to Maintain/Mile	Forest's Projected Annual Road Maintenance Needs by Maintenance Level
1 - BASIC CUSTODIAL CARE (CLOSED)	5.100	$ 400	$ 2,000
2 - HIGH CLEARANCE VEHICLES	418.400	$ 1,000	$ 418,500
3 - SUITABLE FOR PASSENGER CARS	185.400	$ 6,300	$ 1,168,000
4 - MODERATE DEGREE OF USER COMFORT	99.100	$ 20,000	$ 1,982,000
5 - HIGH DEGREE OF USER COMFORT	38.000	$ 30,000	$ 1,140,000
Total System Mileage:	**746.000**		**$ 4,710,500**
Estimated Total Funds Available for Annual Road Maintenance from above	**$112,000**		

Projected: **2%** **of the road system is supported using Annual Road Maintenance costs and cycles in Column C above.**