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San Bernardino National Forest

Land Management Plan Monitoring and Evaluation Report

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I am pleased to present the San Bernardino National Forest's annual Monitoring and Evaluation Report for your review. The purpose of the Monitoring and Evaluation Report is to determine the effectiveness of the Land Management Plan and whether changes are necessary to the Plan, or in program or project implementation.

The 2006 Record of Decision for the San Bernardino National Forest Land Management Plan identified the monitoring requirements as the cornerstone of our program emphasis for the future. We are now in the seventh year of monitoring conducted under the revised plan, and the Forest has learned a great deal from monitoring. The lessons we learn from monitoring help improve our programs and projects. We continue to find ways to increase efficiency and effectiveness of our monitoring and evaluation efforts. The fifth year monitoring report answered questions designed to evaluate progress toward the Forest's desired conditions, and will again in the tenth year monitoring report. It is my commitment to keep you informed of the monitoring results through this report. If you would like to participate in future monitoring, please contact the Forest.

Your continued interest in the San Bernardino National Forest Land Management Plan is just one way for you to stay current with activities on your public lands. Additional information can be found on our website at **http://www.fs.fed.us/r5/sanbernardino.**

Sincerely,

Jody Noiron 10/20/2014

JODY NOIRON Date
Forest Supervisor
San Bernardino National Forest

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Introduction

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. Monitoring requirements are found in all three parts of the 2006 San Bernardino National Forest Land Management Plan (LMP). Appendix C in Part 3 of the LMP summarizes the monitoring requirements identified in each part of the LMP.

Part 1 monitoring identifies outcome evaluation questions that will help evaluate movement towards the desired conditions over the long-term. The outcome evaluation questions are measured through indicators of each goal in which the San Bernardino National Forest (Forest) implements projects that move it toward desired conditions. The baseline conditions that will be used to answer these questions and evaluate progress over time were established within the LMP, or have been developed over time.

Part 2 monitoring focuses on program implementation including inventory through accomplishments tracked in Forest Service corporate databases. The annual accomplishment indicators determine if the program areas are implementing the objectives and strategies established in Part 2 of the LMP.

Part 3 monitoring is conducted at the project or activity level in order to evaluate the effectiveness and application of design criteria established in the LMP. The new projects implemented in fiscal year 2013 and ongoing activities and sites were randomly selected for monitoring based on functional area. Selected projects and ongoing activity or sites were then visited by an interdisciplinary monitoring team to review the application and effectiveness of the design criteria. If problems in implementation were detected or if design criteria were determined to be ineffective, the team recommended possible corrective actions. All recommendations are deliberative in nature and do not constitute a management requirement nor a commitment of funds. LMP monitoring was combined with Best Management Practice (BMP) monitoring when circumstances allowed. The San Bernardino National Forest Leadership Team (FLT) participated in monitoring on the San Jacinto Ranger District for one day. The FLT participates in LMP Part 3 monitoring and evaluation each year by attending a fieldtrip to the projects, activities, or sites on a Ranger District, which is rotated each year.

The Fiscal Year (FY) 2013 LMP Monitoring and Evaluation Report documents the evaluation of selected projects and programs where activities occurred during October 1, 2012 through September 30, 2013. The primary purpose of this evaluation is to determine the effectiveness of the LMP and whether changes in the LMP or in project or program implementation are necessary.

Part 1 Monitoring

Monitoring and evaluation provide knowledge and information to keep the LMP viable. Appropriate selection of indicators, and monitoring and evaluation of key results helps the Forest Service determine if the desired conditions identified in the LMP 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 LMP 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 LMP 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 Forest 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.

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
1.2.1	Restoration of Forest Health in Fire Regime I	Is the National Forest making progress toward increasing the percentage of vegetation types that naturally occur in Fire Regime 1 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
1.2.4	Restoration of Forest Health for Resilience	Has the Forest been successful at reducing mortality risk?	Mortality Risk Assessment	High	5	5
2.1	Invasive Species	Are the Forest's reported occurrences of invasive plants/animals showing a stable or decreasing trend?	Acres of treatments in reported occurrences	Mod	1	5

Goal	Activity, Practice Or Effect To Be Measured	Monitoring Question	Indicators	Data Reliability	Measuring Frequency (Years)	Report Period (Years)
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
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, Wilderness Satisfaction (NVUM)	Mod	5	5
4.1	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 Projects Proposed and Approved, Minerals and Energy Success at protecting Ecosystem Health, Utility Corridor Effectiveness	Mod	1	5
4.2	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

The five year trends were measured and reported in the fiscal year 2010 San Bernardino National Forest Land Management Plan Monitoring and Evaluation Report.

Part 2 Monitoring

Monitoring identified in Part 2 of the LMP is focused on program implementation including inventory activities. The Forest currently uses 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.

Table 2: Part 2 Monitoring Summary

Indicators	FY 2013 Level
Acres of Terrestrial Habitat Enhanced	4,390
Miles of Aquatic Habitat Enhanced	5
Acres of Noxious Weeds Treated	57
Acres of Forest Vegetation Established or Improved	0
Acres of Watershed Improved	1,804
Acres of Land Ownership Adjusted	1,145
Number of Heritage Resources Managed to Standard	1
Presence of a Heritage Program Plan	1 draft
Acres of Section 110 Inventory of NFS lands	240
Evaluations of National Register Eligibility	0
Heritage Priority Assessments	0
Cultural Resource Assets Stewarded	4
Heritage Public or Research Opportunities Provided	5
Heritage Volunteer Hours Contributed	1,161
Products Provided to Standard (Interpretation and Education)	
Recreation Special Use Authorizations Administered to Standard	713
PAOT Days Managed to Standard (Developed Sites)	547,691
Recreation Days Managed to Standard (General Forest Areas)	
Land Use Authorizations Administered to Standard	264
Number of Mineral Operations Administered to Standard	5
Acres of Allotments Administered to Standard	16,700
Acres of Hazardous Fuel Reduction	2,662
Miles of Passenger Car Roads Maintained to Objective Maintenance Level	110
Miles of High Clearance & Back Country Roads Maintained to Objective Maintenance Level	50
Miles of Road Decommissioned	20
Miles of Trail Operated and Maintained to Standard	198

Carbonate Endemic Plant Habitat Management

Outcome Evaluation Question

Is habitat being conserved through implementation of the Carbonate Habitat Management Strategy?

Reference Values

The following actions from the Carbonate Habitat Management Strategy (CHMS) Part IV (Administration) were taken during fiscal year 2013.

13(a)(iii): The Habitat Reserve was managed for conservation of carbonate plants and consistent public uses, as provided under section 9(f) of the CHMS. This management included use, maintenance and

patrol of NFS roads, maintenance of fencing and signage, and administration of special use authorizations.

13(b)(i) and (ii): The habitat and credit registry were maintained and updated in the Mountaintop GIS during fiscal year 2013. These data were used to answer multiple queries from Mitsubishi, Specialty Minerals Inc., OMYA and the Cushenbury Mine Trust with regard to their ongoing activities under the CHMS, as well as new proposals.

Conclusions
Habitat is being conserved through implementation of the Carbonate Habitat Management Strategy. Management activities associated with carbonate habitat during fiscal year 2013 made limited gains toward the desired conditions of protecting the habitat reserve, avoiding destruction of critical habitat, recovering listed species, and restoring carbonate habitat. The main factors limiting substantial gains in these areas was available funding.

Recommendations
- Continue ongoing work towards the LMP recommended establishment of the Blackhawk Research Natural Area.
- Work on taking title to Mitsubishi Cement Co. 17P via donation.
- Work on finalizing mineral withdrawal to establish initial habitat reserve and implement mitigation measures for Omya and Mitsubishi.

Pebble Plain Plant Habitat Management

Outcome Evaluation Questions
Is habitat being conserved through implementation of conservation strategies?

Are resource conditions indicating a stable or upward trend toward meeting desired conditions?

Reference Values
The following actions from the Pebble Plain Habitat Management Guide were taken during fiscal year 2013.

D-1 (5.): Coordination continued with Southern California Edison and Bear Valley Electric Service to avoid and minimize impacts associated with operation and maintenance of their electrical transmission lines through pebble plain habitat.

D-1 (6.): Patrols continued to monitor sensitive areas, record impacts, and maintain fences, signs and gates. Barbed wire continued to be replaced with smooth wire. Additional smooth wire fencing and signage was constructed in strategic locations.

D-1 (9.): The Forest Minerals Officer, in coordination with the District Botanist, continued to manage mining-related activities in and around pebble plain habitat. The strategy is to work with claimholders to prepare Notices of Intent that avoid impacts to pebble plain habitat by design.

D-1 (12.): The effort to identify, close and restore unclassified roads in pebble plain habitat was folded into the OHV Route Designation Project. A final decision on this action was rendered in February 2009 and implementation is ongoing.

Conclusions

Habitat is being conserved through implementation of conservation strategies, and resource conditions indicate a stable or upward trend toward meeting desired conditions.

Management activities associated with pebble plains during fiscal year 2013 made limited gains toward the desired conditions of conserving habitat, minimizing incompatible uses, restoring habitat, and recovery of listed species. The main factor limiting substantial gains in these areas was available funding. With continued decline in budget and staffing, movement toward desired conditions is becoming increasingly difficult.

Recommendations

- Continue ongoing work towards the LMP recommended establishment of the Arrastre and Wildhorse Research Natural Areas.
- Look for additional opportunities to improve pebble plain habitat through the integration of functional programs and through partnerships.
- Repair and expand resource fencing and signage in high use areas. Continue to patrol these areas to monitor effectives of protection measures and to detect additional protections needed.

Biological Resource Condition

In fiscal year 2013 the Forest reported to U.S. Fish & Wildlife Service (FWS) 284 monitoring items from roughly 15 different biological opinions (BO) for 15 threatened and endangered (T&E) wildlife species and 21 T&E plant species:

- Grazing BO – 41 items covering both San Jacinto and Mountaintop Districts; some overlap with Peninsular Bighorn sheep BO, Riparian BO, and LMP BO; also includes measures for Quino checkerspot butterfly and southwestern willow flycatcher
- Plants BOs – 93 items covering mainly Mountaintop District Carbonate/Pebble Plain/Meadows plants
- LMP BO – 115 items forest wide; many overlap with other BOs
- Riparian BO – 80 items forest wide; overlap with LMP BO; with 8 measures for Mountain Yellow-Legged Frog
- Peninsular Bighorn sheep - 6 items all on the San Jacinto District

Items range from doing surveys for species, closures for Mountain Yellow-Legged Frog, installing protective structures and monitoring the effectiveness of those structures, developing and following guidelines/mitigations, etc. Some items may overlap with others; for instance the LMP BO may have items that also are covered by the Carbonate/Pebble Plain/Meadows BOs or by the Riparian species BO. Some items are specific to individual species, such as peninsular bighorn sheep or Quino checkerspot butterfly, while other items may be specific to a group – riparian, plants, etc. Some items are simply on-going and are monitored through other activities, while many are related to individuals or a site specific item, such as Shay Creek and the unarmored threespine stickleback. Some items deal with coordination with groups, agencies, etc.

A spreadsheet is sent annually to the FWS with each of the items and how it was accomplished.

Off-Highway Vehicle (OHV) Program Monitoring

There are six methods of OHV program monitoring. Each program is described separately with conclusions and recommendations for all compiled at the end of this section.

1) OHV Trail Soil Monitoring

Monitoring

During fiscal year 2013, Forest-wide trail condition surveys were conducted on all designated OHV trails (24-50") to assess soil retention and soil loss. During this time, it was determined that all trails were retaining soils at sustainable amounts.

OHV trail maintenance was conducted using a small bulldozer, a front end loader and/or hand tools to remove rock and debris, grade trail tread, increase height of rolling dips, and to clean out over side drains. Culverts and drains were armed with native rock. To reduce sedimentation and dissipate flow, the 2E43 Hixon and the 2W01 Trail crossings were hardened using 4 tons of rock. We also purchased 40 and installed 25 Big and Little Macks along trails to assist with drainage and reduce sedimentation in streams. Additional Best Management Practices (BMPs) were utilized to create soil catch basins in rolling dip lead outs. This allowed the dozer operator to recapture sediment and use it in the trail tread. The combination of all actions led to stabilization of soils on OHV routes.

Annual OHV trail photo monitoring was also conducted at 5 locations.

2) Habitat Management Plan (HMP) Monitoring

Monitoring

Habitat protection monitoring conducted under the Habitat Management Plan (HMP) is funded in partnership with the State of California Off Highway Motor Vehicle Recreation Division (OHMVRD) in the Forests' Ground Operations grant. HMP monitoring was conducted by Forest field staff four times a year using maps and checklists along green sticker routes that intersect with threatened, endangered and sensitive wildlife and plant habitat. If effects to habitat are noted, monitors recommend and schedule actions to repair fences and signing, rake out tire tracks, or initiate a more intensive treatment.

Under the FY13 HMP, 57 locations of sensitive plant and wildlife habitat that intersect OHV routes were monitored except when access was precluded due to snow or bald eagle closure areas. Monitoring encompassed 11 trails and 26 routes and included 2 trail crossings hardened with rock.

The success criteria and management objectives were achieved at 20 sites (no off trail travel occurred within sensitive habitat). Two trail crossings at streams hardened with rock in the spring of 2013 resulted in meeting the objective of preventing pool formation. Unauthorized OHV use occurred at 37 of the 57 HMP sites. In addition to unauthorized OHV use, 6 of the sites experienced sign vandalism and 22 sites had downed or cut fence. A variety of trash was noted along various HMP sites including piles of cinder blocks, a mattress and other large furniture and glass and aluminum alcohol containers. Five sites had target shooting activity/debris. Unlawful wood cutting was also observed. These non-OHV related unauthorized activities affect HMP sites and the fences that protect them.

Actions taken immediately such as repairing fence and signing and raking out tire tracks upon discovery were methods used to successfully protect some sites where unauthorized use occurred. Unauthorized

trails were disguised at 50 locations among 37 breached sites with horizontal slashing and/or raking/sweeping of tire tracks. Additionally, over 5 pounds of native seed was dispersed onto the slashed sites to provide a vegetative barrier to off route use.

Although the monitoring checklist did provide immediate short term solutions to some of these unauthorized uses, the Forest recognized the need to increase on the ground patrols to ensure riders remained on routes. Funds requested in the prior year grant were used to hire an additional patrol on the MTRD in FY13. Additional monitoring funds were requested and received in the 2013/2014 grant cycle; those patrols were hired to begin work in FY14.

Weekly conference calls between Forest OHV and OHV law enforcement staff were successful in focusing efforts to problem locations. This coordination also helped distinguish non-OHV related offenses from strictly OHV offenses. The Forest was also successful recruiting additional HMP volunteers to monitor and maintain sites. Having a strong USFS and volunteer presence appears to be the most effective method to protect habitats along green sticker routes.

OHV grant funds were utilized to purchase pipe and cable fence supplies for installation along green sticker routes to replace t-post fence that has been stolen for salvage in recent years. Installation of the stronger pipe and cable fencing is expected to provide a higher level of habitat protection. It will also allow OHV trail monitors to cover more area along green sticker routes and spend much less time repairing and replacing fence lines.

The Forest continued work on 2 projects identified during prior HMP monitoring as needing intensive restoration. The Coxey Restoration Project was completed in September 2014 to protect 2,621 acres of habitat from unauthorized trail creation and use. A NEPA analysis to identify methods to restore unauthorized routes within the Deep Creek Inventoried Roadless Area is completed and the Decision Memo was signed on September 29, 2014.

3.) Restoration Site Monitoring and Maintenance

Monitoring

In FY13, the SBNF developed a new Forest-wide Restoration Site Monitoring and Maintenance Program in partnership with the Southern California Mountains Foundation (SCMF). The objective was to establish protocol to manage the large number of disturbed sites restored over the last 2 decades. The project was funded with state OHV grants, USFS appropriated watershed and wildlife funds and in kind contributions from the SCMF. Several months of ecologist staff time was acquired from the Stanislaus National Forest to begin this effort. USFS staff entered 995 restoration sites into a GIS with a database of restoration history. Maps books of restoration sites with cross reference to project name and GPS coordinates were created for site monitoring. A monitoring and maintenance protocol that included updated forms, photo monitoring methods, GPS instructions and documentation methods for the SCMF OHV volunteers and USFS restoration staff was then completed. As a result USFS and SCMF staff ground-truthed 995 sites. Of these 260 were unable to locate, 55 sites changed status to full recovery and 680 sites were retained and maintained. The USFS and SCMF will continue this Forest-wide Monitoring and Maintenance protocol for 2 additional years with current funding.

4.) Adopt-a-Trail Program Road and Trail Monitoring

Monitoring

The San Bernardino National Forest Adopt-A- Trail Volunteers contributed 19,009 hours conducting Forest-wide OHV trail and road maintenance with a 100% accident free safety record during fiscal year

13. Of these, 13,130 hours were performed along green sticker routes. Another additional 5,879 hours of road and trail maintenance were performed on other 4 wheel drive roads.
Members of the motorized Adopt-a-Trail (AAT) Program maintained over 225 miles of forest roads and trails. The AAT Program had over 52 active clubs and an estimated 4,000 volunteers that conducted monitoring on three Ranger Districts; Mountain Top, Front Country and San Jacinto. In addition, some volunteers operated our bulldozer (Sweco), front loader (Kubota), backhoes, rock rakes, chainsaws, ATV's and motorcycles.

The Adopt-a-Trail clubs monitored thousands of acres of NFS lands. Every adopted road and trail had an annual written road/trail maintenance plan that identified specific maintenance and monitoring requirements. Maintenance included road grading, brushing, culvert and drain clearance, off road restoration, maintenance of signs, and facilities. The maintenance plans include monitoring points such as; fence lines, barricades for sensitive habitats, hiking trail interfaces (unauthorized use), private property and wilderness trespass and stream crossing monitoring. OHV employees and OHV volunteers repair any breach of barricades, fence lines, etc. These breach points become future monitoring points for OHV patrols and OHV projects. If an area has been illegally breached by motor vehicles multiple times, analysis determines what methodology will be employed to deter any future damage to the area. Typically, signs are posted, law enforcement increased and any barricades are bolstered until the unauthorized motorized use stops occurring.

5) SCMF-OHV Volunteer Program Monitoring

Monitoring

In FY13, the Southern California Mountains Foundation (SCMF)-OHV Volunteer Program had 200 active members conducting public education and monitoring on all three Ranger Districts: Mountaintop, Front Country and San Jacinto. Volunteer contributions resulted in 23,293 hours. These OHV Volunteers are skilled 4 x 4, ATV, ROV and motorcycle operators and provide the public one on one OHV education. OHV Volunteers provided written reports surmising their daily activities monitoring and patrolling the National Forest.

After completion of 100 hours of intense classroom and field training that includes program orientation, OHV rules and regulations, communications and vehicle certification, the SCMF OHV Volunteers are given the authority to patrol as OHV hosts. The volunteers make public contacts and monitor Forest use patterns. They also report forest fires, illegal campfires, traffic collisions and other incidents while providing service to our visiting public. While in the field, the OHV Volunteers are trained to monitor sensitive areas such as meadows, wilderness areas, urban interface (excessive sound and trespass), streams, cultural sites and rare plant/wildlife habitats for unauthorized motorized use.

The OHV Volunteers are a vital Forest resource, having the expertise to reach the back country of the National Forest to perform the duties as described.

6) Forest Travel Management Monitoring

Monitoring

Monitoring occurs in conjunction with implementation of the Forest Travel Management decision. All Forest Roads and Trails that were affected by decommissioning and/or restoration efforts are monitored. If motorized vehicles have breached a site, the OHV Employee, Adopt-a-Trail Volunteer or SCMF OHV Volunteer will repair the breach immediately. If the breach requires equipment, supplies or a work party, the Forest Liaison schedules a project to repair the breached site. As with other monitoring programs, work parties are scheduled when intensive treatments are needed.

Conclusions for Soil Monitoring, HMP Monitoring, Restoration Site Monitoring and Maintenance, Adopt-A-Trail, SCMF OHV Monitoring, and Travel Management Monitoring Programs

Off-Highway vehicle use on designated routes is consistent with Forest Goal 5.2 to provide for public use and resource protection. Active management for OHV use is also consistent with this goal and Strategy Law 1 to utilize cooperative agreements with local law enforcement agencies, and supplement field personnel and provide additional law enforcement support primarily on high use weekends or holidays when visitor use is highest. OHV management is a program emphasis in several of the Places across the Forest. The LMP prospectus for trends and expectations for Trails states that the program will emphasize improving the NFS OHV trails and roads by designating OHV road and trail routes and effectively managing inappropriate use. The desired condition for OHV use is for the use to safely occur on designated routes only.

Soil, Habitat Protection, restoration site, road and trail, educational and travel management monitoring are conducted and actively supported by OHV and resource staff, and Adopt-A-Trail and SCMF OHV Volunteers. Mitigation of unauthorized OHV use to protect natural resources and wildlife habitats has been successful in many locations however additional patrol staff is needed to keep riders on designated routes. In areas where the Forest has a managed presence, unauthorized use can be reduced. The contribution of volunteers is key to the success of protecting sensitive habitats, maintaining roads and trails, and providing education and safety to the public. The monitoring programs have the ability to move the Forest toward the LMP desired condition for OHV management.

The 2012/2013 State of California Off Highway Motor Vehicle Recreation Division grant proposals on the Forest included requests to meet the needs described above in Ground Operations and Law Enforcement. A total of $572,747 was approved. Use of these funds began in FY14.

Recommendations for Soil Monitoring, HMP, Restoration Site Monitoring, Adopt-A-Trail, and SCMF OHV Monitoring Programs

- Conduct Trail Condition Assessments and complete annual OHV trail maintenance within specified timelines. Continue to monitor soil conditions using the photo monitoring protocol in the 2014 Ground Operations Soil Conservation Plan.
- To comply with LMP Standard 35, for identified desired conditions for managed motorized recreation, watershed management and sustainable biological resource conditions, our staff will continue to coordinate the soil, HMP, site restoration monitoring, Site Restoration Monitoring, Adopt-a-Trail Program, SCMF OHV Volunteer programs.
- To ensure all HMP sites are monitored four times a year as required, conduct monitoring in November, February, May, and August.
- Continue the Travel Management monitoring as scheduled.
- Continue to request additional patrol and law enforcement staff in future OHV grants as needed.
- Continue to support, educate and supervise OHV Volunteer Programs and coordinate efforts of all field going patrols including law enforcement personnel.

Heritage Program Monitoring

Monitoring

Until 2011, heritage program monitoring on the SBNF consisted of two types of activity: monitoring during project implementation to ensure that cultural resources are avoided when this type of standard protection measure is indicated in the clearance memo; and conducting condition assessments on 20% of the Forest's Priority Heritage Assets each year. This second type of monitoring "Heritage Assets Managed to Standard" formed the unique performance indicator for tracking heritage program accomplishments. In FY 2012 and 2013, a new Heritage Program management scoring system was implemented and the HRTG-MGD-STD assets measure was dropped in FY 2012. Seven component measures provide a view of progress toward this outcome with a target of 1 "Heritage Program Managed to Standard" per forest. The following instruction was provided to National Forest:

- A Heritage Program managed to standard represents the combined goals of social, environmental, and economic sustainability in the FS Recreation Strategy and Heritage Program responsibilities to protect historic properties, share their values with the public, and contribute information and perspectives to land management. A unit will be counted as one Heritage Program Managed to Standard when the cumulative total of seven heritage stewardship indicators (10 points each) reaches a minimal score of 45 points. The seven indicators reflect the health and performance of FS unit programs in meeting manual direction to preserve America's heritage through responsible stewardship activities that recognize, protect, enhance, and use cultural resources for the greatest public benefit. This measure is calculated in NRM and reported out as one for each Forest meeting the minimal passing score. Targets will be assigned as number of Forests with passing scores.

- The Heritage Program Score represents the overall well-being of the agency's Heritage programs on national and regional scales. The score is based on 7 indicators: 1. Presence of a Heritage Program Plan; 2. Inventory of NFS lands; 3. Evaluation of National Register eligibility; 4. Priority Heritage Assets Condition assessments; 5. Cultural resource stewardship; 6. Opportunities for study and/or public use; and, 7. Volunteer hours. Each unit's score, based on the 7 heritage stewardship indicators – 10 points each, will support management decisions and investments. A cumulative score of 45 indicates a unit or program considered Managed to Standard. Regions will be assigned a total regional score to allocate to units. They will allocate target scores of 45 and above to units given a target to meet standard; 30-44 points to units expected to make progress toward meeting standard; and 15-29 points to units requiring active oversight.

Results:

In FY 2013, the SBNF Heritage program prepared a draft Heritage program plan; carried out 240 acres of Section 110 inventory; actively managed four Priority Heritage Assets, carried out one research project and four public programs; and completed 1161 hours of volunteer service. The SBNF Heritage Program achieved a score of 54 and a 1 for Heritage Program Managed to Standard. Monitoring as part of project implementation remains an important protection measure, but the consistency of its use following protection measures prescribed in clearance memos is measured as part of Phase III LMP monitoring.

Conclusions

The Heritage Program achieved much of the score needed to be a Heritage Program Managed to Standard through integrating targets with better funded program areas, following the Region 5 leadership intent. However, specific funding is needed to make targets in certain areas such as preparing management plans for sites that are eligible to be on the National Register of Historical Places or are otherwise important to the public.

Recommendations

- Adopt a Heritage Program Plan which seeks to integrate heritage targets with the work and targets of other program areas to increase the pace and scale of ecological restoration while fulfilling heritage targets.
- Integrate Tribal Relations work with other public outreach projects, Section 110 Survey Evaluations, and Stewardship.
- Carry out specific Heritage projects to prepare management plans and actively steward Priority Heritage assets.

Water Quality Monitoring

Best Management Practices Evaluation Program (BMPEP)

The Water Quality Management Handbook (2011) states that BMPs "will be used to control nonpoint source pollution related to all management actions with the potential to affect water quality on NFS lands" and that "BMPs are the practices that both the Federal and State water-quality regulatory agencies expect the Forest Service to implement to meet its obligation for complying with applicable water-quality laws and standards, and to maintain and improve water quality."

Forest Service obligations to the State Water Board Management Area Agreement include 1) correcting water quality problems on the Forest, 2) perpetually implementing the Best Management Practice (BMPs) and 3) monitoring and evaluating effectiveness of BMPs.

Implementation of Erosion Control Plans as required by R5 FSH 2509.22 Chapter 10, BMP 2.13, are being used for all ground disturbing projects in FY13. Stormwater Pollution Prevention Plans (SWPPPs) meet the same requirement and are being used on all engineering projects and third-party special use projects on the Forest. In addition, BMP checklists are prepared for all projects with the potential to adversely affect water quality even if an erosion control plan is not necessary. The checklists serve as the primary means for early detection of potential water quality problems and intended to allow for corrective actions to be taken prior to any significant rainfall or snowmelt throughout the duration of the project. The development of checklist forms and training of district personnel has been on an ongoing, informal basis. In 2014, BMP checklist forms will continue to be developed and revised as well as the ongoing and informal training of district staff. This increased tracking of erosion control monitoring allows for increased education of water quality needs to Forest personnel not directly trained in hydrologic processes.

Results

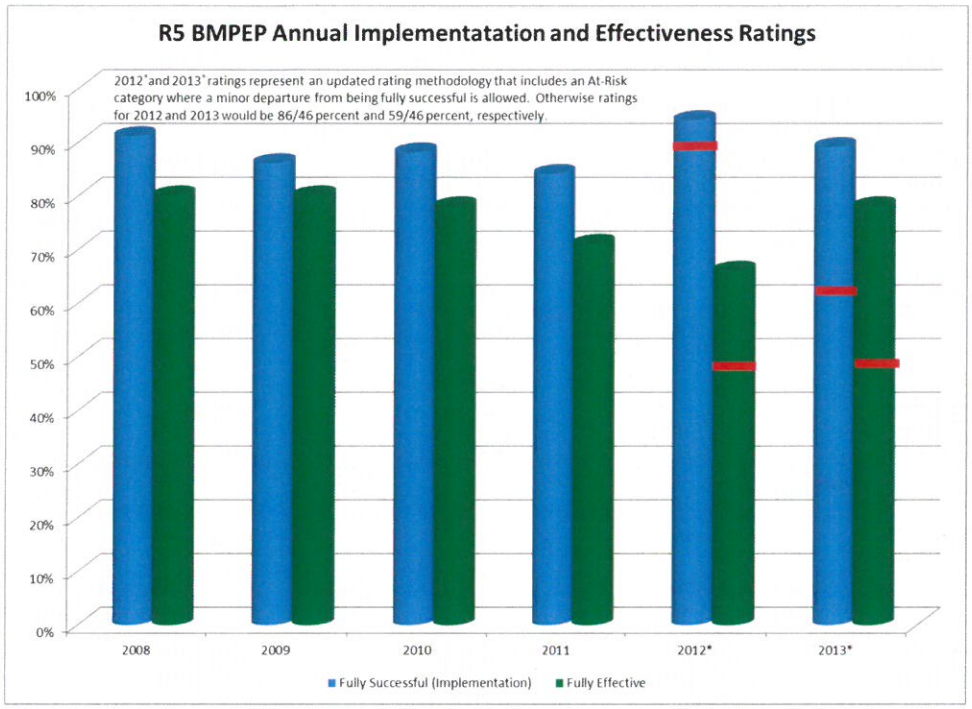
Effectiveness monitoring is completed through annual BMP monitoring of randomly selected, recently completed projects that have been through at least one winter precipitation season, concurrent monitoring in which sites are selected based on management interest in specific ongoing projects, and monitoring

required by Regional Water Quality Control Board (RWQCB) permits. Effectiveness monitoring is designed to evaluate how well the Forest and Region implement BMPs and how effectively the BMPs control water pollution from NFS lands. The summary and results of calendar year 2013 monitoring are located in the San Bernardino National Forest Best Management Practices Region 5 Evaluation Program Water Quality Monitoring Report 2013.

The Forest contributed to the restoration of deteriorated watershed lands by completing road and trail maintenance and fuel reduction projects including the Thomas Mountain Fuels Reduction Project, Bluff Mesa Hazardous Fuel Reduction Project, and the Arrastre Creek Stream Crossing project. Implementation of BMPs was accomplished by conducting BMP training and including BMPs in every project analysis that had hydrologic input. BMP monitoring was accomplished by identifying needs in the analysis process; implementation monitoring was completed by contracting officer representatives or other Forest Service personnel on the project site as the work was being completed. Project locations identified as failing BMPs in 2013 and previous years have been noted with corrective actions, if known. Until the corrective actions are implemented or the project location naturally recovers, these sites will receive monitoring to identify if ongoing legacy issues are present that need resolution. This list is variable from previous reports as areas are removed once they have been addressed and the BMP evaluation shows an effective solution.

Conclusions

In the past six years, implementation of BMPs averaged 82% fully successful on the BDF (FY08=91%, FY09=86%, FY10=88%, FY11=84%, FY12=86%, FY13=59%) and effectiveness protocols have averaged 67% fully successful on the BDF (FY08=80%, FY09=80%, FY10=78%, FY11=71%, FY12=46%, FY13=46%). A new scoring system was fully implemented in 2012 to include an At-Risk category, where some of the implementation and effectiveness questions could show a minor departure from fully successful, but major sediment delivery or major departures were not monitored. Including the At-Risk protocols with the fully successful results in 94% implemented and 66% effective for FY12 and 89% implemented and 78% effective for FY13 (Figure 1).



The 80% effectiveness rating for fiscal year 2008 was attributed predominantly to a legacy road problem where Deer Creek crosses Forest Service Road 1N09. The Forest Service acquired Legacy Roads dollars for fiscal year 2010 and completed the required analysis for funding the appropriate structure in this location.

The 80% effectiveness rating for fiscal year 2009 is not attributable to the fuels reduction program, the reforestation program, or the minerals program (100% implementation and effectiveness). The roads monitoring showed 75% implementation and 55% effectiveness. The recreation monitoring showed 71% implementation and 57% effectiveness.

The 78% effectiveness rating for fiscal year 2010 is not attributable to the fuels reduction program, the reforestation program, or the minerals program (100% implementation and effectiveness). The engineering monitoring showed 82% implementation and 59% effectiveness. The recreation monitoring showed 83% implementation and 83% effectiveness. The grazing allotment failure is being addressed in the current Allotment analysis in progress.

The 71% effectiveness rating for FY11 is not attributable to the fuels reduction program. The engineering monitoring showed 81% implementation and 48% effectiveness, primarily due to the heavy rains of December 2010 and the insufficient resources of the Forest to close roads to wet weather use. The recreation monitoring showed 67% implementation and 67% effectiveness, due to the location of two of the sites [one next to Big Bear Lake and one in a meadow] generating and delivering sediment to water bodies.

The 46% effectiveness rating (66% fully successful or At-risk) for FY12 contains an ongoing issue with a fuels project in the Green Valley area causing a continually growing gully with sediment delivery. This

problem area is being addressed as a part of the Lahontan Timber Waiver agreement required for fuels reduction projects in that area of the Forest.

The 46% effectiveness rating (78% fully successful or at-risk) for FY13 primarily reflects issues, e.g., sediment delivery to the stream channel, lack of ground cover, and improper refuse disposal associated with the Recreation subject area (0% fully successful). Recreation sites with failed effectiveness ratings included the North Shore campground, Tent Peg group campground, and Vivian Creek trailhead. Other subject areas (Figure 2) affecting the effectiveness rating included Road Management (43% fully successful) with drainage and rilling issues noted on 2N70Y and 3N49 and Timber Management (50% fully successful) with skid trail issues noted on the C&L fuel reduction project. Subject areas fully successful included Mining (Belo Horizonte mine), Range Management (Rouse allotment), and Vegetation Management (City Creek mastication).

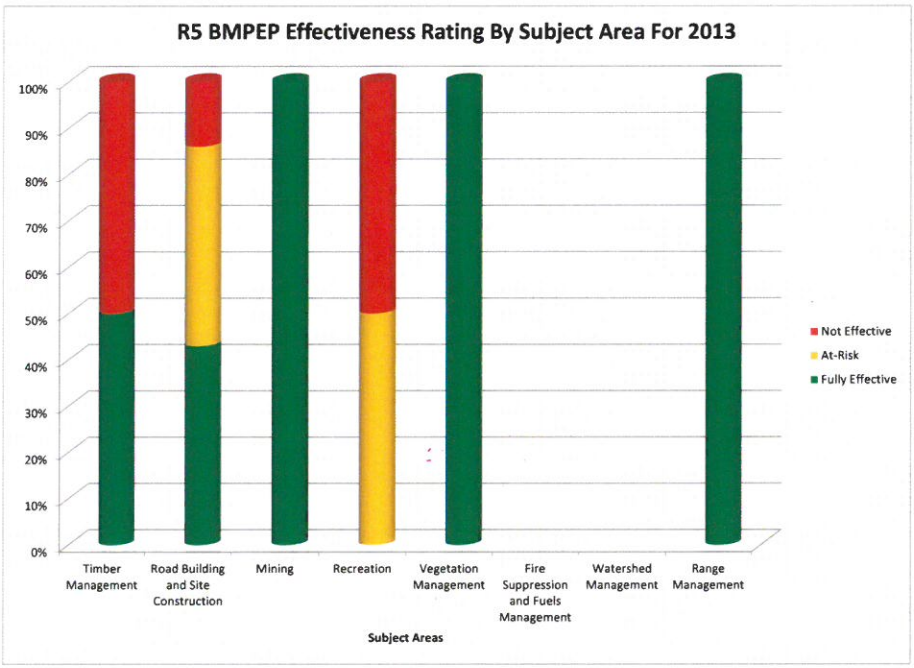


Figure 2. Effectiveness ratings for 2013 by each monitored subject area.

Awareness of the importance of BMP implementation and effectiveness continues with increased training and interaction with District personnel, increased coordination with Forest Plan monitoring, and continued regulatory interactions with the Santa Ana and Lahontan Regional Water Quality Control Boards.

Roads continue to show rilling, rutting, and insufficient drainage. Protocols for keeping sidecasting from being used and using appropriate rip rap are successes. In-channel construction BMPs are being used successfully and additional interactions between the engineering and resources groups as well as the U.S. Army Corps of Engineers and RWQCB for needed permits. The Forest does not have a written wet weather operation standardized plan, nor the infrastructure, staff, or design to prevent wet weather access to many areas. Location and design of dispersed recreation facilities continue to allow sedimentation to

leave the sites and enter drainages. Grazing allotments are being administered to allow for riparian areas to start returning to a stable condition. Minerals management is limited on the Forest, but the five authorized sites with Plans of Operation are in compliance with the majority of the permits.

The analysis shows that the BDF has a proven track record of success for fuels management, so those protocol targets should be reduced. Recreation and the use of Forest Service roads during wet periods are shown to be problematic in terms of water quality protection. More focused monitoring in these areas may help raise awareness to Forest leadership of the potential conflict between water quality protection and high recreation use near water and during wet periods. In addition, the new Water Quality Management Handbook requires a Wet Weather Management strategy to protect water quality by closing access routes during inclement soil moisture conditions. Implementation of this strategy is difficult with limited physical barriers (gates), and reduced staffing.

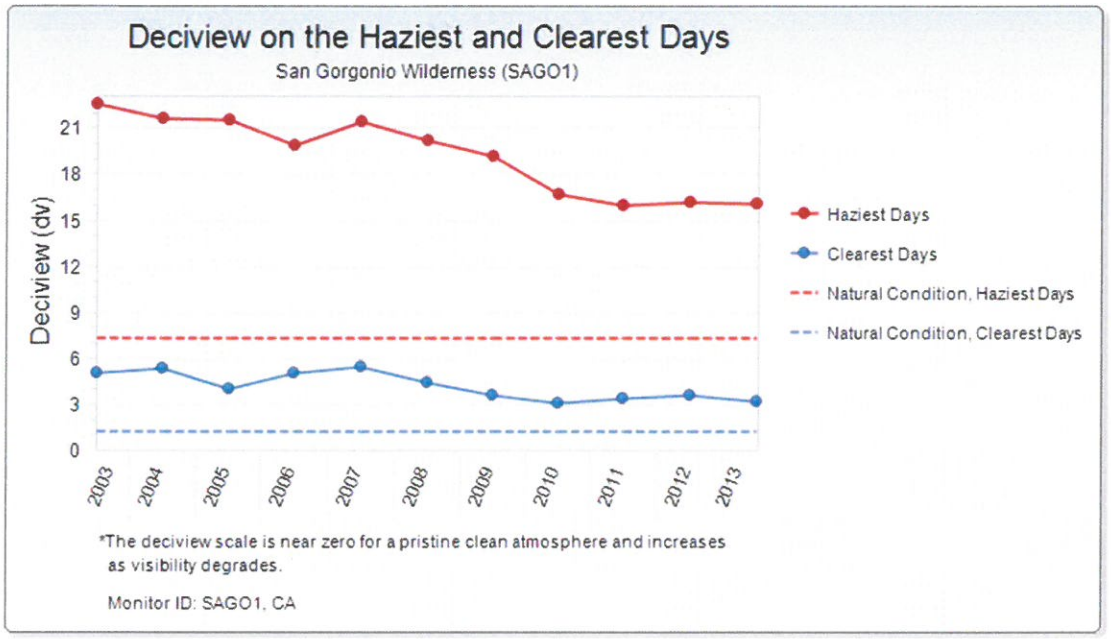
Recommendations

- Continue training and interaction with District staff throughout planning process for fuels treatments, road and engineering projects, and recreation/OHV management.
- Continue combining BMP and LMP monitoring field trips, as applicable to both protocols.
- Continue to promote concurrent monitoring with RWQCBs.
- Continue with BMP checklist development including staff training, implementation, data analysis and storage.
- Incorporate National BMP monitoring with Land Management Plan monitoring as appropriate.
- Develop methodology for distributing BMP monitoring results to appropriate Line and Staff Officers prior to outyear planning meetings.

Air Quality Monitoring

Under the IMPROVE program, a sampling station at the Converse Fire Station monitors the air quality near the San Gorgonio Wilderness Class 1 air shed. Monitoring results from the San Gorgonio Wilderness indicate visibility has been increasing. See the figure below for monitoring data. In addition, visibility for the Class 1 air shed of the San Jacinto Wilderness is monitored using a real-time web camera found at the following URL: http://www.fsvisimages.com/. The agency will continue to assess wilderness visibility under the Prevention of Significant Deterioration (PSD) program of the Clean Air Act.

Monitoring results from the San Gorgonio site. Red lines indicate the worst days while blue indicates the best days. A deciview (dv) reading of "0" indicates a clear view with no reduction in visibility.



More information may be found at the Federal Land Manager Environmental Database (FED) web site at the following URL: http://views.cira.colostate.edu/fed/

Part 3 Monitoring

Implementation and effectiveness monitoring for Part 3 of the LMP are conducted at the project level in order to evaluate the effectiveness and application of design criteria established in the LMP. Part 3 of the LMP requires annual implementation monitoring of new projects and ongoing activities and sites. As detailed in the LMP, 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 Forest is responsible. The functional areas collectively include 35 programs. National Forest management uses the results to clearly communicate program capability both internally and externally.

The Program Emphasis and Objectives' 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.

An interdisciplinary review team visited the selected projects and ongoing activities and sites to review the effectiveness of applying LMP design criteria. If problems in implementation were detected, or if the design criteria were determined to be ineffective, then the team recommended corrective actions. Corrective actions may include amendments to the LMP if necessary to improve the effectiveness of the design criteria.

Appendix C of Part 3 in the LMP identifies at least 10 percent of projects and on-going activities will be reviewed annually. The LMP should be amended to randomly select, for the monitoring period, at least five new projects. 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, as timing and funding permit, additional projects will be randomly selected from each applicable sub-category in the functional areas. 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.

New Projects

All new projects implemented during the monitoring period, including projects that are implemented over multiple years, were stratified into the appropriate functional areas. One project was selected from each functional area, excluding Management & Administration because new projects do not fall in this functional area.

Mountain Fire Suppression Repair

Monitoring

The field review of the Mountain Fire Suppression Repair project implementation occurred on July 8, 2014 on the San Jacinto Ranger District for new project monitoring under the Fire and Aviation Management functional area. The FLT participated in the review. The Mountain Fire burned 27,500 acres on lands managed by the San Bernardino National Forest, Bureau of Land Management, California State Parks, and private lands. It started on July 15, 2013 and was contained on July 30, 2013. A suppression repair plan was prepared in July 2013 that described and outlined appropriate suppression repair treatments within respective land use designations and jurisdictions. Only actions undertaken by fire suppression personnel tied to the incident were included in the suppression repair plan. Suppression repair occurred on 21 miles of dozer line, 51 miles of handline and 5.9 miles of roads within the burned area that required damage repair and restoration of drainage function. Suppression repair occurred throughout the end of July and August of fiscal year 2013. Repair consisted primarily of suppression line rehabilitation and road repair. Additionally, NFS roads 5S02, 5S05, 5S21, and 6S05 were closed in the fire area for a year.

The effectiveness of closures varied depending on the amount of time that personnel could enforce the closures and educate the public. Locks on gates used to block access were sometimes cut and/or opened with unaccounted for Forest Service keys. In addition, access to privately owned property within the fire area needed to be maintained which provided an additional opportunity for illegal access to the burn area by OHV use. The closure had moderate effectiveness as a result, especially if personnel were not available to patrol the fire area. Fortunately, in general, the fire area is not a high public use area.

Conclusions

The Mountain Fire Suppression Repair project implementation is consistent with Forest Goal 1.1 to recover from the high intensity wildland fires. This project implements LMP Strategy REC 2 – Sustainable Use and Environmental Design by managing visitor use within the limits of the identified capacities.

Recommendations

- Continue to rehabilitate areas following fire including suppression repairs and Burned Area Emergency Response efforts.
- Explore opportunities to engage partners and volunteers in the implementation of restoration activities.
- Seek to improve communication between the Incident Management Team and the Suppression Repair Team in order to improve effectiveness and efficiency of suppression repair treatments.
- Continue to coordinate suppression repair activities in an interdisciplinary manner to ensure resources are protected.

Marshall Peak Communication Site Construction

Monitoring

The field review of the Marshall Peak Communication Site Construction Project was held on August 6, 2014 on the Front Country Ranger District for new project monitoring under the Commodity and Commercial Uses functional area. The Environmental Assessment and Decision Notice and Finding of No Significant Impact was completed and signed on July 11, 2012. The communication site was constructed in fiscal year 2013. The purpose and need for the site was to provide wireless communication coverage along the State Highway 18 corridor between the communities of North San Bernardino and Crestline, California where a substantial gap in cellular coverage existed.

Design features included in the environmental analysis were largely implemented especially in regard to Watershed Best Management Practices, Scenery Management Design Features, road and site construction, and fencing and gate installation to deter unmanaged OHV use. However, some design criteria implementation was not monitored and either did not occur or it was uncertain whether they did occur. These include the following: anti-perching structures were not installed, forms that documented equipment cleaning in order to reduce risk of spread of invasives were not filled out and turned in to the botanist, site monitoring for invasive weed infestations did not occur in the first year after construction as specified, and it is not certain whether the Limited Operating Period for migratory bird breeding season (March 15 to August 15) was followed during construction.

Conclusions

Overall project implementation of the construction of the communication site was well done. However, greater operational controls during construction were needed in order to ensure design criteria

requirements are met. The Marshall Peak Communication site is consistent with Forest Goal 7.1 by focusing the build environment into the minimum land area needed to support public needs; and LMP Lands Strategy 2 – Non-Recreation Special Use Authorizations.

Recommendations

- Provide funding through cost recovery agreements for resource specialists to effectively monitor project implementation and design criteria compliance.

Southern California Gas Company Line 4000 Anomaly Dig

Monitoring

The office review of the Southern California Gas Company Line 4000 Anomaly Dig occurred on August 6, 2014 at the San Bernardino National Forest's Supervisor's Office. The project was implemented on the Front Country Ranger District for new project monitoring under the Commodities and Commercial Uses functional area. The anomaly dig to repair a 36" diameter high-pressure natural gas line came under the scope of 36 CFR 220.4(b) in order to protect life and property. An in-line inspection in March 2013 produced anomalies in approximately 80 feet of the pipeline. Inspection results indicated potential dents and metal loss which met the requirements under the California Public Utilities Commission and Department of Transportation/Pipeline Hazardous Materials Safety Administration regulations. If left unchecked, the pipeline posed a threat to life, property, and human safety in the vicinity of the anomaly. Coming so soon after the Pacific Gas and Electric Company's high-pressure natural gas pipeline explosion in San Bruno, California, the situation called for immediate action to repair the pipeline in order to avoid another potentially disastrous situation.

Resource specialists were consulted and asked for their input regarding any design criteria associated with the project. A heritage clearance memo was prepared. Their input was incorporated into stipulations that were part of two "Notice to Proceed" (NTP) letters issued to the Southern California Gas Company, the last amended NTP letter issued on August 2, 2013.

Conclusions

The project was successfully implemented in the late summer to early fall of 2013. Project implementation was effectively monitored and all Forest Service stipulations were met. The disturbed area was contoured back to its natural state and native vegetation is successfully regenerating on the site. The Forest Service response to the emergency was timely, efficient, and effective. This project implement LMP Goal 4.1a – Administer Minerals and Energy Resource Development while protecting ecosystem health and strategy Lands 2 – Non-Recreation Special Use Authorizations.

Recommendations

- Ensure that project decisions and resource specialist input are properly documented and filed.

Road #2N02 Legacy Arrastre Crossing Repair and Restoration

Monitoring

The field review of the Arrastre Creek Crossing Repair and Restoration Project on the September 16, 2014 occurred Facility Operations and Maintenance program functional area. The purpose and need for the project was to repair the road in order to meet water quality regulations, improve important wildlife habitat, and prevent future resource damage. The low-water crossing before the culvert and crossing installation consisted of native materials. Over time, vehicle traffic created a depression at the crossing in

which water from Arrastre Creek would pool during the wet season. Vehicles would continue to try to cross the pool thus creating an ever expanding depression and bigger and deeper pool to cross. When the pool got too deep to cross, vehicles would leave the road and create new pathways through riparian vegetation in order to cross the creek. The situation eventually became untenable from a water quality and wildlife habitat standpoint over time.

The culvert and crossing were successfully installed and vehicles now stay on the road prism and no longer create new paths through riparian vegetation in order to cross the stream. Riparian vegetation is responding accordingly and is in the process of reclaiming previously disturbed areas. All design criteria were met. Operational controls were also well implemented as a Forest Service road engineer was on-site nearly every day during construction. A biologist, botanist, and hydrologist also inspected the site during construction at key times to ensure respective design criteria were complied with.

Conclusions

The Arrastre Crossing Repair and Restoration Project meets Forest Goas 1/1 to improve watershed condition; Forest Goal 3.1 to provide for public use and natural resource protection; and Forest Goal 5.2 to improve riparian conditions. This project implements LMP Strategy WAT 1 – Watershed Function and Trans 1 – Transportation Management by promoting sustainable resource conditions for surface water flow. This project is consistent with LMP Standard 35 which restricts motorized and non-motorized vehicle travel to NFS roads and trails.

Recommendations

- This project was well designed and implemented and met the purpose and need for the project.

Skyline Trail Construction Project

Monitoring

The field review of the Skyline Trail Construction Project occurred on September 16, 2014 on the Mountaintop Ranger District as a new project under the Public Use and Enjoyment functional area. As constructed, the trail is a non-motorized, multi-use trail within the bounds of the Skyline Fuelbreak located along the ridge south of Big Bear Valley. The purpose and need for the trail was to separate motorized from non-motorized traffic on FS Rd #2N10 in order to increase safety for all users. FS Rd #2N10 is a popular, meandering, unpaved road that is frequently traveled by people driving vehicles, motorcycles, and bicycles. The combination of mixed use and relatively high number of users had resulted in several near collisions, as well as documented accidents between vehicles and non-motorized users. Because of the safety concerns, the project was highly supported by the local public. The trail was also constructed to decrease the use of non-system trails in the vicinity of the Skyline Fuelbreak and closed and restored intersecting non-system trails to their natural condition and that pose risks to Forest resources and/or hazards to Forest visitors.

The trail was constructed in FY 2013 by Urban Conservation crews and volunteers. Trail alignment and design was done by the Forest Service. The project also implemented operational controls well as Forest Service personnel were largely present during construction as were biology and botany monitors.

Conclusions

The Skyline Trail Construction Project is consistent with Forest Goal 3.1 by managing recreation in a natural setting. It also implements LMP Strategy Trans 1 – Transportation Management by constructing and maintaining the trail network to levels commensurate with area objectives, sustainable resource conditions, and the type and level of use.

Recommendations

- This project was well designed and implemented and met the purpose and need for the project.

Saddle Stewardship Contract Units 1-5

Monitoring

The field review of the Saddle Stewardship Contract Units 1-5 occurred on September 16, 2014 on the Mountaintop Ranger District as a new project under the Fire and Aviation Management functional area. Portions of Units 1 and 4 were reviewed in the field. The project was one of several fuel reduction projects that emanated from the South Big Bear Environmental Analysis and Decision Notice and FONSI signed on 9/10/2010. The purpose of the project was to reduce forest fuel loads and attain both horizontal and vertical fuel separation within the treatment units using various techniques of the fuel reduction, green tree thinning, and limited biomass removal from the units. The project was implemented in Fiscal Year 2013.

The project incorporated design criteria from the EA into the contract specifications including LOPs, applicable Best Management Practices, Forest disease prevention, noxious week prevention, wildlife protection and habitat enhancement standards, and cultural resource protection standards. Project implementation was well monitored by contract officer representatives, wildlife and botany monitors.

Conclusions

The Saddle Stewardship Contract Units 1-5 project is consistent with Forest Goal 1.1 because it improved the ability of communities to limit loss of life and property. This project implements LMP Strategy Fire 2 – Direct Community Protection by reducing the fire threat to communities using mechanical treatments and prescribed fire.

Recommendations

- This project was well designed and implemented and met the purpose and need for the project.

Ongoing Activities and Sites

One ongoing activity and site was selected from Public Use & Enjoyment, Facility Operations & Maintenance, and Commodity & Commercial Uses functional areas. The one road maintenance and two grazing allotments were monitored through the Fiscal Year 2012 San Bernardino National Forest Best Management Practices Region 5 Evaluation Program Water Quality Monitoring Report.

1N09 Mile Post 0.4 West Emergency Relief for Federally Owned (ERFO) Repair

Monitoring

The field review of the Forest Service Road #1N09 – Mile Post 0.4 West ERFO repair occurred on the Front Country Ranger District on August 6, 2014 as a new project under the Facility Operations & Maintenance management functional area. In December 2010 storms caused major flooding throughout the Forest that resulted in large debris flows, mass wasting of material, land sliding and deep erosion of roadways. Repairs were required at 21 locations on six different roadways on the Mountaintop and Front Country Ranger Districts. Road #1N09 – Mile Post 0.4 West was one of the repair sites where a culvert and a portion of the road were washed out. Repairs to the sites were approved to be funded by the ERFO Roads Program which provides emergency funds for serious natural disaster-related damage when it severely impacts the safety, capacity, or usefulness of federally owned roadways. As a result, the Federal Highway Administration (FHWA) was the lead agency for the NEPA analysis and project

implementation for the repairs. The Forest Service served as a cooperating agency for the project. However, the Forest Botanist prepared a biological assessment, evaluation, and weed risk assessment for plants; the Forest Wildlife Biologist prepared the biological assessment and evaluation for wildlife; and the Forest Archaeologist, prepared a screened exemption for each of the 21 sites. Project implementation monitoring was primarily conducted by FHWA inspectors for the entire project. The Forest Service was required to be physically present to monitor two of the project sites neither of which included this repair site. All other implementation monitoring was conducted by FHWA inspectors, documented in inspection reports, and turned into the FHWA Contracting Officer.

The repair at Road #1N09 – Mile Post 0.4 was successfully completed in 2012 and has withstood subsequent thunder and winter storm flows. Though no threatened and endangered plants or animals nor heritage sites were known to occur at the repair site, habitat and water quality at this location have improved as a result of repairing the culvert and road.

Conclusions

The Road #1N09 – Mile Post 0.4 repair project is consistent with Forest Goal 3.1 to provide for public use and natural resource protection and Forest Goal 5.1 to improve watershed condition through cooperative management. This project implements LMP strategies WAT1 – Watershed Function, and Trans1 – Transportation Management because it improves watershed function because it improves wildlife and plant habitat and watershed function through the improvement of Road #1N09.

Recommendations

- Continue to work collaboratively with other agencies in similar emergency situations in order to expedite repair of resource damage and infrastructure and provide for public access and safety.
- Any future recreation permits need to be consistent with the Forest Plan and should address any necessary improvements to the associated infrastructure that would be necessary to accommodate the increased use.

Dark Canyon Mountain Yellow-Legged Frog (MYLF) Biological Opinion (BO) Compliance Monitoring

The field review of the MYLF BO compliance area in Dark Canyon occurred on July 8, 2013 on the San Jacinto Ranger District as part of ongoing activity monitoring under the Resource Management functional area. The MYLF BO compliance area is located along the North Fork San Jacinto River and is immediately adjacent to Dark Canyon Campground. The MYLF was federally listed as an Endangered species by the U.S. Fish & Wildlife Service (USFWS) on July 2, 2002. The area was also designated as a Critical Biological Zone in the 2006 San Bernardino National Forest Plan. Though containing only 15 sites, the campground receives moderate use during the MYLF breeding season. Human disturbance in North Fork San Jacinto River, primarily emanating from the campground, had long been adversely impacting MYLF habitat and potentially contributing to the population's decline. The BO issued by the USFWS that accompanied the federally listing, required that the creek come under a seasonal closure and other requirements in order to protect the remaining MYLF population. The Forest Service's immediate response was to close Dark Canyon Campground until September in 2004 and allow time to implement BO requirements. These included the following:

- Install approximately 1500 linear feet of fencing between the campground and creek
- Install "No Parking" signs next to low-water bridge and other turnouts along the road leading to the campground eliminate parking and access opportunities to the river for recreationists.
- Install interpretive signage and develop informational brochures regarding the closure relative to MYLF management.
- Make contact with Forest visitors to communicate the reasons for the closure and the reasons for complying with it.
- Remove non-native fish from the MYLF habitat area in the North Fork San Jacinto River.

Conclusions

The results of effectively implementing BO requirements has resulted in the MYLF population in the area trending upward and successfully co-existing with recreation use. Riparian conditions have also visibly improved. MYLF populations are expanding into areas where non-native fish species have been removed. BO compliance is consistent with Goal 3.1 – Provide for Public Use and Resource Protection, Goal 5/2 – Improve Riparian Conditions, and Goal 6.2 – Provide ecological conditions to sustain viable populations of Native and desired non-native species.

Recommendations

- Continue to work collaboratively with USFWS, California Department of Fish and Game, U.S. Geological Service, the San Diego Zoological Society, and recreationists to ensure MYLF populations will continue trending upward.
- Continue to manage MYLF a Forest priority.
- Ensure that the Forest Order designates the correct management unit.

Dark Canyon Campground Operations

Monitoring

The review of Dark Canyon Campground operations and how they interface with MYLF BO compliance occurred on July 8, 2013 on the San Jacinto Ranger District as part of ongoing activity monitoring under the Public Use and Enjoyment management functional area. Being located immediately adjacent to the MYLF critical biological habitat zone located within North Fork San Jacinto River, campground and river use by recreationists was adversely impacting survival of MYLF. Several informal trails had been developed along the river where people would swim. Dams were built in the habitat area as well. These activities, i.e. human disturbance, in combination with fire/debris flows, predatory fish, drought, and disease eventually led to the federal listing of the MYLF as an endangered species in 2002 by the U.S. Fish & Wildlife Service. Campground and recreation activities of campground users would need to be alternatively managed if the campground was to continue to stay open during the MYLF breeding season from March 1st to October 31st of each year which is also the high-use season for camping in the campground.

In addition to the various BO requirements presented in the previous section, measures were taken within the campground itself to minimize impacts to MYLF. These include the following:

- Decommissioned four campsites adjacent to stream area
- Installed interpretive signage and developed informational brochures for facilities

- Increased creek closure monitoring by hiring a bio-technician and other Forest Service personnel during the summer season
- Constructed retaining walls in select campsites that were experiencing appreciable soil loss during storms. The retaining walls minimized soil washing into the river and degrading water quality and MYLF habitat
- Dark Canyon Campground host site was renovated and improved making it more attractive to obtain quality campground hosts. Campground hosts were in place from May through September providing environmental education, compliance, and maintenance/safety to campers.

Conclusions

Dark Canyon Campground operations are consistent with Forest Goal 3.1 – Provide for Public Use and Resource Protection and 5.2 – Improve Riparian Conditions. This effort also implements LMP strategy REC 2 – Sustainable Use and Environmental Design in that it implements adaptive mitigation for recreation uses in recreation sites whenever a conflict between uses or sensitive resources is detected.

Recommendations

- Continue proactive management of recreation users to ensure MYLF viability.
- Continue to make management activities that protect MYLF habitat and populations as well as providing recreation opportunities a Forest priority.

LMP Amendments

The LMP is a dynamic document that can be amended in response to:

- Errors and or discrepancies found during implementation;
- New information;
- Changes in physical conditions;
- New laws, regulations, or policies that affect National Forest management.

The amendments to date are listed in the table below. Supporting documents are kept on file in the LMP Tracking Notebook. We frequently learn about the need for amendments through monitoring.

Table 3: LMP Amendments

Amendment	Implementation Date	Type of Change
1.	October 24, 2005	Errata
2.	April 21, 2006	Reissuance of Record of Decision (ROD) due to technical error in the FEIS regarding omission of public comments on wildlife issues and the agency's responses in the printed and published materials. Began a new 90 day appeal period April 21, 2006 which ended July 20, 2006. The Plan went in effect October 31, 2005 and will remain in effect. The decision to select Alternative 4A did not change.
3.	April 2006	Errata- San Bernardino National Forest LMP – 1 page of errata specific to the Forest.
4.	September 2006	Errata- for Published Documents- southern California Forest Plans Revision. This is the final errata published for all 4 southern California forest plans. It is 31 pages and includes all prior errata. Available on website http://www.fs.fed.us/r5/scfpr/projects/lmp/errata
5.	September 8, 2006	Administrative Correction (36CFR 219.7). Correction to LMP Part 2, p.16. Table 487. Designated Utility Corridors-San Bernardino National Forest. Added Devers-Valley No. 1, a 1.8 mile 500Kv (1) utility corridor to table. This corridor occurs on the San Jacinto Ranger District and was inadvertently left out of the table during the plan revision. The entire Devers –Valley No. 1 correction is available on the Forest website.
6.	January 14, 2008	LMP Amendment. USDA FS Designation of Section 368 Energy Corridors on NFS Land in 10 Western States. Decision by Secretary of Agriculture to Amend Land Management Plans.
7.	January 11, 2010	LMP Plan Amendment. Designation of the Ranger Peak and Red Mountain Communication Sites.
8.	January 11, 2010	LMP Plan Amendment. Designation of the Lake Hemet Communication Site.
9.	September 20, 2011	LMP Plan Amendment. Exception for Ramona Hog Lake Road culvert to be designed to BIA's 25 year flood capacity.
10.	June 8, 2012	LMP Plan Amendment. Exception for 160 ft. tower at the Strawberry Peak Communication Site.
11.	July 11, 2012	LMP Plan Amendment. Designation of the Marshall Peak Communication Site.

LMP Updates

LMP Amendments (discussed above) change decisions made by the LMP. Consequently, they require environmental analysis under the National Environmental Policy Act (NEPA). From time to time other changes to the LMP are needed which are not intended to affect earlier decisions or Plan objectives. Examples of such changes include corrections; clarification of intent; changes to monitoring questions; and refinements of management area boundaries to match management direction with site-specific resource characteristics at the margin of the maps. We call these types of changes "updates." Since they do not change any Plan decision, they do not require NEPA analysis.

Updates to the San Bernardino Land Management Plan are described in the table below. The supporting document is on file in the LMP Tracking Notebook. There are no updates recommended as a result of this monitoring effort.

Table 4: LMP Updates

Update	Implementation Date	Type of Change
1.	May 31, 2006	Removal of Mill Creek Recreation Tract from the list of Recreation Residence Tracts in Part 2, p.17., Other Designations-Table 481.Recreation Residence Tracts. The Decision Memo was signed May 31, 2006; the Tract was conveyed on December 13, 2007.
2.	December 8, 2009	Removal of Middle Fork Recreation Tract from the list of Recreation Residence Tracts in Part 2, p. 17., Other Designations-Table 481. Recreation Residence Tracts. The Decision Notice was signed December 8, 2009.
3.	September 3, 2010	Incorporation of HR146 - Omnibus Public Land Management Act of 2009, which added to the existing Santa Rosa Wilderness and designated two new wildernesses, Cahuilla Mountain and South Fork San Jacinto, within the San Bernardino National Forest. The Act expanded the Santa Rosa and San Jacinto Mountains National Monument with the addition of the Santa Rosa Peak and Tahquitz Peak areas. The Act also designated portions of the North Fork San Jacinto River and Palm Canyon Creek as 'Wild', portions of the North Fork San Jacinto River and Fuller Mill Creek as 'Scenic', and portions of the North Fork San Jacinto River, Fuller Mill Creek, and Bautista Creek as 'Recreational' Rivers.

Table 5: LMP Monitoring and Trend Report Action Plan

Task and Responsible Official	Effective Date
The Forest Supervisor approves all of the recommendations in section V.	October 2014
The Forest 2013 LMP Monitoring and Evaluation Report will be discussed at a Forest Leadership Team (FLT) meeting.	October 2014
To ensure the recommendations of the on the ground and activity monitoring in section III are reviewed, the Forest Supervisor will inform project and program leaders who participated in the monitoring of the availability of the 2013 LMP Monitoring and Evaluation Report on the Forest website.	October 2014
To promote LMP consistency in future projects, the Forest Supervisor will ensure that the 2013 LMP Monitoring and Evaluation Report is available on the Forest website for all employees.	October 2014

Public Participation

In October 2014, the Fiscal Year 2013 San Bernardino National Forest Land Management Plan Monitoring and Evaluation Report will be made available to the public on the Forest website, or a printed version upon request.

List of Preparers

Jerry Sirski, Acting Forest Environmental Coordinator, was the primary investigator for this San Bernardino National Forest Land Management Plan Monitoring and Evaluation Report. The interdisciplinary team consisted of the following Forest line and staff:

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Appendix A

Table A 1: Selected Projects and Activities for LMP Monitoring and Evaluation on the San Bernardino National Forest

Unit	Place	Name	Project	Program	Ongoing Activity Site	Monitor LMP Consistency	Monitor Effectiveness	Documentation reviews, field reviews and/or comments
FCRD	Front Country	Marshall Peak Comm Site	X			X	X	Field Review 8/06/2013
FCRD	Front Country	Rd #1N09 – MP 0.4 West Road Repair			X	X	X	Field Review 8/06/2013
FCRD	Cajon	So. Cal Gas Co. Anomaly Dig	X			X	X	Field Review 8/06/2013
MTRD	Big Bear Back Country	Arrastre Creek Culvert Installation	X			X	X	Field Review 9/16/2013
MTRD	Big Bear	Skyline Trail Construction	X			X	X	Field Review 9/16/2013
MTRD	Big Bear	Saddle Stewardship Contract Units 1-5	X			X	X	Field Review 9/16/2013
SJRD	Garner Valley	Mountain Fire Suppression Repair Plan	X			X	X	Field Review 7/08/2013
SJRD	Idyllwild	Dark Canyon BO Compliance			X	X	X	Field Review 7/08/2013
SJRD	Idyllwild	Dark Canyon Campground BO Compliance/Campground Operations			X	X	X	Field Review 7/08/2013

FCRD = Front Country Ranger District, SJRD = San Jacinto Ranger District, MTRD = Mountaintop Ranger District, BMP = Also part of Calendar Year 2013 Best Management Practice Monitoring