Southern California National Forests
Land Management Plan Amendment

I. Introduction

The Southern California National Forests (the Angeles, Cleveland, Los Padres, and San Bernardino National Forests, collectively, "four forests") propose to amend the Land Management Plans (LMP) adopted in 2006. The proposed amendment revises land use zone allocations for select Inventoried Roadless Areas (IRAs) within the four forests and amends LMP monitoring protocols. This proposed 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*.

A. Purpose and Need for Action

The purpose of the proposed action is to amend LMP land use zone allocations for select IRAs and to amend LMP monitoring protocols. This action is needed to respond to the terms of the Settlement Agreement between the Forest Service, State of California, and other settlement parties.

LMPs are required by the National Forest Management Act (NFMA). They are an integrated document that describes the goals, objectives, and management direction for each component of the National Forest System. The original LMPs for the four southern California national forests were adopted between 1986 and 1989, and revised in 2006 consistent with NFMA requirements. This proposed amendment to the 2006 LMPs is limited in scope and designed to address the terms of the settlement agreement.

B. Proposed Action

The action proposed by the Forest Service to meet the purpose and need is to modify the existing land use zones in the identified IRAs to include more Back Country Non-Motorized and Recommended Wilderness areas. An alternate monitoring framework is also proposed.

C. Decision Framework

Given the purpose and need, the Regional Forester reviews the proposed action, other alternatives, including No Action (Alternative 1), and the environmental consequences in order to determine whether the LMPs will be amended as proposed, modified by an alternative, or not at all.

The decision framework does not include changes to the other components of the LMPs, including changes to suitable uses within land use zones, plan standards, or designation of other special areas.

II. Detailed Proposed Action

The Forest Service is proposing two independent and distinct actions for the proposed LMP amendment. The first component of the proposed amendment would change land use zone

allocations for specific areas within IRAs identified in the settlement agreement. The second part of the proposed amendment would modify the monitoring and evaluation requirements adopted in the LMP.

These actions are being divided to provide clarity in the analysis and disclosure of effects. The land use zone allocations apply to a select group of IRAs, and will affect the uses of those lands. The analysis will focus on how the resources on those lands will change under the different land use zone allocations proposed.

The monitoring and evaluation requirements apply forest wide, and will influence the implementation of plan standards and guidelines within all resource areas. The analysis of the monitoring and evaluation requirements will focus on how plan implementation will affect the achievement of LMP goals and objectives.

A. Land Use Zone Allocations

The Proposed Action responds to the Settlement Agreement by increasing Back Country Non-Motorized (BCNM) and Recommended Wilderness (RW) land use zone allocations within the settlement IRAs. The proposed action allocations are based on the updated wilderness evaluation for the settlement IRAs (available as an online document). The wilderness evaluations identify the capability, suitability, and need for wilderness associated with each IRA. Based on this updated analysis, the land use zone amendments brought forward in the proposed action were developed using the following guidelines:

- Existing RW land use zones were maintained.
- Areas that are capable and available for wilderness in areas of high need were allocated to RW. Capable and available areas adjacent to the settlement IRAs were also included in the RW allocation when inclusion created a more logical recommended wilderness area boundary.
- Areas that are capable and available for wilderness in areas of low or moderate need were allocated to BCNM.
- Areas not capable or suitable for wilderness will keep their current land use zones as follows:
    - Motorized access on existing authorized roads and trails was maintained, with 100’ buffers applied along county and forest roads, and 300’ buffers applied along state highways. The current plan allocation for these roaded areas, which will not change as part of this amendment, is a mix of Back Country (BC) or Back Country Motorized Use Restricted (BCMUR).
    - Existing Developed Area Interface (DAI) zones were maintained around structures/facilities to provide for fuel treatments. DAI zones in chaparral fuels were set a minimum distance of 300’ from structures, with larger DAI zones in timbered areas.
    - Fuel breaks were buffered 300’ if there was a National Forest System (NFS) road or motorized trail associated with the fuel break.
    - Facilities authorized under permit such as communication sites and powerlines not already in BCNM or RW were buffered to maintain the current allocations.
- Critical Biological (CB) zones were maintained or allocated to RW.

Table 1 summarizes the existing and proposed land use zone allocations by Forest.

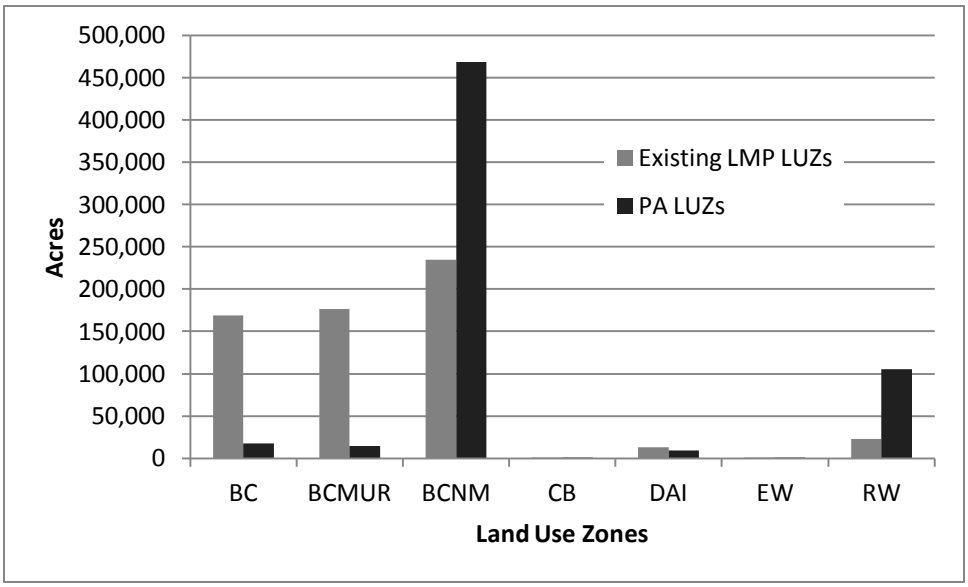
Table 1. Summary of existing and proposed land use zone allocations by Forest.

	Existing Land Use Zone Allocations in Acres	Proposed Land Use Zone Allocations in Acres
Angeles		
Back Country	2,390	823
Back Country Motorized Use Restricted	3,370	660
Back Country Non-Motorized	62,652	27,071
Critical Biological	326	0
Developed Area Interface	1,505	476
Recommended Wilderness	0	41,214
Existing Wilderness	8	8
Total Acres	**70,251**	**70,251**
Cleveland		
Back Country	6,072	1,775
Back Country Motorized Use Restricted	5,475	3,226
Back Country Non-Motorized	68,057	34,772
Critical Biological	506	506
Developed Area Interface	2,995	1,317
Recommended Wilderness	0	41,511
Existing Wilderness	0	0
Total Acres	**83,106**	**83,106**
Los Padres		
Back Country	154,630	15,130
Back Country Motorized Use Restricted	164,694	9,955
Back Country Non-Motorized	86,478	380,728
Critical Biological	395	395
Developed Area Interface	7,032	7,021
Recommended Wilderness	5,306	5,306
Existing Wilderness	936	936
Total Acres	**419,471**	**419,471**
San Bernardino		
Back Country	5,659	188
Back Country Motorized Use Restricted	2,813	567
Back Country Non-Motorized	17,178	25,562
Critical Biological	0	0
Developed Area Interface	1,440	773
Recommended Wilderness	17,594	17,594
Existing Wilderness	11	11
Total Acres	**44,694**	**44,694**
Grand Total of Acres	**617,523**	**617,523**

The net LUZ allocation change between the existing LMP and the Proposed Action is shown in Figure 1. The Proposed Action LUZ allocations by IRA are summarized in Appendix 1. Detailed topographic maps of each IRA are available on the project web site at:

http://www.fs.fed.us/nepa/fs-usda-pop.php/?project=35130

Figure 1. Net allocation changes between the current LMP and Proposed Action.



As shown in Table 1, the proposed action identifies several areas on the Angeles and Cleveland National Forests for Recommended Wilderness (RW). On the Angeles National Forest, the Fish Canyon and Salt Creek IRAs were combined to create the proposed 40,000 acre Fish Canyon recommended wilderness area (Figure 2). The western boundary of the recommended wilderness was drawn to exclude the designated utility corridor. Other non-conforming uses were also excluded from the recommended wilderness area, including Knapp Ranch and the Burnt Peak communication site.

On the Cleveland National Forest, the proposed 23,000 acre Eagle Peak recommended wilderness area (Figure 3) includes portions of the Eagle Peak, Sill Hill, and No Name IRAs, along with portions of the Cedar Creek and Upper San Diego River undeveloped areas. The proposed wilderness boundary allows for continued access to existing utility lines, county roads, and forest system roads, while maintaining motorized administrative access to the Cedar Falls area. The 11,000 acre Barker Valley and 5,000 acre Caliente recommended wilderness areas are also proposed on the Cleveland National Forest.

The proposed action also includes approximately 300,000 acres of additional BCNM allocations to the IRAs on the Los Padres National Forest, and an additional 8,000 acres of BCNM allocations on the San Bernardino National Forest. On the Los Padres National Forest, maintaining corridors along system roads are a predominant feature of the proposed action, as shown in Figure 4.

Figure 2. Fish Canyon recommended wilderness area.

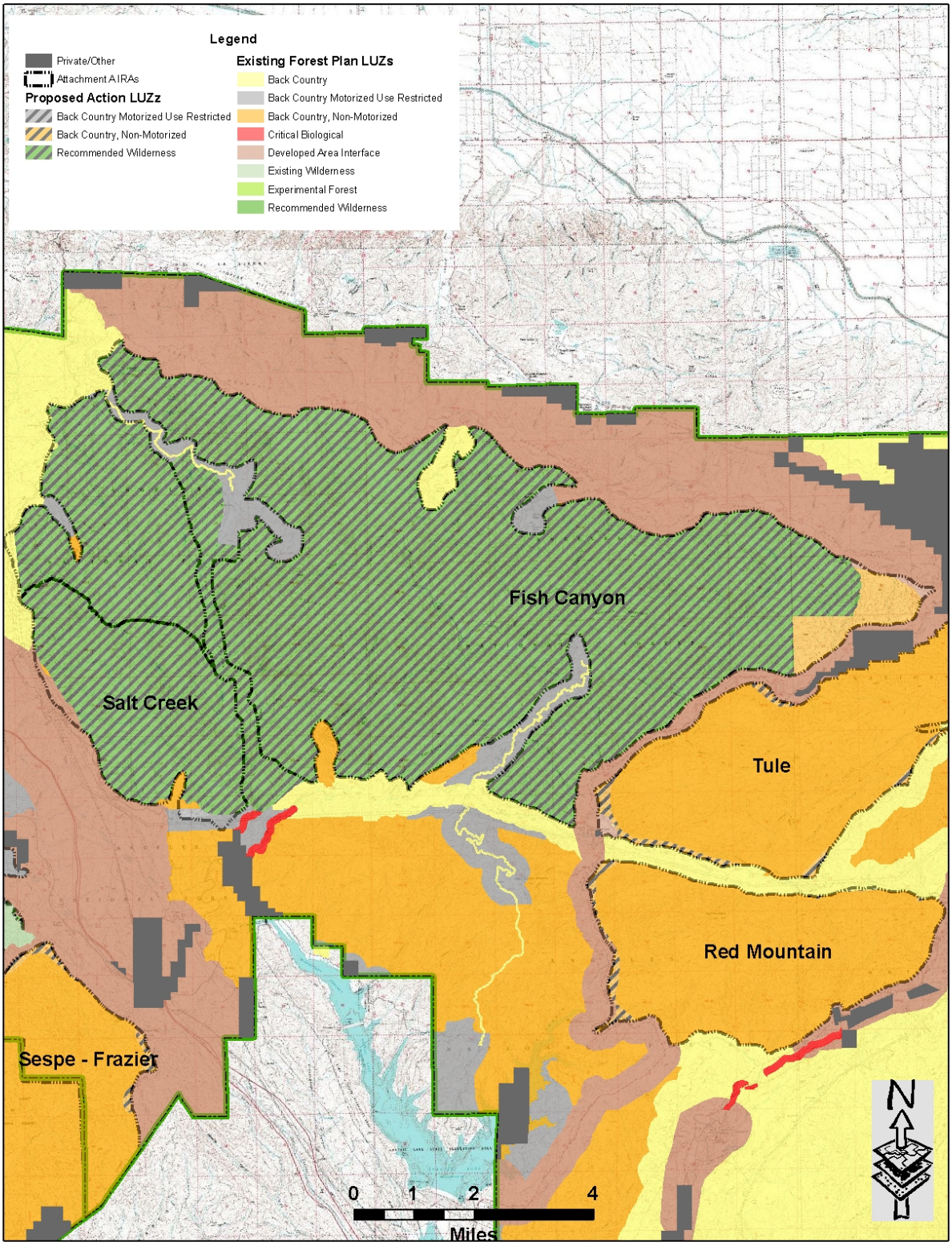


Figure 3. Eagle Peak recommended wilderness.

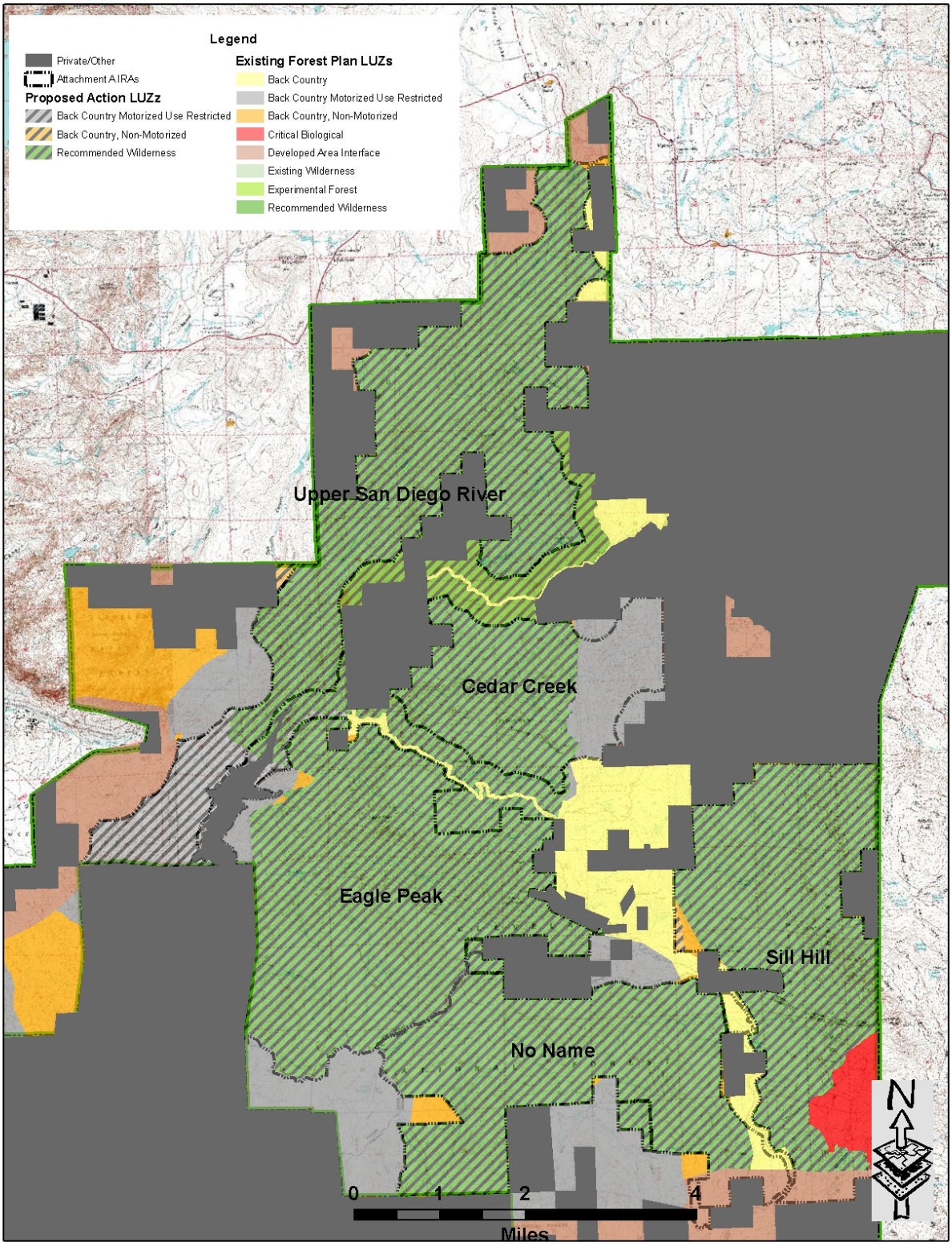
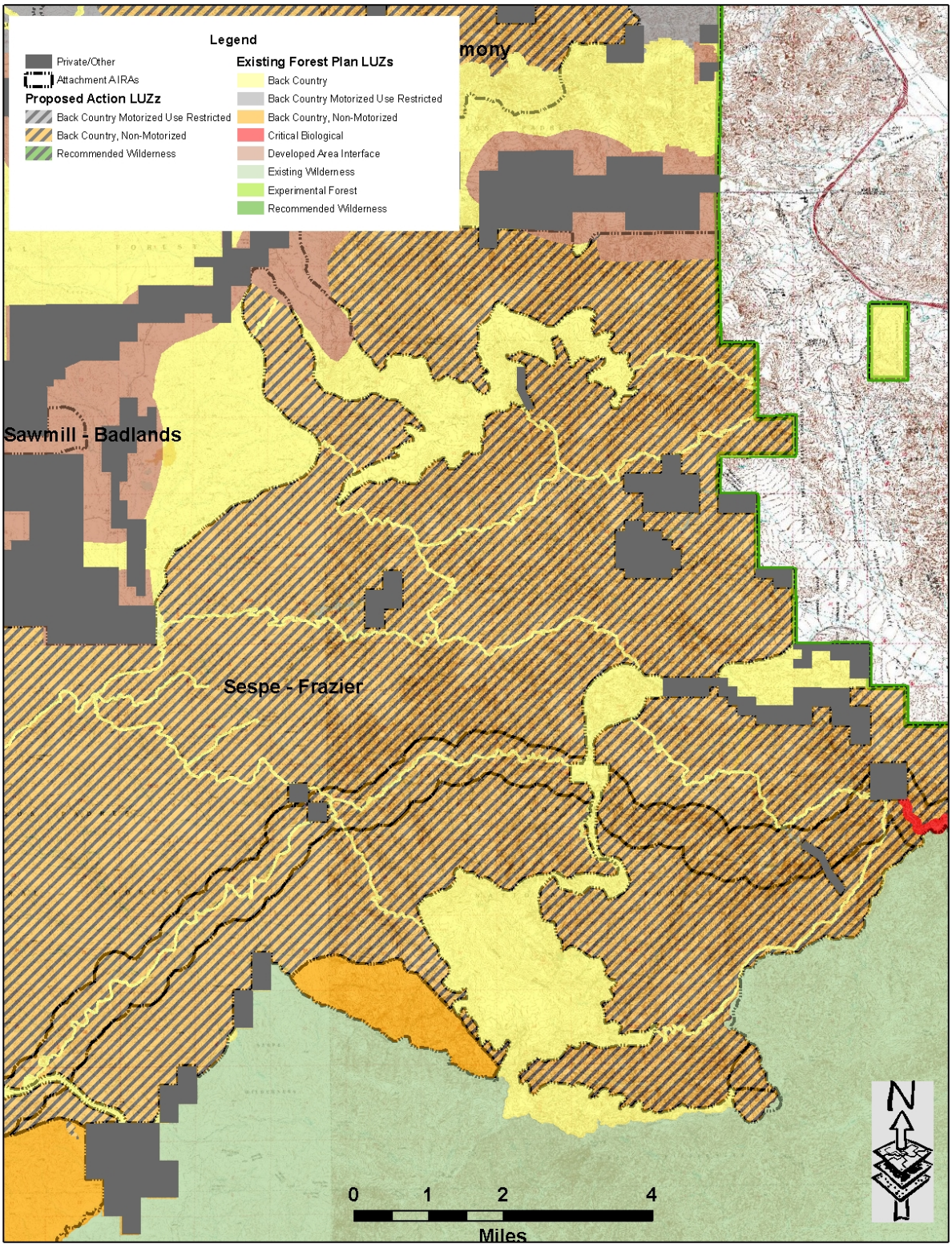


Figure 4. Sespe-Frazier IRA showing no change to LUZs along system roads



B. Monitoring and Evaluation Requirements

The proposed action includes monitoring and evaluation requirements described in more detail in Appendix 2. The proposed action monitoring requirements are based on the current monitoring requirements with the following revisions:

- Update Part 1 monitoring questions to:
  - Include a question for restoration of forest health.
  - Add a question for riparian condition and drop the question for general forest activities.
  - Add an indicator for unauthorized roads and trails.
  - Clarify and update several indicators to reflect current inventory methodology.
- Add a section that describes the implementation of Part 1 monitoring in greater detail.
- Expand the description of Part 3 monitoring to provide more detail on how to select projects for monitoring.

III. Forest Plan Direction That Will Not Change in the Amendment

The proposed amendment does not change the forest wide management direction adopted in 2006. The existing LMP land use zone definitions, the suitable uses identified within the individual land use zones, and the plan standards remain as described in the current LMPs. Land use zone descriptions and suitable uses are found in Part 2 of the LMPs, forest specific plan standards are also in Part 2, and plan standards applicable to all four forests are found in Part 3.

Existing direction that will not change also includes the Regional Forester's decisions for recommended Wild and Scenic Rivers, Research Natural Areas, and Special Interest Areas. These decisions are outlined in the individual Record of Decision for each forest, and also described in Part 2 of the LMPs.

IV. Implementation of the 2001 Roadless Area Conservation Rule

The proposed amendment will not affect the implementation of the 2001 Roadless Area Conservation Rule (36 CFR Part 294 Subpart B). The Roadless Area Conservation Rule (RACR) was published in the Federal Register on January 12, 2001 (66 FR 3244). Ten lawsuits were filed challenging the rule. In May 2001, a preliminary injunction barring implementation of the rule was issued by a federal district court in Idaho. The Ninth Circuit Court of Appeals reversed that ruling, and the RACR became effective in April 2003.

In July 2003, a federal district court in Wyoming upheld a State of Wyoming challenge to the RACR holding that promulgation of the RACR was procedurally flawed under the National Environmental Policy Act and substantively illegal under the Wilderness Act. The court permanently enjoined the rule. The decision was appealed to the Tenth Circuit Court of Appeals, but the court declared the case moot and vacated the Wyoming order after the 2005 State Petitions Rule was promulgated.

The LMPs for the four Southern California National Forests were issued when the 2005 State Petitions Rule was in effect. Under the State Petitions Rule, the land use zone allocations made in the LMPs include designations that allowed road construction and reconstruction in approximately 28% of the one million acres of IRAs within the four forests.

The 2005 State Petitions Rule triggered two additional lawsuits in a district court of California.

On September 20, 2006, the California court set aside the State Petitions Rule, and reinstated the RACR. The decision was appealed and on August 5, 2009, the appellate court affirmed the district court's ruling.

In response to the reinstatement of the RACR, the State of Wyoming filed a second lawsuit (*Wyoming II*) challenging the RACR. On August 12, 2008, the Wyoming court again set aside and enjoined the RACR. The Wyoming decision placed the Forest Service in a conundrum of trying to comply with the California court's order *to follow* the RACR and the Wyoming court's order *to not follow* the RACR. The government filed an appeal on August 13, 2009 to the Tenth Circuit Court.

On October 21, 2011, the 10th Circuit Court of Appeals reversed the Wyoming District Court and upheld USDA's 2001 Roadless Rule in Wyoming v. USDA. Pending further appeals, implementation of the 10th Circuit ruling will reinstate the RACR on a nationwide basis. Under the RACR, new road construction and reconstruction are generally prohibited in IRAs, and timber harvest is only permitted under a few limited exceptions. All LMP direction allowing road reconstruction and reconstruction in IRAs is superseded by the 2001 Roadless Rule without further agency action, and Forest Service project decisions will be guided by the LMP direction as modified by the RACR.

Appendix 1 - Summary of Proposed Action LUZs by IRA

IRA LUZ allocation with Proposed Action	Acres
Antimony	**40848**
BC	2128
BCMUR	2062
BCNM	35909
DAI	749
Barker Valley	**11979**
BC	786
BCMUR	19
BCNM	97
RW	11077
DAI	0
Black Mountain	**16814**
BC	850
BCMUR	500
BCNM	15464
Cactus Springs B	**3106**
BCNM	3105
EW	0
Caliente	**5915**
BC	37
BCNM	150
RW	5622
DAI	106
Cedar Creek	**2793**
BC	0
BCMUR	830
RW	1963
DAI	0
Cedar Creek & Eagle Peak (between IRAs)	**433**
RW	433
Cedar Creek, Eagle Peak, No Name, Sill Hill, Upper San Diego River (between IRAs)	**599**
BCMUR	49
BCNM	28
RW	523

IRA LUZ allocation with Proposed Action	Acres
Coldwater	**8402**
BC	571
BCMUR	415
BCNM	7385
DAI	31
Cucamonga B	**11933**
BC	71
BCMUR	11
BCNM	4941
RW	6286
DAI	623
EW	2
Cucamonga C	**4106**
BC	28
BCMUR	0
BCNM	4078
RW	0
EW	0
Cuyama	**19570**
BC	85
BCMUR	8
BCNM	19477
Diablo	**19597**
BC	60
BCMUR	390
BCNM	19148
Dry Lakes	**17043**
BC	334
BCNM	16185
DAI	523
EW	2
Eagle Peak	**6481**
BCMUR	239
BCNM	25
RW	6217
Fish Canyon	**29886**
BC	8

IRA LUZ allocation with Proposed Action	Acres
BCMUR	0
BCNM	933
RW	28883
DAI	61
Fish Canyon & Salt Creek	**1617**
RW	1617
Fox Mountain	**52066**
BC	1230
BCMUR	2525
BCNM	48311
EW	0
Garcia Mountain	**7850**
BC	241
BCMUR	515
BCNM	7017
EW	77
Juncal	**12289**
BC	492
BCMUR	738
BCNM	11047
EW	12
CB	0
Ladd	**5300**
BC	43
BCMUR	662
BCNM	4568
DAI	28
Machesna Mountain	**12268**
BC	532
BCMUR	11
BCNM	11678
EW	47
Malduce Buckhorn	**14177**
BC	381
BCMUR	437
BCNM	7704
RW	5306

IRA LUZ allocation with Proposed Action	Acres
DAI	75
EW	1
CB	273
No Name	**4897**
BC	133
BCMUR	35
BCNM	2
RW	4491
DAI	236
Pyramid Peak A	**14177**
BCNM	6789
RW	7387
Quatal	**7250**
BC	50
BCMUR	49
BCNM	7151
Raywood Flat B	**11373**
BC	90
BCMUR	556
BCNM	6649
RW	3920
DAI	150
EW	8
Red Mountain	**8034**
BC	13
BCNM	7979
DAI	41
Salt Creek	**11022**
BC	86
BCMUR	98
BCNM	40
RW	10680
DAI	118
Sawmill - Badlands	**51334**
BC	2120
BCMUR	2048
BCNM	44896

IRA LUZ allocation with Proposed Action	Acres
DAI	1992
EW	279
Sespe - Frazier	**111137**
BC	3159
BCMUR	895
BCNM	103848
RW	33
DAI	2561
EW	519
CB	121
Sill Hill	**5294**
BC	10
BCNM	71
RW	4511
DAI	196
CB	506
Spoor Canyon	**13741**
BC	2027
BCMUR	8
BCNM	11706
Tequepis	**9080**
BC	1237
BCNM	6687
DAI	1156
Trabuco	**23341**
BC	195
BCMUR	1
BCNM	22428
DAI	717
Tule	**9861**
BC	589
BCNM	9108
DAI	164
Upper San Diego River	**6740**
BC	0
BCMUR	929
BCNM	16

IRA LUZ allocation with Proposed Action	Acres
RW	5795
DAI	1
West Fork	**1169**
BC	59
BCMUR	14
BCNM	1089
EW	8
Westfork	**4407**
BC	68
BCMUR	59
BCNM	4228
DAI	52
White Ledge	**18632**
BC	205
BCMUR	227
BCNM	18194
DAI	5
CB	1

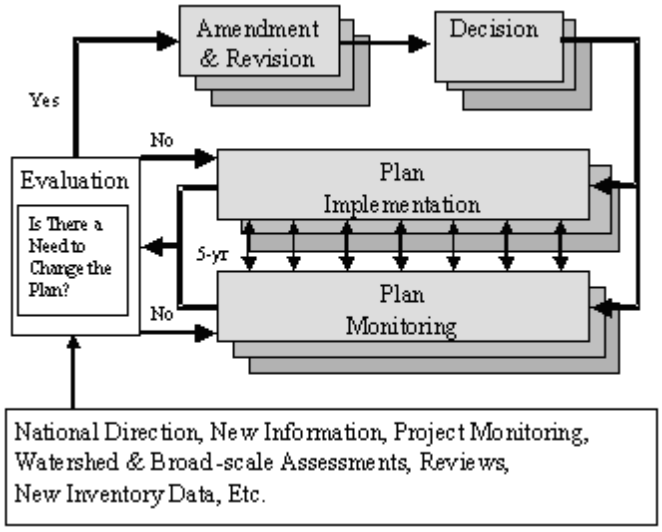
Appendix 2 – Monitoring Proposed Action

Introduction

Effective land management plan monitoring and evaluation helps the Forest Service improve its management of America's National Forests. Monitoring and evaluation identifies the need to adjust desired conditions, goals, objectives, standards and guidelines as forest conditions change. Monitoring and evaluation helps the Forest Service and the public determine how a land management plan is being implemented, whether plan implementation is achieving desired outcomes, and whether assumptions made in the planning process are valid. Land management plans need to be dynamic to account for changed resource conditions, such as large-scale wildland fire or listing of additional species under the Endangered Species Act; new information and science such as taking a systems approach; and changes in regulations and policies.

Monitoring requirements are found in all three parts of the Angeles, Cleveland, Los Padres, and San Bernardino National Forest Land Management Plans (2006) (Southern California Land Management Plans). In Part 1 monitoring is focused on measuring movement toward desired conditions over the long-term. Part 2 describes individual program accomplishments and is reported annually. Finally, Part 3 measures how well project implementation follows direction in the Southern California Land Management Plans. All three parts use an adaptive management approach designed to lead to continuous improvement in the National Forests' environmental performance.

The Adaptive Cycle



The Southern California Land Management Plans comply with the requirements of the 1982 planning regulations. The establishment of monitoring and evaluation requirements for plan implementation are met through this amendment to the Southern California Land Management Plans (36 CFR 219.11(d) and 36 CFR 219.12(k) [1982]). Planning regulations require that land management plans be revised every 10 to 15 years after initial approval (36 CFR 219.10(g) [1982]).

Monitoring and evaluation are part of the adaptive management cycle and are separate, sequential activities that provide information to determine whether programs and projects are meeting Southern California Land Management Plans direction. Monitoring collects information, on a sample basis, from sources specified in the Southern California Land Management Plans. Evaluation of monitoring results is used to determine the effectiveness of the Southern California Land Management Plans and whether amendments or revisions to the plans are needed. With these tools, information is collected and compiled to serve as reference points for the future; new scientific understanding and technology, changes in law and policy and resource conditions, growing

concerns, trends and changing societal values are incorporated into land management planning; and the scientific validity and appropriateness of assumptions used in the development of land management plans are evaluated. In short, they breathe life into a static document, making it dynamic, relevant, and useful. Other component parts include inventory, assessment, planning, and implementation. No single component can be isolated from the whole of adaptive management.

Types of Monitoring

Several kinds of activities can be referred to as "monitoring." These include:

- Programmatic monitoring, which tracks and evaluates trends of ecological, social, or economic outcomes.
- Project implementation monitoring, which monitors compliance with the Southern California Land Management Plans standards and guidelines.
- Effectiveness monitoring, which evaluates how effective our management actions are at achieving desired outcomes.
- Validation monitoring, which verifies assumptions and models used in Southern California Land Management Plans implementation.
- Other monitoring that may address issues for large geographic areas of which a forest or grassland is a part.

Two other types of "monitoring" are not appropriate for inclusion in the monitoring chapter of the Southern California Land Management Plans. These are:

- Tracking or development of administrative reports (such as plans for protection of historic sites, interpretive plans, plans to inventory a particular resource, or conservation strategies).
- Tracking specific program outputs (such as miles of trail maintained, recreation visitor days, cubic feet of timber harvested, or acres of prescribed burn accomplished).

Tracking outputs can be referenced using general terms in the Southern California Land Management Plans and may be included in the annual monitoring plan or annual monitoring and evaluation report (as discussed below regarding annual indicators), because they are an important measure of how the Forest Service uses funds and are important to the public.

Part 1 Monitoring

Monitoring and evaluation provide knowledge and information to keep the Southern California Land Management Plans viable. Appropriate selection of indicators, and monitoring and evaluation of key results helps the Forest Service determine if the desired conditions identified in the Southern California Land Management Plans are being met. Monitoring and evaluation also help the Forest Service determine if changes should be made to goals and objectives, or monitoring methods.

The aggregated outcome of project-level work reflects progress towards achieving the desired conditions of the Southern California Land Management Plans and the contribution to Forest Service priorities. This emphasizes the importance of using the National Strategic Plan desired conditions, goals and objectives that apply to the planning area in the Southern California Land Management Plans and to use common criteria and indicators as appropriate. This approach will enable monitoring and evaluation efficiencies

and provide critical information on the contribution of the southern California National Forests to the Forest Service's mission, goals, and objectives.

Monitoring and evaluation processes begin by identifying key questions Forest Service managers need to answer about land management plan implementation. Managers must also understand baseline conditions (that is, the resource conditions that were present when the record of decision was signed) versus desired conditions, and the evaluation strategies that will help determine if movement towards desired conditions is occurring. Current conditions of key environmental indicators are identified in the final environmental impact statement (USDA Forest Service 2005) along with projected trends. Actual trends in key environmental indicators are used to measure changes over time as the basis for determining when a need for change is indicated. Monitoring is the method for adapting to change and to more easily amend and eventually revise land management plans in order to achieve desired conditions while ensuring healthy National Forests exist for future generations.

Table 1: Part 1 Monitoring Summary

Goal	Activity, Practice Or Effect To Be Measured	Monitoring Question	Indicators	Data Reliability	Measuring Frequency (Years)	Report Period (Years)
1.1	Vegetation Treatments in WUI Defense Zone	Has the forest made progress in reducing the number of acres that are adjacent to development within WUI defense zones that are classified as high risk?	Acres of High Hazard and High Risk in WUI Defense Zone	High	1	5
1.2	Restoration of Forest Health	Has the forest been successful at reducing mortality risk?	Mortality Risk Assessment	High	1	5
1.2.1	Restoration of Forest Health in Fire Regime I	Is the forest making progress toward increasing the percentage of montane conifer forests in Condition Class 1?	Departure from desired fire regime, acres by Fire Regime I	Mod	5	5
1.2.2	Restoration of Forest Health in Fire Regime IV	Is the forest making progress toward maintaining or increasing the percentage of vegetation types that naturally occur in Fire Regime IV in Condition Class 1?	Departure from desired fire regime, acres by Fire Regime IV	Mod	5	5
1.2.3	Restoration of Forest Health in Fire Regime V	Has the forest been successful at maintaining long fire-free intervals in habitats where fire is naturally uncommon?	Departure from desired fire regime, acres by Fire Regime V	Mod	5	5
2.1	Invasive Species	Are the national forests' reported occurrences of invasive plants/animals showing a stable or decreasing trend?	Acres of treatments in reported occurrences	Mod	1	5
3.1	Visitor Use of the Forest	Are trends in indicators and visitor satisfaction surveys indicating that the forest has provided quality, sustainable recreation opportunities that result in increased visitor satisfaction?	Visitor Satisfaction (NVUM)	Mod	5	5

Goal	Activity, Practice Or Effect To Be Measured	Monitoring Question	Indicators	Data Reliability	Measuring Frequency (Years)	Report Period (Years)
3.2	Wilderness Use	Are trends in indicators and visitor satisfaction surveys depicting the forest has provided solitude and challenge in an environment where human influences do not impede the free play of natural forces?	Wilderness Condition	Mod	5	5
4.1a	Mineral and Energy Development	Has the forest been successful at protecting ecosystem health while providing mineral and energy resources for development?	Number of Mineral and Energy Development Projects Proposed and Approved, Minerals and Energy Success at protecting Ecosystem Health	Mod	1	5
4.1b	Mineral and Energy Development	Has the forest been successful at protecting ecosystem health while providing renewable resources for development?	Number of Renewable Resource Projects Proposed and Approved, Renewable Resources Success at protecting Ecosystem Health	Mod	1	5
5.1	Watershed Function	Is the forest making progress toward sustaining Class 1 watershed conditions while reducing the number of Condition Class 2 and 3 watersheds?	Number of Watersheds in each Condition Class	High	1	5
5.2	Riparian Condition	Is the forest increasing the proper functioning condition of riparian areas?	Change in Indicator Score for Aquatic Habitat, Aquatic Biota and Riparian Vegetation	Mod	5	5
6.1	Rangeland Condition	Is forest rangeland management maintaining or improving progress towards sustainable rangelands and ecosystem health?	Percent of key areas in active allotments meeting or moving towards desired conditions	Mod	1	5
6.2	Biological Resource Condition	Are trends in resource conditions indicating that habitat conditions for fish, wildlife, and rare plants are in a stable or upward trend?	MIS Habitat Condition	Mod	5	5
7.1	Built Landscape Extent/ Land Adjustment	Is the forest balancing the need for new infrastructure with restoration opportunities or land ownership adjustment to meet the desired conditions?	Land Ownership Complexity, Authorized and Administrative Infrastructure, Inventoried Unclassified Roads and Trails	High	5	5

Goal 1.1: Vegetation Treatments in WUI Defense Zone

Improve the ability of southern California communities to limit loss of life and property and recover from the high intensity wildland fires that are a natural part of this state's ecosystem.

Large fires are an inevitable and increasingly common part of southern California ecosystems. Suburban communities have been developed in more remote areas and urban areas have pushed up into the foothills in many places. This has led to an increase in the amount of Wildland/Urban Interface (WUI) areas that are at risk and in need of protection from wildland fire. A large portion of these interface areas are covered in chaparral or coastal sage scrub vegetation. High intensity, stand-replacing fires are a natural part of the fire regime within these vegetation types, putting homes built here at risk even from the natural fire regime. Fire history studies are showing an increasing trend in fire occurrence.

The desired condition is to have vegetation treated to enhance community protection and reduce the risk of loss of human life, structures, improvements, and natural resources from wildland fire and subsequent floods. Firefighters have improved opportunities for tactical operations and safety near structures, improvements, and high resource values. By providing for defensible space, public and firefighter safety is enhanced. Local jurisdictional authorities, citizen groups and the Forest Service act together to mitigate hazardous fuel conditions in areas surrounding urban interface, urban intermix, and/or outlying improvements.

Outcome Evaluation Question

Has the National Forest made progress in reducing the number of acres that are adjacent to development within WUI defense zones that are classified as high risk?

Acres of high hazard and high risk in the WUI Defense Zone

The WUI defense zone is defined in Part 3 of the Southern California Land Management Plans in standard S7, including the referenced Appendix K. The defense zone is the portion of the WUI that is directly adjacent to structures. It has a variable width which is determined at the project level up to maximum widths defined for general vegetation types in standard S7. For the Southern California Land Management Plans analysis the maximum width was assumed and this was used to represent the present or "baseline" extent of the WUI defense zone.

High hazard fuels are those that have the potential to burn with high intensity. Fire intensity affects suppression effectiveness in protecting structures in interface areas. A key strategy in the Southern California Land Management Plans is to reduce fire hazard adjacent to communities and structures to improve suppression effectiveness and provide defensible space in interface areas. Risk is related to human values or "risk of loss." The presence of structures is the indicator of risk in this analysis.

There is no current site-specific inventory of fuel hazard within the defense zone. In addition, high hazard conditions can be dynamic, returning in as few as five years after a fire in some vegetation types. For this reason the hazard indicator is assumed to be high in all areas until a project-level assessment determines otherwise. Therefore, the monitoring task is to track the level of management effort directed at reducing fire hazard in the WUI defense zone, including keeping the inventory of the actual defense zone up-to-date.

Table 2: Acres of High Hazard and High Risk in WUI Defense Zone

Indicator	Baseline Acres from Forest Plan Analysis	Acres treated and reported in corporate reported systems.	Acres removed due to new information on absence of substantial structures	Acres added due to new information on presence of substantial structures	Acres added from growth due to maintenance backlog	Fifth year trend
WUI Defense Zone						

The five year trend will be measured by: taking the baseline acres from the 2005 Southern California Land Management Plans analysis; subtracting the areas treated, and areas that are no longer WUI Defense Zone; and adding acres from areas that have reverted to high hazard and risk due to maintenance backlog, and areas that have become WUI Defense Zone due to development. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend indicates that there is an increase in the number of WUI Defense Zone acres in high hazard and risk, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 1.2: Restoration of Forest Health

Restore forest health where alteration of natural fire regimes has put human and natural resource values at risk.

The current condition of the vegetation on the four southern California National Forests has been influenced by a century of fire management, mostly in the form of fire suppression, as well as by other land-use practices, including logging, grazing, and mining. The interaction of climate, geology and topography has created an array of vegetation types on the four National Forests that ranges from dry desert scrub to humid coastal redwood forests. Ensuring the health of America's forests requires the analysis, understanding, and management of complex and interrelated natural resources. Increasing human-use pressures, a continual threat from native and exotic insects and diseases, and more complex management policies make natural resource management demanding.

The structure, function, and species composition of nearly all southern California plant communities are under the direct control of recurrent fire. The long-term goal of vegetation management is to perpetuate plant communities by maintaining or re-introducing appropriate fire regimes while also protecting human communities from destructive wildland fires. To accomplish this goal, the Forest Service has developed desired conditions within the framework of five major fire regimes that have been described for the United States (Schmidt et al. 2002). In this classification, fire regimes are defined primarily by the frequency (average interval between fires) and fire severity (which is related to intensity). Generally, other elements of fire regimes such as season of burning, landscape pattern, and size are not so heavily weighted in this classification. The regimes are as follows:

- Fire Regime I (0 to 35 years, low severity)
- Fire Regime II (0 to 35 years, stand replacement)
- Fire Regime III (35 to over 100 years, mixed severity fires)
- Fire Regime IV (35 to over 100 years, stand replacement)
- Fire Regime V (Over 200 years, stand replacement)

A national Condition Rating System has been developed that links fire regime to existing vegetation by evaluating the degree to which a vegetation type has departed from its ideal regime. The greater the departure, the greater the risk fire poses to the functioning of the ecosystem. The three Condition Classes are as follows:

- Condition Class 1 - Fire regimes are within a historical range (i.e., 1910 to present), and the risk of losing key ecosystem structure and function is low. Vegetation attributes (e.g., species composition and structure) remain intact and operate within the historic range.
- Condition Class 2 - Fire regimes have been moderately altered from their historic range. Fire frequencies have departed from historical frequencies by one or more return intervals (either increased or decreased) and the risk of losing key ecosystem components is moderate. Vegetation attributes have been moderately altered from their historic averages resulting in moderate changes to one or more of the following attributes: fire size, intensity and severity, and landscape pattern.
- Condition Class 3 - Fire regimes have been significantly altered from their historical range. Fires have departed from historic frequencies by multiple return intervals. Vegetation attributes have been significantly altered from their historic range. The risk of losing key ecosystem components is high resulting in significant changes to one or more of the following fire regime attributes: fire size, intensity, severity, and landscape pattern.

Outcome Evaluation Question

Has the forest been successful at reducing mortality risk?

Mortality Risk Assessment

When assessing risk as it relates to forest health, risk is often composed of two parts: the probability of a forest being attacked (susceptibility) and the probability of resulting tree mortality (vulnerability). The National Insect and Disease Risk Map project (NIDRM) was driven by the 188 models which attempt to predict how individual tree species will react to various mortality agents. The models, in turn, are the interactions of predicted agent behavior with known forest parameters (criteria). The most widely used forest parameters for NIDRM were stand basal area (BA), stand density index (SDI), and tree diameter or its surrogate, quadratic mean diameter (QMD). Plot data were interpolated to create uniform 'surfaces' that capture natural variations in forest parameters.

The five year trend will be measured by comparing the annual NIDRM data and cross referencing mortality within the reporting period. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows an increase in the risk of mortality, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 1.2.1 - Reduce the potential for widespread losses of montane conifer forests caused by severe, extensive, stand replacing fires.

The long-term desired condition for the remaining unburned National Forest System lands will be to:

1. Create forests more resistant to the effects of drought, insect and disease outbreaks and stand-killing crown fires;

2. Encourage tree recruitment that contain a species mix more like pre-settlement composition, (i.e., with a higher representation of shade-intolerant species like ponderosa pine that have declined during the period of fire suppression);
3. Recreate stand densities more like those of the presuppression era; and
4. Encourage a stand structure that emphasizes large-diameter trees.

A somewhat different management emphasis will be applied to forests with growing sites that are more productive. In these settings, forests have high canopy cover with densely-shaded understories. Many wildlife species, including the California spotted owl, specifically require this type of high-cover conditions. Although the overall goal of fuels reduction also applies to these forests, they will be managed to maintain high canopy cover, as well as greater within-stand vertical (e.g., tree regeneration layers, snags) and horizontal (e.g., downed woody material) heterogeneity than in other montane conifer forests.

The interval between fires will be shortened in montane conifer forests to emulate historic intervals so that excessive accumulations of stand-threatening ladder and ground fuels do not develop. However, complete elimination of stand-replacing fires is not possible because during wildland fire weather, topography, and fuels create localized patches of high intensity, passive crown fires. Moreover, small areas of crown fires are desirable because they provide openings for the regeneration of shade-intolerant species. Rather, the goal will be to reduce the occurrence of extensive crown fires like those that burned in 2003. With this management emphasis, the majority of forest stands would eventually be returned from Condition Class 3 to Condition Class 1.

Outcome Evaluation Question

Is the National Forest making progress toward increasing the percentage of montane conifer forests in Condition Class 1?

Departure from desired fire regime, acres by Fire Regime I

Acres in departure categories 2 and 3 are due to the infrequency of fires. Acres of fuel treatments and fire are therefore appropriate indicators for making progress towards this goal. Vegetation treatments envisioned by the Southern California Land Management Plans are to be designed to bring forested stands into Condition Class 1. Therefore it is assumed that if these projects are implemented as planned, acres treated, as measured by the annual indicators for this goal, will indicate progress toward the desired condition of moving these stands to Condition Class 1. Fire can be classified as prescribed and wildfire. Prescribed fire is used as a management tool to help reduce the vegetation and reintroduce fire as a natural process. Annually, those Montane Conifer areas that have had wildfire or prescribed fire will be added to Condition Class 1. The desired condition for fire is low intensity, high frequency that removes ladder fuels and reduces the risk of crown fires.

Table 3: Acres by Fire Regime I

Vegetation Type	Baseline Acres of Condition Class I	Acres of mechanical treatment	Acres of Prescribed Under Burning	Acres of Wildfire	Acres removed due to no disturbance within 35 years	Fifth year trend
Montane Conifer, Regime I						

The five year trend will be measured by: taking the baseline acres of Montane Conifer, Fire Regime I, from the 2005 Southern California Land Management Plans analysis that were in Condition Class 1; subtracting the areas that have not had mechanical treatment, prescribed under burning, or wildfire within the previous 35 years; and adding the areas that have been mechanically treated, areas that have had prescribed under burning, and areas that have had wildfire over the five year monitoring period. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows a decrease in the number of acres in Condition Class 1, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 1.2.2 - Restoration of Forest Health in Fire Regime IV

A variety of vegetation types and habitats are identified as being under the influence of Fire Regime IV. The desired condition for chaparral is to establish a diversity of shrub age classes in key areas near communities to improve the effectiveness of fire suppression operations. Adequate defensible space around communities could greatly reduce the risk of structure loss, as well as improve safety for residents. Thus, at the urban interface there will be a management emphasis on direct community protection. In addition to protecting urban areas, strategically placed blocks of young chaparral around certain forest types (e.g., montane conifer and bigcone Douglas-fir) could be used to reduce the risk of crown fires. The desired condition for coastal sage scrub is to increase the average interval between fires thereby reducing the area at risk of type conversion. The desired condition for both gabbro and serpentine habitats is to keep disturbance levels low. For closed-cone conifers found in these habitats, the desired condition is to maintain 35- to 100-year intervals between stand-replacing fires depending on the life history characteristics of each species.

Outcome Evaluation Question

Is the National Forest making progress toward maintaining or increasing the percentage of vegetation types that naturally occur in Fire Regime IV in Condition Class 1?

Departure from desired fire regime, acres by Fire Regime IV

Acres in departure categories 2 and 3 are due to excessively frequent fires. Acres of fuel treatment, therefore, are not good indicators of making progress toward this goal. Improved suppression and prevention effectiveness over time may lead to improving conditions where long-term trends will indicate progress toward the desired condition. Those areas that do not have a fire return interval that is too frequent, greater than 35 years, are in Condition Class 1. Evaluation should discuss the fact that large infrequent fires are most responsible for changes in these numbers so the annual indicators have limited value in estimating long-term trends.

Table 4: Acres by Fire Regime IV

Vegetation Type	Baseline Acres of Condition Class I	Acres added due to no disturbance within 35 years	Return Interval Less than 35 years			Fifth year trend
			Acres of mechanical treatment	Acres of Prescribed Under Burning	Acres of Wildfire	
Chaparral/ Costal Sage Scrub/ Gabbro/ Serpentine/ Closed-cone conifer/ Lower montane; Regime IV						

The five year trend will be measured by: taking the baseline acres of Chaparral, Costal Sage Scrub, Gabbro, Serpentine, Closed-cone conifer, and Lower montane vegetation types, Fire Regime IV, from the 2005 Southern California Land Management Plans analysis that were in Condition Class 1; subtracting the areas that have a return interval of disturbance that is less than 35 years over the five year monitoring period through mechanical treatment, prescribed under burning, and wildfire; and adding the areas that have not had mechanical treatment, prescribed under burning, or wildfire within the previous 35 years. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows a decrease in the number of acres in Condition Class 1, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 1.2.3 - Restoration of Forest Health in Fire Regime V

A variety of vegetation types fall into Fire Regime V. The desired conditions for alpine and subalpine habitats are to (1) maintain long fire-free intervals to encourage natural, sporadic tree recruitment and (2) limit the effects of human use, especially trampling of fragile alpine plant communities. The Forest Service should maintain long fire-free intervals in desert types and prevent frequent fires from eliminating them or significantly reducing their distributions.

Outcome Evaluation Question

Has the National Forest been successful at maintaining long fire-free intervals in habitats where fire is naturally uncommon?

Departure from desired fire regime, acres by Fire Regime V

Acres in departure categories 2 and 3 are due to excessively frequent fires. Acres of fuel treatment, therefore, are not good indicators of making progress toward this goal. Improved suppression and prevention effectiveness over time may lead to improving conditions where long-term trends will indicate progress toward the desired condition. Those areas that do not have a fire return interval that is too frequent are in Condition Class 1. Fires that occur too frequently lead to vegetation type changes in Fire Regime V. The extent of vegetation in Fire Regime V is measured geographically to determine the trend in populations on the four Southern California National Forests.

Table 5: Acres by Fire Regime V

Vegetation Type	Baseline Acres of Condition Class I	Acres added due to no disturbance within 200 years	Return Interval Less than 200 years			Fifth year trend
			Acres of mechanical treatment	Acres of Prescribed Under Burning	Acres of Wildfire	
Alpine and Subalpine/ Desert woodlands, forests and scrub/ Bigcone Douglas-fir; Regime V						

The five year trend will be measured by: taking the baseline acres of Alpine and Subalpine, Desert woodlands, forests and scrub, and Bigcone Douglas-fir vegetation types, Fire Regime V, from the 2005 Southern California Land Management Plans analysis that were in Condition Class 1; subtracting the areas that have a return interval of disturbance that is less than 200 years over the five year monitoring period through mechanical treatment, prescribed under burning, and wildfire; and adding the areas that have not had mechanical treatment, prescribed under burning, or wildfire within the previous 200 years. If the five year trend shows a decrease in the number of acres in Condition Class 1, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 2.1: Invasive Species

Reverse the trend of increasing loss of natural resource values due to invasive species.

Invasive nonnative species are animal and plant species with a high capacity for reproduction and spread at the expense of native species. They are introduced into an area in which they did not evolve and in which they have few or no natural enemies to limit their reproduction and spread. These species can cause environmental harm by significantly changing ecosystem composition, structure, and function. They can prey upon, consume, harm, or displace native species.

The desired condition is that the structure, function, and composition of plant communities and wildlife habitats are not impaired by the presence of invasive nonnative plants and animals.

Outcome Evaluation Question

Are the National Forests' reported occurrences of invasive plants/animals showing a stable or decreasing trend?

Acres of treatments in reported occurrences

The indicator for determining if the National Forests’ are moving toward the desired conditions is the number of acres of reported occurrences that have been treated. Evaluation should discuss the fact that this indicator does not account for the areas of the National Forests that are outside of the reported occurrences, and trends will only demonstrate the effectiveness in reported occurrences.

Table 6: Acres of Treatments in Reported Occurrences

Indicator	Baseline Acres of Reported Occurrences of Invasive Species	Acres of treatment	Acres added due to new information on presence	Fifth year trend
Acres of invasive plants/ animals				

The five year trend will be measured by: establishing a baseline for the acres of reported occurrences of invasive plant and animal species; subtracting the areas that have been effectively treated; and adding areas where new presence of invasive species has been reported. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows an increase in the reported number of acres of invasive species, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 3.1: Managed Recreation in a Natural Setting

Provide for Public Use and Natural Resource Protection.

Management of recreation on the National Forests of southern California has traditionally been low-key with minimal regulation of use patterns. As surrounding populations have soared, National Forests have become a primary source of natural open-space based recreation activities. Limited access due to steep topography and dense chaparral has led to a pattern of generally low levels of use across most of the landscape. Recreation is highly concentrated in areas that are relatively flat and have roaded access (e.g., valley bottoms and forested mountain valleys and plateaus). In addition, water is an attraction that draws large crowds in many areas. This concentrated and unregulated use has become a concern, especially where sensitive natural resources may be disturbed.

Desired conditions for managing recreation include accommodating the increased demand for recreation within the capacity of the land to support it. An emphasis on natural resource protection improves resource conditions through increased regulation of recreation use. Improved recreation infrastructure is designed to direct use away from sensitive areas or, where this is not possible, minimize adverse effects. Expansions in recreation infrastructure are balanced by restoration and removal of unneeded facilities that do not meet user needs or are in conflict with resource protection needs. Increases in roaded acres over time should be low, as defined by road density analysis.

Outcome Evaluation Question

Are trends in indicators and visitor satisfaction surveys indicating that the National Forest has provided quality, sustainable recreation opportunities that result in increased visitor satisfaction?

Visitor Satisfaction from National Visitor Use Monitoring (NVUM)

Annual indicators are recreation facilities managed to standard including natural resource protection as described in Goal 3.1. “Meaningful measures” provides a framework for measuring this, but the linkage to resource protection is not as clear. Implementation and effectiveness monitoring of resource protection actions required by standards S34 and S50 (including Appendix D) help to measure the resource protection element of this goal. A long-term indicator is the visitor satisfaction from the NVUM survey. Given that management of recreation will follow direction in the Southern California Land Management

Plans, visitor satisfaction will demonstrate the effectiveness of protecting resources and providing for public use.

Goal 3.2: Wilderness

Retain a Natural Evolving Character within Wilderness.

Desired conditions for wilderness include: Ecological processes occur untrammeled. Human influences do not impede the free play of natural forces in the ecosystem. Management activities prescribed for enhancement and recovery of threatened and endangered species and for the re-introduction of extirpated species are supported. Vegetation management maintains or mimics natural processes for the purpose of achieving wilderness fire management objectives. Reduce to an acceptable level, the risks and consequences of wildland fire within wilderness or escaping from wilderness. Outstanding opportunities for solitude and inspiration are characteristic and stable, or increasing. Primitive and unconfined recreation opportunities that offer physical and mental challenges are stable or increasing. Remediate and prevent human-caused impairments to air quality values including visibility, ozone injury, and acid and nitrogen deposition. Suppression of wildland fires and ignition of prescribed fires in wilderness will consider impacts to human health and air quality. People are connected to the values of wilderness resulting in support and stewardship for these values. Wilderness is used as a benchmark for ecological studies.

Outcome Evaluation Question

Do trends in indicators and visitor satisfaction surveys indicate the National Forest has provided solitude and challenge in an environment where human influences do not impede the free play of natural forces?

Wilderness Condition

Wilderness condition will be used to indicate the effectiveness of the National Forests at moving toward desired conditions. Wilderness Condition will be evaluated from a combination of the wilderness section of the NVUM for visitor information, national reporting systems for management actions in wilderness, Watershed Condition Assessment, and accomplishment data related to the National 10-year Wilderness Stewardship Challenge.

Goal 4.1a: Energy and Minerals Production

Administer Minerals and Energy Resource Development while protecting ecosystem health.

A wide variety of minerals and energy resources are found on southern California National Forests, including precious minerals, oil and gas, high quality metallurgical, chemical and cement grade carbonate rocks, and mineral materials. The National Forests have an essential role in contributing to an adequate and stable supply of mineral and energy resources while continuing to sustain the land's productivity for other uses and its capability to support biodiversity goals.

The desired condition is that approved minerals and energy developments are managed to facilitate production of mineral and energy resources while minimizing adverse impacts to surface and groundwater resources and protecting or enhancing ecosystem health and scenic values.

Outcome Evaluation Question
Has the National Forest been successful at protecting ecosystem health while providing mineral and energy resources for development?

Number of Mineral and Energy Development Projects Proposed and Approved
The number of mineral and energy development projects proposed and approved will be used to demonstrate the baseline of impacts to resources. The screening of projects, the difference between the proposed and approved projects, is the first indicator of the protection of ecosystem health. Screening is used to ensure that projects comply with the Southern California Land Management Plans and other applicable laws, regulations, and policies.

Minerals and Energy Success at protecting Ecosystem Health
The number of acres of habitat conserved as part of mitigation for mineral and energy development projects will be used to indicate the effectiveness of the National Forests at protecting ecosystem health. This indicator demonstrates the trend in habitat protection for approved mineral and energy development projects.

Goal 4.1b: Energy and Minerals Production
Administer Renewable Energy Resource developments while protecting ecosystem health.

Wind energy can be developed to generate mechanical power or electricity. Solar energy can be developed to provide heat, light, hot water, electricity and cooling for many uses. Hydroelectric power can be developed to provide both mechanical power and electricity for a multitude of uses. National Forests have an essential role in contributing to an adequate and stable supply of renewable energy resource developments while continuing to sustain the land's productivity for other uses and its capability to support biodiversity.

The desired condition for solar, wind, and hydroelectric energy resources is that National Forests will support the use of these renewable resources to help meet the growing energy needs in southern California while protecting other resources. The desired condition for biomass is that as National Forests generate timber and chipped woody material as a by-product of ecosystem management, healthy forest restoration, fuels management, and community protection projects, that biomass will provide for energy co-generation when other higher value options are not available.

Outcome Evaluation Question
Has the National Forest been successful at protecting ecosystem health while providing renewable resources for development?

Number of Renewable Resource Projects Proposed and Approved
The number of renewable resource projects proposed and approved will be used to demonstrate the baseline of impacts to resources. The screening of projects, the difference between the proposed and approved projects, is the first indicator of the protection of ecosystem health. Screening is used to ensure that projects comply with the Southern California Land Management Plans and other applicable laws, regulations, and policies.

Renewable resources success at protecting ecosystem health

The number of acres of habitat conserved as part of mitigation for renewable resource projects will be used to indicate the effectiveness of the National Forests at protecting ecosystem health. This indicator demonstrates the trend in habitat protection for approved renewable resource projects.

Goal 5.1: Watershed Function

Improve watershed conditions through cooperative management.

The National Forests generally provide the headwaters and primary source areas for most of the major river systems in southern California. Streams and rivers offer habitat to numerous aquatic and riparian-dependent species-at-risk found on all of the National Forests; in addition to providing water for municipal, commercial and agricultural uses off of the National Forests. Watershed conditions, or watershed health, on the National Forests vary depending upon the amount of disturbance that has occurred within each watershed, and the effect of the disturbance on the natural integrity of the watershed as a whole.

The desired condition is that National Forest watersheds are healthy, dynamic and resilient, and are capable of responding to natural and human caused disturbances while maintaining the integrity of their biological and physical processes. Geologic resources are managed to protect, preserve and interpret unique resources and values, and to improve management of activities that affect watershed condition and ecosystem health. Geologic hazards are identified, analyzed and managed to reduce risks and impacts where there is a threat to human life, natural resources, or financial investment.

Outcome Evaluation Questions

Is the National Forest making progress toward sustaining Class 1 watershed conditions while reducing the number of Condition Class 2 and 3 watersheds?

Number of Watersheds in each Condition Class

It is generally accepted that watersheds heavily altered by disturbance would contain more impaired water bodies than watersheds with moderate or minimal disturbance. The number of Hydrologic Unit Codes (HUCs) in each condition class having impaired waters will be used as an indicator for moving toward desired conditions.

Table 7: Baseline Condition of Monitoring Indicators

Indicator	Desired Condition	Baseline Number of Watersheds	Fifth year trend
Watersheds in Condition Class I - Good	Maintained condition ratings	43 total in Province*	
Watersheds in Condition Class II - Moderate	Maintained or improved condition ratings	34 total in Province*	
Watersheds in Condition Class III - Poor	Improved condition ratings	12 total in Province*	

*HUC 5, will be updated based on Watershed Condition Assessment Process

The five year trend will be measured by: taking the baseline number of watersheds in each Condition Class from the 2005 Southern California Land Management Plans analysis and comparing the five year Watershed Condition Assessment. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows an increase in the number of watersheds in

Condition Class 3 and/or a decrease in the number of watersheds in Condition Class 1, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 5.2: Riparian Condition

Improve riparian conditions.

Riparian and aquatic ecosystems occur on all four southern California National Forests and are associated with water. They play a vital role in watershed functioning and in the survival of most of the species-at-risk. These ecosystems contain aquatic and terrestrial features and lands adjacent to perennial, intermittent, and ephemeral streams, as well as in and around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, springs and other bodies of water.

Riparian Conservation Areas (RCAs) are areas along streams and around water/riparian features that are identified to protect riparian and aquatic ecosystems and the dependent natural resources associated with them during site-specific project planning and implementation. Standard S47 in Appendix E and Part 3 of the Southern California Land Management Plans explain the concept and the process for delineating RCAs.

The desired condition is that watercourses are functioning properly and support healthy populations of native and desired nonnative riparian dependent species. Riparian vegetation consists mainly of native species, with minimal or no presence of invasive nonnative plants. Nuisance nonnative aquatic animals are absent or rare in streams and lakes. Riparian and aquatic ecosystems (including vegetation, channel stability, water quality, and habitat for aquatic and riparian dependent species) are resilient and able to recover after natural events, such as floods and wildland fires.

Outcome Evaluation Question

Is the forest increasing the proper functioning condition of riparian areas?

Change in Indicator Score for Aquatic Habitat, Aquatic Biota and Riparian Vegetation

The indicator is the Aquatic Habitat, Aquatic Biota and Riparian Vegetation indicators from the Watershed Condition Assessment. The change in score from the Watershed Condition Assessment indicators will demonstrate the effectiveness of the National Forests at protecting riparian areas, and therefore the watercourses that they surround.

Goal 6.1: Rangeland Condition

Move toward improved rangeland conditions as indicated by key range sites.

Rangeland management of livestock grazing areas for sustainability is achieved by allowing moderate utilization levels that maintain forage, cover, and habitat requirements for wildlife; and maintain soil productivity, water quality, and ecosystem health. Moderate use is defined as leaving adequate amounts of residual dry matter or plant stubble height in order to provide favorable microenvironments for early seedling growth, protect root development in perennial plants, maintain soil protection, and provide adequate soil organic matter. Standard S56 in Appendix E and Part 3 of the Southern California Land Management Plans defines specific forage utilization standards that must be met in different vegetation types in order to achieve moderate use.

The desired condition is that livestock grazing opportunities are maintained and are managed for sustainable, healthy rangelands that contribute to improving watershed conditions towards a fully functional and productive condition.

Outcome Evaluation Question

Is forest rangeland management maintaining or improving progress towards sustainable rangelands and ecosystem health?

Percent of Key Areas in active allotments meeting or moving towards Desired Conditions

In livestock grazing areas, 'key areas' are designated to monitor rangeland conditions. Key areas are defined as a portion of the range, which, because of its location, grazing or browsing value, and/or use serves as an indicative sample of range conditions, trend, or degree of use seasonally. A key area guides the general management of the entire area of which it is part.

Table 8: Percent of Key Areas in active allotments meeting or moving towards Desired Conditions

Indicator	Baseline Percent of Key Areas in active allotments meeting or moving towards Desired Conditions	Fifth year trend
Percent of Key Areas in active allotments		

The five year trend will be determined by first establishing a baseline percent of Key Areas in active allotments meeting or moving towards desired conditions. Information will then be compiled from annual compliance monitoring, Region 5 long-term range monitoring, and other condition assessments conducted in the key areas to determine condition trends in Key areas every five years. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows a decrease in the percent of Key Areas in active allotments meeting or moving towards desired conditions, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Goal 6.2: Biological Resource Condition

Provide ecological conditions to sustain viable populations of native and desired nonnative species.

The mountains and foothills of southern California are home to approximately nine native species of fish, 18 amphibians, 61 reptiles, 299 birds, 104 mammals, 2,900 vascular plants, and an unknown number of species of invertebrate animals and non-vascular plants. Approximately 3,000 of these species occur on the four southern California National Forests.

Many of the 3,000 species have a large proportion of their distribution on National Forest System lands. Some are endemic to the National Forests (essentially found nowhere else in the world), and some have special status as federally listed threatened, endangered, proposed, candidate, or Forest Service sensitive species. Other species have wide geographic ranges and are found elsewhere in California, Mexico, the West or the Southwest, but are rare in southern California. There are also plants and animals that were formerly common in southern California, but are now rare because of urban development. Some of the best remaining habitat for these species occurs on the margins of National Forest System lands.

The desired condition is that habitats for federally listed species are conserved, and listed species are recovered or are moving toward recovery. Habitats for sensitive species and other species of concern are managed to prevent downward trends in populations or habitat capability, and to prevent federal listing. Flow regimes in streams that provide habitat for threatened, endangered, proposed, candidate, and/or sensitive aquatic and riparian-dependent species are sufficient to allow the species to persist and complete all phases of their life cycles. Habitat conditions sustain healthy populations of native and desired nonnative fish and game species. Wildlife habitat functions are maintained or improved, including primary feeding areas, winter ranges, breeding areas, birthing areas, rearing areas, migration corridors, and landscape linkages. Fish habitat functions are maintained or improved, including spawning areas, rearing areas, and upstream and downstream migration, where possible.

Outcome Evaluation Question

Are trends in resource conditions indicating that habitat conditions for fish, wildlife, and rare plants are in a stable or upward trend?

Management Indicator Species Habitat Condition

Management Indicator Species (MIS) are selected because their population or habitat trends are believed to indicate the effects of management activities (36 CFR 219.19(a)(1) [1982]; 36 CFR 219.14 [2005]), and as a focus for monitoring (36 CFR 219.19(a)(6) [1982]). Species considered for designation as MIS were assessed using the following criteria to determine their appropriateness:

- Changes in the species' population or habitat should reflect the effects of National Forest management activities; and
- Population or habitat trends for the species must be capable of being effectively and efficiently monitored and evaluated.

The Southern California Land Management Plans require forest-scale monitoring of habitat condition and trend for the 12 MIS that were selected for representative habitat types and issues. Habitat condition is defined as the current amount of habitat (or habitat factor) on the southern California National Forests.

The five year trend will be measured by: taking the baseline MIS habitat condition from the 2005 Southern California Land Management Plans analysis and comparing the existing MIS habitat condition on the southern California National Forests. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows a reduction in the MIS habitat condition, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Table 9: MIS Indicators

MIS	Indicators of Management
Mountain Lion	Fragmentation
Mule Deer	Healthy Diverse Habitats
Arroyo Toad	Aquatic Habitat
Song Sparrow	Riparian Habitat
Blue Oak	Oak Regeneration
Engelmann Oak	Oak Regeneration
Valley Oak	Oak Regeneration
Bigcone Douglas-fir	Bigcone Douglas-fir Forest
Coulter Pine	Coulter Pine Forest
California Spotted Owl	Montane Conifer Forest
California Black Oak	Montane Conifer Forest
White Fir	Montane Conifer Forest

Goal 7.1: Natural Areas in an Urban Context

Retain natural areas as a core for a regional network while focusing the built environment into the minimum land area needed to support growing public needs.

Urbanization within and surrounding National Forest System lands threatens to alter the natural character of many areas. Suburban communities have been developed in more remote areas and urban areas have pushed up into the foothills in many places. This has led to an explosion in the amount of Wildland/Urban Interface areas that are at risk and in need of protection from wildland fire. The combination of increased development and the need to protect these developed areas from fire and other natural events (such as flooding) will put increasing pressure on National Forest managers to alter landscape character to accommodate these uses.

The desired condition is that the natural and cultural features of landscapes that provide their sense of place are intact. Landscapes possess a vegetation pattern and species mix that is natural in appearance and function. Built elements and landscape alterations complement landscape characteristics. Areas zoned as Back Country retain an undeveloped character with a low level of loss of acres in this condition.

Outcome Evaluation Question

Is the National Forest balancing the need for new infrastructure with restoration opportunities or land ownership adjustment to meet the desired conditions?

Land Ownership Complexity

The measure of land ownership complexity is through the boundary per area and the consolidation of National Forest System lands through land acquisition.

The complexity of internal and external boundaries is determined through calculating the miles of boundary per area of the National Forest System lands. A higher value indicates highly intermixed ownerships.

Table 10: National Forest System Boundary per Area

National Forest	Miles of exterior NFS Boundary	Miles/sq. mile	Miles of Private In-holding Boundary	Miles/sq. mile	Fifth year trend
Angeles	1,242	1.13	462	0.42	
Cleveland	1,299	1.44	1,058	1.17	
Los Padres	2,918	0.95	1,728	0.56	
San Bernardino	1,665	1.32	1,018	0.81	

The land adjustment program can reduce ownership complexity through consolidation of ownerships. The annual indicator is the acres of land acquired, which will reduce the complexity of ownership and reduce the boundary miles per area.

Authorized and Administrative Infrastructure

The amount of authorized and administrative infrastructure on National Forest System lands increases the complexity of management.

Table 11: Infrastructure on National Forest System lands

NFS and Authorized Infrastructure	Angeles	Cleveland	Los Padres	San Bernardino	Fifth year trend
Number of Facilities					
Number of Recreation Sites					
Miles of Roads					
Miles of Trails					
Miles of Authorized Utilities					

The five year trend will be measured by: taking the baseline number of authorized and administrative infrastructure from the 2005 Southern California Land Management Plans analysis and comparing the existing authorized and administrative infrastructure on the National Forests. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows an increase in the number of authorized and administrative infrastructure, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Inventoried Unauthorized Roads and Trails

The number of inventoried unauthorized roads and trails will be used as an additional indicator of the effectiveness of the National Forests' movement towards desired conditions. The concentration of recreation activities has increased the pressure on areas surrounding authorized infrastructure that has led to an increase in unauthorized roads and trails. The inventory of the unauthorized roads and trails will demonstrate the effectiveness of the National Forests at protecting resources.

Table 12: Miles of Unauthorized Roads and Trails

Indicator	Baseline Miles of Unauthorized Roads and Trails	Miles of Decommissioning	Miles added due to new information on presence	Fifth year trend
Miles of Unauthorized Roads and Trails				

The five year trend will be measured by: establishing a baseline for the miles of unauthorized roads and trails; subtracting the miles that have been decommissioned; and adding the miles of unauthorized roads and trails that have been reported. The five year trend will then inform the National Forests if they are moving toward desired conditions. If the five year trend shows an increase in the reported number of miles of unauthorized roads and trails, evaluation will need to determine if a trigger has been reached, thereby requiring an amendment or revision of the Southern California Land Management Plans.

Land Management Plan Evaluation and Reports

Evaluation is more than reporting facts and figures. Southern California Land Management Plans evaluation tells how decisions have been implemented, how effective the implementation has proved to be in accomplishing desired conditions, what was learned along the way, and how valid management assumptions are that led to Southern California Land Management Plans decisions.

The Forest Supervisor will maintain monitoring information, including Internet-based reports, for public reviews, and will evaluate such information on a periodic basis to determine, among other things, need for amendment or revision of the Southern California Land Management Plans. Formal evaluation and reporting will occur every five years, unless the Forest Supervisor deems it necessary that a shorter timeframe is warranted for some evaluations. The five-year review will provide a comprehensive evaluation of information in response to monitoring questions and regulatory review requirements.

Part 2 Monitoring

Monitoring identified in Part 2 of the Southern California Land Management Plans is focused on program implementation including inventory activities. The Angeles, Cleveland, Los Padres, and San Bernardino National Forests currently use performance indicators for tracking program accomplishments. The current system tracks performance measures linked to the National Strategic Plan and reports accomplishments through a national reporting system. Although the system will evolve over time as technology changes, **Table 13** represents the type of measures that are reported on an annual basis.

The Southern California Land Management Plans further define how inventory and reporting will be accomplished in Appendix B - Program Strategies and Tactics (Part 2, pages 121-122):

- **AM 1 - Land Management Plan Monitoring and Evaluation**
  Report the results of land and resource management plan monitoring and evaluation questions in the annual monitoring and evaluation report, including the actions taken to respond to new information learned through the adaptive management cycle.
- **AM 2 - Forest-wide Inventory**
  Develop and maintain the capacity (processes and systems) to provide, store, and analyze the scientific and technical information needed to address agency priorities.

Table 13: Part 2 Monitoring Summary

Indicators	Data Reliability	Measuring Frequency (Years)	Report Period (Years)
Acres of Terrestrial Habitat Enhanced	High	1	1
Miles of Aquatic Habitat Enhanced	High	1	1
Acres of Noxious Weeds Treated	High	1	1
Acres of Vegetation Improved (also see Hazardous Fuels Reduction)	High	1	1
Acres of Watershed Improved	High	1	1
Acres of Land Ownership Adjusted	High	1	1
Number of Heritage Resources Managed to Standard	Mod	1	1
Products Provided to Standard (Interpretation and Education)	Mod	1	1
Recreation Special Use Authorizations Administered to Standard	Mod	1	1
PAOT Days Managed to Standard (Developed Sites)	Mod	1	1
Recreation Days Managed to Standard (General Forest Areas)	Mod	1	1
Land Use Authorizations Administered to Standard	Mod	1	1
Number of Mineral Operations Administered	High	1	1
Number of Allotments Administered to Standard	High	1	1
Acres of Hazardous Fuel Reduction	High	1	1
Miles of Passenger Car Roads Maintained to Objective Maintenance Level	High	1	1
Miles of High Clearance & Back Country Roads Maintained to Objective Maintenance Level	High	1	1
Miles of Road Decommissioned	High	1	1

Additional monitoring questions specific to each National Forest are included in Part 2 of the Southern California Land Management Plans.

These data are reported in the annual monitoring and evaluation report as part of the National Forest's implementation monitoring efforts. Annual monitoring and evaluation reports will document when there is a need to change the Southern California Land Management Plans in response to declining trends in resource conditions.

Part 3 Monitoring

Implementation and effectiveness monitoring for Part 3 of the Southern California Land Management Plans are conducted at the project level. Part 3 of the Southern California Land Management Plans requires annual implementation monitoring of new projects and ongoing activities and sites. Project selection for monitoring will use the following protocol and will be reviewed and updated annually as needed.

As detailed in the Southern California Land Management Plans, the Program Emphasis and Objectives describe the activities and programs on the Forests. Activities were organized into six functional areas, which include all areas of business for which the National Forests are responsible. The functional areas collectively include 35 programs. National Forest management uses the results to clearly communicate program capability both internally and externally.

The six functional areas are:

- Management & Administration: National Forest leadership, management and administrative support activities, communications, external affairs, community outreach, planning, human resources, information technology, and financial management.
- Resource Management: Activities related to managing, preserving, and protecting the national forest's cultural and natural resources.
- Public Use & Enjoyment: Activities which provide visitors with safe, enjoyable and educational experiences while on the national forest and accommodate changing trends in visitor use and community participation and outreach.
- Facility Operations & Maintenance: Activities required to manage and operate the national forest's infrastructure (i.e., roads, facilities, trails, and structures).
- Commodity & Commercial Uses: Grazing management, forest special product development, and activities related to managing non-recreation special-uses such as national forest access, telecommunications sites, and utility corridors.
- Fire & Aviation Management: Wildland fire prevention through education, hazardous fuels reduction, and proactive preparation. This program also includes on-forest wildland fire suppression, and national or international wildland fire and emergency incident response.

The Program Emphasis and Objectives will be used to stratify the new projects and ongoing activities and sties by functional areas.

New Projects

All new projects implemented during the monitoring period, including projects that are implemented over multiple years, will be stratified into the appropriate functional areas. At a minimum, five new projects will be randomly selected for the monitoring period. Ideally, a project will be selected from each functional area, excluding Management & Administration because new projects do not fall in this functional area. If there are a large number of new projects implemented within a functional area over the monitoring period then a larger number of new projects should be selected.

Ongoing Activities and Sites

All ongoing activities and sites will be stratified into the appropriate functional areas. At a minimum, three ongoing activities and/or sites will be randomly selected for the monitoring period. Ideally, an ongoing activity and/or site will be selected from Public Use & Enjoyment, Facility Operations & Maintenance, and Commodity & Commercial Uses functional areas. As timing and funding permit, ongoing activities and/or sites will be randomly selected from each applicable sub-category in the three functional areas.

A review team will visit the selected projects and ongoing activities and sties to review the effectiveness of applying Southern California Land Management Plans design criteria. If problems in implementation are detected, or if the design criteria are determined to be ineffective, then the team will recommend corrective actions. Corrective actions may include amendments to the Southern California Land Management Plans if necessary to improve the effectiveness of the design criteria. Results of this monitoring will be reported annually in the Southern California Land Management Plans monitoring

and evaluation report. In addition, design criteria, including new laws or regulations referenced in Appendix A of the Southern California Land Management Plans will be updated.

Table 14: Part 3 Monitoring Summary

Indicators	Data Reliability	Measuring Frequency (Years)	Report Period (Years)
Design Criteria	Mod	1	1

It is anticipated that there will be between 8 and 20 new projects, ongoing activities and sites to monitor each year. Monitoring will be conducted through an interdisciplinary team examining documentation (NEPA or otherwise) for required mitigation measures including applicable Best Management Practices (BMPs), consultation requirements from U.S. Fish & Wildlife Service, U.S. National Marine Fisheries Service (NMFS), and the State Historic Preservation Office (SHPO), and applicable guidance from the Southern California Land Management Plans. The team will validate whether the projects were implemented consistent with Southern California Land Management Plans direction, how well objectives were met and how closely standards and project mitigation measures improved environmental conditions. This monitoring process will be tied to the Angeles, Cleveland, Los Padres, and San Bernardino National Forest Environmental Management System.

A comparison of expected results and actual results is needed to determine whether programs and projects are meeting Southern California Land Management Plans direction as part of the Adaptive Management Cycle. To determine if design criteria are being implemented, and if there are cause and effect relationships the following questions will be asked of each project or ongoing activity or site:

- Were LMP goals, desired conditions and standards incorporated into NEPA documents and/or any procedural plans (i.e. burn plans, allotment plans, facility master plan, etc.)?
- What were the mitigation measures or design criteria; and were they implemented as designed?
- What were the requirements from Biological Assessments/Evaluations, Heritage Evaluations, and Watershed Assessments; and were they implemented?
- Were legal and other requirements identified as applicable to the project or ongoing activity or site addressed?
- Were operational controls effective at protecting the environment as intended?

Additional Monitoring

- Review the results of all on-going activity sites identified in Biological Opinions with annual monitoring requirements
- Review the results of all ongoing activity sites identified in consultation with SHPO with annual monitoring requirements
- Review the results of selected Evaluation Process monitoring sites assigned to the Forest to validate whether BMPs are used and effective.
- Review the results of selected ML1 and 2 roads from Regional Roads monitoring procedure.