United States
Department
of Agriculture

Forest Service
Pacific
Southwest
Region

October 2013

Angeles National Forest Fiscal Year 2012

Land Management Plan

Monitoring and Evaluation Report

October 2013

Dear Forest Stakeholders:

I am pleased to present the Angeles National Forest's Monitoring and Evaluation Report for activities and actions implemented in fiscal year 2012. Monitoring occurred during fiscal year 2012 (October 2011 through September 2012) while projects were being implemented, or after they were completed. The purpose of the Monitoring and Evaluation Report is to determine if plans, projects and activities are implemented as designed and in compliance with the Land Management Plan.

In April 2006, the revised Angeles National Forest Land Management Plan was approved. In the Record of Decision, monitoring is emphasized and identified as a key element in all programs to assure the achievement of desired conditions over time. This report summarizes monitoring efforts conducted in the sixth full year of implementing the revised plan

It is important to me to keep you informed of the results of our monitoring. This Monitoring and Evaluation Report will be posted on our Forest website at **http://www.fs.fed.us/r5/angeles/**. If you are interested in becoming involved in our planning process, please see our national website to review current projects and activities under evaluation (**http://www.fs.fed.us/sopa/**).

Sincerely,

Thomas A. Contreras
Forest Supervisor
Angeles National Forest

III. Land Management Plan Monitoring and Evaluation of Projects, Activities, and Programs

The LMP requires that ten percent of new projects or ongoing activity sites be monitored and reported on annually for each type of activity for review. Table 1 lists the fiscal year 2012 projects and activities selected for review.

Table 1. Angeles National Forest projects and activities selected for LMP monitoring and evaluation.

Ranger District *	Name	Project Type
All Districts	Tehachapi Renewable Transmission Project	Special Uses
Santa Clara Mojave Rivers	Southern California Edison Deteriorated Pole Replacement	Special Uses
San Gabriel River	Mt. Baldy Fuels Reduction	Vegetation / Fuels Management
Los Angeles River	Mt. Wilson Hazardous Fuels Reduction	Vegetation / Fuels Management
All Districts	Station Fire Reforestation	Reforestation
San Gabriel River	Annual Road Maintenance, Rincon Redbox (2N24) and Sunset (2N07)	Road Maintenance
Santa Clara Mojave Rivers	Mint Fire Burned Area Emergency Rehabilitation	Emergency Watershed Stabilization

Project Name: Tehachapi Renewable Transmission Project

Project Description and Monitoring: The Tehachapi Renewable Transmission Line is located in two designated utility corridors: The Rio Hondo-Vincent Corridor from Acton to Duarte, and the Vincent-Gould Corridor from Acton to La Canada. The project will remove two smaller voltage lines and construct, operate, and maintain 46 miles of larger ones in the same footprint. The project was approved in October 2010, but due to necessary permits from several regulatory agencies construction did not begin until November 2011 and will continue into mid-2015.

The project has been intensively monitored to ensure compliance with all applicable state and federal permits as well as mitigation described in the project's Environmental Impact Statement (EIS). A comprehensive construction plan was developed that referenced more detailed plans than required in the EIS. The primary responsibility for compliance monitoring is given to the project proponent, Southern California Edison. General oversight is provided by Forest Service staff on National Forest lands, with support from the California Public Utilities Commission (CPUC), the lead state agency. SCE provides detailed weekly summaries of monitoring including tracking of corrective actions.

Additional environmental compliance and permits were required, including (1) Clean Water Act Section 401 certification and filing of a Stormwater Pollution Prevention Plan from the Regional Water Quality Control

Board, (2) Clean Water Act Section 404 permits from US Army Corps of Engineers, (3) Endangered Species Act consultation with US Fish and Wildlife Service, (4) streambed alteration agreements from CA Department of Fish and Wildlife, (5) Certificate of Public Convenience and Necessity from the CPUC, and (6) consultation with the Federal Aviation Administration for airspace safety. Additional specific mitigation plans have been prepared for riparian areas, invasive weeds, traffic control, visual resources, hazardous materials, and erosion control. A habitat restoration plan is required but has not yet been finalized. The draft version was developed by a botanist without an interdisciplinary team.

This project also needed to be consistent with the ANF's Land Management Plan. Applicable LMP standards included S42, which requires provisions for raptor safety. The decision required adoption of recommendations of the Avian Powerline Interaction Committee, a group of professional biologists considered an authority on minimizing the risk of bird deaths from powerlines. Other standards which were incorporated were S47 for riparian area conservation, S9 and S10 for protection of scenic resources, and Place Specific Standard S1 for the Pacific Crest Trail were all incorporated into the project, with S47 and S9 requiring project specific amendments to the LMP.

Conclusions: The project contributed to achieving desired conditions in LMP Goal 4.1a and 4.1b, by ensuring implementation of all applicable permits and mitigation plans, and by intensively tracking monitoring and quickly taking corrective action to achieve compliance.

The project will enable SCE to meet the State's goals for increasing the use of renewable energy. The project was implemented as planned and in full compliance during the first year of construction. The size and complexity of the project required cooperation among many agencies. Communication protocols in the construction plan were followed. Allowing SCE to "self-police" operations is effective as long as the Forest Service provides oversight.

The designated scenic integrity classes of high and moderate are incompatible with the intended use of designated utility corridors. This project was the second of three powerline projects approved by the Angeles National Forest within 5 years; all 3 projects were in corridors designated by the LMP as suitable for utility lines, yet all 3 required amendment to the LMP for Standard S9 regarding Scenic Integrity Objectives (SIOs). The analysis in the project EIS did not adequately consider the context of existing utility corridors and transmission lines that have been on the forest for over 70 years. The visual analysis and assumptions are also inconsistent with the resolution of an appeal on the LMP, in which the Washington Office of the Forest Service determined that "SIO's are objectives, not standards."

Recommendations: Continue working with SCE and all other agencies to ensure a high level of compliance. Use an interdisciplinary team approach to review and finalize the habitat restoration plan, including a forester/silvicuturalist, a hydrologist or soils specialist, and a wildlife biologist. Amend the land use plan to either eliminate utility corridor designations, or to clarify that the SIO's are not standards as directed in the response to LMP appeal.

A staging area for powerline construction, with erosion control measures installed on a nearby road.

Project Name: Southern California Edison Deteriorated Pole Replacement – Titan Circuit

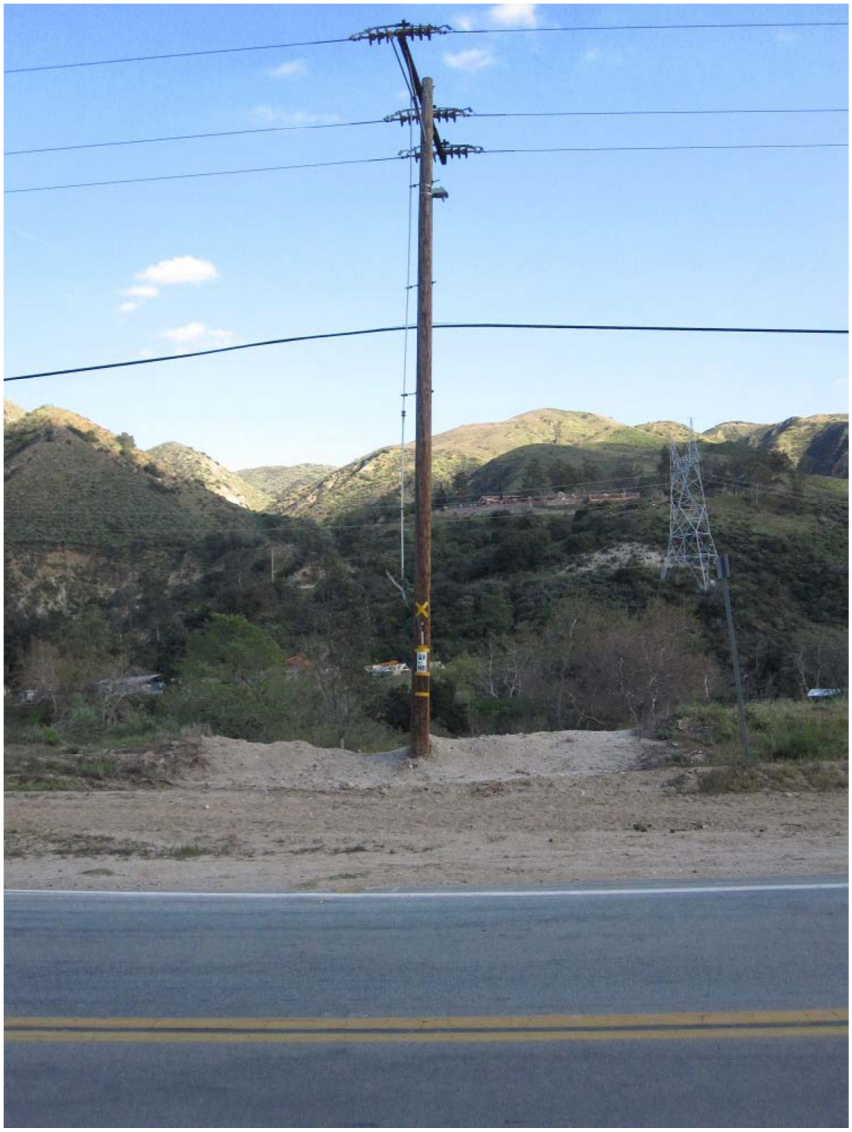
Project Description and Monitoring: Southern CA Edison holds a special use permit for electrical distribution lines across the forest. Most of them serve either private parcels, or public facilities owned by the Forest Service or permittees. The lines are supported primarily by wooden poles and all are less than 33 kiloVolts. Edison has an ongoing program of inspection and maintenance, focused on replacing wooden poles that are older than their recommended life or otherwise deteriorated. They submit requests to the forest for approval to remove individual poles as they are identified. If lines are staying in the same location and structures are replaced with the same size and dimensions as existing, the work is approved as maintenance of the existing facilities, and public notification, comment, or administrative review (appeal) is not required.

Replacement of two poles was approved by the District Ranger along the Titan electrical circuit near Big Rock Creek Road in the Sycamore Flats area. Pole replacements of this nature include Best Management Practices to limit impacts from soil erosion. These practices are selected after a rapid assessment of the project area to determine if there are any sensitive resources. No sensitive resources were noted in the vicinity of this project, and no LMP Standards from Part 3 were found applicable to the activity. Best management practices included, but were not limited to, washing of ground disturbing equipment to prevent the spread of weeds, restrictions on motorized equipment routes to protect water quality, and ensuring avoidance of sensitive plants prior to construction, and avoiding work during the bird nesting season.

Conclusions: The project was implemented in a timely manner, allowing SCE to maintain compliance with hazard abatement clauses in their permit. Processing requests as routine maintenance actions that do not

require public notification or opportunity to comment allows for more timely implementation, and a more immediate response to a potential health and safety concern. Best management practices were employed in the field and were effective in minimizing impacts.

Recommendations: Continue to look for ways to streamline and gain efficiencies in the review and processing of routine maintenance work, especially for potentially hazardous facilities such as electrical lines. Continue to apply best practices to all work in the field, regardless of the specific processes used to evaluate project proposals.



One of the newly installed poles along Big Rock Creek Road. Note the proximity to the existing highway.

Project Name: Mt. Baldy Hazardous Fuels Reduction – Year 4

Project Description and Monitoring: Mt. Baldy Village (population approximately 800) is comprised of private inholdings, Forest Service facilities, and multiple special use permit facilities for recreational purposes including summer cabin residences, convenience store, lodges and a ski resort. The Mt. Baldy

community was vulnerable to losing private facilities, recreation sites and high-valued conifer stands due to dry conditions and crowded vegetation in the area. There was a need to reduce the risk of a catastrophic wildfire, provide a safety zone for firefighters, attain desired ecological conditions, provide community protection and enhance fire suppression operations in the future. FY 2012 was the fourth year of implementation of this project. Activities included thinning, piling, and chipping over 14 acres on a ridge south of the Mt. Baldy Village community. The brush piles were burned in FY 2013.

Conclusions: Fuel loading was reduced on a strategically located ridge where fires have historically been stopped. Firefighters positioned on this ridge would be able to directly attack approaching fires due to the reduction in fuels resulting in decreased flame lengths. This project contributed to achieving desired conditions in LMP Goal 1.1, and 1.2 by protecting both public and private resources and contributing to forest health. The project occurred in the Wildland Urban Interface, within areas designated in the LMP as threat zones and defense zones. These are areas nearest to communities where fuel treatments should be prioritized.

Applicable LMP Standards included S14 and S15 for the retention of downed logs and snags, S47 for riparian conservation areas, and S20 limited operating period for spotted owls. The District Fuels Officer verified that these standards were successfully implemented. No work was done in the Bear Canyon area during the nesting season for spotted owls.

Recommendations: Continue to monitor regrowth of vegetation after treatment to determine if additional treatments are needed in the near future. Continue to give priority to fuel reduction activities in the WUI defense and threat zones. Validate that spotted owls are still nesting in Bear Canyon.

Kerkoff Ridge after treatment. Note the vegetation piled for later prescribed burning.

Project Name: Mount Wilson Hazardous Fuels Reduction

Project Description/Monitoring: The overall objectives of this project were to reduce potential damage to natural resources and developments from wildfire, improve the vigor of conifer and oak stands, and reduce the intrusion and spread of non-native invasive plant species.

The Mount Wilson area includes the historic Mount Wilson Observatory valued at $115 million dollars, as well as over 20 communication-use leases, the Red Box Ranger Station and Harkamokngna Cultural Center, Camp Hi-Hill organizational camp and the Mount Harvard communications facility. These areas were at risk from wildfire even after the 2009 Station Fire, as considerable unburned vegetation remained in the area. The proposed action will also improve the health and vigor of the remaining vegetation by removing dead material, thinning overly dense vegetation and removing non-native invasive species.

For FY 2012, activities included mechanical and hand cutting, and forest stand thinning over 160 acres. Cut vegetation was piled for later burning or chipped on site. Applicable LMP Standards included S47 for Riparian Conservation Area protection, and S20 for Spotted Owl limited operating periods. The project prescriptions and implementation seemed to follow the general intent of Standards S2, S3, S4, and S5 for silvicultural and vegetative treatment design. The treatment areas were consistent with maps in the signed decision documents. Field visits to the project site showed that thinning treatments were effective in reducing oak canopy to approximately 40%, as required by LMP Standard S4. Several program strategies for fire risk management and invasive species were specifically mentioned in project documentation. The project occurred in Wildland Urban Interface defense zones, including areas along evacuation routes, effectively incorporating LMP Standards S7 and S8 for prioritizing treatment in these areas. Over 25 separate measures for resource protection were attached to the project decision, covering botany, wildlife, heritage resources, travel management, invasive species, and hydrology and soils.

Conclusions: The majority of applicable LMP Standards appear to have been applied, although a complete listing of them was not found in the project documentation. There was mention of how the project achieved LMP Desired Conditions.

The project was not fully consistent with LMP Standard S8. Many of the general resource protection measures adopted were not specific to the resources present or the activities proposed. For example, one measure stated “Livestock will not be used as part of this project.” This was unnecessary as livestock were never part of the proposed action, and therefore would not have been used anyway.

Recommendations: In developing the proposed action, document more specifically how the project is in compliance with the entirety of the LMP. When developing general mitigation or protection measures, keep the fuel loads and priorities associated with WUI Defense and Threat zones as the priority as described in the LMP and EIS..

Mt. Wilson project area near communication towers, before treatment.

Same project area after thinning and chipping.

Project Name: Station Fire Reforestation

Project Description/Monitoring: In 2009, the Station Fire burned over 161,000 acres of the Angeles National Forest. Based on a Post-Fire Assessment, it was determined that close to 36,000 acres of tree-dominated vegetation types were burned. Of these tree dominated burned acres, around 24,000 acres

were determined to be in a deforested condition with little to no post-fire tree survival. The Angeles National Forest took part in a carbon sequestration demonstration to address the deforestation caused by this large wildfire. Funding for this project was obtained by partnerships between the National Forest Foundation (NFF) and South Coast Air Quality Management District (SCAQMD). The goals of this project were to accelerate establishment of ecologically appropriate forest cover through planting a minimum of 75-100 trees per acre, and allow for natural regeneration in areas that were not determined to be in a deforested condition. The project was planned to maintain the tree species diversity, consistency with seed zones, and composition that occurs naturally in the area.

Between 2/21/12 and 3/31/12 a total of 154,470 trees were planted on 1,025 acres. Based on data from survival exams conducted in the late summer of 2012, on average, 78 trees per acre survived. All planted species were native to the Angeles National Forest. The species composition was 3% incense cedar, 18% ponderosa pine, 78% big cone Douglas fir, and 1% Jeffrey pine. Overall, average tree planting density was 212 trees per acre with the objective of having at least 75-100 trees per acre at the end of five years. Survival rates for the 2012 planting season were around 38%. The increase from 2011 (25%), was due primarily to release of existing seedlings and additional stocking, as lack of soil moisture was still a primary overall reason for seedling mortality. Release is a forestry term for the removal of competing vegetation around seedlings. The project implemented protection for sensitive plants, as well as cultural resources, to avoid impacting them during release.

Conclusions: Bench marks for tree survival in the Station Fire Reforestation project made great improvement in 2012 over the 2011 planting year. Many of the difficulties of reforesting areas in arid climates persist, but this is a five-year project, and with continued emphasis on additional stocking and release, continued improvement is expected in the following years. This reforestation project works towards meeting the LMP goal of 1.2 for maintaining and improving conifer forest ecosystems.

Recommendations: Continue to implement the remainder of the reforestation project. Perform annual survival exams to target areas for restocking or release. Pursue partner funding for similar reforestation efforts after other wildfires.

A surviving tree seedling after release.

A rare lily coexisting peacefully with a seedling

Project Name: Annual Road Maintenance, Rincon Redbox (2N24) and Sunset (2N07)

Project Description/Monitoring: This is a road maintenance project completed by the Angeles National Forest heavy equipment crew. The focus of the work was to keep the road within its Objective Maintenance Level (OML), and to prevent further erosion and sediment flow into the watershed by maintaining proper drainage. The primary methods used are grading to remove accumulated soil and rock and smooth the travel surface, establishment of the proper slope across the travelway, and the cleaning and clearing of the dips and inlets that direct water to the overside drains. Overside drains are inspected for function and those that need repair or replacement are completed by contractors as soon as practical. The equipment crew coordinated with resource specialists, primarily for botantical and heritage resources, to avoid adverse impacts. All work occurred in the existing road prism.

Conclusions: The road was maintained within agency guidelines for its Objective Maintenance Level (OML). Watershed conditions will be improved by maintaining proper drainage and preventing sediment flow into it. The roads will be kept open for public use (2N24) and for administrative access to a critical communications site (2N07) by minimizing the potential for damaging washouts which mobilize large quantities of sediment into the watershed. No specific LMP Standards are applicable to road maintenance. Instead, general best management practices are used, which include washing of equipment to prevent the spread of noxious weeds, avoiding sensitive seasons for breeding wildlife, minimizing ground disturbance in and around streams, and focusing work in drier seasons. Resource values were maintained. Proper road maintenance contributes to achieving the desired conditions in LMP Goals 3.1 – Provide for Public Use and Natural Resource Protection, and Goal 5.1, Improve Watershed Conditions.

Recommendations: Continue to maintain roads as budgets allow within the appropriate Objective Maintenance Level (OML) guidelines. Use the most effective and cost efficient combination of in-house and contracted labor. Keep the Heritage and Botany programs involved in annual reviews of planned road maintenance project.

Project Name: Mint Fire Burned Area Emergency Response (BAER) Implementation – Invasive Plant Survey and Removal

Project Description/Monitoring: BAER is a Forest Service program designed to protect life, property, water quality, and deteriorated ecosystems from further damage from flooding in the initial year(s) after the fire is out. BAER seeks to reduce watershed damage from flooding or landslides that can occur due to the land being temporarily exposed in a fragile condition. A BAER team assesses the area and recommends treatments, looking for opportunities to mitigate potential impacts to downstream values including infrastructure and critical wildlife, plant and fisheries habitat.

The Mint Fire burned 650 acres in September 2011. This fire was in chamise and mixed chaparral ecosystems. The BAER assessment was reviewed, the District Resources staff were interviewed, and a visit to the fire area was made.

Treatments implemented to protect values at risk were storm protection for the Pacific Crest Trail, gate and barrier installation, and survey and treatment of invasive weed populations. Approximately 10 acres were disturbed by heavy equipment during fire suppression, and quickly became infested with tumble mustard.

After surveying the extent of this infestation, the mustard plants were eradicated by hand pulling in the early spring before the plant developed seed.

Results: A site visit showed that removal of the invasive species had been successful in promoting the establishment and health of native vegetation within the disturbed areas.
This project removed approximately 90% of tumble mustard individuals over the burned area. The Fenner L.A. County Corrections crews completed nearly 1,600 hours of restoration within the Largo Vista fire area.

Conclusions: A focus on post-fire invasive removal in heavily disturbed areas seems effective in preventing invasive species from spreading into new areas after a fire. The weed survey was consistent with goal 2.1 to reduce impairment of natural communities from invasive species. The installation of gates and other barriers is critical in controlling further disturbance to a burned area from public use, and contributes to toward goal 3.1 to provide managed recreation in a natural setting.

Recommendations: A nonnative seed source may still remain within the seed bank in the surrounding soil. Therefore, follow up monitoring and treatment are necessary during subsequent years in order to control, contain and eventually eradicate these invasions throughout time. BAER assessments should always include funding requests for implementing and patrolling closures.

An area where invasive plants were removed. The green plants in the foreground are native.

Program Accomplishment Summary for FY 2012 (Part 2 Monitoring)

Program Accomplishment	Reported Number
Acres of Terrestrial Habitat Enhanced	3,080
Miles of Aquatic Habitat Enhanced	15
Acres of Noxious Weeds Treated	1,587
Acres of Forest Vegetation Improved or Established	5,727
Acres of Water or Soil Resources Protected, Maintained or Improved	800
Recreation Special Use Authorizations Administered to Standard	314
Number of Recreation Sites Maintained to Standard	98
Recreation Site Capacity Days Managed to Standard	915,224
Land Use Authorizations Administered to Standard	549
Number of Mineral Operations Administered to Standard	12
Acres of Hazardous Fuel Reduction	2,156
Miles of Passenger Car Roads Maintained to Objective Maintenance Level	73
Miles of High Clearance Roads Maintained to Objective Maintenance Level	41
Miles of Road Decommissioned	3
Miles of Trail Maintained or Improved to Standard	156

IV. East Fork of the San Gabriel River

The East Fork San Gabriel River has been assigned a Total Maximum Daily Load (TMDL) value by the Environmental Protection Agency, through the State Water Resources Board. This designation, made pursuant to the Clean Water Act, requires the Angeles National Forest to reduce the level trash in the river to zero. In addition, the TMDL stipulates that the Angeles National Forest

> "must conduct monitoring at locations downstream of each of the four informal recreational areas [the flats downstream of Follows Camp, Oak Park, Eldoradoville, and Coyote Flats]. During the peak usage months of June through September, monitoring shall be conducted downstream of one of the four sites each week. Using a rotating schedule for monitoring will result in each picnic area being monitored at least once each month during the peak period. Monitoring may be conducted every other month during the rest of the year. Monitoring will not only include sampling for trash flowing downstream of each of the four areas, but also visual observations of the river terrace areas. Sampling must be conducted in a manner that will measure both floatables and "bedload" trash. The USFS staff should conduct visual observations during their public education visits. Standard data sheets should be developed for recording observed trash levels. The USFS shall comply and submit to the Regional Board the results of monitoring on a monthly basis. The reports are due by the 15'"day of the month following the collection of data."

The East Fork San Gabriel River TMDL recommends that the Angeles National Forest may use the following to meet the zero trash requirement of the TMDL:

- During the peak picnicking season (summer), provide trash and hot coal receptacles in the river terrace area where the picnickers actually congregate. Make receptacles readily visible. To prevent the potential of causing a flood hazard, install the receptacles in the river terrace area at the beginning of May and remove them at the beginning of October.

- Provide at least one full-time person at each of the four identified sites on each weekend day and holiday to direct picnickers to the trash receptacles, provide them with information on environmental issues and litter laws, and ensure the receptacles are in proper working order. The on-site person for these areas should be able to communicate both in English and Spanish. It will be the duty of these persons to recommend improvements in the trash collection system as necessary. They should do so in writing to the District Ranger as necessary.

- Provide a full-time trash collection crew for the East Fork on each weekend day and holiday to collect litter from the river terrace and roadside receptacles. This should be done at a frequency to prevent "fly away" of any litter from the terrace into the watercourse.

- Post bi-lingual "No Littering" signs at the East Fork Road intersection with Highway 39 and at the parking areas at each of the four informal picnic areas. The signs should contain appropriate symbols as well as the written message, and cite the appropriate federal and county codes, citing the largest possible penalty amount. These signs should also be placed near the river terrace and roadside receptacles at each of the four informal picnic areas.

- Enforce existing anti-litter laws. Personnel with authority to issue citations for litter law violations should increase patrolling in the area during peak use periods.

The TMDL also requires evaluation of:

- The need, feasibility, and practicability of a prohibition of glass containers in the East Fork area.
- Options for the disposal of hot charcoal, to prevent the deposition of charcoal in the stream.
- Measures necessary to eliminate the improper disposal of used diapers.

In Fiscal Year (FY) 2011, the Angeles National Forest reported that it has been unable to fully meet the requirements of the East Fork San Gabriel River TMDL due to funding shortages. Volunteers take part in a quarterly trash removal project in the San Gabriel River to work towards meeting the TMDL guidelines.

In FY 2012 planning began for an important partnership between the ANF and the Watershed Conservation Authority (WCA) to address the ongoing pollution in the East Fork San Gabriel River. Partnership agreements were entered into to allow WCA to fund education, user survey, and infrastructure development projects over a five year period starting in FY 13. Future LMP Monitoring Reports will provide progress updates on this important effort to meet TMDL requirements.

V. Public Notification

The Angeles National Forest Land Management Plan Monitoring and Evaluation Report for fiscal year 2012 will be posted on the Forest web page. Please contact the Angeles National Forest at 626-574-1613, or visit www.fs.fed.us/r5/angeles for specific questions.