

San Gabriel Mountains National Monument Management Plan

DRAFT Environmental Assessment



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Contents

Introduction	1
2006 Angeles National Forest Land Management Plan.....	1
2014 Forest Plan Amendment.....	2
2012 Planning Rule.....	2
Proposed Project Location	3
Purpose and Need for Action.....	3
Public Involvement and Tribal Consultation	7
Public Involvement.....	7
Tribal Consultation.....	8
Key Issues	9
Transportation/Access.....	9
Sustainable Recreation and Use	10
Social Issues and Environmental Justice.....	10
Wildlife, Sensitive Species, and Threatened and Endangered Species	10
Alternatives Analyzed in Detail.....	11
No Action (Continue Current Management).....	11
Proposed Action.....	11
Plan Components.....	12
Monitoring.....	25
Alternatives Considered, but Eliminated from Detailed Analysis	25
Decision to be Made	26
Environmental Impacts of the Alternative	27
Introduction.....	27
Aquatic Species.....	27
Affected Environment	27
Environmental Consequences	28
Heritage Resources	30
Affected Environment	30
Environmental Consequences	33
Hydrology	36
Affected Environment	36
Environmental Consequences	52
Recreation	62
Affected Environment	62
Environmental Consequences	74
Scenery.....	80
Affected Environment	80
Environmental Consequences	86
Socioeconomics	89
Affected Environment	89
Environmental Consequences	94
Soils.....	99
Affected Environment	99
Environmental Consequences	100
Terrestrial Wildlife.....	105
Affected Environment	105
Environmental Consequences	110
Threatened, Endangered, and Region 5 Sensitive Plants.....	115

Affected Environment	115
Environmental Consequences	122
Transportation	128
Affected Environment	128
Environmental Consequences	131
Wilderness and Special Designated Areas	133
Affected Environment	133
Environmental Consequences	139
Acronyms	147
Glossary	149
References	153
Appendix A. Presidential Proclamation	159
Appendix B. Projects, Activities, and Factors Considered in Cumulative Effects.....	165
Recreation Use and Facilities	166
Travel Management	166
Development Adjacent to National Forest System lands	166
Climate Change/Pollution	166
Past Fires	167
Appendix C. San Gabriel Mountains National Monument Management Plan	169
Chapter 1 – Introduction	169
Purpose of Monument Plan	169
Planning Area	170
Management Planning Overview	170
Management Plan Organization, Content, and Terminology	171
Chapter 2 – San Gabriel Mountains National Monument Management Area	174
Introduction	174
Sustainable Recreation	174
Heritage Resources	176
Biological Resources	177
Energy Resources	177
Designated Areas	177
Suitability of Lands	177
Designated Areas	182
Chapter 3 – San Gabriel Mountains National Monument Transportation Plan	185
Desired Conditions	186
Management Approaches	186
Current Transportation System	187
Transportation System Management	187
Appendix D. Regional Forester Letter from Oct 2014 for Management Framework	191

List of Tables

Table 1. Suitable uses commodity and commercial uses, San Gabriel Mountains National Monument	17
Table 2. San Gabriel Mountains National Monument critical biological land use zones (CBLUZ)	19
Table 3. New wilderness area descriptions	25
Table 4. USDA Forest Service sensitive species (populations and/or habitat) within the analysis area	27
Table 5. Federally listed species and/or critical habitat within the analysis area	28

Table 6. Watershed acreage, land ownership and summary of Watershed Condition Ratings for the San Gabriel Mountains National Monument	38
Table 7. Water bodies located within the San Gabriel Mountains National Monument	39
Table 8. Percentage of Angeles National Forest Watersheds allocated for public water supplies	41
Table 9. Potential effects to water-related resources	42
Table 10. Percent of modeled RCA acreage relative to total NFS land base	45
Table 11. Potential effects to riparian vegetation from management activities	48
Table 12. Recreation opportunity spectrum class characterizations.....	63
Table 13. Land use zones and associated ROS classes	64
Table 14. Total estimated national forest visits from National Visitor Use Monitoring.....	67
Table 15. Resource indicators and measures for proposed action direct and indirect effects	77
Table 16. Scenic attractiveness acres and percent of total acres by class within the Monument ..	83
Table 17. Key Places valued for scenic quality.....	84
Table 18. Scenic integrity objective acres and percent of total acres by class within the Monument	85
Table 19. Estimated racial and Hispanic composition of 2014 population	93
Table 20. Share of 2014 population living below poverty level.....	93
Table 21. Soils found within the ecological unit inventory survey area	99
Table 22. Forest soil productivity.....	99
Table 23. Terrestrial wildlife species analyzed	106
Table 24. Summary of effects determination	112
Table 25. Species and critical habitat considered.....	116
Table 26. Angeles National Forest wilderness designated within the monument.....	133
Table 27. Designated wilderness visits across the Angeles National Forest (USDA Forest Service 2006c, 2011 (NVUM reports) and USDA Forest Service 2013b).....	134
Table 28. Resource indicators and measures for the proposed action.....	142
Table 29. Summary of Federal and State wilderness by county (USDA Forest Service 2013b)	143

List of Figures

Figure 1. Vicinity map.....	5
Figure 2. Proposed land use zones map.....	23
Figure 4. Intermittent and perennial streams in the San Gabriel Mountains National Monument	39
Figure 5. Map of riparian resources, San Gabriel Mountains National Monument	46
Figure 6. OHV area	72
Figure 7. San Gabriel Canyon	73
Figure 8. East Fork San Gabriel at Oaks Picnic Area	82
Figure 9. San Gabriel Wilderness viewed from Jarvi Memorial on Angeles Crest Scenic Byway, Highway 2	83
Figure 10. San Gabriel Mountains National Monument scenic integrity objectives map.....	86
Figure 11. Closed portion of Hwy 39 south of Hwy 2, just west of Mt Islip	129
Figure 12. San Gabriel Canyon OHV area	129
Figure 13. Jarvi Memorial Vista, along Hwy 2	130
Figure 14. Chilao visitor center	130
Figure 15. Sheep Mountain Wilderness and recommended wilderness viewed from East Fork Trailhead.....	134
Figure 16. San Gabriel Wilderness viewed from San Gabriel Canyon Road, CA-39.....	134
Figure 17. East Fork San Gabriel River at East Fork Trailhead.....	136
Figure 18. North Fork San Gabriel River at West Fork Trailhead.....	137

The Forest Service is proposing to amend the 2006 Angeles National Forest Land Management Plan (Forest Plan) with a management plan to provide for the protection of the objects of interest identified in the Presidential Proclamation establishing the San Gabriel Mountains National Monument (Monument) (see Proclamation attached as appendix A).

Introduction

We prepared this environmental assessment (EA) to determine whether implementation of the amendment may significantly affect the quality of the human environment and thereby require the preparation of an environmental impact statement. By preparing this environmental assessment, we are fulfilling Agency policy and direction to comply with the National Environmental Policy Act (NEPA). For more details of the proposed action, see the “Proposed Action and Alternatives” section of this document.

On October 10, 2014, President Barack Obama designated 346,177 acres of existing Federal lands as the San Gabriel Mountains National Monument in an executive action, the eighth national monument under Forest Service management. A national monument is a designation given to a protected area of Federal land. The Proclamation for the Monument mandated the preparation of a management plan for the Monument within 3 years. The Monument Plan will be developed according to new regulations adopted in 2012, referred to in this document as the 2012 Planning Rule.

2006 Angeles National Forest Land Management Plan

The existing Forest Plan was adopted in 2006 (USDA Forest Service 2006a, and includes 99 percent of all National Forest System lands now within the Monument. Approximately 4,030 acres of the Monument are within the San Bernardino National Forest, which has been managed according to the San Bernardino Land Management Plan, also adopted in 2006. The regional forester has assigned administrative and planning authority for the Monument (including the portion within the San Bernardino National Forest) to the Angeles National Forest. The San Dimas Experimental Forest is still administered under the jurisdiction of the Pacific Southwest Research Station.

Although adopted using the 1982 Forest Service Planning Rule, the Forest Plan is based upon the principles of adaptive management, as outlined in the report of a committee of scientists published in 1999. The current plan has three parts: the Vision, the Strategy, and the Design Criteria, which together provide management direction to integrate multiple uses (recreation, conservation education, special uses, etc.) with protection and enhancement of natural resources (air and water quality, wildlife, soils, fuel reduction, native vegetation, etc.). Part 1 is the vision; this part of the plan looks to the future and describes a collective vision or desired condition for the national forests of southern California over time. Proposed amendments to language in this part may be found in the “Desired Conditions” section of the proposed action. Part 2 is the forest-specific strategies; this part of the plan can be thought of as “the tools” that will be used to achieve the desired conditions in Part 1. This section includes descriptions of objectives, program emphasis, and potential resource management strategies. Proposed amendments to language in this part may be found in the “Suitability of Lands” section of the proposed action below. Part 3 includes the design criteria. The design criteria consist of pertinent environmental and public land management laws, standards that define the parameters for the activities the Forest Service anticipates, and other guidance (including management guides, manual and handbook direction or other appropriate reference material). Proposed amendments to language in this part may be

found in the Standards, Guidelines, and Management Approaches sections of the proposed action below.

2014 Forest Plan Amendment

In 2013, the Southern Province Forests evaluated roadless areas and land use zones, as well as the monitoring program. As a result, some land use zones within the Monument were changed through a Forest Plan amendment in October 2014. This amendment changed approximately 780 acres from Back Country and Back Country Motorized Use Restricted to Backcountry Non-Motorized zone, as well as some other minor adjustments within the West Fork Inventoried Roadless Area. In 2009, Congress designated approximately 39,039 acres as the Magic Mountain and Pleasant View Ridge Wilderness Areas. Both areas are within the Monument.

A court order mandated a workflow process to address project impacts to species conservation and habitat:

The Forest Service shall put in place plans for addressing each project or site-specific action in advance of implementing the project or action that takes into account: a) assessments of habitats and species that may be implicated; b) prioritize habitat assessments and species evaluations in accordance with best science, conservation and protective practices.

In the 2014 Land Management Plan (LMP) Amendment, an amended monitoring strategy was adopted using criteria developed since 2006. The Monitoring Strategy was further refined in 2016 as an administrative action, based on the direction of the 2012 Planning Rule.

2012 Planning Rule

The 2012 Planning Rule provides the overarching framework for individual forests and grasslands in the National Forest System to use in developing, amending, and revising land management plans. Forest and grassland supervisors use these procedures to develop land management plans that set forth specific desired conditions and guidance; for example, for forest health and resilience, species and habitat protection, contributions to sustainable communities, and recreational opportunities and other multiple uses. The 2012 Planning Rule defines the scope of forest plan amendments very broadly, and leaves discretion to a forest supervisor as to the scope and scale of plan amendments. The 2012 Planning Rule creates an adaptive framework that allows the Forest Service to meet modern and future needs, taking into account new understanding of science, land management, and the all-lands context for managing resources. It focuses on outcomes, rather than outputs, and helps units identify their unique roles in the broader landscape and create land management plans to guide proactive contributions to ecological, social, and economic sustainability.

The 2012 Planning Rule emphasizes collaboration, requires improved transparency, and strengthens the role of public involvement and dialogue throughout the planning process. It also requires the use of the best available scientific information to inform decisions. Notably, the 2012 Planning Rule provides an emphasis on sustainable recreation as an important multiple use and as a contributor to social and economic sustainability. Sustainable recreation includes settings, opportunities, and access for a range of uses, on land, water, and in the air. There are requirements to provide for ecosystem services, protect cultural and historic resources, protect wilderness areas and wild and scenic rivers, and appropriately manage other designated areas and areas of tribal importance. New requirements direct a unit and landscape-scale monitoring program based on the

latest science, strengthening the role of monitoring so that units can better track changing conditions and measure progress towards meeting objectives in the plan.

Amendments allow the Forest Service the ability to keep LMPs up to date to respond to changing conditions. For these reasons, a forest plan amendment is considered appropriate to meet the requirement of the Proclamation for a management plan, and allow the continued management of the Monument within the context of the Forest.

Proposed Project Location

The project area is located in the northern and southeastern portions of the San Gabriel Mountain Range, approximately 30 miles northeast of Los Angeles. The recently designated National Monument covers 342,177 acres of the Angeles National Forest and 4,030 acres of neighboring San Bernardino National Forest. Figure 1 shows the current administrative boundaries of the Angeles National Forest subunits, known as ranger districts, overlaid by the Monument boundary.

Purpose and Need for Action

The purpose of the Monument Plan is to amend the existing Forest Plan (as amended, 2014) to administer the Monument in a manner that is protective of the objects of interest identified therein. The need for change arises out of the Presidential Proclamation. Changes to the existing Forest Plan, as reflected in the Presidential Proclamation establishing the Monument, include direction for the protection of identified Monument objects, public access when consistent with natural resource protection, public engagement, a transportation plan, and withdrawal of lands from uses associated with mining laws, subject to valid existing uses. Specifically, the Presidential Proclamation directs the plan to:

- Promulgate such regulations for the management of the Monument, as deemed appropriate.
- Provide for maximum public involvement in the development of the plan, including, but not limited to, consultation with tribal, State, and local government, as well as community environmental, conservation, health, and social justice organizations.
- Provide for protection and interpretation of the scientific and historic objects identified and for continued public access to those objects, consistent with their protection.
- Protect and preserve Indian sacred sites, as defined in section 1(b) of Executive Order 13007 of May 24, 1996, and access by Indian tribal members for traditional cultural, spiritual, and tree and forest product-, food-, and medicine-gathering purposes, to the maximum extent permitted by other applicable laws and consistent with the purposes of the Monument.

The Forest Service chose to prepare a plan amendment because most of the LMP is still relevant and there is only a need to make limited changes to the LMP as a result of the new monument.

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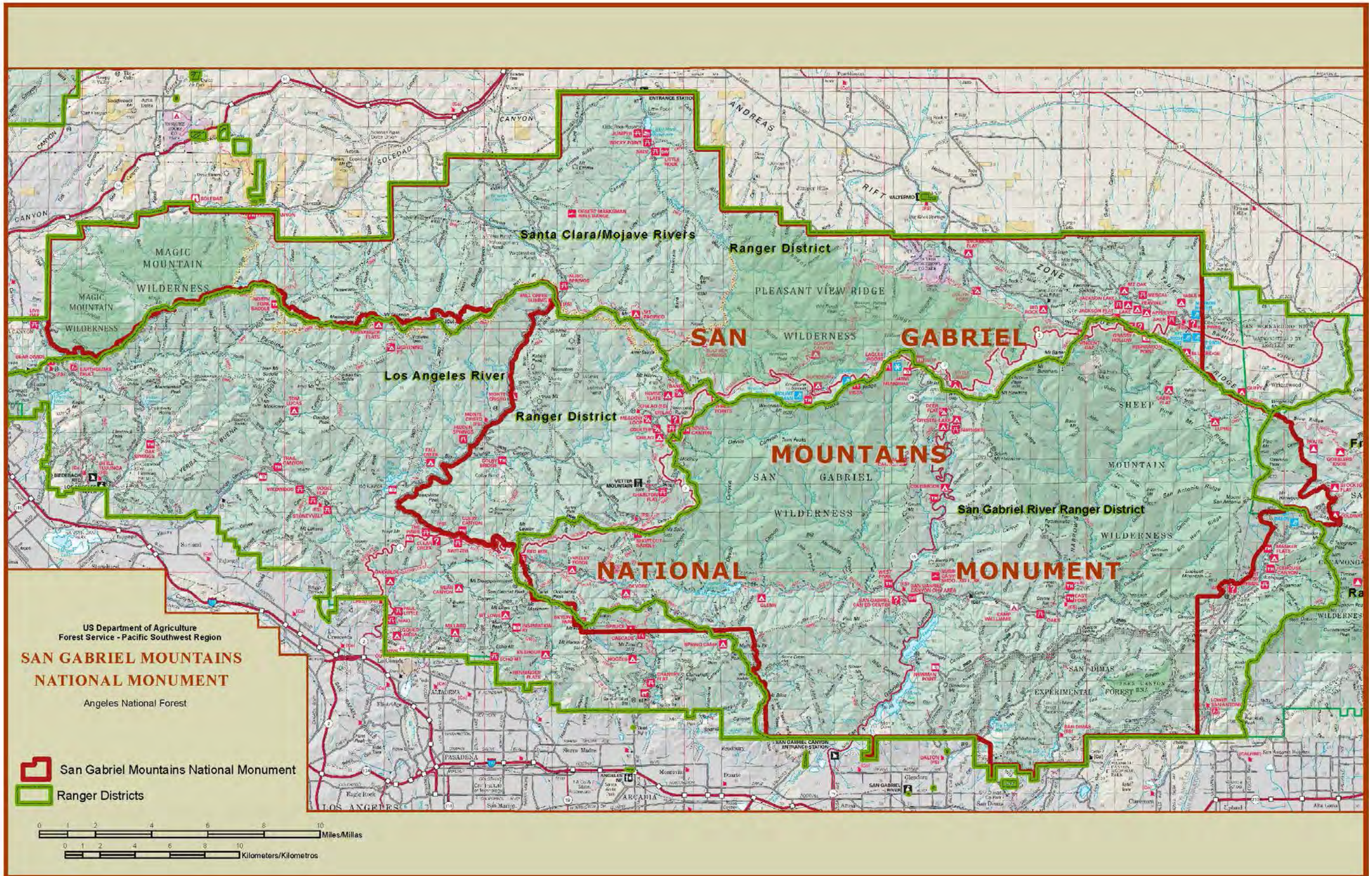


Figure 1. Vicinity map

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Public Involvement and Tribal Consultation

Public Involvement

The Council on Environmental Quality defines scoping as “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” Scoping is a valuable step in the analysis process and is designed to share the proposed action, gather new information, define the overall scope of the analysis, and ultimately identify issues used to develop alternatives and otherwise refine the analysis.

The project first appeared on the Angeles National Forest’s Schedule of Proposed Actions in July 2015. A scoping letter describing the purpose and need for change and proposed action and seeking public comments was sent via regular mail or email to approximately 3,200 interested groups, individuals, and agencies on June 15, 2015, with comments requested to be returned by July 27, 2015. A map, fact sheet, and FAQ document were also provided. A press release was sent to local news media outlets on June 10, 2015. A notice of intent to prepare an environmental assessment was published in the *Federal Register* on June 12, 2015. All notices included a web address for the project’s Web site where comments could also be submitted. The project’s Web site could also be accessed from the home page of the Angeles National Forest’s public Web site. The Angeles National Forest held five public open houses to discuss the development of the Monument Plan at the following locations:

- June 22, 4-8 pm, Pacific Community Center, 501 S. Pacific Ave., Glendale, CA
- June 23, 4-8 pm, Palmdale Legacy Commons Senior Center, 930 East Avenue Q9, Palmdale, CA
- June 24, 4-8 pm, Glendora Public Library, 140 S Glendora Ave., Glendora, CA
- June 25, 3-8 pm, Pico House, 424 N Main St, Los Angeles, CA
- June 26, 4-8 pm, Big Pines Lodge, 24537 Big Pines Highway, Wrightwood, CA

A 15-day extension was requested and granted by the Forest Supervisor, extending the period until August 11, 2015. A variety of printed materials was available at these open houses, including a Monument fact sheet, frequently asked questions, project schedule and key milestones, and scoping letter. An assessment of what planning components were needed to meet the direction in the Proclamation, known as the “Need to Change” document, was the focus of the open houses. Printed information was available in English and Spanish. A Spanish translator was available at all the open houses.

The public was invited to comment on the proposed action, identify potential conflicts or benefits, and provide any relevant information that would be useful in the subsequent environmental analysis. The Forest Service received and considered responses from 917 interested groups, individuals, and agencies in the form of letters, emails, and Web site submissions that contained over 1,545 individual comments and concerns.

Consideration of Public Comments

We analyzed all of the comment letters using a process called content analysis, which has several discrete steps. We read each letter, email, or Web site submission and identified approximately 1,545 individual comments and concerns within these 917 responses. We assigned each individual comment/concern to a classification code to assist with identifying issues and possible alternatives to the proposed action. Members of the interdisciplinary team reviewed the comments. We held several

interdisciplinary team meetings to determine which of the concerns expressed by the public would be key issue categories to be considered in the analysis.

All comments were thoughtful narratives reacting to the proposed action with support, opposition, concerns, or requests for revision and new alternatives. The Forest Service appreciates the time and perspectives shared by each commenter, and the willingness of all to engage in the environmental analysis process. We identified four key issue categories based on these comments and concerns. In order to address these issues, the original proposed action was modified and alternatives to the modified proposed action were developed.

After key issues were identified, we confirmed other relevant resources. Other relevant resources provide additional information for the analysis, but do not necessarily drive the formulation of alternatives. We also considered several suggestions from the public related to alternatives and components of alternatives; some we considered but have dismissed from further detailed analysis and others we have brought forward for full analysis.

For an alternative to be analyzed in detail in the EA, it must meet the purpose and need for action, must address one or more key issues, and should reduce the potential for significant impacts. Many of the alternatives proposed in scoping did not meet the purpose and need's narrow scope focused on the Proclamation's direction. For more information on the process for consideration of public comments, see the Scoping Outcome Summary available in the project record.

During and after the comment period, Forest Service staff continued public engagement by responding individually to over 120 inquiries by e-mail and telephone. The Forest Service attended several meetings sponsored and requested by interested groups. These groups included organizations focused on social justice and underserved communities, such as the Asian Pacific Policy Council, San Gabriel Mountains Forever, and The City Project.

The Forest Service also continues to attend monthly meetings of the San Gabriel Mountains Community Collaborative, and make formal presentations, as requested. This representative group was formed in 2015, and is managed by the National Forest Foundation to represent various interests and communities associated with the National Monument. There are 45 members in this group, which is made up of public, non-profit, and private stakeholders.

Tribal Consultation

Tribal consultation associated with the Monument was formally initiated with federally recognized Tribes following the official designation of the Monument in November 2014. The meeting, attended by the San Manuel Band of Serrano Mission Indians, was held at the Angeles National Forest Supervisors Office between the Forest Supervisor, Forest Tribal Relations Manager, and the Cultural Policy Director of the San Manuel Band of Serrano Mission Indians. Follow-up letters were sent to all three of the appropriate federally recognized Tribes that could ascribe cultural affinity to lands encompassed by the new Monument within the Angeles National Forest in mid-2015. These letters were sent to the San Manuel Band of Serrano Mission Indians on July 23, 2015, the Santa Ynez Band of Mission Indians on July 28, 2015, and the Tejon Indian Tribe on July 28, 2015. The "need to change" document was provided to each of the Tribes, in addition to requesting comments on the initial plan development strategy (i.e., as an amendment to the Angeles Forest Plan). Comments were requested by mid-August, but it was stated that comments from Tribes would be welcomed throughout the planning and plan development process. In an effort to respond more effectively and within the formal government-to-government consultation process, the three federally recognized Tribes were invited to a formal meeting in September to discuss any comments with the Forest

Supervisor, following their review of the scoping and need to change documents. No tribal comments or contacts for a follow-up formal meeting with the Forest Supervisor were received from the Tribes at that time.

The Monument Plan and ongoing analysis were an agenda topic most recently at the Angeles National Forest January 2016 tribal meeting. Letters to each of the three federally recognized tribes, in addition to over 123 other Native American groups and individuals, were sent on November 17, 2015. The letters requested a meeting to discuss a range of topics, in addition to the current status of the San Gabriel Mountains National Monument Management Plan. Individuals representing a number of non-federally recognized tribes attended, along with the Forest environmental coordinator, who provided an update on the Plan's development.

In March 2016, the Forest's tribal relations manager contacted the Cultural Policy Director of the San Manuel Band of Serrano Mission Indians, a federally recognized tribe, to discuss the development of the Monument Management Plan, and to respond to information concerning their participation and level of involvement. Following this discussion, a formal meeting between the Forest Supervisor and representatives from the Tribe was set for April 18, 2016.

The Forest's tribal relations manager has been in regular contact with two groups representing the Gabrielino Tribe, a non-federally recognized tribe who ascribe cultural affinity to lands encompassed by the Monument, since the January 2016 meeting. These discussions have involved requests that support specific objectives or goals within the Monument Proclamation. These requests included providing administrative access within the Monument for the collection of traditional Native resources, and in another instance, facilitating the restoration and access to significant cultural resource sites for ceremonial purposes (in addition to providing site documentation and records), to tribal members and their tribal archaeologist, which is currently ongoing.

Key Issues

Through internal and external scoping we identified four key issue categories for the San Gabriel Mountains National Monument Plan Analysis.

Transportation/Access

- How might the Forest Service provide public access to the Monument for all who wish to enjoy it in a manner that is protective of the objects of interest, that addresses capacity concerns, and that ensures public safety is paramount?
- How might the Forest Service address inadequate parking within popular areas of the Monument?
- How might the Forest Service address dangerous conditions associated with Monument roads being used for night time raceways?
- How might the Forest Service reduce traffic congestion during illegal zip-lining and bungee-jumping from the Bridge to Nowhere and during winter snowfall?
- How might the Forest Service work with surrounding and adjacent communities to reduce traffic congestion concerns in communities that provide ingress and egress to the Monument?

Sustainable Recreation and Use

- How might the Forest Service align and coordinate its recreation opportunities and system of trails with surrounding communities' trails and open space networks?
- How might the Forest Service address conflicts between motorized and non-motorized users and conflicts between different types of non-motorized trail users?
- How might the Forest Service address the need for trail system inventory, mapping and characterization, levels of difficulty, variety of opportunities (long distance, beginner, technical, single track, loops for a variety of uses including mountain bikes, hikers and horses) and planning for new trail development and connections?
- How might the Forest Service address the need for long-term road and trail maintenance and restoration, particularly on national recreation trails, including the Silver Moccasin and Gabrielino Trails, those closed previously for resource issues, and those in fire-damaged areas?
- How could the Forest Service address the need to provide meaningful visitor information and environmental education and interpretation programs that are relevant to diverse visitors?
- What are the impacts of concentrated recreational use on streams and riparian areas? How might the Forest Service manage recreational use to protect aquatic resources?
- How might the Forest Service align volunteer and partner contributions to ensure a well-coordinated approach to maintenance of the resource and sustainable land management within the Monument?

Social Issues and Environmental Justice

- How could the Forest Service increase access and the ability to enjoy existing opportunities in the Monument for youth and minority populations adjacent to the Monument?
- How could the Forest Service support access to the Monument for underprivileged youth and minority populations?
- How might the Forest Service outreach to differing demographics, such as youth, millennials, and urban populations that may not initially have knowledge of or an interest in visiting the Monument?

Wildlife, Sensitive Species, and Threatened and Endangered Species

- What plan components may be needed to protect sensitive and threatened and endangered species, including Santa Ana sucker, arroyo chub, Santa Ana speckled dace, mountain yellow-legged frogs, California red-legged frogs, coast horned lizards, arroyo toads, lungless salamanders, yellow-blotched salamander, Western pond turtles, California spotted owls, and Nelson's bighorn sheep?
- What are the impacts of off-highway vehicle use on sensitive species in the Monument?

Alternatives Analyzed in Detail

The no-action and proposed action alternatives were considered.

No Action (Continue Current Management)

The no-action alternative is required by the National Environmental Policy Act and serves as a baseline to compare effects of action alternatives.

Current management would continue in accordance with the 2006 Angeles National Forest Land Management Plan, relevant amendments, and interim management direction (see appendix D). Because this alternative is the continuation of current management and would not result in changes to the existing Forest Plan, protections of Monument objects would only be provided where existing goals or objectives address them.

Plan components do not apply to the no-action alternative because a Monument Plan would not be proposed under this alternative; no changes would be made to the existing Forest Plan or applicable amendments in the planning area under the no-action alternative. Continuing current management under the no-action alternative would include the use of standard operating procedures and best management practices from the Forest Plan for management of lands within the Monument.

The no-action alternative does not meet the purpose and need of complying with the Presidential Proclamation establishing the San Gabriel Mountains National Monument to complete a Monument management plan in the 3 years provided or providing expanded opportunities.

Proposed Action

The Forest Service proposes to change some existing management direction in the Forest Plan according to the 2012 Planning Rule to be consistent with the Presidential Proclamation establishing the Monument, and to capture those changes in the Monument Management Plan. All other direction from the Forest Plan would apply to the Monument and be tiered to in the standalone Monument Management Plan (see appendix C). Within the Monument, the Forest Plan would be amended in the following areas to ensure appropriate management of the Monument, consistent with the Proclamation:

- 1) Forest Plan Part 1 – Goal 3.1, related to Managed Recreation in a Natural Setting;
- 2) Forest Plan Part 1 – Goal 4.1, related to Energy and Minerals Production;
- 3) Forest Plan Part 2 – Land Use Zones (as amended by 2014 land use plan amendment), related to Wilderness Areas, suitable uses allowed within land use zones, and Critical Biological Land Use Zones;
- 4) Forest Plan Part 2 – Prospectus, related to Heritage Resources;
- 5) Forest Plan Part 2 – Place-Based Program Emphasis, related to Wilderness Areas;
- 6) Forest Plan Part 2 – Appendix A: Inclusion of the description of current wilderness areas;
- 7) Forest Plan Part 2 – Appendix B: Strategies, related to focal species, recreation, transportation, minerals, transportation, minerals, off-highway vehicle use opportunities

No other applicable aspects of the Forest Plan in Part I (Vision, including goals), Part 2 (Strategy including objectives, suitable uses within land use zones, and “places”), and Part 3 (Design Criteria, including standards) would change as part of this proposal.

At the end of the amendment process there would be a single document that would serve as a separate San Gabriel Mountains National Monument Management Plan (provided as appendix C), adopted as an amendment to the Forest Plan. Thus, new planning direction would replace existing Forest Plan direction and unchanged Forest Plan direction that applies to the Monument would be tiered to within the document.

The Monument Plan would apply to all National Forest System lands within the Monument, including the small portion on San Bernardino National Forest System lands (1 percent), which would also be guided by the direction provided by the Monument Plan.

New plan components, modifications to existing Forest Plan components, and monitoring measures described in the next section would apply to the implementation of this alternative.

Plan Components

These plan components were developed to reduce or eliminate adverse impacts, as well as promote beneficial impacts from plan implementation and are incorporated as an integrated part of the proposed action. Plan components are intended to provide for social, economic, and ecological sustainability and multiple uses in an integrated manner. In addition, best available scientific information is incorporated to inform the development of plan components and other plan content.

Plan components identified below would only apply to the Monument. Applicable, existing Forest Plan components will be tiered to where no changes are necessary to protect Monument objects and comply with the direction provided within the Proclamation. These plan components address the key issues that were identified during scoping. Consequently, the proposed Monument Management Plan would include the following new and modified plan components to provide a detailed management framework for planning-level direction (provided as appendix C) on all lands encompassed within the Monument.

New Plan Components and Modifications to Existing Forest Plan Components

The interdisciplinary team developed the following new plan components and changes to the existing Forest Plan to respond to the Forest Plan amendment purpose and need.

Transportation

Desired Conditions

1. The Monument is accessible through alternative transportation and public transportation options in coordination with other agencies and gateway communities to provide greater access for those who do not have personal vehicles, reduce vehicle congestion, address parking capacity issues, and improve public safety.
2. Road density within the Monument remains stable or is decreasing. The number of automobiles are reducing over time.
3. Roads and trails are maintained to standard.

Management Approaches

1. Improve needed operational maintenance level 2 National Forest System roads to standard so they qualify for Federal Lands Transportation Program funding (operational maintenance level 3+) and other related Federal funding.

2. Improve non-motorized trails to standard so they qualify for Federal Lands Transportation Program funds (“provide an engineered surface”) and other related Federal funding.
3. Decommission and rehabilitate high-risk, low-value roads identified in the roads analysis and travel analysis processes.
4. Over the planning period, the number of inventoried unauthorized roads and trails are reduced, and the development and proliferation of new unauthorized facilities is minimized.
5. Coordinate projects with California State Parks and the Off-Highway Motor Vehicle Recreation Program, including projects that restore areas with unauthorized off-highway vehicle uses.)
6. Evaluate alternative transportation and public transportation opportunities.
7. Coordinate with local government on transportation planning. Participate in the Southern California Association of Governments. Coordinate with Caltrans to improve transportation connectivity within the Monument, while minimizing adverse resource effects.
8. Coordinate with programs such as CAR-LESS CA and connections, such as El Pueblo and Gold Line transit lines.
9. Coordinate with the Federal Lands Collaborative Long-Range Transportation Planning effort to ensure it is responsive to the transit/transportation needs of the Monument.
10. Maintain awareness that “driving for pleasure” is and will continue to be an important use within the Monument.
11. Update the Angeles National Forest’s motor vehicle use map as necessary to identify currently designated roads, trails and areas for public motor vehicle use.
12. Manage high visitor use and traffic congestion using the following strategies:
 - Consider using temporary one-way traffic flows and closures during peak volumes.
 - Evaluate the use of parking capacity limits.
 - Enforce parking capacity.
 - Prevent or limit parking in riparian areas to reduce resource damage.
 - Explore opportunities to increase parking capacity in key areas.

Sustainable Recreation

Desired Conditions

1. Recreation opportunities, including products, services, and the built environment, support the needs and expectations of the diverse population in the surrounding area, including urban visitors, youth, people with disabilities, aging populations, and different ethnic groups.
2. Youth are engaged in outdoor recreation and conservation education opportunities, fostering the next generation of public land stewards.
3. Interpretation materials capture the rich cultural history that shaped the area, including Native Americans, Spanish missionaries and colonialists, Mexican rancheros, Euro-Americans and Asian settlers and prospectors.
4. Public outreach and education uses contemporary social media, new technology, and culturally relevant media outlets. Engaging schools, communities, universities, museums, and other educational institutions invested in elevating public awareness of the environment, conservation, and outdoor recreation presents exceptional opportunities to re-imagine Angelenos’ connections to their surrounding forests and open spaces.
5. Conservation education focuses on themes of urbanization, fire, heritage resources, and wildlife and plants, which are the main management challenges within the Monument.

6. Signs are universal and public information and education is multilingual to ensure communication is intentional, meets information needs, and conveys a message of public access for all.

Guidelines

1. Along the Pacific Crest National Scenic Trail (PCT) within the Monument, new recreation events, such as foot races or horseback endurance events and fundraising events should be limited to designated crossings only. Existing recreation events may be allowed to continue at current levels.
2. All new road and trail crossings of the PCT within the Monument will be evaluated and planned to minimize impacts to the scenic, natural, and experiential values of the trail. New roads and new trails, including new motorized and mechanized transport trails, within the PCT foreground should be designed to minimize the visual, aural and resource impacts to the PCT. Exemptions may be allowed if required by law to provide access to private lands or documented as the only prudent and feasible alternative.
3. Maintain or increase the number of conservation education programs or events per year within the Monument.

Management Approaches

1. Prioritize work with external partners to develop sustainable recreation studies, recreation design plans, new products, or recreation design features to improve recreation management within the Monument and ensure relevance to the Monument's diverse visitor use base.
2. Evaluate the need for recreation carrying capacity in high use areas such as San Gabriel Canyon, following the Interagency Visitor Use Management Framework (<http://visitorusemanagement.nps.gov>), including:
 - Identifying visitor capacities and strategies to manage use levels within capacities.
 - Documenting criteria and rationale for establishing visitor capacities.
 - Documenting the relationship between the amount of visitor use and existing conditions and how management actions are expected to affect that relationship.
3. Work with gateway communities and local partners to manage potential impacts and maximize potential benefits associated with Monument designation by addressing issues such as identification of appropriate access points and parking capacity at access points.
4. Develop a Monument conservation education plan.
5. Expand the use of multilingual information and outreach including interpretive signs, standard recreation signs, online information and social media, and multilingual personnel such as recreation staff, law enforcement, and volunteers.
6. Prioritize youth engagement efforts aligned with the Region 5 Integrated Youth Engagement Strategy, and continue participation in programs such as the Southern California Consortium "Generation Green" program.
7. Develop criteria for appropriate types of special events, requests, and emerging uses within the Monument.
8. Implement adaptive management processes at recreation facilities to proactively engage persons with disabilities, contemporary urban visitors, aging populations, diverse ethnic groups, youth, and day-use emphasis (see appendix C of the Forest Plan, Monitoring Requirements).

Heritage Resources

Desired Conditions

1. Heritage resources are protected and preserved for cultural and scientific value and public benefit.
2. Historic and Native American heritage resources eligible for the National Register of Historic Places are protected and preserved.
3. Priority Heritage Assets are protected and enhance the Monument's distinct characteristics.
4. Historic properties within designated wilderness areas are documented and protected, and values and connections between heritage and wilderness values are promoted.

Standards

1. Road and trail maintenance and use must be managed to prevent adverse effects to values or attributes that make heritage resources eligible for the National Register of Historic Places.

Guidelines

9. Projects should be designed to avoid, minimize, or mitigate adverse effects or impacts to significant cultural properties.
10. Heritage sites should be protected during fire suppression and rehabilitation activities where feasible.

Management Approaches

1. Review recorded or documented historic properties within designated wilderness to identify any that support or enhance wilderness values and characteristics. Manage these identified resources as Priority Heritage Assets, regularly monitoring unidentified wilderness Priority Heritage Assets and promoting values and connections between heritage and wilderness values. Assess and review documented and unevaluated heritage resources to identify those resources that enhance the Monument's distinct characteristics and to regularly monitor those at risk. Manage these identified resources as Priority Heritage Assets. Of the 44 sites identified within the Monument, those identified as Priority Heritage Assets will be monitored every 5 years. If new resources are identified and determined to be Priority Heritage Assets, they will also be monitored every 5 years.
2. Use partnerships to develop and implement stewardship plans for heritage resource sites, focusing on those sites with recognized significance or at risk from public or land use effects.
3. Evaluate historic sites for appropriate management. Develop site management plans for noteworthy heritage resources.
4. In consultation with tribes, work to improve the interpretative potential of Native American resources within the Monument, focusing on traditional uses, tribal history, and the current relationship of local tribes to the San Gabriel Mountains.
5. Evaluate the following heritage sites for eligibility under the National Register of Historic Places: Aliso-Arrastre Special Interest Area; Eldoradoville, located along the East Fork of the San Gabriel River; Mt. Wilson Observatory; and San Dimas Experimental Forest. Nominate eligible sites for listing.

Biological Resources

Desired Conditions

1. Habitat conditions are stable or improving over time as indicated by the status of focal species and other elements of the 2016 Monitoring Strategy. Habitats of species specifically listed in the Proclamation as objects of interest in the SGMNM are managed to preserve and protect these species.
2. Maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, focal species, and watch list species.

Management Approaches

1. Monitor at-risk species according to the 2012 Planning Rule direction on monitoring.

Energy Resources

Standards

2. Valid Federal mineral rights existing within the Monument at the time of the Monument proclamation must be managed to protect the objects of interest listed in the Proclamation.

Designated Areas

Desired Conditions

1. Designated wilderness within the Monument is maintained as a naturally evolving and natural-appearing landscape that provides for primitive and unconfined recreation use. The sense of remoteness and solitude is maintained.

Suitability of Lands

1. Mineral and energy resources exploration and development is not suitable within the Monument, except where valid rights already exist at the time of the Monument proclamation. Table 1 below would replace Table 2.1.3 of Part 2 of the Angeles Forest Plan to identify the current Suitability of Lands within the Monument.
2. Within the Monument, the PCT foreground is not suitable for special-use authorizations for new communication sites and wind generation sites.

Table 1. Suitable uses commodity and commercial uses, San Gabriel Mountains National Monument

Activity or Use	Land Use Zone						
	Developed Areas Interface	Back Country	Back Country Motorized Use Restricted	Back Country Non-Motorized	Critical Biological	Wilderness	Experimental Forest
(Non-Rec) Special Uses: Low Intensity Land Use	Suitable	Suitable	Suitable	By Exception	By Exception	By Exception	For Research
Communication Sites	Designated Areas	Designated Areas	Designated Areas	By Exception	By Exception	Not Suitable	By Exception
Livestock Grazing	Designated Areas	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Designated Areas	Not Suitable
Major Transportation Corridors	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Major Utility Corridors	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Road Construction or Re-construction	Suitable	Suitable	Suitable for authorized use	Not Suitable	Not Suitable	Not Suitable	By Exception
Developed Facilities	Suitable	Suitable	By Exception	Not Suitable	Not Suitable	Not Suitable	For Research
Oil and Gas Exploration and Development Areas¹	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Minerals Resources Exploration and Development²	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Renewable Energy Resources	Suitable	Suitable	By Exception	By Exception	Not Suitable	Not Suitable	Not Suitable
Wood Products, Including Fuelwood Harvesting	Suitable	Suitable	Suitable	Suitable	By Exception	Not Suitable	By Exception
Special Forest Products	Suitable	Suitable	Suitable	Suitable	By Exception	By Exception	Not Suitable

1 By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.

2 With the exception of valid existing rights.

The following Land Use Zone descriptions would replace the descriptions on pages 9 through 11 of Part 2 of the Angeles Forest Plan and describe the zones within the Monument.

Critical Biological (3,043 acres or less than 1 percent of the Monument): This zone includes the most important areas on the national forest to manage for the protection of species at-risk. Facilities are minimal to discourage human use. The level of human use and infrastructure is low to moderate.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the Forest Plan) may occur in this zone. Community protection vegetation treatments within the Critical Biological land use zone may occur by exception. In these cases, managers will consider species and habitat needs.

The management intent is to retain the natural character and habitat characteristics in this zone and limit the level of human development to manage for protection of species-at-risk. Activities and modification to existing infrastructure are allowed if they are beneficial or neutral to the species for which the zone was primarily designated (see Table 1: San Gabriel Mountains National Monument Critical Biological Land Use Zones). Human uses are more restricted in this zone than in Back Country Non-Motorized zones in order to protect species needs, but are not excluded. Low impact uses, such as hiking, mountain biking and hunting are generally allowed. Motorized use of existing National Forest System roads is allowed. Less than 1 percent of the National Forest System and non-system roads are found in this zone, including one mile of inventoried unauthorized road. Road density will not be increased and may be decreased as a result of species protection requirements.

Table 2. San Gabriel Mountains National Monument critical biological land use zones (CBLUZ)

Primary Species Protected and Primary Uses			
CBLUZ	Primary Species Protected	Place	Primary Uses**
South Fork Big Rock Creek	Mountain yellow-legged frog	Angeles High Country	Existing use of Sycamore Flats, South Fork and Little Jimmy Campgrounds is retained
South Fork Little Rock Creek	Mountain yellow-legged frog	Angeles High Country	Existing use of the Williamson Rock climbing area is retained
Lower Little Rock Creek	Arroyo toad	Mojave Front Country	Ongoing activities at Little Rock Reservoir and associated developed areas to include the boat ramp, Fisherman's Point, Juniper, Rock Point and Sage Picnic Areas are retained. Use of Little Rock Road 5N04 is retained. Little Rock Off-highway Vehicle (OHV) Area is closed above Rock Point Day Use Area; however a small segment is retained. Little Rock OHV route adjacent to CBLUZ is retained for opportunities to define an improved system while relocating established routes outside of sensitive areas. Joshua Tree and Basin Campgrounds and Santiago OHV route are currently closed due to potential impacts to the arroyo toad. Site specific analysis of these areas will determine if they are a suitable use within the CBLUZ.
West Fork San Gabriel River	Santa Ana sucker	San Gabriel Canyon	CBLUZ location is Cogswell Dam downstream to the beginning of the wild trout area (2nd bridge). This area is currently managed as a wild trout stream and this designation is retained. Management of the Cogswell Dam for flood control and water conservation including water release is not in conflict with the CBLUZ designation and is retained. Installation of toilets can be considered neutral or beneficial use. Administrative use and use of National Forest System Road 2N25 as a hiking and bicycle path will be retained.
East Fork San Gabriel River	Santa Ana sucker	San Gabriel Canyon	CBLUZ location is from just above the Oaks day use site upstream to the private land parcel near the Bridge to Nowhere, including the Cattle Canyon tributary upstream to the upper extent of the Santa Ana designated critical habitat. Existing transportation and other uses will continue.
North Fork San Gabriel River	Santa Ana sucker	San Gabriel Canyon/Angeles Uplands East	CBLUZ location is from the West Fork/North Fork confluence upstream to the northern extent of the Santa Ana sucker Designated Critical Habitat, including the Bichota Canyon tributary of the North Fork San Gabriel River. Existing uses will continue.
Aliso Canyon Creek	California red-legged frog	Soledad Front Country	The West Wide Energy Corridors will be managed for utility infrastructure, including new and upgraded transmission lines. Access to utility corridors will be maintained while minimizing road infrastructure within the CBLUZ. Existing Transportation and other uses will continue.

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Primary Species Protected and Primary Uses			
CBLUZ	Primary Species Protected	Place	Primary Uses**
Upper Big Tujunga	Arroyo toad, California red- legged frog	Angeles Uplands (West)	Access on County Road 3N19 and associated maintenance, access to private property in section 35, existing Special Use Permits, and proposed OHV corridor across Alder Creek area are retained. Dispersed recreation use will continue to be limited by limiting parking areas.
Soledad Canyon	Arroyo toad, unarmored three-spine stickleback	Soledad Front Country	The Wildlife Viewing site at this location will be retained. Soledad Campground will continue to be closed and facilities removed. Private lands surrounding the CBLUZ are not affected.

**This is a partial list of activities associated with these CBLUZs. See Suitable Use Tables (Part 2 of Forest Plan) for full description of all able uses.

Existing Wilderness (122,098 acres or 34 percent of the Monument): This zone includes congressionally designated wildernesses. Only uses consistent with all applicable wilderness legislation and with the primitive character are allowed in existing and recommended wilderness. Road access is limited to uses identified in the specific legislation designating the wilderness (see wilderness in the forest-specific design criteria of Part 2 of the Forest Plan), approximately 0.7 percent of the National Forest System and non-system roads are found in this zone, including 1.4 miles of inventoried unauthorized road. The characteristic Recreation Opportunity Spectrum objective is Primitive with limited areas of Semi-Primitive Non-Motorized.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the Forest Plan) may occur in this zone. Community Protection vegetation treatments within the existing wilderness zone may occur by exception. In these cases, managers will consider wilderness needs. The management intent is to administer this zone for the use and enjoyment of people while preserving its wilderness character and natural conditions. Non-conforming uses will be removed to preserve wilderness character. Designated wilderness includes:

Sheep Mountain Wilderness

San Gabriel Wilderness

Magic Mountain Wilderness

Pleasant View Ridge Wilderness

Designated Areas

The following changes to the Forest Plan “Special Designation Overlays” are proposed for the Monument. These changes would update the Special Designations to acknowledge and be consistent with designation of two new wilderness areas in 2009.

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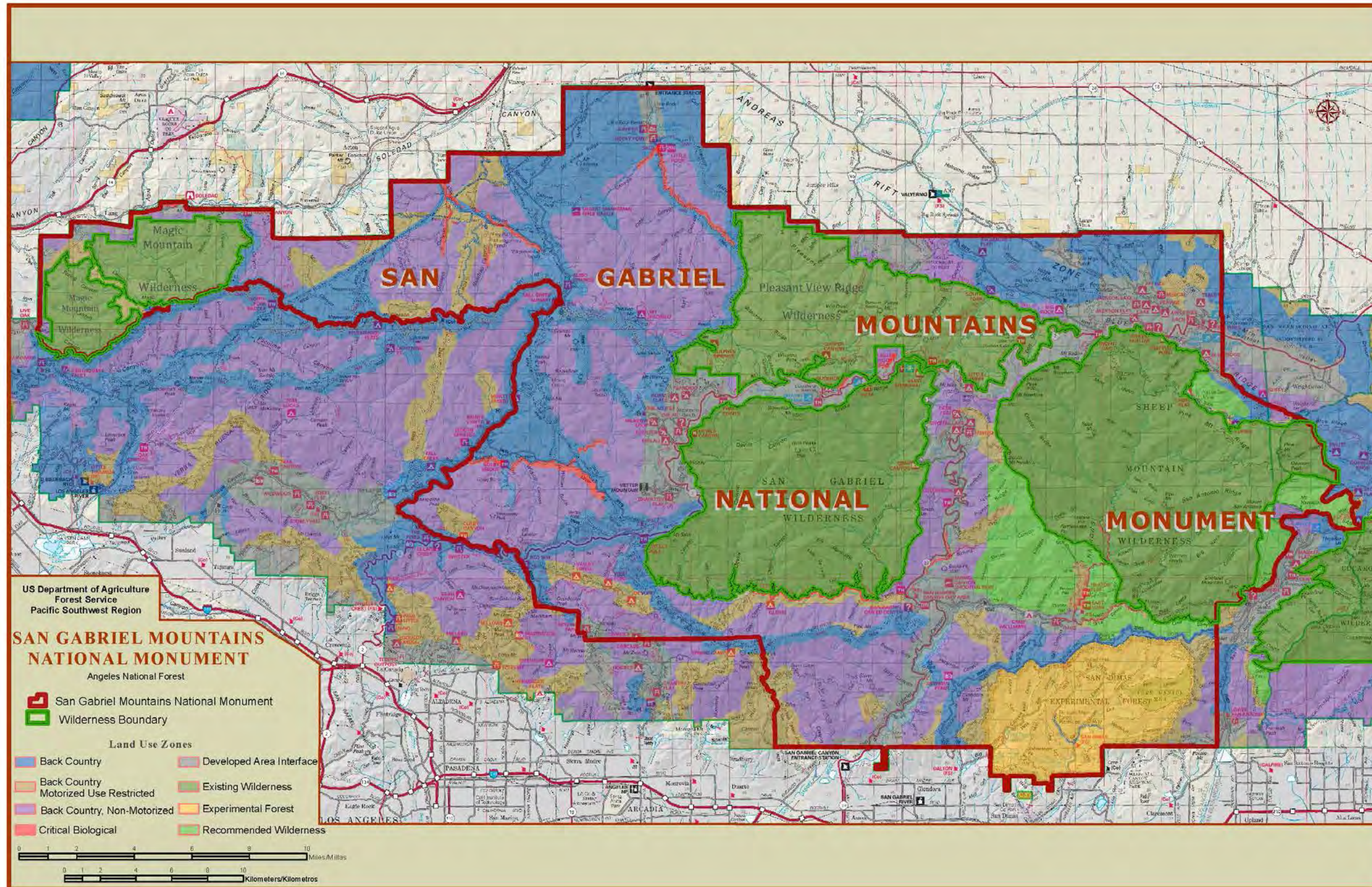


Figure 2. Proposed land use zones map

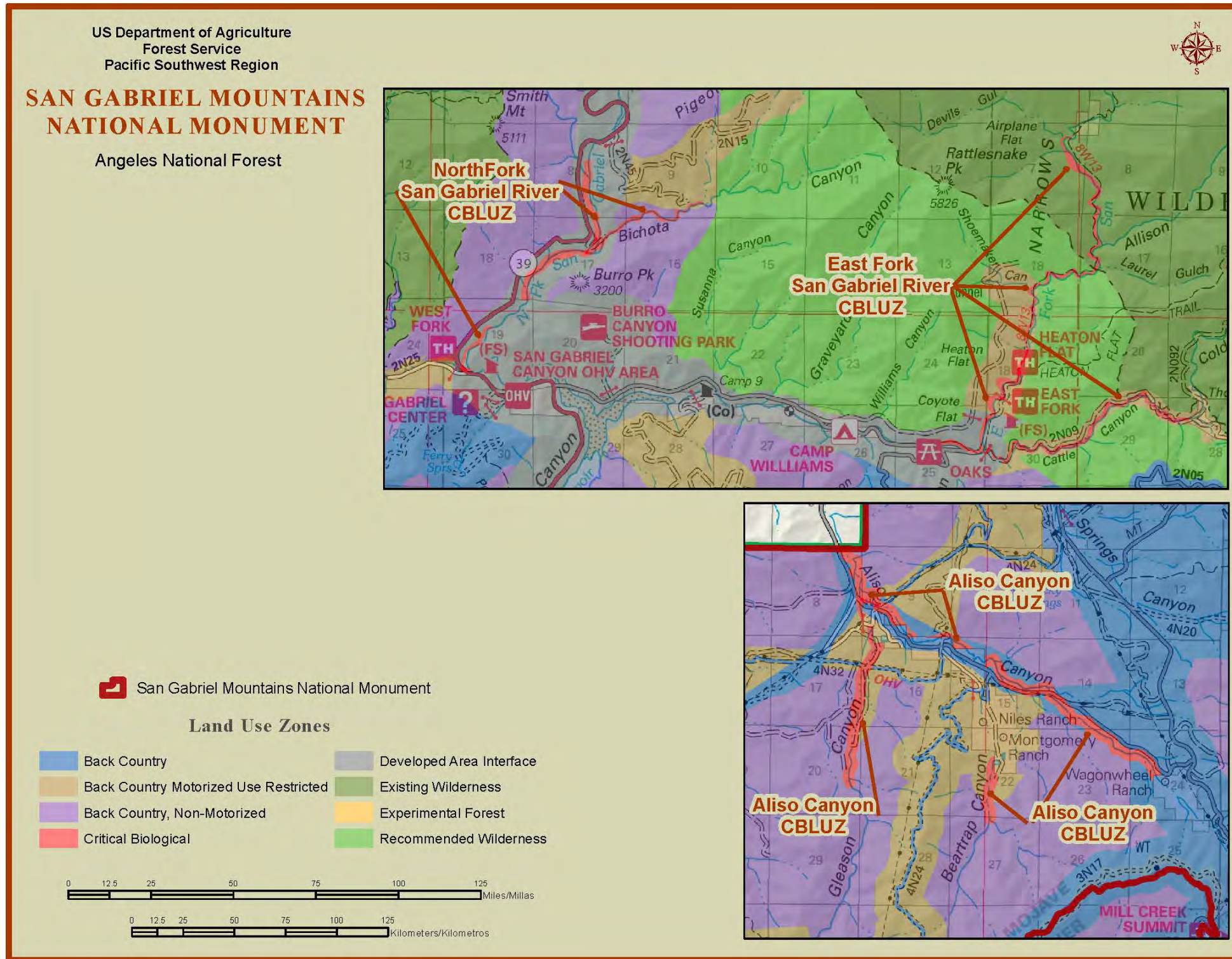


Figure 3. San Gabriel Mountains National Monument land use zones in detail

Table 3. New wilderness area descriptions

Title	Place	Acres
Magic Mountain Wilderness	Soledad Front Country	11,938
<p>The United States Congress designated the Magic Mountain Wilderness in 2009. The Magic Mountain Wilderness is generally bounded by: Santa Clara Divide Road (3N17.7) on the south; Backcountry Discovery Trail 1 (3N37) on the east; and forest boundaries on the north and west. A closed road traverses the mountain from the community of Lange to Magic Mountain. This corridor separates the Magic Mountain Wilderness into two portions.</p> <p>The Magic Mountain Wilderness's chaparral-covered hillsides and oak-studded canyons provide a scenic vista and suitable habitat for the California condor. The area also offers primitive recreational opportunities for the rapidly urbanizing Santa Clarita Valley. There are no officially designated trails within this wilderness. However, several social trails exist which were created by visitor use.</p>		
Pleasant View Ridge Wilderness	Angeles High Country, Mojave Front Country	27,040
<p>The United States Congress designated the Pleasant View Ridge Wilderness in 2009. This wilderness area is located roughly 30 miles northeast of La Canada, north of the Angeles Crest Highway where the San Gabriel Mountains slope north to meet the Mojave Desert. The area features 8,200-foot Mt. Williamson and other dramatic peaks, formidable cliffs, the headwaters of Little Rock Creek, remote backcountry, and some of the most magnificent canyon country in the San Gabriel Mountains.</p> <p>The Pleasant View Ridge Wilderness is generally bounded by: California Highway 2 (Angeles Crest Scenic Byway) on the south; Little Rock Canyon on the west; and the forest boundary on the north; and High Desert National Recreation Trail (10W02 Burckhardt) on the northeast.</p> <p>The area can be accessed from California State Highway 2 at Vincent's Gap, Islip Trailhead, Buckhorn Campground, and Three Points Trailhead and from the Pacific Crest National Scenic Trail and High Desert National Recreation Trail.</p> <p>Trails going through this wilderness include: High Desert National Recreation Trail (10W02 Burckhardt), Islip Saddle (9W02), and Pacific Crest National Scenic Trail.</p>		

Monitoring

No new resource monitoring requirements beyond those identified in the existing Forest Plan (Part 3, Appendix C, revised 2016) have been identified as necessary for the implementation of the proposed action.

Alternatives Considered, but Eliminated from Detailed Analysis

We carefully considered the alternatives discussed below and determined they would not be carried forward into detailed analysis in the environmental assessment. For an alternative to be analyzed in detail in the environmental assessment, it must meet the purpose and need for action and address one or more key issues.

Alternatives not considered in detail in the EA may include, but are not limited to, those that do not meet the purpose and need, are technologically or economically infeasible or illegal, or would result in unreasonable environmental harm.

Public scoping comments provided a large number of suggestions for actions to address some of the key issues and other relevant resource concerns identified above. Some public comments suggested the Forest Service operate a tram/bus/rail system to shuttle visitors into and out of the Monument. This suggestion is outside the capacity of the Forest Service to provide with current funding and staffing and was therefore considered unfeasible. An alternate proposal for a Transportation Plan is being developed in coordination with other partner authorities and is being pursued as a part of this planning effort.

Construction of new bike paths into the Monument, more recreational facilities (such as bathrooms, trash cans, parking, etc.), and entrance stations at entrances to the Monument were also proposed. These types of action are outside the scope of the planning effort, as defined by the purpose and need. Site-specific analysis would be necessary and appropriate for considering this kind of development within the Monument.

Some commenters suggested the Forest Service should complete Travel Management Regulation Subpart A, B, and C planning in conjunction with the Monument Management Plan amendment. The Angeles National Forest has considered incorporating these processes into the Monument Plan amendment process, but has determined it is not necessary for the scope of this planning effort and would be best addressed in a focused planning effort in parallel. The Angeles has conducted a forest-wide roads analysis process that included all system roads, and has also gone through the route and area designation process—leading to the creation of the current motor vehicle use map. This existing direction continues to guide and inform decisions within the Monument.

Comments also advocated that the Forest Service provide more funding/staffing for the Monument or charge additional fees for admission to the Monument to pay for additional facilities. While previous Monument designations indicate that resources are likely to increase, this is not a decision that can be made within the current Monument Plan, as funding levels fluctuate from year to year and are based upon congressional appropriation processes.

Changing the fee structure is a site-specific action outside the scope of the planning effort, but could be considered in a future process focused on such changes.

Some commenters suggested the Forest Service establish visitor capacity allocations. This type of action is outside the scope of this planning effort, but could be considered in a future site-specific process focused on such changes in specific areas. The proposed action does include a goal to evaluate visitor capacity.

A number of comments suggested that the Forest Service deny the California High Speed Rail application for routes through the Monument as a part of this planning effort. This suggestion is outside of the scope of this planning effort, as special use permits are considered on a case-by-case basis once submitted by applicants.

Decision to be Made

The Forest Supervisor will decide whether to amend the Forest Plan as proposed in this document, or make adjustments based on input that emerges from the environmental analysis and public comment. The Forest Plan amendment (see “Chapter 2 – Proposed Action”) would include: new desired conditions, suitability of lands, and standards, guidelines and management approaches.

Environmental Impacts of the Alternative

Introduction

Located in the northern and southeastern portions of the San Gabriel Mountain Range, approximately 30 miles northeast of Los Angeles, the recently designated Monument covers 342,177 acres of the Angeles National Forest and 4,030 acres of neighboring San Bernardino National Forest. The San Gabriel Mountains are some of the steepest and most rugged mountains in the United States. The San Gabriel Mountains are actively uplifting, being squeezed between the San Andreas, Sierra Madre, and the Cucamonga Faults.

These mountains are the headwaters of the Los Angeles River and the San Gabriel River. They also contribute significant runoff to the Santa Ana River (via Lytle, Cucamonga, and San Antonio Creeks) and the Santa Clara River (via Soledad Canyon). The major desert-flowing drainages are Little Rock and Big Rock Creek. Drought-tolerant and fire-adapted chaparral shrubland is the dominant community and includes scrub oaks, chamise, manzanita, wild lilac, and western mountain-mahogany. Mixed conifer forest is an associated vegetation community comprising Jeffrey pine, sugar pine, white fir, and riparian woodlands including white alder, sycamore, and willow. Limber pine, incense cedar and other trees grow at higher elevations. The mountains also include pinyon pine/juniper woodland, as well as Joshua tree/creosote within the adjacent Mojave Desert.

Many of the streams have water flow throughout the summer, either because of dam leakage or because of groundwater flow throughout the fractured bedrock or alluvial floodplains/fans. With a close proximity to a major urban area, many riparian areas receive heavy recreational use in the summer. Designated off-highway vehicle (OHV) areas in San Gabriel and Little Rock watersheds also receive heavy use.

Aquatic Species

Affected Environment

The following tables display special status aquatic species (and/or their habitat) located within the San Gabriel Mountains National Monument perimeter.

Table 4. USDA Forest Service sensitive species (populations and/or habitat) within the analysis area

Species	Scientific Name	Status*
Western Pond Turtle	<i>Actinemys marmorata</i>	FSS, SSC
Two-striped Garter Snake	<i>Thamnophis hammondi</i>	FSS, SSC
San Gabriel Mountains Slender Salamander	<i>Batrachoseps gabrieli</i>	FSS
Yellow-blotched salamander (Ensatina)	<i>Ensatina eschscholtzii croceator</i>	FSS, SSC
Arroyo Chub	<i>Gila orcutti</i>	FSS, SSC
Santa Ana Speckled Dace	<i>Rhinichthys osculus</i>	FSS, SSC

*FSS= Forest Service sensitive; SSC = California Department of Fish and Wildlife species of special concern; FE = federally endangered.

Table 5. Federally listed species and/or critical habitat within the analysis area

Species	Scientific Name	Status*
California Red-legged Frog	<i>Rana draytonii</i>	FT
Mountain Yellow-legged Frog	<i>Rana muscosa</i>	FE
Arroyo Toad	<i>Anaxyrus californicus</i>	FE
Santa Ana Sucker	<i>Catostomus santaanae</i>	FT
Unarmored Threespine Stickleback	<i>Gasterosteus aculeatus williamsoni</i>	FE**

* FE= federally endangered; FT = federally threatened.

**USDI Fish and Wildlife Service 2009

Life history and status of aquatic analysis species is provided in the “species document” within the Land Management Plan (USDA Forest Service 2005a) for Southern California National Forests, and is hereby incorporated by reference.

General conditions of aquatic habitat are described in the project hydrology report.

Environmental Consequences

No Action

Under the no-action alternative, there would be somewhat less emphasis on aquatic resource maintenance and protection within that portion of the forest occupied by the Monument; however, the Forest Plan does already have numerous requirements in place that provide substantial benefit. Though not quantifiable, future projects would likely contribute slightly more aquatic species and habitat effects under the no-action alternative. As stated previously, future projects would require site-specific analysis.

Proposed Action

Direct and Indirect Effects – Proposed Action

Vehicle congestion and parking issues are a known issue within the Monument. For example, the East Fork San Gabriel River, which supports the federally listed Santa Ana sucker, experiences very high visitor use during warm months, with related impacts, such as modification of riparian vegetation and alteration of in-stream habitat (e.g., rock dams). A reduction in automobile use is likely to result in a corresponding reduction in impacts from near-stream roads, and road/trail condition improvement is likely to reduce impacts such as sediment input (see Hydrology section); It is likely that a reduction in congestion and possible prevention of expanded parking would provide an overall benefit to aquatic habitat through a reduction of physical impacts, such as vegetation removal and sediment production; however, it is recognized that use following the designation of the Monument would likely increase any associated impacts, such as those currently documented within and adjacent to the San Gabriel River. Some of these effects include: reduced riparian vegetation, increased sedimentation, physical alteration of stream habitat/flow (e.g., rock dams), and an increase in physical/chemical, and biological pollutants.

Based on professional judgment, it is assumed that conservation education is generally beneficial to natural resources, including aquatic species and their habitat within the analysis area through a reduction in negative human effects, some of which include: reduced riparian vegetation, increased sedimentation, physical alteration of stream habitat/flow (e.g., rock dams), and an increase in physical/chemical, biological pollutants. This would likely become increasingly important as visitor use is estimated to increase due to the designation of the Monument.

The proclamation itself precludes new mining within the Monument. In general, reduced mining has the potential to result in a corresponding reduction in aquatic habitat impacts, especially where it occurs proximate to water or is hydrologically connected.

Management within wilderness has species and habitat protection as a major component. The following language is extracted from the Forest Plan, and is not a change related to the proposed action. It supports the protection of native biota, including aquatic species, and is assumed to be a beneficial effect:

“The national forest is active in regional planning efforts to establish a wildlife linkage connecting the San Gabriel Mountains to the Sierra Pelona and Santa Susana Mountains. Uses and activities are managed to provide opportunities for establishment of regional wildlife linkages in the Soledad Front Country Place. Protection and enhancement of threatened, endangered, proposed, candidate and sensitive species, such as the unarmored threespine stickleback, arroyo toad, southwestern willow flycatcher, least Bell's vireo, San Diego horned lizard, two-striped garter snake and sensitive plants will be emphasized in all activities. Arundo and other exotic species eradication to restore healthy riparian systems will continue to be emphasized.”

“A wildlife linkage connecting the San Gabriel Mountains north to Saddleback Butte has been established and is functioning. Habitat conditions for threatened, endangered, proposed, candidate and sensitive species are improving over time. Exotic species are reduced and controlled over time.”

The proposed action provides increased emphasis on special status species, including aquatic organisms. For example, the establishment of additional Critical Biological Land Use Zones (CBLUZ) would generally reduce human-caused impacts through a decrease in high-impact activities (e.g., new road construction) in these areas. This zone includes some of the most important areas on the national forest to manage for the protection of species at-risk, including but not limited to the following special status aquatic species: mountain yellow-legged frog, Santa Ana River sucker, Arroyo toad, and unarmored three spine stickleback (see table 2: San Gabriel Mountains National Monument Critical Biological Land Use Zones). The management intent is to retain the natural character and habitat characteristics in this zone and limit the level of human development to manage for protection of species-at-risk. Based on professional judgement, this is likely to be a beneficial effect in the long term due to maintenance or improvement of habitat, and knowledge derived from monitoring. Problem areas identified through monitoring would allow for site-specific beneficial actions, such as habitat protection/restoration where conditions are degraded and/or special status species are present.

Conservation education related to wildlife is expected to be beneficial to aquatic species and their habitat. Presumably, education regarding human-caused impacts would reduce the likelihood of behavior capable of negatively affecting aquatic habitat, some of which include: disturbance of near-stream vegetation, physical/chemical/biological contaminant introduction, sediment impacts from stream access and in-stream modifications (e.g., rock dams), and introduction of nonnative plants and animals.

Increased emphasis/management of heavily impacted riparian areas, such as roads/trails and parking areas along portions of the San Gabriel River and tributaries, has the potential to benefit all aquatic species through a reduction in negative effects (e.g., sedimentation, loss of riparian vegetation). This benefit could extend to hydrologically connected roads/trails located outside of riparian areas, but capable of impacting downstream/adjacent habitat. Parking capacity limits could reduce visitor use in or near sensitive aquatic habitat, with a corresponding reduction in negative effects, some of which include: reduced riparian vegetation, increased sedimentation, physical alteration of stream habitat/flow (e.g., rock

dams), and an increase in physical/chemical, biological pollutants. This would likely become increasingly important as visitor use is estimated to increase due to the designation of the Monument.

Increased emphasis on impact review of extractive resources (e.g., mining) is assumed to be a benefit to aquatic organisms and their habitat in the long-term. Any aquatic resource impacts associated with management outside of the Monument would be analyzed in separate documents through site-specific analysis.

Cumulative Effects – Proposed Action

The proposed action itself does not contribute to present effects, but instead guides future management. Future actions would be subject to site-specific analysis. The proposed action (e.g., forest plan amendments) does increase emphasis on aquatic habitat and species protections; therefore, future actions that comply with the proposed action language (and amended Forest Plan) would be expected to have lower impacts than those that do not. Therefore, the contribution of future projects to cumulative effects would likely be less under the proposed action, as compared to current management. The Monument designation is expected to result in increased visitor use; the management plan could address this increased visitor use through emphasis on issues such as public transportation and transportation connectivity. There is uncertainty regarding the future interaction between increased visitation and increased emphasis on aquatic habitat/species protection. Site-specific future impacts, positive, negative, or neutral, are beyond the scope of this analysis.

Determinations for Aquatic Species

As described in the analysis, the proposed action supports/emphasizes aquatic habitat maintenance and protection; therefore, it is likely that future actions that are in compliance with the Monument Plan would result in a neutral to beneficial effect to all aquatic species and their habitat. However, components of the proposed action, such as an emphasis on increased public transportation, could lead to an increase in visitor use. Therefore, there is a degree of uncertainty regarding the overall positive, negative, or neutral outcome of implementing the proposed action. This uncertainty is reflected in the determinations below.

The following determination applies to all U.S. Forest Service sensitive species in table 4: “May affect individuals, not likely to result in trend toward Federal listing or loss of viability.”

The following determination applies to all federally listed species (table 4) present within the analysis area: “May Affect and is Likely to adversely affect.” The actions proposed for this project are currently expected to be consistent with the following Biological Assessment (and related Biological Opinion) from 2012: “Forest Service Ongoing Activities Associated with Recreation, Roads/Trails, and Administrative Sites on the Angeles National Forest” (USDA Forest Service 2012). Further consistency evaluation would occur after the Angeles National Forest finalizes the EA.

Heritage Resources

Affected Environment

Survey occurred on 25,542 acres out of 346,176 acres, as of June 2015. That means approximately 7 percent of the land within the Monument boundaries has been surveyed for cultural resources. Approximately 565 cultural resource inventories have occurred within the Monument boundary. They vary in acreage and intensity. Roughly 1,000 sites, varying from large areas to roads to isolated finds, have been documented as of June 2015. That number recorded from the current acreage surveyed allows for an average of one site per 25 acres. If that average held true for 320,634 acres that have yet to be surveyed, there remain 12,573 cultural resources that are undocumented.

Sites can be managed in four different ways according to the Forest Service Cultural Resource Use Categories (2363.31):

- Preservation (2363.31a) – Preservation is appropriate for cultural resources whose primary value warrants protection in place. The management focus of cultural resources in this category is preservation and protection. This category includes, but is not limited to:
 1. Properties or areas that are important to a specific group’s traditions or religions (TCP and Sacred Site).
 2. Cultural resources that are exceptionally unique or extraordinarily valuable.
 3. Cultural resources that may have future scientific potential.
- Enhancement (2363.31b) – Enhancement is appropriate for cultural resources that have the potential to provide public educational, informational, or recreational benefits above all other uses. The management focus is sustainable use (historic administrative sites), adaptive reuse (historic cabin and lookout rentals), interpretation, and other development that benefits agency management and public use of cultural resources.
- Scientific (2363.31c) – Scientific investigation is for cultural resources whose primary value is in their ability to reveal information about past human cultures and environments above all other uses. This category includes cultural resources suitable for data extraction through various research methods and experimental studies that have broader management benefit. The management focus is preservation, protection, and research.
- Release from Management under NHPA (2363.31d) – The agency official may release those cultural resources that have negligible scientific, historic, cultural, or interpretive value and that are not eligible to the National Register. This includes:
 1. Cultural resources whose research potential is effectively exhausted as soon as they have been documented.
 2. Historic properties that have had their salient information collected and preserved through mitigation.
 3. Historic properties destroyed by any natural event or human activity.

The majority of the sites that were analyzed fall under the preservation category. Several could be categorized as Enhancement (05015200066-Bridge to Nowhere, 05015100194-Mt. Wilson Trail, 05015200092-Mt. Baldy Trail, 05015400118-Burkhart’s Trail). A few sites could be categorized as scientific- 05015100032, 05015100020, 05015500138, 05015500130, 05015500131, 05015500003, 05015400048, 05015100154, 05015400179, 05015500032. Approximately 42 sites could be released from management at the time of this analysis. That leaves the remaining approximately 950 sites in the preservation category.

A few sites or areas were explicitly addressed in the proclamation:

Aliso-Arrastre Special Interest Area

There are approximately 74 cultural resources within the Aliso-Arrastre SIA and 12 linear sites that cross or are within the SIA.

Eldoradoville

Eldoradoville (05015200002) was destroyed during the flood of 1938, but what remains is located along the East Fork of the San Gabriel River. The site today consists of a series of concrete pads, retaining

walls, a cobble rockwork flagpole base, and nonnative vegetation on the primary terrace above the East Fork of the San Gabriel River. Earlier placer workings are located nearby. The site is the approximate geographic location of the historic “Prospect Bar” and “Eldoradoville” mining towns of the mid-1800s, historic “Camp Bonita” of the Great Hiking Era, and the historic “Hooverville” of the 1930s. The remains are most consistent with the 1909 to 1938 Camp Bonita occupation. In May 1859, a gold mining boom town known as Prospect Bar, consisting of a boarding house, two or three stores, blacksmith, butcher shop, etc., arose due to a flurry of mining activity on the East Fork of the San Gabriel River. That settlement was described as being located 4 miles up the East Fork, near the confluence of that stream and Cattle Canyon. The site was flooded out in a storm in November 1859. In March 1860, the miners had returned and formed a mining district, naming the town Eldoradoville. The town was a lawless Wild West settlement, governed by the knife and gun. There were three stores, and six saloons with gambling and dance halls. The residents turned out on Election Day in 1860, voting 34-23-14 for Stephen Douglas over Breckenridge and Lincoln, respectively. In 1861, the district produced an average of \$15,000 per month in shipments of gold. During January 1862, another deluge completely obliterated the town and all other mining works in the East Fork, leaving nothing but mud and rock. Large-scale mining in the area never again reached the height of that period. In 1909, Jay Gardner Scott founded a small resort camp at the junction of the East Fork and Cattle Canyon. Originally named “Scott's Camp,” it was soon changed to Camp Bonita. A small lodge and store were built, along with tents to accommodate fishermen. Henry Willard took over the camp in 1914, and made the resort very popular, running a stage three times a week into the East Fork. Flooding damaged the resort in the 1920s and early 1930s, and it was finally destroyed in the great flood of 1938. Concurrent with this operation was the resettlement of Eldoradoville by Depression-era miners, at a site named Hooverville. It was one of many such shantytowns to spring up from unemployed families searching for honest work. Most of the structures associated with the settlements were tents and even converted automobiles. Hooverville and other such settlements were also completely destroyed in 1938.

Mt. Wilson Observatory (05015100005)

Site of several important telescopes, dating to as early as 1889, which pioneered astronomical discoveries. In 1889, the Harvard Observatory on Mt. Wilson featured a 13-inch lens, and enabled the photography of 1,150 stars and the completion of a star map of the heavens. In 1908, the 60-inch Snow Solar telescope was constructed by George E. Hale at the site. That instrument enabled much of the study of sunspots and other modern solar observations. In 1917, the 100-inch Hooker telescope, the largest ever made until 1948, was constructed on-site. Over its lifetime, it revolutionized the concepts of space and the universe, allowing the mapping of the galaxy, and the siting of distant galaxies. In 1936, Dr. Edwin Hubble used the Hooker Telescope to make record of the second ever supernova witnessed by man. Later additions to the site include a 50-foot interferometer for measuring stellar diameters, a 20-inch reflecting telescope, a 10-inch photographic refractor, and a 6-inch visual refractor.

The site is currently being interpreted by the Mt. Wilson Observatory and offers weekend tours, school group tours, and other opportunities.

San Dimas Experimental Forest

Although mentioned in the proclamation, the San Dimas Experimental Forest is currently off limits to the public and managed by the Pacific Southwest Forest Service Office. The San Dimas Experimental Forest has been a field laboratory for studies of chaparral and related ecosystems for the last 68 years. Over the years data have been collected on water (precipitation, streamflow, etc.), soils and slope stability, effects of fire, vegetation management, chaparral ecology and physiology, vegetation classification, litter decomposition, and community structure of fauna (Dunn et al. 1988).

Potential National Register Districts

Big Pines

In 1922, Los Angeles County established Big Pines Recreation Camp on the northeastern slopes of the San Gabriel Mountains, approximately 70 road miles from the City of Los Angeles. Initially a combination of County-owned property (approximately 760 acres) and land leased from the USDA Forest Service (3,500 acres), the Camp was transferred entirely to the Angeles National Forest in 1941. Since then, many of the original Camp facilities have been removed or rebuilt. Construction of the Angeles Crest Highway in the 1950s and redevelopment of former Camp land for modern recreational facilities nearly compromised the integrity of remaining structures and of the historic Camp landscape. However, a large number of the original Camp buildings and landscape features remain at separate areas of concentrated Camp activities: the Camp headquarters complex or “Arch” area, the Ski Club and Zoo complex, staff residence and service complexes, organizational camps, and a tract of recreational homes originally built at the Camp for Los Angeles County supervisors and staff.

Big Pines Recreation Camp district was nominated to the National Register of Historic Places in 2006. The period of significance for the district is 1922 to 1941. The district might benefit from interpretive signs or walks with its current location and proximity to highly populated areas.

Mt. Baldy

Mt. Baldy sits on the edge of the San Gabriel Mountains National Monument. Two sites make up a possible National Register District: FS#05-01-52-20 (CA-SBR-5582H) Baldy School house, and FS#05-014-52-18 (CA-SBR-5581H) Camp Baldy Ranger Residence, but they are outside of the San Gabriel National Monument boundaries.

East Fork Mining District

The East Fork Mining District was nominated to the National Register of Historic Places in 1997. It is located within the Sheep Mountain Wilderness area. There are several historic mining properties within this district: the Allison Mine, the Gold Dollar and Eagle Mines, the Baldora Mine Complex, the Stanley-Miller Mine, the Big Horn Mine, the Native Son Mine, Smith Cabin, and Rattlesnake Place Mining Cabins Nos. 1 and 2. The mines, mills and support buildings retain the historical context and integrity of early 1900s mining technology in the San Gabriel Mountains.

Due to the East Fork Mining District location in a wilderness area, it is recommended that no further interpretive efforts are made. Stabilization and research would be a good use of the district.

Environmental Consequences

No Action

Impacts on the cultural resources would primarily result from unmitigated surface disturbance such as wildfires, unauthorized collection, and inadvertent vandalism and trampling. Direct and indirect impacts on cultural resources result from any surface-disturbing activity. Federal actions defined as Federal undertakings under Section 106 of the National Historic Preservation Act (NHPA) require the identification, evaluation, and treatment of adverse effects and the appropriate mitigation of the impacts.

Impacts from increased recreational use, wildfires, and unauthorized collection and vandalism are not usually considered under Section 106 of NHPA and result in the unmitigated loss of cultural resource information. Most impacts are difficult to quantify because the locations of most cultural resource sites in

the San Gabriel Mountains National Monument are unknown, and the alternative does not identify specific areas for surface-disturbing activities.

Proposed Action

The proposed action includes purposeful management of recreation uses, engaging youth and underserved communities in interpretation, and enjoyment of recreation uses. Reducing the number of inventoried unauthorized roads and trails and minimizing development and proliferation of new unauthorized routes are also goals.

Direct and Indirect Effects – Proposed Action

Under the proposed action, new direct effects would not likely occur, because the known sites would be avoided and if there are unanticipated discoveries, all work in the area would stop. Monument projects and activities are managed for compliance with existing Federal laws, policies, and regulations, ensuring protection or mitigation measures are in place prior to project implementation. In addition, Monument activities or projects, during the initial planning phase, can be modified or redesigned to avoid or minimize affects that could cause effects to historic properties. As such, any future Monument activities in support of the proposed action, would be reviewed at the project level, where cultural resource surveys and identification efforts would occur, and the individual project is analyzed for direct, indirect, and cumulative affects to historic properties. This process ensures that all regulated or managed Monument activities would seek to avoid and minimize effects or impacts to historic properties. An analysis of prior and current Monument activities indicates that future projects tied to the proposed action would likely be ground-disturbing activities associated with an increase in visitor use, recreation, OHV activity, trail and campground use and maintenance, an increase in invasive species (and associated actions for their treatment or removal), access road maintenance/grading, Monument health and fuel reduction, special use facility maintenance and improvements, fire suppression activities, etc. Some of these Monument activities would increase with the proposed action (visitor and recreation use/trail and campground maintenance, etc.), while others could remain relatively constant and in line with past and current operation levels (fuels reduction, SUP facility maintenance). However, with project-level analysis and review, emergency fire suppression coordination with heritage staff, and existing compliance responsibilities (i.e., avoidance measures and/or project modification/redesign strategies, in accordance with Section 106 [36 CFR 800], R5 Programmatic Agreement), direct effects from developed or regulated Monument activities would likely be minimal and not reach a level of significance.

Indirect effects could occur with increased unregulated recreation activities. Without sufficient law enforcement associated with recreational activities, actions such as increased visitor use, off-road travel, inadvertent vandalism, and pot hunting would result in a loss of cultural resource information, which could be an indirect effect. As most recreation activities are dispersed in nature and do not require permitting, these impacts would be mitigated on a case-by-case basis, as they are discovered.

Improved visitor use could increase contact with cultural resource sites by visitors who could intentionally damage sites by collecting surface artifacts, vandalizing, illegally digging, or otherwise excavating the sites. Portions of this data loss could affect NHRP eligible and potentially eligible sites, resulting in impacts; however, increased access could also allow for the increased presence of law enforcement and cultural resource personnel to monitor sites and areas, which could deter vandalism or other damage to cultural resources.

Cumulative Effects – Proposed Action

Cumulative effects over time can occur to cultural resources through both natural processes and through the management activities of a monument. Monument projects and activities are managed for compliance

with existing Federal laws, policies, and regulations, ensuring protection or mitigation measures are in place prior to project implementation. In addition, Monument activities or projects, during the initial planning phase, can be modified or redesigned to avoid or minimize affects that could cause effects to historic properties. As such, any future Monument activities in support of the proposed action, would be reviewed at the project level, where cultural resource surveys and identification efforts would occur, and the individual project is analyzed for direct, indirect, and cumulative affects to historic properties. This process ensures that all regulated or managed Monument activities would seek to avoid and minimize affects or impacts to historic properties. An analysis of prior and current Monument activities indicates that reasonably foreseeable future projects tied to the proposed action would likely be ground-disturbing activities associated with an increase in visitor use, recreation, OHV activity, trail and campground use and maintenance, an increase in invasive species (and associated actions for their treatment or removal), access road maintenance/grading, Monument health and fuel reduction, special use facility maintenance and improvements, fire suppression activities, etc. Some of these Monument activities would increase with the proposed action (visitor and recreation use/trail and campground maintenance, etc.), while others could remain relatively constant and in line with past and current operation levels (fuels reduction, SUP facility maintenance). Modest positive cumulative effects are expected over time with facility changes associated with alternative transportation, additional parking, and reducing resource damage in sensitive areas – such as riparian areas. Indirect effects associated with the Monument Plan are expected to offset negative effects associated with population growth and increased authorized and unauthorized uses. In accordance with the proposed Monument Plan, expansions in recreation infrastructure would be balanced by restoration and removal of unneeded facilities that do not meet user needs or are in conflict with resource protection needs. With project-level analysis and review, emergency fire suppression coordination with heritage staff, and existing compliance responsibilities (i.e., avoidance measures and/or project modification/redesign strategies, in accordance with Section 106 [36 CFR 800], R5 Programmatic Agreement), cumulative effects from developed or regulated Monument activities would likely be minimal.

Cumulative effects, as a result of the proposed action, could also potentially involve unregulated recreation activities through an increase in visitor use, in addition to those resulting from natural processes. Analyzing past and current effects of unregulated activities, the proposed action would likely incrementally increase these types of impacts to historic properties. For example, unauthorized recreational mining activities have adversely affected historic properties in the past. An increase in visitor use would undoubtedly increase these unregulated recreational activities, thus increasing the potential for cumulative effects to historic properties. In addition, an increase in visitor use would also add to the potential for future looting and vandalism affecting historic properties, particularly unauthorized collection, and damage caused by graffiti, when past and current impacts are considered. These unregulated activities would continue, as they have in the past, with an incremental increase of impacts, over time, to historic properties resulting from objectives and goals of the proposed action (increased access and recreation). While these are not Monument actions or activities, these types of unregulated public/visitor activities can be mitigated or reduced however, through the appropriate strategies, particularly by an increased law enforcement presence, Forest Service patrols, or other measures. These strategies would limit cumulative effects and impacts resulting from unregulated or unauthorized activities to a less than major level, as well.

Natural processes impacting historic properties (i.e., soil movement, erosion, deposition, flooding, fire, etc.), would also likely occur to both known and unknown cultural resources as a result of the proposed action. Natural processes, when examined with past, present, and future actions may provide potential to incrementally impact historic properties in the future. Many of the natural processes stated above, when examined against, for example, fire suppression activities, can be a combination of both regulated or planned, and natural factors that when associated, can cumulatively effect historic properties. Fire can

denude hillsides of slope-stabilizing vegetation, while firebreak construction can disturb and loosen soil, culminating in an increase in erosion or deposition, both potential impacts to historic properties. This type of cumulative effect occurring to a large degree is relatively low, as long as heritage staff is brought into early stage or initial attack fire planning decisions.

While the potential exists for cumulative effects to occur as a result of the proposed action, it is mainly one of degree, and would remain minimal to low if processes and procedures in place are followed. The proposed action or plan itself has no real potential to cumulatively affect historic properties. No ground-disturbing or other type of action or activity is being proposed. The potential for impacts to historic properties comes later, at the project level, and as a result of unregulated or unmanaged visitor/recreational use. Each of these potential causes of cumulative effects can be managed in ways to minimize or reduce incremental or cumulative effects from occurring to a large degree.

Hydrology

Affected Environment

The San Gabriel Mountains National Monument includes watersheds that are critical to providing the quality and quantity of water needed for the support of plants and wildlife, as well as for drinking water and other human uses. The watershed resource consists of surface water, groundwater, riparian areas, and the soils and landscapes that make up the watersheds. The relationship between groundwater extraction, water diversions, and instream flow requirements to support aquatic species and riparian habitat is important to the proper functioning of sustainable forest ecosystems and the recovery of listed species. The challenge is to balance the needs of water users with resource needs for the maintenance or improvement of riparian and wetland habitat.

Composed of steep, naturally erosive mountains formed by dynamic geologic forces characterized by high relative relief, deep dissection, and innumerable extremely steep slopes, the watersheds of the San Gabriel Mountains National Monument provide a relatively direct delivery system for precipitation and sediment to reach streams. As a result, the valley-side slopes in the mountains are exceptionally geologically active environments, in which rates of debris production and removal are extremely rapid by comparison with other areas and regions (Cooke 1984). Past storm events in the area have resulted in substantial sedimentation in the four reservoirs (Palmdale Little Rock, Cogswell, San Gabriel and Morris). National Monument managers play a unique and important role in water resources in that they are responsible for the headwaters and primary source areas for major river systems and have stewardship over the primary recharge area for most aquifers within the San Gabriel Mountains.

A healthy watershed operates in dynamic equilibrium. This balance can be affected by national forest management activities, off-forest uses, and natural events such as earthquakes and wildland fires. Heavy precipitation and flood events cause erosion and sedimentation, and naturally occurring chemical compounds found in the rocks can affect surface water quality. Management activities, public uses and natural events that disturb the soil surface, as well as those that impede or remove streamflow, generally increases the closer a ground-disturbing activity is to a stream, riparian area or wetland. Surface water, floodplains, groundwater, wetlands, and riparian areas are closely related through proximity to one another and through interflow of water traveling at the subsurface between streams and groundwater aquifers (Winter and Chavez 1998).

Urbanization near and adjacent to the national forests can and is already having a marked effect on national forest resources. Many stream channels downstream of the national forests' boundaries have been altered through flow management or channelization, which has caused a break in the connectivity with natural streams that previously flowed through towns, cities and farmland to the Pacific Ocean.

Annual precipitation

The climate in this region is best described as Mediterranean, characterized by wet winters and dry summers, with mild seasonal changes. Warm and dry conditions dominate from May to October, and cool, intermittently wet conditions often occur between November and April. Snowpack may accumulate at higher elevations during the winter and early spring months, with snow melting before June. It is cyclic in nature, with consecutive years of low rainfall and extended droughts, as well as years with high rainfall and associated flooding.

Average annual precipitation on the national forests varies dramatically elevation. Little or no precipitation occurs in the planning area during approximately three-quarters of the year (Fujioka et al. 1998). The San Gabriel Range is a physiographic barrier that causes air masses to rise as winds blow over the range, and locally there are increases in precipitation as a result. The upper elevations receive the highest rainfall in southern California. Precipitation data collected at San Antonio Canyon just outside the Monument has been collected since 1900. For San Antonio Canyon, precipitation averaged 42 inches at 3,400 feet elevation (Nourse 1999). Annual precipitation amounts can reach 60 inches at higher elevations, much of which falls as snow. Precipitation varies considerably from year to year, and reflects precipitation patterns found over much of southern California. Short duration high-intensity storms are relatively common.

Streams and River Networks

High variability in precipitation and runoff in southern California can result in large flood events, which scour channels and redistribute sediments and bedload. The winter of 2005 offers an example of this type of regional flooding. Maximum discharge periods in high-elevation streams are governed by the timing of spring snowmelt (Stephenson and Calcarone 1999). Local flood peaks generally occur during major rainfall events, which threaten life and property during these periods. Large-scale and high-return-interval floods are associated with major sub-tropical events and with northern Pacific frontal systems in the planning area. Wildland fire-related flood events are exacerbated by the large amounts of sediment released by the fires that “bulk” the flood flow volumes to double or triple their average volumes.

The upper San Gabriel River watershed (Graf 1988) has a long history of large flood events and associated sedimentation. Severe storms have occurred in the San Gabriel Range that have led to extensive floods. A maximum discharge of 24,000 cfs was recorded at a USGS gage in San Antonio Canyon in March of 1938. This was followed about 30 years later in 1969 by a flood of 16,400 cfs at the same stream gage.

Because of early recognition of the economic potential for irrigation and hydroelectric power, streamflows in parts of the San Gabriel Range have been monitored intermittently since the late 1800s (Nourse 1999). Diversion and use of surface flows and groundwater for hydroelectric power, irrigation and domestic use is common within the Monument. Water uses in some areas have been extensively studied. Historic flow patterns in southern California streams reflect the region's climate of long, dry summers and short, wet winters. Peaks of stream discharge show up in the winter and early spring and then decline into the summer months. Gaging data from the Lower San Antonio Canyon, just outside the Monument, show mean annual runoff was 23 cfs. Hydrologic studies analyzed month-to-month variations in streamflow and precipitation. They found peak runoff rates occurred in April, while the greatest precipitation occurred in February. It is assumed that this delayed runoff pattern reflects springtime melting snow, combined with water storage and release from surface deposits that have absorbed runoff.

At the same stream gage, droughts have led to minimal surface flows. In late summer and early fall of 1951, zero flow was recorded. Similar low flows were recorded in 1954 and 1963. For this site, stream

diversions, combined with widespread infiltration of stream water into thick alluvial deposits, has led to common extended periods of very low flows or zero flows in the channel along lower San Antonio Canyon (Nourse 1999). Streamflow patterns in other areas of the San Gabriel Range which have not been studied as thoroughly within the Monument are probably similar.

The San Gabriel Range river systems are dominated by short, high magnitude storm events and, as a result, many rivers exhibit braided channel morphology. Braided channels are generally characterized by abundant bedload, steep channel gradients, highly erodible banks, and highly variable discharge (Graf 1988). In dryland river systems, flood events are almost always the factors that convert meandering channels to a braided morphology. Due to the role of large storm events, the change from braided back to meandering channel morphology is much slower than the change from meandering to braided channel geometry. The combination of high intensity rainfall events, poor soil development, and steep slopes often generates high magnitude storm events that transform stream channel morphology and associated riparian habitat, which should be recognized when describing aquatic and riparian habitat areas and evaluating potential human impacts on stream channel morphology and aquatic and riparian habitat.

The planning area includes both National Forest System (NFS) watersheds lands and other ownerships within the boundaries of the Monument. Approximately 67 percent of the watersheds are in non-National Forest System ownership overall for the Angeles National Forest (table 6). Watershed condition ratings for Monument watersheds are included in these totals.

Table 6. Watershed acreage, land ownership and summary of Watershed Condition Ratings for the San Gabriel Mountains National Monument

Watersheds	Watershed Acreage	Non-NFS land Acreage	Percent of Watershed in Non-NFS land	Watershed Condition Rating		
				Good	Moderate	Poor
39	344,602	8,558	2	11	18	10

NFS: National Forest System

The importance of water yields from vegetation and fuels treatments depends on aspect, elevation, soils, geology and vegetation cover, as well as on annual precipitation. The San Gabriel Mountains National Monument is a source of water for municipal, commercial and agricultural uses and for streamflows necessary to maintain healthy aquatic and riparian resources. Streamflows from forest watersheds result from total precipitation minus losses from evaporation, transpiration and groundwater storage. Trees and chaparral have an impact on water available to streamflow by intercepting precipitation in their canopies, which is then evaporated back into the atmosphere. Trees also transpire large amounts of water, which depletes water reserves in the soil and increases the groundwater capacity for subsequent rainfall or snowmelt (Troendle and Kaufmann 1987).

Estimated water yield conditions (on National Forest System lands only) have not changed measurably since the analysis conducted for the forest plan, which estimated the total annual water yield from the national forests. It is expected that short-term changes in water yield from the Monument management would occur during the implementation of this management plan. However, the limited amount of precipitation and high evapotranspiration rates common in this climatic zone severely limit the long-term changes in water yield (Ziemer 1981).

There are approximately 385 miles of streams and 6,765 acres of lakes and reservoirs within the planning area, although most reservoirs are on non-National Forest System lands (table 7).

Table 7. Water bodies located within the San Gabriel Mountains National Monument

National Monument	Miles of Perennial and Intermittent streams	Acres of Lakes and Reservoirs
San Gabriel Mountains National Monument	284	6,765

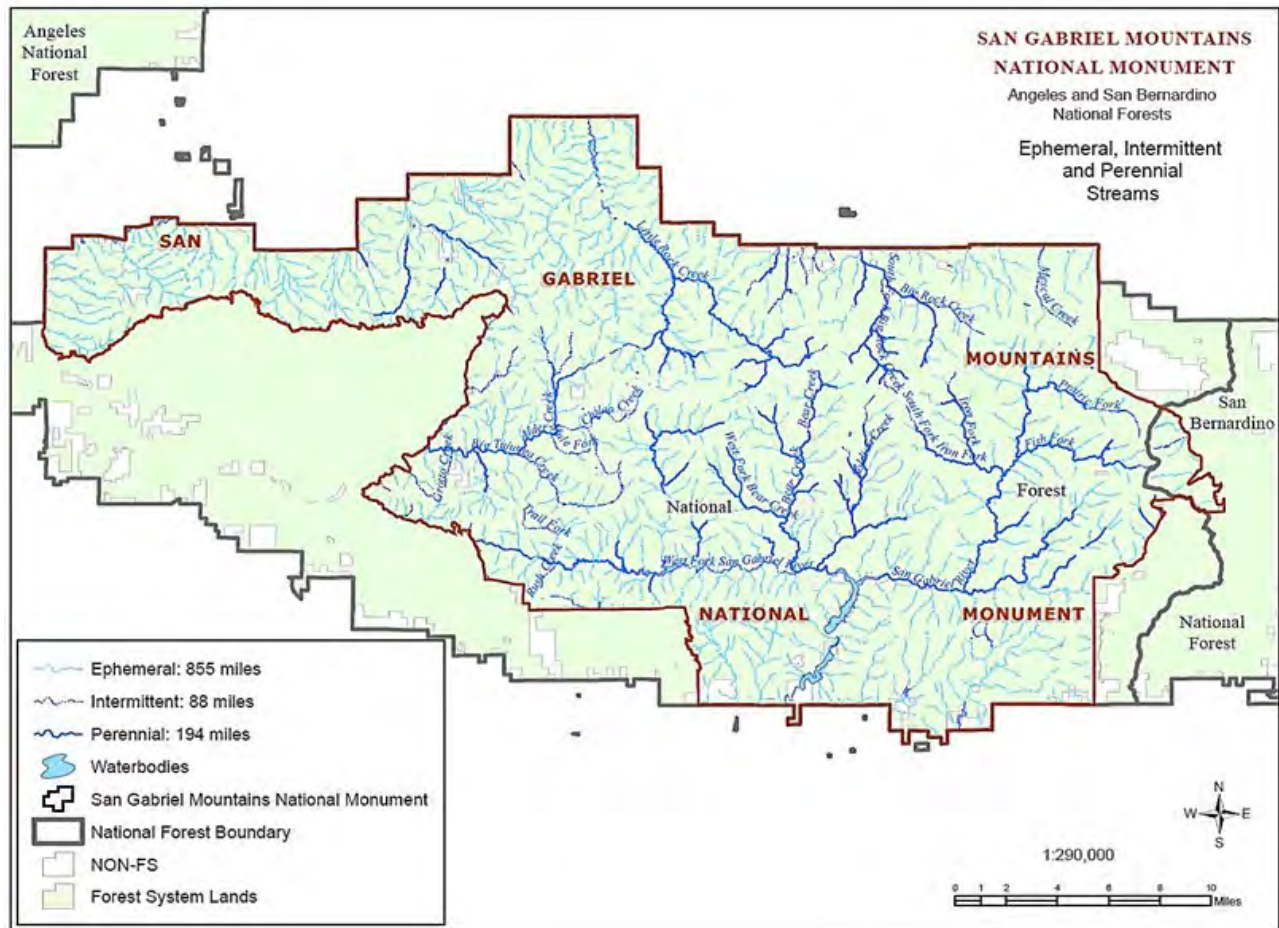


Figure 4. Intermittent and perennial streams in the San Gabriel Mountains National Monument

Water Quality

Surface Water - Quality

Watershed conditions, or watershed health, on the national forests vary depending on amount of disturbance that has occurred within each watershed and the effect of the disturbance on the natural integrity of the watershed as a whole. The 88 watersheds on the southern California national forests have been analyzed and assigned a watershed condition rating (see table 123 of the Forest Plan: Watershed Acreage, Land Ownership And Summary Of Watershed Condition Ratings By Forest, page 199) based on disturbance and overall watershed health criteria identified in the watershed condition rating methodology (USDA Forest Service 2000). Disturbances such as mining, recreation, grazing, and special uses can adversely affect a watershed's condition. The severity of effects is influenced in part by the local terrain, fire regime, precipitation and potential geological hazards.

Changes in watershed condition are reflective of changes in the long-term reliability of a watershed to provide the expected water quality and quantity. Most conditions leading to poor ratings are associated with high road densities, agriculture, and urban developments within the floodplains.

While most water produced on the San Gabriel Mountains National Monument meets or exceeds Federal and State water quality standards, those waters that do not meet State Regional Water Quality Control Board standards (Clean Water Act, Section 303 (d)) can be designated by the state as “impaired.” Impairments are alterations in water quality factors typically associated with temperature, sediment and chemicals. There is one State-designated impaired stream segment in the San Gabriel Mountains National Monument (State of California 2003). The East Fork of the San Gabriel River is listed for “trash” along the river. This water body is in a low elevational area, has an associated floodplain, and has easy vehicle access and high use rates. State-listed 303(d) impaired waters would be considered during site-specific analysis as projects are proposed. Steps would be taken to maintain at least the existing quality of these waters. Opportunities to improve conditions would be identified and implemented as funding allows.

Surface Water - Uses

The year-round demand for water is magnified by the large and increasing human populations surrounding and using the national forests (Davis 1998). The national forests provide domestic-use and drinking water for many southern California communities. Much of the water from Monument streams is appropriated, meaning that the amount and location of the diversion is registered with the State; some watersheds may be adjudicated in the future. Adjudication is a binding, court-approved allocation of specific amounts of water to specific persons within a watershed; adjudication restricts forest water uses. Large streams flow off the Monument, where the water is captured for private, municipal, industrial, or agricultural uses. In some watersheds, the current assigned water right exceeds 25 percent of the estimated annual flow.

Surface water found on the Monument plays a vital role in sustaining natural resources. Surface water has several state designated beneficial uses that include municipal supply in several watersheds and used non-consumptively and consumptively, both of which uses are highly valued and depend on high-quality water.

Non-consumptive Water Uses

Non-consumptive water uses include water needed by wildlife, fisheries, and riparian vegetation, as well as water needed for hydroelectric generation, streamside recreation and overall aesthetics. Many of the recreational activities on the Monument revolve around streams and water bodies, including sightseeing, camping and day-use in the form of water play, fishing, and boating. One of the primary responsibilities of the Forest Service is to ensure that adequate amounts and quality of water are available to support natural resources such as fish, wildlife, and riparian vegetation found on the national forests, and to provide water for fire suppression. The dynamics of streamflow and the proximity of groundwater largely determine the extent and character of riparian, wetland, and aquatic habitats. Seasonality, volume, duration, and year-to-year variability of streamflow all greatly influence the structure and composition of ecological communities found in the stream channel and adjacent wetlands.

Several hydroelectric projects draw water from watersheds lying in part or totally on Monument lands. These hydroelectric projects include both large storage reservoirs and small “run of the river” projects, which do not impound substantial amounts of water. In addition, a number of flood control and water supply dams with impounded reservoirs on each national forest preserve domestic water supplies and control downstream flooding. The presence of dams and diversions on national forests' major streams has altered aquatic and riparian habitats and reduced the capability of these habitats to support native species (Stephenson and Calcarone 1999). These impoundments have dramatically affected the distribution of

steelhead trout and their access to historical habitat, as well as other native fish species. Downstream of some dams, however, the regulated release flows can deliver above-natural late season flow levels that help support aquatic species that may have otherwise been negatively affected by droughts.

Consumptive Surface Water Uses

Consumptive surface water beneficial uses include drinking water, mining operations, dust abatement, fire-fighting, special-use permits, and use at Forest Service facilities, campgrounds and administrative sites. Water resources on the national forests contribute to public water supplies, as well as to agricultural and recreational development. Water rights are subject to State of California jurisdiction. Most of the major reservoirs in and around the national forests store water for public water supplies and agricultural uses outside the national forest boundaries. Community drinking water supplies are wholly or partially provided in 45 percent of watersheds on the Angeles National Forest (table 8). No numbers are available for the Monument.

Table 8. Percentage of Angeles National Forest Watersheds allocated for public water supplies

National Forest	Percentage of Watersheds That Serve As Public Water Supplies	Percentage of Watersheds With Filed Water Rights	Percentage of Watersheds Where Filed Water Rights Account For 25% of Estimated Annual Flow	Percentage of Watersheds Fully Appropriated or State Adjudicated
Angeles	45	100	17	33

The percentage of total watersheds allocated for public water supplies in some watersheds presently constitutes a large percentage of the total water produced from the national forests. Demand for national forest water extraction special-use permits is expected to increase in the future. The State Water Resources Control Board would rule a stream segment or watershed to be fully appropriated (that is, no water is available for new water rights applications) on a case-by-case basis. The demand for water is particularly apparent in the number of existing water rights associated with each watershed. Approximately 100 percent of the watersheds on the Monument have at least one water right filing; currently no watersheds are being appropriated or adjudicated.

Intensive water use and management have resulted in a dramatic reduction in the extent and distribution of riparian and native freshwater habitats in this region. It has been estimated that 95 to 97 percent of riparian habitat in southern California coastal floodplain areas has been eliminated. In addition, much of what remains must function under a highly modified hydrologic regime, including upstream dams that regulate streamflow.

Surface water, riparian, and groundwater resources are generally tightly connected. The following table (table 9), combines material from the Angeles Forest Plan (USDA Forest Service 2005a) showing the types of management activities that can affect these water-related resources. These include impacts to streambanks and channel morphology, effects to riparian conservation areas (RCAs) and effects to water quantity.

Table 9. Potential effects to water-related resources

Resource Affected	Type of Disturbances	Type of Management Activities	Effect	Consequence to Water and Riparian-dependent Resources
Streambanks (water quality)	Streambank degradation as a result of management prescriptions or actions Inadvertent degradation of streambanks from overuse by humans	Vegetation treatments Prescribed burning Wildfire suppression Livestock grazing Recreation use that exceeds carrying capacity Permitted Mining Road management (adjacent to roads and at stream crossings)	Decreased bank stability, collapsed banks Increased soil compaction, erosion and sedimentation Disruption of large woody debris inputs	Water quality degradation (temperature, pH, sedimentation) Loss of food nutrients and habitat for aquatic and riparian-dependent species
Channel morphology	Physical alteration of channel Impede or restrict streamflows	Impoundments Permitted Mining Recreation overuse (mechanized, nonmechanized and day-use), including excessive amounts of recreational dam building (water play) Unauthorized off-route vehicle use	Disrupt the proper functioning of the channel (through structure placement, creating flat water where there was flowing water) Channel type conversion, channelization, alteration of channel geometry, or disruption of flow and hydrologic processes	Water quality degradation (temperature, pH, sedimentation) Loss of food nutrients and habitat for aquatic and riparian-dependent species, alteration of riparian vegetative community (+ or -)
Riparian conservation areas (RCAs)	Ground-disturbing activities within and outside of RCAs	Forest Service facilities or areas: roads, trails, railroads, utility corridors, fuelbreaks, recreation open areas – off-highway vehicle (OHV) and target shooting, and the associated stream crossings Management of those facilities: construction, reconstruction, maintenance The Uses: driving within designated areas, unrestricted vehicle use off route (day use, mountain bikes, motorcycles, and vehicles, dispersed camping)	Increase soil compaction Increase erosion Increase turbidity Increased sediment delivery to streams Disrupt proper functioning of the channel (through increased sediment delivery and transport within the stream channel) Increased fire starts	Water quality degradation (temperature, pH, sedimentation) Loss of food nutrients and habitat for aquatic and riparian-dependent species Alteration of riparian vegetative community (+ or -)

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Resource Affected	Type of Disturbances	Type of Management Activities	Effect	Consequence to Water and Riparian-dependent Resources
Water quantity	State approved Water extraction or diversion	Management of hydroelectric projects, municipal and domestic water uses Transport of water through tunnels Water wells	Alteration of quantity and quality of water Disruption of normal hydrograph (timing, magnitude and duration of flow) Alteration of the stream channel in response to altered flow Alteration of riparian vegetative community (+ or -) Depletes groundwater (overdrafting or water seepage into tunnels) Redistributes water between watersheds Increase in nonnative, invasive species habitat conditions RCA fragmentation (loss of connectivity)	Lowered water quantity Water quality degradation (e.g., temperature, pH and sediment) Loss of food nutrients and habitat for aquatic and riparian-dependent species
Water quality	Actions that contribute chemical compounds and toxins into water bodies or aquifers	Mining Road maintenance (e.g., surfactants and oils) Wildfire suppression (foams and retardants) Special uses with septic systems or onsite wastewater treatment Abandoned landfills	Reduction in shading and leaf drop Alteration of surface water quality and contamination of aquifers Vegetation type conversion	Water quality degradation (temperature and pH) Loss of food nutrients and habitat for aquatic and riparian-dependent species Loss of riparian-dependent species, especially aquatic organisms

Riparian Areas and Wetlands

Riparian habitats are typically narrow, linear shrub or woodlands or forests that line perennial and ephemeral streams. Wetlands may consist of bogs, fens, marshes and wet meadows, and as a result of higher water tables that often coincide with riparian areas in the Monument. Wetlands, as a result, will not be discussed separately.

Any designated areas within the project area that have special considerations for hydrologic effects of land management, including riparian reserves, riparian protection areas, streamside exclusion zones, meadows, wetlands such as fens, and areas included in partnership agreements.

Riparian forests and woodlands differ sharply from surrounding uplands by having a canopy cover dominated by a variety of deciduous broad-leaved trees, often with multi-layered canopies. Riparian habitats and wetlands are highly productive and vital for wildlife as they provide food, cover, shade, ameliorated microclimate, water, and wildlife nesting and foraging habitats. Many upland wildlife species use riparian habitats during some part of their life cycle. Riparian habitats are most prevalent along mid- to larger-order streams at elevations below 4,000 feet in the foothills and valleys.

Stream hydrology, channel geomorphology, and proximity to groundwater are a few of the factors controlling the extent of riparian, wetland, and aquatic habitats. Seasonality, volume, duration, and year-to-year variability of streamflow influence the structure and composition of plant communities along channels and in floodplains. Groundwater fluctuations also affect riparian communities by creating springs, seeps, and ephemeral water bodies.

No other vegetation type in the Monument have been so drastically altered by human activities as vegetation in riparian zones. Ecological processes have been altered by the development of water storage and diversion structures, invasion of undesirable nonnative species, urbanization, and, to a lesser extent, livestock grazing, recreation, and mining. Low-elevation streams face greater threats than high-elevation streams because riparian areas and their water flows are more likely to be diverted or altered, more likely to be urbanized, and more likely to be invaded by nonnative plant and animal species. Instream water storage and diversions have dramatically reduced the extent of riparian habitats in this region. In fact, approximately 95 to 97 percent of low-elevation floodplain riparian habitat in southern California has been eliminated, and most major streams now contain dams or diversions. In addition, many smaller streams and springs have been dammed or diverted for water supplies and local flood control. Subsurface waters have been heavily tapped for domestic water, lowering water tables and base flows of many springs and streams (Stephenson and Calcarone 1999).

Riparian ecosystems are characterized by the presence of trees, shrubs or herbaceous vegetation that requires free or unbound water, or by conditions that are moister than those of surrounding areas. On most areas on the national forests, annual precipitation does not exceed losses to transpiration and evaporation; moisture availability is frequently a limiting factor affecting vegetation location, pattern, and composition. To date, riparian ecosystems on the national forests have only been partially mapped from field investigations. These linear features on the landscape are difficult to accurately map across large areas.

Riparian ecosystems, aquatic ecosystems, wetlands, reservoir/lakeside zones, and floodplains are all included in riparian conservation areas (RCAs). Although the terms riparian ecosystems and RCAs will be used interchangeably in the following discussions, by strict ecological definition they may not be the same in all instances. RCAs are an administratively designated zone designed to call attention to the need for special management practices to maintain and/or improve watershed and riparian resources. The RCAs serve to protect watercourses from soil erosion and vegetative disturbances from other than natural

processes adjacent to the watercourse and areas upslope. Riparian ecosystems are managed to maintain or improve conditions for riparian-dependent resources. Preferential consideration is given to riparian-dependent resources when conflicts among land use activities occur. RCAs overlap all land use zones and include the following areas:

RCAs are managed primarily to protect and maintain the following important habitat components for threatened and endangered species and non-federally listed fish, wildlife, and plant species habitat: (a) water quality; (b) water quantity; (c) site productivity; (d) channel stability; and (e) riparian vegetation.

The National Forest Management Act requires that special attention be given to the land and vegetation for approximately 100 feet (approximately 30.5 meters) from the edges of all perennial streams, lakes, and other bodies of water. This requirement is intended to protect riparian-dependent resources and stream water quality from adverse effects, primarily erosion and sedimentation, related to national forest management activities. RCAs include this minimum required 100-foot (30.5 meters) distance from the edge of water bodies and, in addition, also extend to include wider distances based on imperiled species habitat requirements and water quality protection needs determined over the past 15 years. RCA boundaries would include aquatic ecosystems, floodplains and riparian vegetation, wetlands, and meadows.

RCA acreage has been modeled and represents approximately 5 percent of the San Gabriel National Monument (table 10). These acreage values are undoubtedly lower than actual, since wetlands, especially vernal pools smaller than one acre, were not generally modeled.

RCAs are key to maintaining productive fisheries and wildlife habitat, attenuating flood flows, providing quality water for downstream users, supplying groundwater recharge, being available as diverse scenery and recreation locations, and sustaining forage production. The objective is to protect the riparian ecosystem and vegetation with an emphasis on preventing the causes of management-initiated watershed and riparian degradation.

Table 10. Percent of modeled RCA acreage relative to total NFS land base

National Monument	NFS Land Total Acreage	RCA Total Acreage	Percent RCA Out of Total NFS Lands Acreage
San Gabriel Mountains National Monument	346,177	17,266	5

NFS: National Forest System

RCA: Riparian Conservation Area

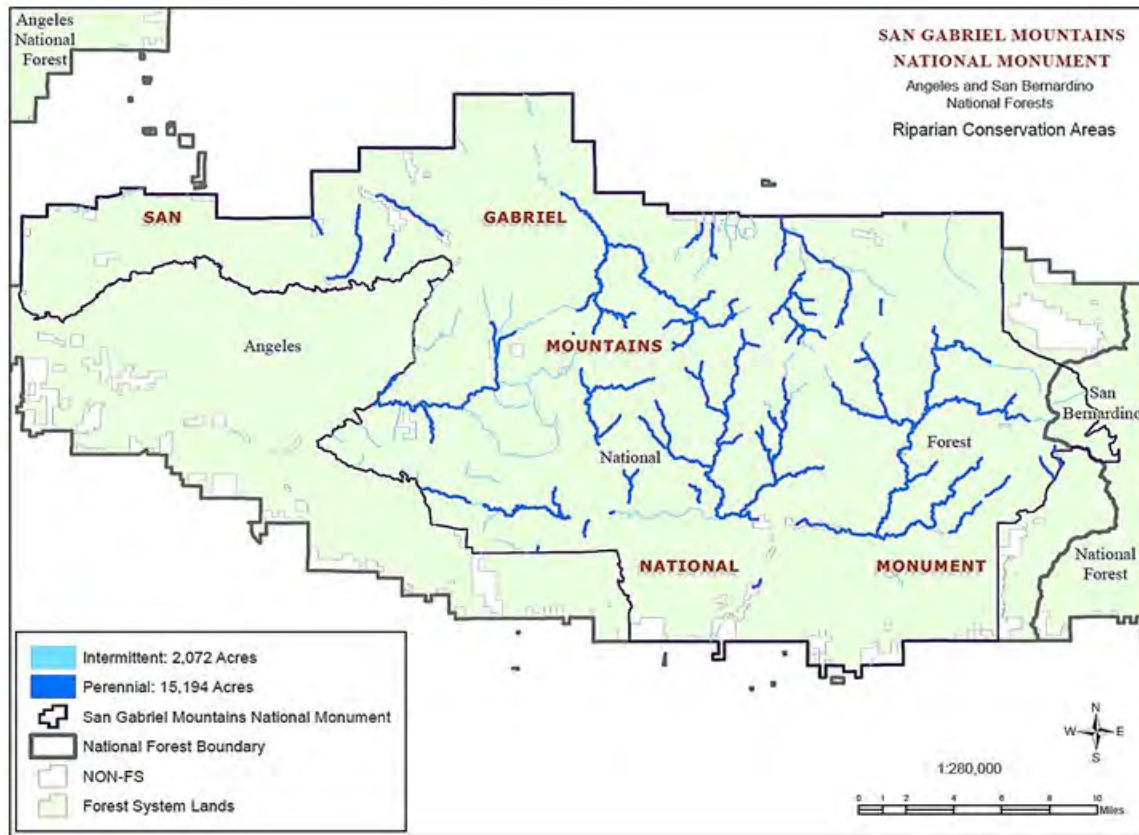


Figure 5. Map of riparian resources, San Gabriel Mountains National Monument

Riparian Areas - Quality

In the overall southern California geographic area, riparian habitats have declined in quality and quantity at low elevations, where they historically were most extensive. Estimates indicate that channelization and diversion of streams in the past century have reduced the extent of riparian habitats in southern California by more than 90 percent (Faber and others 1989). More recently, strong regulatory policies on “no net loss” of wetlands and floodplains have helped to check this decline (Stephenson and Calcarone 1999).

The health, vigor, and structural condition of the riparian vegetation are generally good, except where affected by large-acreage wildland fires (Stephenson and Calcarone 1999). Foothill riparian areas are cool, pleasant places near large and growing urban populations, so increases in recreation pressure are inevitable. Riparian habitat degradation currently tends to be localized in a few popular, easily accessible areas (Stephenson and Calcarone 1999).

Livestock grazing in riparian areas within the Monument area has been substantially reduced during the past 15 years, resulting in some improvements in vegetation condition.

Riparian vegetation can vary from alders along streams to chaparral in the coastal foothills, to conifers and oaks in the montane conifer forests (Stephenson and Calcarone 1999). The extended drought and the subsequent bark beetle infestations are currently reducing streamside vegetative cover, especially in mature, primarily mixed conifer forests and chaparral stands. In the short term, this is increasing the large woody debris supply on sections of some streams; in the long term, the supply may be diminished below normal because of the slow rate of regrowth in many of these areas. One of the biggest threats is that

these riparian areas within the vegetation mortality zones are very likely to burn up in a wildland fire, in which case the vegetation and the large woody material would also be lost in the short term.

Riparian Areas - Uses

These areas are attractive to Monument visitors, as described in the Recreation section, and receive intensive pressure for day and overnight uses, such as water play, picnicking, family gathering, camping, hiking, mountain biking and fishing. In general, effects depend on the timing of the use, sensitivity of the location, type of use and intensity and specific behaviors of the recreationists.

The current primary national forest management uses that affect the condition of surface water, riparian conservation areas and groundwater include: fuels and vegetation treatment; recreation use and development; road and trail construction and maintenance; water extraction and management; mining; other special uses that occur streamside such as recreation residences and organization camps; special land use designations such as research natural areas, wilderness and special interest areas; grazing; unauthorized activities; and watershed restoration. Effects from ground-disturbing activities can include but are not limited to soil compaction, stream channel degradation, increased erosion, and sedimentation. Vegetation treatments have potential to remove or destroy riparian vegetation and to affect water quality when herbicides are used. Water extraction and diversion can result in long-term effects by altering the quantity and quality of streamflows and by affecting a channel's capacity to carry normal flows. Watershed restoration treatments (such as riparian vegetation restoration, stabilization of sediment sources, and restoration of abandoned mine lands) are designed to improve conditions for riparian-dependent resources.

As standard operating procedure, management activities are designed to avoid RCAs or allow minor encroachments and proactive riparian treatments based on site-specific project-level planning. Routine applications of measures that protect water quality and RCAs, such as those in the Water Quality Management for National Forest System Lands in California, Best Management Practices Handbook (USDA Forest Service 2000). Best Environmental Design Practices (see Scenery), and environmental protection stipulations are incorporated into special-use permits, contract specifications, and field operation plans for all management activities. In addition, the effects of wildland fire are minimized using resource advisors assigned to the fire, and the associated flooding is mitigated through the Burned Area Emergency Response (BAER) process.

Surface water, riparian and groundwater resources are generally tightly connected. Table 11, taken from the Forest Plan, describes potential effects to riparian vegetation from management activities, and depicts the types of management activities that can affect these water-related resources.

Table 11. Potential effects to riparian vegetation from management activities

Type of Disturbances	Vegetation removal through management prescriptions or actions Inadvertent destruction or removal of vegetation from overuse by humans, vehicles or animals
Type of Management Activities	Vegetation treatments Prescribed burning Wildfire suppression Livestock grazing Recreation use that exceeds carrying capacity Unauthorized use of NFS lands
Effect	Reduction in shading, leaf drop, large woody debris, streambank stability, soil compaction, increased erosion and sedimentation Input of ash, soot, or chemical compounds to stream Increased fire starts
Consequence to Water and Riparian-Dependent Resources	Water quality degradation (temperature, pH, sedimentation) Loss of food nutrients and habitat for aquatic and riparian-dependent species Loss of aquatic species from toxic levels of chemicals Loss of riparian vegetation connectivity upstream and downstream

Riparian Area Invasive Plants

Next to streamflow alterations, the biggest factor threatening the health of riparian ecosystems is the spread of invasive nonnative plant and animal species. Reservoirs and other artificial aquatic habitats have facilitated the introduction of a wide variety of nonnative aquatic species into stream systems. Collectively, introduced species have caused serious declines in the capability of riverine habitats to support native species (Stephenson and Calcarone 1999).

Groundwater - springs, seeps and recharge

Porosity and permeability characteristics of geology surface layers help determine the runoff characteristics of a drainage basin dependent on available precipitation (Freeze and Cherry 1979, Fetter 1994). Surface geology controls the amount of water that infiltrates in to the ground, the infiltration rate, and the amount and duration of groundwater drainage during dry periods. In turn, contrasts between geologic layers related to the location of perennial springs.

Analysis of hydrogeologic conditions and surface flow rates in the San Gabriel Range has been discussed by Nourse (2003). Quantitative aspects of the water resources, including long-term precipitation analysis, are also discussed by Wiedlin (2001). For the area they studied, nearly half of the approximately 40 inches of annual precipitation input drains out of the area in the form of surface water and groundwater. Although the rate of drainage following recharge events was quite high, several stream segments located below perennial springs flowed year-round even during extended periods of drought. For the study, most of the major springs existed because of underground bedrock barriers or “dams” that force groundwater contained in alluvium or talus to the surface. Further, spring flow can be influenced by favorably oriented bedrock fracture systems that channel deep-seated groundwater into narrow, near-surface conduits (Nourse 1999). Many drainages are fed by groundwater sources in the summer and early fall. Streams flowing through bedrock canyons often have perennial flow because groundwater feeds deep pools and bedrock serves as a natural barrier to infiltration (Stephenson and Calcarone 1999). Several important aquifers exist that absorb water from a stream at one position in the drainage, then discharge it along lower portions of the same drainage (Nourse 1994).

Groundwater

Groundwater (the water beneath the Earth's surface) is an integral part of the biological and physical ecosystem within national forests. Like surface water, groundwater depends on precipitation as its source. Together with surface water, it defines the water balance within a watershed. Groundwater and surface water are physically connected in some settings, such as along alluvial channels and fractured bedrock stream channels. The exchange of water between surface flow and groundwater flow is called interflow; it results in recharge of aquifers when there is a surplus of surface water, and seepage into stream channels from aquifers when surface water dries up.

Groundwater (and its associated aquifers) can be affected by: (1) changing the amount of water available for recharge of an aquifer; (2) overdrafting the sustainable aquifer capacity or flow (quantity), or changing the amount of water extracted; (3) contamination of groundwater (quality); or (4) damage of the aquifer (physical integrity). Most national forest management activities have limited consequences related to groundwater. Water developments, mineral and energy operations, and wildland fire have the most potential to affect groundwater quality, quantity and use.

Management of surface water and groundwater includes issues of water quality and quantity, water rights, coordination with other government agencies, collaboration with national forest users and dependent resources, urbanization along the national forests' boundaries and within inholdings, increasing demands on surface water and groundwater resources, and heightened recognition of the dependence of unique national forest resources on groundwater.

Groundwater - Quantity

The quantity of groundwater available on the Monument is unknown. An article in the magazine *Western Water* (July/August 2003), "California Groundwater: Managing a Hidden Resource," states: "Individual regions are beginning to map the extent of the problem, but 'unfortunately, comprehensive information regarding California's groundwater quality and quantity is lacking,' according to a March 2003 report by the State Board [of Water Resources]. "This lack of information impairs the ability of regulators and the public to protect and manage the state's groundwater basins/subbasins" (Pitzer 2003, p. 13). There is less information on groundwater aquifers in the mountains underlying the four national forests in southern California than there is on aquifers underlying much of the rest of California.

Groundwater is extracted through springs, horizontal wells and vertical wells. In California, the subsurface flow of a stream is considered surface water by the State and governed by the State Water Resources Control Board, with permitting, regulatory and statutory adjudicative authority.

The major alluvial aquifers (many of which are recharged from National Forest System lands) are well documented by the State of California, but the "bedrock fracture aquifers" and "porous rock layers" are less well-known and difficult to inventory. All aquifers are subject to overdrafting (extracting more groundwater than sustains or recharges an aquifer), contamination, insufficient recharge due to drought, and changed underground conditions due to earthquakes, tunneling, drilling and other causes.

Groundwater is a limited renewable resource because of the slow rate of groundwater movement through bedrock, the human dependence on groundwater sources, the decline in aquifer levels during extended drought cycles, the dependence on recharge from seasonal precipitation, and the restricted storage capacity of the bedrock. The potential for the overdraft of groundwater is already recognized within some areas on National Forest System lands, especially adjacent to national forest boundaries where development is encroaching, and on inholdings and areas with intermixed private and National Forest System lands. At this time, information is limited to assess the effects of Forest Service and off-forest uses and proposals for groundwater developments.

Following fires or vegetation manipulation, where the slopes have adjusted to a stable angle in conjunction with the local climate and forest vegetation, the increase in water entering shallow aquifers can result in slope movement (landslides, debris flows and erosion). Both roads and stream channels experience impacts from groundwater-related slope instability.

Past studies that quantify water loss via transpiration and its effects on groundwater indicate that removing vegetation will not increase groundwater reserves in low precipitation climates like southern California. Vegetative cover is beneficial to slopes, and helps reduce erosion and debris flows. Additionally, Pete Wohlgenuth from the Pacific Southwest Research Station (Wohlgenuth, 2005) adds that there is some potential to increase water yield by converting chaparral to grasslands, but at the expense of slope stability and accelerated erosion.

Water is slowly released from aquifers back to the channel throughout the year. Reservoirs can store winter precipitation and augment late summer groundwater levels as water soaks into the substrate. If soil is compacted, or if land is covered with developments or paved, less area is available for water infiltration and more is likely to run off. These conditions also add to increasing flood flows.

Surface water and groundwater interflow in alluvial aquifers is a continuum, with water moving between the ground surface and the subsurface. Reduction of groundwater quantity in an alluvial aquifer due to pumping from wells may affect streamflow, as the loss from the stream to the aquifer occurs. The change in streamflow may or may not be measurable. In contrast, construction of a dam and storage of water behind it can increase the groundwater levels in the surrounding area.

Past groundwater use on National Forest System lands has been generally low, with some exceptions. However, use is rising within private inholdings, and adjacent urban areas are drilling more wells close to national forest boundaries. Most groundwater extracted from National Forest System lands comes from fractured bedrock aquifers, porous rock layers, and perched aquifers in landslide deposits rather than from the large valley aquifers. Many wells on the Angeles National Forest and the Monument have been going dry or experiencing lower water levels.

More than 22 wells and 5 springs have gone dry in recent years at recreation facilities, fire stations and settlements within the Monument boundary (Andresen pers. comm., as cited in Angeles LRMP, USDA Forest Service 2005a). The cause of the decreasing water levels may be overdraft, drought, or a combination of the two.

Groundwater - Quality

It is generally assumed that groundwater is safe for consumption without treatment (U.S. Geological Survey 1998). As a result of EPA's Surface Water Treatment rule, wells on National Forest System lands are drilled to reduce the potential risk of contaminated or non-potable surface water supplies, since groundwater is less easy to contaminate than surface water. Aquifers filter and de-contaminate groundwater during long residence; furthermore, properly constructed wells include seals designed to keep contamination out. Nevertheless, groundwater and the aquifers that contain it can become contaminated. The quality of groundwater extracted from springs and wells involves both biological and chemical characteristics.

Chemical and biological contamination can result from urbanization near or within national forests. "In general, groundwater contamination stems from the misuse and improper disposal of liquid and solid wastes; the illegal dumping or abandonment of household, commercial, or industrial chemicals; the accidental spilling of chemicals from trucks, railways, aircraft, handling facilities, and storage tanks; or the improper siting, design, construction, operation, or maintenance of agricultural, residential, municipal, commercial, and industrial drinking water wells and liquid and solid waste disposal facilities.

Contamination can reach groundwater from activities occurring on the land surface, such as industrial waste storage; from sources below the land surface but above the water table, such as septic systems; from structures beneath the water table, such as wells; or from contaminated recharge water” (Bachman and others 1997).

In summary, groundwater quantity and quality on the four southern California national forests are generally good in Monument lands distant from major developments, except in isolated cases where existing wells cannot keep up with (mostly) recreational demands and where isolated cases of contamination occur. Near national forest boundaries, where urban areas and large developments are occurring, groundwater quantity is declining but quality is generally good.

Groundwater - Uses

On-forest resource and management uses for groundwater include campgrounds, administration sites and recreational cabins. Maintenance of streamflow, distribution of plants and animals, and sociological and economic interests all depend on groundwater. The diversity of plants found in meadows often is a function of the availability of shallow groundwater. The presence of groundwater within the root zone for much of the year maintains many of the valuable habitats within the national forests. Release of water from groundwater aquifers maintains base flows of streams during dry periods. In some cases, groundwater seeps and springs are important to maintaining riparian area viability and habitat. In coming years, national forest managers anticipate increased requests for extraction, storage and distribution facilities on National Forest System lands for groundwater resources.

Much of the groundwater for urban uses comes from aquifers surrounding and sometimes extending into National Forest System lands. Such uses include wells drilled within or adjacent to national forest boundaries for agricultural or industrial uses; withdrawals for commercial developments, water bottling operations, golf courses and snow-making in ski areas; and domestic uses for local communities and private in-holdings. Developments that extract water directly from, or immediately adjacent to, National Forest System lands are expanding in southern California. The closer the well is to National Forest System lands, and the greater the quantity of water extracted, the higher the potential that the extraction will affect the sustainability of forest ecosystems.

Tunnel construction under National Forest System lands have influenced groundwater dynamics by changing water flow through, into, and out from groundwater aquifers. Water seepage into a tunnel can heighten the risk of water loss from the aquifer with potential ramifications to surface resources. Since fault zones are often locations of relatively high water flow in fractured rock aquifers, excavation of tunnels through earthquake fault zones can exacerbate this potential, cause changes in aquifer recharge, and affect riparian-dependent resources. Nevertheless, since aquifer integrity and groundwater quality and quantity could be compromised, each new tunnel proposed would be assessed separately for needs such as lining or other seepage control measures.

Existing tunnels on the Angeles National Forest include about 31 miles of water conveyance tunnels (mostly lined), and 0.25 mile of highway tunnels (all tunnel mileages are estimates); some of the tunnels are located on the Monument. Additionally, an unknown number of miles of mining adits and shafts exist on the Monument.

Environmental Consequences

No Action and Proposed Action

Direct and Indirect Effects

No change is proposed in Goal 5.1 from the Forest Plan, which is to improve watershed conditions through cooperative management, and Goal 5.2 of the Forest Plan, which is to improve riparian conditions. These goals would continue to support watershed and riparian conditions on the Monument for both the proposed action and the no-action alternative.

For watershed effects, the proposed action and the no-action alternative, current general effects to watershed resources would continue. Of the proposed new goals, changes in mineral and oil and gas exploration and development could have a net positive effect on water quality. Amendments proposed for Part 2 and 3 may affect strategies in Appendix B of the Forest Plan for recreation including off-highway vehicle uses, and effects to riparian areas from recreation.

Amendments that may include watershed impacts include Desired Conditions, Standards, Guidelines, and Management Approaches within the Transportation, Sustainable Recreation and Biological Resources sections.

The following is a general discussion of current management effects. Most of these effects would continue under the proposed action and no-action alternative, and because LMP standards and guidelines and other protections to watersheds are currently implemented and would continue under the proposed action, except where indicated effects to watersheds would generally be the same for both alternatives.

Generally, adverse impacts to watersheds can be minimized or eliminated when all applicable measures, as described under resource protection measures (USDA Forest Service 2005a), are effectively applied. RCAs are not intended to exclude management, but rather to protect areas of high importance and sensitivity that need strong consideration to maintain and improve conditions for water quality and riparian-dependent natural resources. At the project level, based on application of forest plan standards and site-specific condition analysis, activities may be conducted within RCAs.

Current standards in the Forest Plan indicate acres of treatment, but are not specific about the location of treatment units, roads or facilities. Actual location of the treatment units, the activities within them and the timing of the treatments are more useful in predicting actual impacts on water and riparian resources. These would all be considered during site-specific, project-level environmental analyses as projects are proposed and adopted under the Monument Plan.

Watershed condition ratings, acres of ground disturbance, acres protected through land use zone designations, and acres of restoration were considered during the analysis and comparison of the proposed action and no-action alternatives, relative to effects on riparian and water resources. As described in the proposed action, no changes in current management would be proposed that would directly or indirectly affect watershed conditions on lands designated for the Monument. RCAs were used literally as buffers during modeling for this planning effort to determine a reasonable estimate of the remaining landscape acreages available for a variety of activities. Specifically, acreage available to vehicle access (such as Back Country and other land use zones allowing access) and acreage protected through special designations (such as existing wilderness, recommended wilderness and critical biological zones) were some of the most powerful indicators of potential impacts to RCAs and water quality.

Groundwater

Off-forest developments, fire, vegetation management, road and trail management, mining and oil and gas operations, recreation activities and administrative uses of water can all affect groundwater and result in increases or decreases in water quantity and quality. Unless mitigated, the consequences can include less water available for human and resource use and reduced water quality, either short-term or long-term. National Forest managers would follow national and regional direction for water development and, where applicable, develop local management plans or guidance to preserve and protect sustainability of surface water and quality and quantity of groundwater and aquifers. Oil and gas exploration and development would be curtailed under the proposed action and, as a result, risks to water quality from these activities would be decreased compared to the no-action alternative. Currently, oil and gas operations are prohibited by stipulation in areas subject to slope instability, riparian areas and wetlands, which reduces the risk to riparian areas and surface water quality.

Activities that use increased amounts of groundwater may contribute to overdraft, because water levels in some wells are already dropping and groundwater resources are finite. Changes in demand for and use of both surface water and groundwater are likely to occur both on and adjacent to National Forest System lands in both alternatives. Monument managers can control issuance of special-use permits for water uses on National Forest System lands by requiring analysis of environmental consequences of all extraction applications. Cleanup of contaminated aquifers, deteriorating wells, abandoned mines, oil fields and landfills would be a high priority under both alternatives. Water extractions occurring off-monument that may impact Monument resources can be assessed and contested by the Forest Service.

Pressures from increasing populations and Monument users are likely to increase levels of water use above current levels for both alternatives. On-monument consequences include reduced flow in streams, drying up of wells, groundwater contamination, and habitat shrinkage. Off-monument extractions can cause the same consequences, especially near Monument boundaries and private in-holdings. The ability of the Forest Service to mitigate effects rests on the ability to adequately assess potential impacts and make decisions about granting permits for proposed or existing activities. The largest impacts would be from the largest and closest extractions, which would likely be water bottling operations and commercial developments near Monument boundaries. Consequences of on-monument uses are usually less pronounced, because extractions are relatively small; however, in aquifers with limited available quantities, even small extractions can be detrimental to sustainability of the aquifer. The number of special-use permits for groundwater use—including existing permits, new permits, or proposed uses for on-monument recreation or administrative needs—is expected to increase in the next 15 years.

It is recognized not only by the Forest Service, but also by State water agencies, that in many instances insufficient data are available to adequately analyze the effects of groundwater developments. “In many basins, our ability to optimally use groundwater is affected by overdraft and water quality impacts, or limited by a lack of data, management, and coordination between agencies” (Department of Water Resources 2003). The types of data needed are accurate records of extraction sites, types and amounts of groundwater use, and subsurface conditions that give clues to aquifer volume, extent and conditions and potential sustainable quantities of groundwater. The consequences are that either decisions are made with insufficient information to adequately understand the environmental effects of proposed actions, or last-minute, often costly, analyses must be conducted to attempt to gather and analyze the needed data.

Sometimes, however, relatively simple geo-hydrologic interpretations can be made based on existing geologic maps, well data, aerial photography and information from similar terrains that are sufficient for isolated or obvious situations. Changes in risks to surface water, groundwater and associated aquifers can occur by: (a) changing the amount of water flowing instream; (b) changing the amount of water going into (recharging) an aquifer; (c) changing the amount of groundwater taken out (extracted) from an

aquifer, which can result in overdrafting the sustainable aquifer capacity or flow (quantity); (d) contaminating the surface water or groundwater (quality); (e) damaging the aquifer (physical integrity); or having insufficient data acquisition and management of water resources resulting in any of the above. The Forest Service is in the final stages of revising policy on the extraction of groundwater. Forest-level decisions on groundwater extraction would be tiered to this policy.

Judgments about the conservation and sustainability of water and riparian resources under each alternative would be based on the assumption that the following management direction would be consistently implemented across the Monument for all alternatives:

- Use site-specific information in project planning to conserve or enhance water and riparian-dependent resources;
- Mitigate adverse impacts on water and riparian-dependent resources; and
- Restore disturbed areas as needed.

Forest Plan Decisions

All alternatives provide riparian area protection through the Forest Plan standards and the use of the Five-Step Project Screening Process for Riparian Conservation Areas, which delineates riparian conservation areas for special management.

Watershed management for the proposed action and no-action alternative focuses on maintaining water quality and quantity and on protecting watershed health from the effects of limited growth in facilities and recreation uses. Management priority would be given to those areas where detrimental effects are occurring or where they could occur. An adaptive management approach would be used for watershed protection. Restoration activities would be accomplished primarily at prioritized recreational use areas in association with environmental education and interpretation, hardening of recreation sites, increased Forest Service presence, and restriction of unauthorized uses. There may be a limited increased demand for groundwater at these improved recreation sites.

Potential adverse effects on watersheds are directly tied to activities that impact and disrupt the proper functioning of the resource. Such activities include disturbances to soils and vegetation, especially when occurring close to stream channels; alteration of surface and/or subsurface water flow; and disturbances to the actual stream channel. Those management activities and uses that have the greatest potential to influence surface water, riparian-dependent resources, and groundwater are shown in table 9 and table 11 (Angeles LMP, USDA Forest Service 2005a) in this EA including:

- Potential effects to streambanks from management activities,
- Potential effects to channel morphology from management activities,
- Potential effects to the ability of the RCA to catch sediment before it enters the stream from management activities,
- Potential effects to water quantity from management activities,
- Potential effects to water quality (from toxins) from management activities.
- Potential effects to riparian vegetation from management activities,

Monument management activities and uses would include watershed restoration, vegetation management, prescribed burning, fuelbreaks, wildland fire suppression, recreation, transportation system, land use

authorizations, land ownership, roadless, wilderness and special designations, and management of unauthorized or criminal activities.

Management of Geologic Resources and Hazards

Management of geologic resources, which includes applying geologic information to management of ecosystems, adds valuable and often critical information for protecting and improving the condition of watersheds. It also assists in determining the physical characteristics and engineering properties of different soil and rock types, and aquifer and surface drainage characteristics that then guide project development. Effects of management of geologic resources and hazards would be similar for both alternatives. Because mining and oil and gas development would be curtailed, and can have substantial impacts on surface and groundwater quality, as a result of implementation of the proposed action risk of water quality impacts from mining and oil and gas development such as leaching of heavy metals in to watercourses or sedimentation from surface mining developments would be less than prior to the Proclamation.

Special Designation Areas

Roads have long been recognized as the primary human-caused source of soil and water disturbances in forested environments. Wilderness, critical biological zones, research natural areas and other special designation areas can provide an added amount of resource protection, because they generally have limited vehicular access and have restrictions on other types of uses. For the proposed action two new wilderness areas would be designated for the Monument, which would increase areas with restricted vehicular access. The exception to this assumption is when special designation areas become more popular and draw more use to the area, resulting in riparian conservation area degradation.

The proposed action would have the highest amount of special designations, resulting overall in fewer roads across the landscape and improved watershed conditions, especially through limiting amount of road use. As a result special land use designations this alternative would emphasize watershed restoration.

Water and riparian resources generally are better protected by increased numbers of special designation areas (such as recommended wilderness) because these areas usually involve fewer roads, less direct vehicular access to sensitive areas, reduced estimated unauthorized activities adjacent to roads, reduced management activities in sensitive areas and inherent resource protection through specific direction in the actual designations. The opposite may turn out to be true, however, if a recommended wilderness actually becomes a popular attraction and experiences overuse after it is adopted. Further, as a result of poor access needed to complete fuels treatments designated wilderness areas maybe larger and have more frequent and intense fires over time.

Recreation

Although only about 2 percent of the land base across the Monument is suitable for recreation activities, the demands placed upon Monument riparian areas for recreation use would continue to increase. In southern California, riparian areas and lakes, reservoirs and streams are the most sought-after locales for much of this recreation use. Water provides basic needs in campgrounds and other recreation sites. Most wilderness visitors also travel to and camp near lakes or streams. The availability of water enhances most recreational uses and, conversely, recreational pursuits have varying degrees of impact on these resources. Many developed and dispersed recreation sites, summer homes and organization camps are located near lakes and streams.

Because use is concentrated on the few available sites near water, over-use can reduce the health and vigor of riparian vegetation and compact soils. Recreation sites and riparian areas both have a limited capacity to meet the demands being placed upon them. Concentrated overuse typically affects riparian

conservation areas; it results in trampling of streambanks and riparian vegetation, leads to soil compaction, and causes erosion and sedimentation. The risk of water pollution from human waste, dishwashing, trash accumulation and horse use is also higher where people congregate. In general, most areas across the Monument experience only minor amounts of these effects, except at areas of concentrated use that are mainly associated with dispersed recreation. Although there is a component of year-round use composed mainly of dispersed use and hiking, most Monument visitation decreases between October and April when many developed campgrounds and day-use areas are closed for the winter season. Camping is not allowed within 100 feet of water bodies, and there are processes to assess current use of an area and to determine corrective measures when impacts do occur. Dispersed camping that takes place off-road has become an increasing problem that causes degradation to both riparian areas and streams.

Shooting areas on the Monument represents an area of concentrated use that can lead to riparian conservation area and water quality effects. Trampling of the area, uncontrolled vehicle use, erosion, sedimentation and physical damage to riparian vegetation can result from this activity. In addition, water quality degradation can occur from high concentrations of lead shot targets left in these shooting areas. The Monument has experienced an increasing problem with large amounts of trash, such as refrigerators, scrap metal and old cars being left on a site after shooters use them for targets.

Impacts from group events, including outfitters and guides, are unique to the particular activity and differ with respect to location, size of group, time period and type of activity. These activities can also have effects similar to those described for other ground-disturbing activities, although the effects are generally of short-term duration and can be mitigated by the terms of the permit. Recreation residences are of long-term duration and can have effects similar to those described for other ground-disturbing and water extraction activities, depending on the terms of the permit and how they are administered.

When adverse changes in vegetation structure, fish and wildlife populations, stream channel stability or water quality indicate that habitat is declining beyond acceptable levels, the alternative is to use adaptive management techniques to modify, disperse, decrease or eliminate existing use based on the Adaptive Mitigation Protocol for Recreation. In some cases the management options are limited and the challenges are compounded when there are no comparable areas nearby to which existing uses can be accommodated.

Both alternatives are similar for watershed effects from recreation. There could be a shift in patterns of Monument visitation, meaning that the peak periods for recreating, which are currently weekends and summer months, could be extended to weekdays and into the spring and fall. This shift could result in overuse of riparian conservation areas and effects on riparian-dependent resources and water quality. For both alternatives, environmental education may play a role in reducing impacts from recreation on watershed resources by increasing awareness of impacts on watersheds by users. Parking area restrictions and a transportation plan under the Proposed Action may alleviate watershed damage from the proposed action compared to the no-action alternative.

Unauthorized vehicle use associated with dispersed camping would occur in all alternatives. Recreation uses that arise from improving or adding developed recreation facilities would result in additional demands for water. The need to develop more, larger or deeper water sources would increase, sanitation could decrease, and the potential for aquifer contamination and overdrafting would increase proportionally. Soil compaction from vehicles and concentrated use areas would cause small reductions in infiltration and increase runoff, resulting in less aquifer recharge. Other potential changes include alteration of local surface water temperature and chemistry; less groundwater availability to resupply surface water systems and riparian areas; and changes in rates of erosion, mass movement and soil creep.

Indirect effects of water extractions just outside Monument boundaries in support of recreation activities can drain Monument aquifers and take water needed by Monument resources.

Overuse and unauthorized uses of riparian conservation areas by developed and dispersed recreation have a potential for affecting water quality, riparian habitat and the ability of the stream channel to function properly. Similar effects can result from overuse and unauthorized uses in open off-highway vehicle areas and along trails, including motorized, non-motorized, mechanized, pack stock, and hiking forms of recreation. Parking area restrictions and a transportation plan under the Proposed Action may alleviate watershed damage from the Proposed Action.

Law Enforcement

Unauthorized activities that occur on the Monument can have detrimental effects on riparian conservation areas and water quality. Many of these activities are somewhat dependent on water sources, such as unauthorized water extraction for personal use or criminal endeavors like irrigating marijuana plantations. These extractions can interfere with a stream's hydrologic function and water quantity and quality, and they can cause habitat loss or degradation. Other unauthorized activities that generally can be considered ground-disturbing activities include illegal mining, off-route driving by motorized, non-motorized, and mechanized equipment, as well as dumping of trash and debris at shooting areas, day-use areas, and along roads. Those activities that affect water quality are described in potential effects on water and riparian resources from management activities tables. Effects from this activity are similar for both alternatives.

As the population in southern California increases, the Forest Service can anticipate increasing numbers of Monument visitors and a related increase in the number of unauthorized and criminal activities. The effects from these activities would be widespread and somewhat unpredictable. Control of effects would be heavily dependent on funding and staffing.

Roads and Trails

Roads are the largest source of increased sediment into stream channels on the Monument. Precipitation run-off from roads is a concern because of the efficiency with which it can reach a stream. In an unroaded area, or when there is an adequate buffer between the road and the stream, run-off from rain or snowmelt typically infiltrates into the soil of a vegetated slope before it can reach a stream channel. This process is interrupted when a road traverses a slope and collects and diverts the run-off. If no effective mitigations are applied to disperse the run-off collected on a road, it can serve as a conduit where water travels down the road surface and flows directly into nearby channels, increasing the turbidity and rate of streamflow. In turn, the available energy of a stream increases, resulting in accelerated erosion of banks and the streambed. The proposed action could have positive effects provided reductions in passenger car vehicle use occur in locations and at times when overcapacity is occurring, along with improvements to traffic flow and parking taking place. Alternative transportation and connectivity to public transportation outside of the Monument could further reduce congestion and parking problems.

Generally, higher densities of roads within a watershed result in quicker run-off to the stream network and increase the risk of channel erosion and downstream sedimentation. Although overall road densities across the Monument are low, roads can affect riparian conservation areas and water resources. Deposition of sediments, or sedimentation, occurs where or when flow rates are not sufficient for their transport in suspension. It can cause adverse ecological and economic consequences if the amount of sediment exceeds the transport capacity of a stream system. Sedimentation can inhibit flow through diversion structures, reduce reservoir capacity, increase sediment removal costs from sediment catchments and increase the costs of water treatment. It also can adversely affect aquatic habitat by burying important gravels needed for spawning, filling interstitial spaces in a streambed inhabited by

aquatic insects, reducing pool depths and changing the balance of scouring and deposition within a stream system. Impacts of sedimentation would be analyzed during project-level analyses.

The primary water concerns in road management are location, design, layout and maintenance. When located adjacent to or across a stream, roads and trails can act as constriction points when flows are directed through undersized culverts and can serve as direct conduits of sediment-laden run-off into a stream, leading to sedimentation. Roads and trails constructed along an unstable slope can weaken its structure, resulting in landslides and creating a source of sediments from the disturbed material. Low-water road crossings (armored and unarmored fords, cement slab crossings, etc.) can disrupt streamflows, affect channel geometry and function and deliver sediment directly into the stream from the approaches to the stream crossing. Roads or trails would lessen infiltration to aquifers and increase surface run-off. Improper drainage can result in concentration of water that may cause slope instability and increased erosion and sedimentation, and may also alter aquifer recharge infiltration.

Restoration of riparian conservation areas under both alternatives may include obliteration or relocation of roads away from stream channels, riparian areas, steep slopes, high-erosion-hazard areas and areas of mass movement. Positive changes to the road system could involve the removal of unnecessary roads, along with responsible investments and improvements in roads determined to be needed for long-term access and utilization. Realignment of roads and other travel ways to cross riparian areas and streams at a perpendicular, rather than acute, angle also reduces chronic sedimentation and improves the quality of riparian and aquatic habitats in presently affected stream reaches. Road reconstruction may be necessary to provide stable cut-and-fill slopes and adequate drainage that would allow run-off to be filtered through vegetated buffers or sediment traps before entering the stream channel. Effective seasonal road closures are also a viable management tool that can reduce severe road damage from ruts and serve to maintain a road's integrity, thus reducing road maintenance needs while decreasing riparian and water quality impacts.

Non-recreation Special Uses

Existing water resource, flood control, utility, pipeline, or telecommunications facilities located within the monument may be expanded, and new facilities may be constructed within the monument, to the extent consistent with the proper care and management of the objects protected by the Proclamation, subject to the Secretary of Agriculture's special uses authorities and other applicable law.

Generally, uses such as utility corridors (including power lines, communication lines, and pipelines) have similar effects as those described under the roads section. These corridors are usually maintained to be relatively free of vegetative cover and therefore can serve as erosion and sediment sources on the landscape. Unauthorized vehicle, motorcycle and mountain bike use on these corridors can lead to acceleration of these effects, if left unchecked.

Filming permit and military maneuver effects are unique to the particular location, size of group, time period and type of activity. These activities can have effects similar to those described for other ground-disturbing activities, although effects are generally of short-term duration. Impacts from special uses on watersheds would typically be mitigated through avoidance and engineering design and by terms of the permit. There would be no anticipated increases in special-use permits in the proposed action or no-action alternatives, so direct and indirect effects of these alternatives would be similar.

As the population in southern California increases, we can anticipate an increasing interest in water impoundments for both hydroelectric generation and for municipal, agricultural and industrial use. Reservoirs can increase groundwater levels above and immediately below the dam site, and water flows can be managed to increase or decrease streamflows and groundwater levels downstream during different

times of the year (Berg and others 2004). This generally is advantageous to groundwater flow and riparian sustainability, if managed for that purpose. However, riparian vegetation can encroach on stream channels when water is managed for very low flows and can cause reduced channel capacities. Diversions that remove water from an area can lower groundwater tables and surface water flow, which in turn affects habitats, riparian resources and other resources.

Both alternatives would have similar potential for additional water rights and developments (extractions or diversions) or additions to and retrofitting of existing projects. Beneficial use of water (purpose of the extraction) in the form of water diversions from existing streams would not vary by alternative. Potential adverse effects on water from future uses would increase with each water rights application. Water use is authorized through riparian rights or by state-issued water rights; however, normally a water right does not obligate the Monument to authorize a diversion structure. When authorizations expire and when new diversion structures are proposed, water impacts would be addressed during screening application analysis processes.

Potential overdraft of aquifers, with accompanying reduction in surface water and groundwater quantity, can result in a reduction in water availability to Monument resources. Overdrafting can occur in bedrock fracture aquifers, alluvial aquifers or deep porous and permeable rock zones. It results primarily from pumping from vertical wells or withdrawal of water from horizontal wells, at a rate greater than that which is naturally, or in some cases artificially, replaced by aquifer recharge. Within or near the Monument, potential sources of overdraft are water wells for campgrounds, recreation residences, snowmaking and water bottling operations, administrative sites, range and wildlife sources and nearby agriculture and urbanization. In general, the more wells that tap an aquifer, and/or the more water pumped, the higher the likelihood of overdraft and the more likely that surface resources would be affected, especially riparian areas, springs and meadows. If more water is kept on-Monument to maintain Monument vegetation, keep aquifer levels high, support streamflow and riparian area integrity, support wildlife and grazing needs and provide drinking water for Monument recreationists, then less is available for down-gradient domestic, municipal, agricultural, and commercial uses. Alternatives that use increased amounts of groundwater may contribute to overdraft.

The Forest Service has little control over external water extractions, and the consequences would be similar in both alternatives. Indirect effects of water extractions just outside Monument boundaries from increasing urban developments and increasing commercial developments, such as water bottling, can drain monument aquifers and take water needed by Monument resources.

Minerals and Energy

Currently, oil and gas and other mineral exploration and developments have the potential to adversely affect water quality by adding sediment and/or toxic substances from road and drill pad construction and drilling and boring activities. The potential exists for spills of blasting agents, drilling fluids and oil and gas products to enter surface and ground waters. Oil and gas exploration and development would be curtailed under the proposed action and, as a result, risks to water quality from these activities would be decreased compared to the no-action alternative.

Both historical mining operations and abandoned mine lands continue to affect riparian conservation areas and water quality from run-off, erosion and sedimentation, as well as from leaking chemical compounds. Placer mining on the national forests generally is located along streams within riparian conservation areas. Placer mining activity involves removal of any riparian vegetation and processing of gravel substrates. Past placer mining practices on the national forests have led to introduction of heavy sediment loads into the stream channels and, in some cases, alteration of the stream channel and flood plain system. Monument streams particularly affected by past placer mining activities include: Mill and

San Francisquito Creeks and the San Gabriel Rivers. Generally, effects from large- and small-scale mining can include type conversion, soil compaction, riparian vegetation removal, physical habitat destruction, interference with hydrologic function, alteration of water quantity, water quality degradation, increased run-off, erosion, and sedimentation.

Past and current mining activity can cause large long-term impacts on surface and groundwater quality. Metal ores can contain sulfides of metals such as iron, zinc, lead, and copper. Deep in the ground, sulfides are normally stable, but mining exposes these ores to air or water and the result is oxidation to metal sulfates and sulfuric acid. Metals that come in contact with acidic run-off dissolve easily and enter a water body in solution. Aquatic life and riparian vegetation are poisoned by acidic water. Without protective vegetation along streambanks, channel erosion also would also occur. Some mining activity, such as exploration, simply disturbs the soil, leaving surfaces exposed to erosive forces.

Current mining occurring on the Monument is limited primarily to a few small gold mines scattered throughout the Monument and a few gravel pits and rock quarries. The placer gold operations mostly use small suction dredges that work instream to separate gold from stream gravels. These operations can cause some alteration of substrates within the stream channel. Gold operations working outside stream channels are required to use settling ponds for process waters and to rehabilitate and revegetate mined areas on completion of mining. When vegetative cover is removed, or when soils are disturbed or compacted, there is a short-term increase in sedimentation. Natural precipitation and flood events can also cause sedimentation. Natural occurrences of chemical compounds in surface water reduce water quality. Mining operations thus have the potential to contaminate surface and ground water.

Mining operations—especially adits, shafts and pits—can alter aquifer integrity, groundwater quality and quantity. Plans of operation and reclamation plans are designed and administered to mitigate adverse impacts. Lode mining, which involves digging of tunnels, adits and shafts, can intercept and change groundwater flow and aquifer physical properties. Placer mining, gravel pits and rock quarries that move large quantities of sediment within a stream channel or alter the stream channel and floodplain system, could affect the quantity of water infiltrating to the aquifer. Ground disturbance and stream sedimentation from most current operations, except for gravel operations on the Angeles National Forest, are small.

Cumulative Effects

The cumulative effects analysis for watershed resources pertains to the planning period of 15 years, which is generally a shorter period of time than many natural watershed processes. This analysis for water and riparian resources pertains to the watersheds that contain all or a portion of National Forest System lands administered by the Angeles National Forest on the Monument. Many of the watersheds originating on National Forest System lands are held in mixed ownership at their lower elevations, commonly with urban developments near and adjacent to the Monument, which contributes to cumulative watershed impacts. Through active coordination and cooperation with local community groups, governments and other agencies, watershed restoration projects could reduce the effects of connected, disturbed areas that have led to a loss of riparian and water connectivity with off-forest stream channels and could reduce the potential for future adverse cumulative effects.

Projected human population growth throughout all of southern California is expected to bring major increases in pressure on the Monument's natural resources, including development and use of resources to support community growth (such as water, energy and transportation). Demand is expected to continue for new or upgraded interstates, state highways and/or large utility or water projects crossing the Monument. Increased adjacent urban development has the potential to affect Monument water and riparian resources through increased run-off and pollutants from roads, roofs, driveways, fertilized yards and agricultural uses. This development also raises the potential for an increase in unauthorized uses and

criminal activities on the Monument. During the short term, there would be an expected increase in accidental or unintentional human-caused wildland fires due to the inability to remove and treat vegetation associated with the cyclical tree mortality issue on the Monument. All of these issues would present effects that can detrimentally affect water and riparian areas.

Water and riparian resources receive protection from Monument management under both alternatives through the application of design criteria (standards) that would limit the extent and duration of any adverse environmental effects. Nevertheless, some adverse effects are unavoidable.

The possibility for damage to riparian ecosystems is similar. Because there would be less potential for designating protected areas, such as wilderness, the no-action alternative may result in more ground-disturbing activities such as road building and reconstruction, recreation facility construction and commodity development. The resource protection measures described in the Forest Plan should prevent widespread or long-term deterioration of water or riparian resources. During implementation of this plan, some short-term adverse effects can be expected, but no long-term negative effects are anticipated. It is impractical to complete a cumulative watershed effects analysis at the scope and scale of this strategic level of forest planning. Cumulative watershed effects analyses using the USDA Forest Service, Region 5 methodology (FSH 2509.22) would be developed and discussed at the project level.

Potential cumulative effects on water and riparian resources resulting from past, current, and future management are based on the total amount of disturbance. The same watersheds where management activities historically have been concentrated would continue to incur most of the activities under both alternatives.

Nearly all the management activities conducted on the Monument have the potential to affect water resources. Their cumulative effect on a watershed depends upon the effects of past and present management, as well as the watershed's inherent ability to absorb additional disturbance to its biological and physical processes and elements. The impacts of management activities on watershed health can be detected by assessing the conditions of its water and riparian resources. As such, these resources are excellent indicators of cumulative effects. Presently, most of the Monument watersheds are rated as being in good to moderate condition. As previously stated, where multiple ownerships exist in a watershed, the Forest Service would work with the appropriate agencies, communities, and individuals to protect and restore watershed resources. High-risk watersheds would be evaluated and prioritized for rehabilitation based on feasibility, funds available, and overall benefits to watershed health.

Activities that have a higher risk of adverse watershed effects include water extractions; water diversions (blocking of channels); removal of vegetation; recreation facility development and use; mining; and high linear feature density (roads, trails, fuelbreaks, power transmission and pipelines and trans-basin diversions and tunnels). Some watersheds experience many of these effects, underscoring the need to take into account their cumulative effects.

The cumulative effects of management activities and the expansion of urban populations toward National Forest System lands trend toward increased pressure to develop more groundwater resources, both on-Monument and adjacent to National Forest System lands. The results are increased risks of damage to groundwater quality, decreased levels of groundwater availability, and increased costs of developing and maintaining deeper and larger wells. An increase in water diversions and impoundments can affect water quality and the functioning of streams, ponds, lakes and wetlands. Potential cumulative effects as a result of water put to beneficial use through diversions of surface water would depend on the demand for future water rights. Substantial diversions from monument streams occur at this time for public water supply and hydroelectric projects, and additional new proposals are expected. Adverse effects on riparian-dependent resources have occurred at existing sites, and additional diversions would increase these effects. Most

special designation areas on the Monument are virtually untouched by roads or large-scale management activities and generally retain pristine watershed characteristics.

Increased recreation resulting from expanded population growth can lead to increased trail density, trampling and degradation of riparian areas and other activities that threaten watershed health, especially in popular locations. These activities may limit management options in watersheds of mixed ownership where watershed condition and water quality is of concern.

Based on ground disturbance, implementation of the no-action alternative would have the highest risk of adverse cumulative effects on the water and riparian resource and overall watershed condition. The proposed action would follow with fewer impacts.

Recreation

Affected Environment

Recreation has been a popular use of the area now included in the Monument for many years and has been managed under the existing Forest Plan since 2005. The importance of recreation and open space within the Monument is captured in the paragraphs below from the 2014 Presidential Proclamation:

Known as the crown to the Valley of Angels, the peaks of the San Gabriel Mountains frame the Los Angeles skyline. Over 15 million people live within 90 minutes of this island of green, which provides 70 percent of the open space for Angelenos and 30 percent of their drinking water. Millions recreate and rejuvenate in the San Gabriels each year, seeking out their cool streams and canyons during the hot summer months, their snowcapped mountains in the winter, and their trail system and historic sites throughout the year.

Enthusiasm for recreating in the mountains continues today. The San Gabriels offer hundreds of miles of hiking, motorized, and equestrian trails, including several National Recreational Trails and 87 miles of the Pacific Crest National Scenic Trail. In the footprint of the resorts of the Great Hiking Era, many visitors partake of Forest Service campgrounds built on the foundations of early 20th-century lodges and resorts. In a region with limited open space the mountains are the backyard for many highly urbanized and culturally diverse populations within Los Angeles, underscoring the need for strong partnerships between this urban forest and neighboring communities.

The Forest Service has begun initial investments to improve visitor experiences in the San Gabriel Mountains in its new status as a national monument. The Angeles and San Bernardino National Forests were provided \$300,000 to hire eight additional youth conservation corps crews to improve various visitor recreation sites and visitor centers. The Angeles National Forest has added a partnership coordinator and a volunteer coordinator; a conservation education coordinator, and three visitor information specialists will be added in the future. The forests also have replaced signs throughout the area. (USDA Forest Service 2014c)

Recreation Settings and Opportunities

The U.S. Forest Service uses the recreation opportunity spectrum (ROS) to provide a variety of recreation opportunities that can be enjoyed in diverse settings. A recreation opportunity is defined as “the opportunity to participate in a specific recreation activity in a particular recreation setting to enjoy the desired recreation experiences and other benefits that accrue” (36 CFR 219.19). Recreation opportunities include non-motorized, motorized, developed, and dispersed recreation on land, water and in the air. The

social, managerial, and physical attributes of a place, when combined, provide a distinct set of recreation opportunities.

The ROS provides a framework for defining the types of outdoor recreation opportunities the public might desire, and identifies that portion of the spectrum a given national forest might be able to provide (USDA Forest Service 1982). The ROS class characterizations are shown in table 12.

Table 12. Recreation opportunity spectrum class characterizations

ROS Class	Characterization
Primitive (P)	Characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free of evidence of human-induced restrictions and controls. Motorized use within the area is not permitted. There are no developed facilities.
Semi-Primitive Non-Motorized (SP)	Characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction among users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreation experience opportunities. A minimum of developed facilities (if any) are provided.
Semi-Primitive Motorized (SPM)	Characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present but would be subtle. Motorized use of local primitive or collector roads with predominantly natural surfaces and trails suitable for motorbikes is permitted. Developed facilities are present but are more rustic in nature.
Roaded Natural (RN)	Characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of people. Such evidence usually harmonizes with the natural environment. Interaction among users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities, which are present and well defined.
Rural (R)	Characterized by a substantially developed environment and a background with natural appearing elements. Moderate to high social encounters and interaction between users is typical. Renewable resource modification and utilization practices are used to enhance specific recreation activities. Sights and sounds of humans are predominant on the site and roads and motorized use is extensive. Facilities are more highly developed for user comfort with ample parking.

Forest Plan FEIS Part 1 p 246 (USDA Forest Service 2005b)

The ROS settings represent a range from a very high probability of solitude, self-reliance, challenge and risk to a very social experience where self-reliance, challenge, and risk are less important (USDA Forest Service 1982). The physical setting is defined by the absence or presence of human sights and sounds, size, and the amount of environmental modification caused by human activity. The social setting reflects the amount and type of contact between individuals or groups. The managerial setting reflects the amount and kind of restrictions placed on people’s actions by the respective administering agency or private landowner (USDA Forest Service 1986).

The Monument is an important recreational setting for millions of residents in Los Angeles County and surrounding areas. For many urban residents, the Monument provides the only available and measurable open space. The site also provides general educational, cultural and recreational opportunities, including hiking, hunting, fishing, horseback riding and cycling and archeological, astronomical and geological interpretation. (USDA Forest Service 2014a)

A majority of the Monument acreage is within the Primitive (132,788 acres) and Semi-Primitive Non-Motorized (110,352 acres) ROS classes. The remaining acreage is within the Semi-Primitive Motorized (51,761 acres), Roaded Natural (32,413 acres), and Rural (8,910 acres) ROS classes. The approximate percentages of the Monument acreage within each class are 38.4 percent Primitive, 31.9 percent Semi-Primitive Non-Motorized, 15 percent Semi-Primitive Motorized, 9.4 percent Roaded Natural, and 2.6 percent Rural. The Forest Plan allocates areas of the Forest to different land use zones. The ROS classifications reflect the overall theme and character expressed by the land use zones. The Land Use Zones identify where certain uses or management activities are intended or allowed. There are four categories of activities and programs which are subject to the land use zones – Resource Management, Public Use and Enjoyment, Commodity and Commercial, and Fire and Fuels, with more specific activities and uses identified under these.

Table 13. Land use zones and associated ROS classes

Land Use Zone	ROS
Existing and Recommended Wilderness (EW/RW)	Primitive
Back Country Non-Motorized (BCNM)	Semi-primitive Non-motorized
Back Country Motorized Use Restricted (BCMUR)	Semi-primitive non-motorized with some Roaded Natural and Semi-primitive motorized
Back Country (BC)	Semi-primitive motorized, Roaded Natural with some Rural
Developed Area Intermix (DAI)	Rural and Roaded Natural
Critical Biological (CB)	Varies
Experimental Forest (EF)	Semi-primitive non-motorized and Semi-primitive motorized

Developed Recreation

Developed recreation sites including campgrounds, group campgrounds, picnic sites, day use areas, fishing sites, boating sites, interpretive sites, visitor centers, information and observation sites, and trailheads are located within the Monument. The combined design capacity of all major developed recreation sites within the Monument (excluding downhill ski areas) is 10,182 people at one time (PAOT) (Angeles GIS and INFRA data, USDA Forest Service 2016b). The main recreation areas or complexes within the Monument include, Big Pines, Chilao, Crystal Lake, and Little Rock.

Dispersed Recreation

Dispersed Camping

Dispersed Camping (also known as remote or primitive) camping occurs outside of developed campgrounds. It occurs in both wilderness and non-wilderness areas, with or without a vehicle; however, most dispersed camping use occurs by vehicle. Most use is in forested areas with level ground near water. Within the Monument, dispersed camping is generally allowed, except where posted signs specify otherwise (USDA Forest Service 2013a) and within the Critical Biological and Experimental Forest Land Use Zones (Forest Plan Table 2.1.2). The Angeles has approximately 2,000 acres for potential dispersed

vehicle camping opportunities, available acreage is limited by steep terrain and urban influences. Since the Monument makes up nearly half of the Angeles National Forest acreage, there are approximately 1,000 acres for potential dispersed vehicle camping opportunities within the Monument.

Wildlife and Nature Viewing

Wildlife and nature viewing activities in southern California remain popular, but limited, due to the large human presence and rapid urbanization. Viewing natural features was listed as one of the top 10 main activities in the 2011 NVUM survey for the Angeles National Forest (USDA Forest Service 2011a).

Water Play

Water play is an activity defined as sitting by, wading through or swimming in streams and lakes (especially during the warmer summer months). There may be associated activities in or near adjacent riparian areas, including picnicking, large family gatherings, and cooking. Water play use is very high in the lower elevation canyons of the Monument, including the San Gabriel Canyon.

Recreational Target Shooting

Recreational target shooting is not allowed anywhere on the Angeles National Forest other than in designated ranges. Recreational target shooting sites (such as gun clubs and concession-operated shooting ranges under special use authorization to the Forest Service) have structured settings similar to facilities found on private land. Permitted recreational shooting sites within the Monument include the Burro Canyon Shooting Range.

Hunting and Fishing

Hunting is permitted during hunting seasons designated by the California Department of Fish and Wildlife. A state hunting license is needed at all times. Popular game includes mule deer, bear, coyotes, jackrabbits, ducks, geese, dove and pigeons. Fishing opportunities are available in rivers and reservoirs within the monument. Monument designation did not change any existing opportunities for hunting or fishing.

Winter Sports and Snow Play

Winter sports opportunities including cross-country skiing, snow camping, hiking, and snow play are some popular uses of the forest when it is blanketed with snow. Downhill skiing is available at the local commercial ski areas: Mt. Baldy Ski Lifts, Mountain High East, West, and North Resorts and Mt. Waterman.

Special Area Designations

There are several special designations within the Monument that allow for varying levels and types of recreational use. The four wilderness areas, Magic Mountain Wilderness, Pleasant View Ridge Wilderness, San Gabriel Wilderness, and Sheep Mountain Wilderness (including the adjacent Sheep Mountain recommended wilderness lands) provide opportunities for solitude and primitive recreation, no motorized or mechanized use is allowed within wilderness. The San Dimas Experimental Forest is closed to general use except under permit for research or specific education purposes. Descriptions and analysis of other special area designations is included in the Wilderness and Special Designated Areas section below.

Recreation Special Use Authorizations

Recreation special use authorizations within the Monument include recreation residences, ski areas, shooting areas, campground concession operations, outfitters and guides, and special events. Event

examples are the Crystal Lake Marathon and the Amgen bicycle race. Recreation special use authorizations within the Monument continue to be managed in compliance with applicable existing rules and regulations.

Trails and Access

Driving for pleasure is a popular activity on scenic routes through the Monument. Highway 39 and Highway 2, the Angeles Crest Scenic Highway are major routes providing access into and through the Monument.

OHV areas

There are two designated open OHV areas within the Monument: the San Gabriel Canyon OHV area includes 150 acres of rocky, sandy, reservoir land; and the Little Rock OHV area includes the Little Rock OHV trail. Outside of the two open OHV areas, vehicles are limited to designated roads, as shown in the motor vehicle use map. The open OHV areas have been effective in managing and reducing the impacts associated with cross-country OHV use and the proliferation of user-created routes.

Non-motorized trails

There are 243 miles of non-motorized system trails within the Monument that provide hiking, horseback riding and mountain biking opportunities. National Trails include the Pacific Crest Trail (PCT), the Silver Moccasin National Recreation Trail, the Gabrielino National Recreation Trail and the High Desert Trail. All trails, except the PCT and those within wilderness are open to mountain bikes. The West Fork National Scenic Bikeway parallels more than eight miles of the West Fork San Gabriel River. This gated, paved road provides a relatively flat, paved route for bicyclists of all abilities.

(<https://sangabrielmountains.org/the-place/west-fork-national-bikeway/>, accessed May 2, 2016).

Sustainable Recreation

In 2010, the Forest Service developed an approach to sustainable recreation called Framework for Sustainable Recreation. This document provides strategic direction for the Forest Service “to unite diverse interests, create and strengthen partnerships, focus scarce resources on mission-driven priorities, connect recreation benefits to communities, provide for changing urban populations, and most importantly, sustain and expand the benefits to America that quality recreation opportunities provide” (USDA Forest Service 2010). The goal of sustainable recreation is to:

- Provide a diverse range of quality natural and cultural resource based recreation opportunities, and protect the natural, cultural, and scenic environment for present and future generations to enjoy
- Partner with public and private recreation benefit providers to meet public needs and expectations, and
- Perform and plan by implementing systems and processes to ensure effective decisions and sound investments.

Building upon the strategic guidance in the Framework for Sustainable Recreation, the 2012 Planning Rule defines sustainable recreation as “the set of recreation settings and opportunities on the National Forest System that is ecologically, economically, and socially sustainable for present and future generations” (36 CFR 219.19). This definition recognizes the role the recreation program plays in supporting the overall Forest Service mission of sustainability. Sustainability is only possible when recreation is integrated with all other agency programs. Similarly, national forests are vital to the sustainability of many rural and urban communities. Thus, national forest recreation plays a key role in the social stability, environmental integrity, and economic vitality of these communities.

The sustainability of recreation opportunities on the Monument depends on the balance among, economic, social and environmental conditions, commonly known as the three spheres of sustainability.

Social Sustainability

Most visitors come to know the national forests through their direct recreation experiences. Thus, it is important to provide recreation opportunities that visitors' desire to maintain relevancy. Relevancy is affected by the forest's ability to maintain recreation infrastructure, such as developed recreation sites and trails, that meet visitors' needs; the diversity of forest visitors versus the diversity of the population in surrounding counties; and visitor, community and stakeholder interest in working with the forest to provide and maintain a variety of recreation opportunities and settings to meet diverse visitor needs.

Visitor Use and Visitor Satisfaction

Visitor use, participation and satisfaction are measured by the National Visitor Use Monitoring (NVUM) system. The most recent information is summarized below. The complete report for the Angeles (2011) may be viewed and downloaded individually and/or combined from the NVUM Web site (USDA Forest Service 2011b).

Table 14. Total estimated national forest visits from National Visitor Use Monitoring

Angeles National Forest Visitation	Fiscal Year
3,636,000	2011
3,181,000	2006
3,500,000	2001

For 2011, at the 90 percent confidence level, the total estimated national forest visits to the Angeles National Forest were between 3.6 million and 4.2 million. The Monument is the heaviest used area on the Angeles National Forest. The 346,177-acre monument makes up nearly half of the 700,000-acre forest, but likely receives well over half of the annual visitation, due to highly popular sites such as San Gabriel Canyon, and the Monument's proximity to the Los Angeles metropolitan area. Multiple access points from communities along CA 210 provide access to the Monument, and Highway 2, the Angeles Crest Highway serves as a commuter route through the Monument, connecting communities to the north. Visitation is expected to increase now that the area has been designated a national monument (USDA Forest Service 2014d).

National monument designation may increase the visibility of the area and influence visitor's expectations of the types of experiences they will find. Changes in designation may imply (real or perceived) differences in the availability of services, promotional expenditures, allowable uses, or uniquely attractive features of the site (Weiler and Seidl 2004). Several studies have shown increased visitation and associated economic growth due to monument designation, by comparing pre- and post-designation visitation for monuments throughout the west. (Headwaters Economic 2011 and 2014, BBC Research and Consulting 2012, Downstream Strategies 2013, and Economic and Planning System, Inc. 2014). The studies have indicated increases in visitation ranging from 30 percent to over 300 percent in the 10 years following monument designation. These studies have primarily focused on monuments near smaller rural communities throughout the western United States, several of which had very low visitation prior to monument designation. Although not directly comparable to the San Gabriel Mountains National Monument, with high visitation prior to designation and proximity to multiple major metropolitan areas, it is likely that the monument designation will result in higher visitation than would have occurred without the national designation.

Population growth also continues to drive an increase in southern California national forest outdoor recreation demand. The population within the four southern California national forests planning boundary (Angeles, Cleveland, Los Padres, and San Bernardino National Forests) in 2013 was 34.3 million people, an increase of 9.8 percent since 2000 (USDA Forest Service 2013a). Ethnic and racial diversity has also increased (2010 Census data). In addition to potential visitation increases due to monument designation, the population in the Los Angeles region is projected to increase by 18 percent from 2010 to 2060 (California State Parks 2013).

Angeles National Forest National Visitor Use Monitoring Results

The following visitor use information applies to the entire Angeles National Forest.

Just over 35 percent of visits are made by females. Hispanic visitors account for just over 20 percent of all visits. Among racial minorities, Asian (15 percent) and Native American (5 percent) are the most common. About 16 percent of the visits are made by children who are under 16. Only about 10 percent are from people aged 60 and older. Nearly half have traveled less than 25 miles to get to the Angeles, and more than a quarter are from 26 to 50 miles away (USDA Forest Service 2011a). The most commonly reported zip codes of visitors are from Los Angeles and San Bernardino Counties.

Most visits are day visits. Half of all Forest visits last no more than 3.5 hours. More than three-quarters last 6 hours or less. Wilderness visits are of short duration as well; most last less than 4 hours.

Despite a mostly local customer base, frequent users are uncommon. Less than 12 percent of visits come from people who visit more than 50 times per year (USDA Forest Service 2011a). Most visitors (93.5 percent) visit only one site during their Forest visit. Average group size is 2.5 people.

Hiking and walking are the most commonly reported main activities (46.2 percent), followed by downhill skiing (9.4 percent), relaxing (7.5 percent), some other activity (6.2 percent), fishing (5.5 percent), OHV use (3.6 percent), motorized water activities (3.4 percent), bicycling (2.9 percent), viewing natural features (2.8 percent), developed camping (2.8 percent), driving for pleasure (2.4 percent), and picnicking (1.7 percent) (USDA Forest Service 2011a).

Approximately 30 percent of Forest visitors reported using developed recreation facilities such as visitor centers, scenic byways, developed fishing sites, developed swimming areas, information sites and designated OHV areas.

Overall satisfaction is high, with 77 percent indicating they are very satisfied, and 18.2 percent somewhat satisfied. Areas with lower satisfaction and high importance to visitors, which may need more work for day use developed sites include restroom cleanliness and value for fee paid; for overnight developed sites and recreation, information availability; and for general forest undeveloped areas, signage adequacy.

Trends and Projections

Population growth is projected to be the primary driver in growth of numbers of adults participating in outdoor recreation (Cordell 2012). Visitor use will inevitably grow over time, especially in areas adjacent to major metropolitan areas like Los Angeles. Recreation use is expected to become more intense at existing sites and also expand to other lightly used areas. As popular sites reach their capacity, use is likely to shift from the heavier summer season to spring, fall, and to some degree, winter.

As population increases, visitor demographics of the population and national forest visitors will also become more diverse and will have changing expectations for recreation opportunities. For example, more Hispanic/Latino visitors are expected. Studies have shown that Latinos prefer to recreate at sites with facilities and areas large enough to accommodate families and large groups (Madsen et al. 2014).

Other demographic changes that may impact visitor expectation are the increasing population of Baby Boomers who wish to remain active in retirement. A California State Parks study says, “This generation, born and bred in prosperity, is looking for an amenity-rich and meaningful outdoor recreation experience, increasing the need for programs, facilities, and infrastructure. Boomer seniors will be drawn to conservation and heritage causes...” (California State Parks 2005). On the other end of the spectrum, Millennials (the generation born between 1982 and 2000) have grown up with technology and connection with social networking sites. This generation’s view of the outdoors is likely to be areas close to home, where they can socialize and interact with their family and friends. Others in this generation engage in outdoor recreation and use technology to enhance and share their experiences (Outdoor Industry 2014). This is a very diverse generation that will require a variety of approaches to effectively engage and serve in outdoor recreation settings.

Agency managers will face ever-increasingly difficult decisions about recreation management and resource protection conflicts. Because more people now live in urban areas, wildland recreation skills of visitors will continue to erode, leading to more safety and liability concerns and search-and-rescue operations. Also, emerging technologies will continue to create new uses with as yet unknown impacts; however, it is clear that conservation education and partnerships will play vital roles in the health and stewardship of the national forests. (USDA Forest Service 2005b, FEIS part 1 p. 498)

As the diversity of recreation visitors increases, satisfaction of users becomes more contingent upon a successful environmental and conservation education program including specifics such as where to go, what to do, and information to create a sense of welcome. As management focus remains on the sustainability of the recreation setting and the national forest niche of nature based activities, cooperation and partnerships with local communities and other recreation providers will be required to provide a full range of recreation opportunities. (USDA Forest Service 2005b, part 1 p. 501)

Access for Youth and Minority Populations

Access for youth and minority populations and population statistics are discussed in detail in the Socioeconomics section below. It is important for recreation managers to consider the unique needs and desired recreation experiences for youth and minority populations within the range of recreation opportunities being provided within the Monument.

The decline of outdoor recreation participation among children has been well documented by books such as *Last Child in the Woods* by Richard Louv. More people live in urban areas, families have less time to spend outdoors, and parents and their children often have fears about nature. In 2007, Forest Service Chief Gail Kimbell issued a challenge to the American people to introduce children to national forests. She said:

Our most important resource in this country is not forests, vital as they are. It is not water, although life itself would cease to exist without it. It is people. The challenges of climate change and looming water shortages will not be resolved in a few years. It will take generations. Today’s children—and theirs—will need to be able to take the baton and finish the race. For that, they will need a full understanding of why forests are so valuable, along with a strong land ethic. It is our imperative to give them both (Kimbell 2007).

Some under-represented groups, both rural and urban, may not have transportation nor the financial means to access forest recreational settings and recreational opportunities. A number of factors, such as fees, inadequate transportation, and unfamiliarity with being outdoors, may deter some people from recreating on the Forest. In some cases, families rely on public transportation, often limiting their ability

to access national forest recreation sites, unless they are in close proximity to public transportation routes. See additional discussion in the socioeconomic section.

Conservation Education, Volunteers, and Partnerships

Volunteers help the Angeles National Forest serve visitors and protect and restore natural resources and recreation facilities. The Angeles National Forest reported that during fiscal year 2013, volunteers provided 75,406.3 hours of service to the Angeles National Forest, valued at \$1,669,495.48. In addition, the forest's partnerships and organization-agreement hours totaled 32,458 hours, valued at \$718,620.12 (USDA 2014e). A significant portion of this volunteer effort takes place within the Monument.

Conservation education is a broad category that includes interpretation, environmental education and visitor information. Since the adoption of the 2006 Forest Plan, one additional conservation education program on the Angeles National Forest has been started.

The Southern California Consortium is an environmental education, outreach, and recruitment, kindergarten through employment program whose focus is to educate underserved urban communities. The program's three main components are: Community, Environmental Education, and Employment.

San Gabriel Mountains Community Collaborative is a collaborative group that is facilitated by the National Forest Foundation, the non-profit partner of the Forest Service. The purpose statement of the collaborative is to:

Represent the general public by integrating diverse perspectives to identify, analyze, prioritize and advocate for values, resources, investments, management objectives and implementation practices that sustainably benefit all communities throughout the region, the Angeles National Forest and the San Gabriel Mountains National Monument.

The collaborative is an important connection to the diverse community surrounding the Monument, and a key partner in community engagement in Monument planning and management.

(<https://www.nationalforests.org/who-we-are/regional-offices/california-program/sangabrielmountains>, accessed May 2, 2016)

There are numerous other volunteer and partner organizations that support recreation and resource management within the Monument.

Ethnic and racial diversity of users

In 2014, the population of Los Angeles County was approximately 73 percent Hispanic and racial minorities and the population of San Bernardino County was approximately 68 percent Hispanic and racial minorities (see the Socioeconomics section below for additional information).

In contrast, the 2011 NVUM information shows that Hispanic and racial minority visitors account for approximately 43 percent of all visits. Among racial minorities, Asian (15 percent) and Native American (5 percent) are the most common.

One of the measures of social sustainability is recreation equity, or the percent of minorities in the Forest's market zone versus the percent of Forest visitors who are minorities (USDA Forest Service 2014b). This measure helps determine how well forests are reaching out to their communities and serves as an indicator of future recreation use and relevancy in times of changing demographics. There is a notable gap in the number of minorities visiting the Forest compared to the minority population in the counties adjacent to the Forest.

However, several site-specific studies on the Angeles National Forest have indicated that selected locations have a greater proportion of Latino visitors. Chavez and Olson (2005) reported that 40 percent of visitors to the Angeles high country and San Gabriel Canyon were Latino; and Winter and Chavez (2008) found in multiple areas on the same forest surrounding the San Gabriel and San Antonio Canyons that a majority (55 percent) of visitors self-identified as Latino (Milburn and Winter 2015). This information indicates that management actions to meet the needs of diverse visitors should be concentrated in specific areas. This information also indicates that changes to visitor capacity and access in specific locations may have disproportionate impacts to minority populations (this is discussed in detail in the environmental justice section of the Socioeconomics section below).

Environmental Sustainability

The underlying conditions of the natural environment are the foundation for sustainable recreation opportunities. Some of these environmental conditions are affected by things outside of the forest's control such as climate change and natural disasters as well as localized factors such as declining ecosystem health; in addition to impacts from unmanaged recreation use, vandalism, and recreation infrastructure deferred maintenance backlog.

Examples of recreation management actions that may be taken to move toward environmental sustainability include implementing travel management planning to provide designated OHV routes and areas, implementing additional permit systems or area restrictions to direct use to appropriate sites, concentrating use in developed sites, and increasing management of dispersed camping.

Environmental sustainability is assessed by examining the conditions and trends affecting the quality of recreation settings. The Angeles National Forest has taken several management actions to reduce or manage impacts from recreation use and move toward a more sustainable environment that will in turn provide more sustainable recreation settings.

Following are descriptions of environmental conditions and trends affecting recreational settings, and a few of the recreation management actions that are being implemented.

Fire

Several recent large fires on the Angeles National Forest have affected the quality of recreational settings. For example, the Cabin Fire of 2015 resulted in an emergency closure area along a portion of Highway 39. The closure order restricts dispersed recreation and travel on Forest System roads throughout the closure area. The closure is in place to protect soil, watershed, and cultural resources and public safety (Order No. 15-01-03).

As severe fire seasons are becoming the norm, fire restrictions are increasingly impacting the recreation experience as campers are unable to enjoy evening campfires or cook over open flames, and in some cases, areas are closed to public use. Fire restrictions are put in place and become more restrictive as fire danger levels increase. Specific campground, trail, and area public safety closures are also used as needed. Frequently, fire impacts trail conditions, leading to an increased need for trail maintenance.

Unmanaged Recreation and Visitor Use Impacts

In addition to environmental conditions, unmanaged recreation has been identified by the Forest Service as one of four —key threats to the nation's forests and grasslands. The use of OHVs is seen as a major component of unmanaged use (USDA Forest Service 2006b). OHV use trends including increasing numbers of participants and changing technology that has allowed access to previously inaccessible areas, may impact recreational settings from the presence of fugitive dust and soil disturbance, spread of noxious weeds, and proliferation of unauthorized routes.

On the Angeles National Forest, travel management designations through the motor vehicle use map, and designation of the two OHV open areas have been successful in managing impacts associated with motor vehicle use.



Figure 6. OHV area

In some cases, popular recreation areas and activities overlap with important wildlife habitat and pose potential impacts to sensitive wildlife species. For example Williamson Rock, a popular rock climbing area, is under a temporary closure based on concerns related to protection of the mountain yellow-legged frog and its critical habitat. Hikers on the Pacific Crest Trail are also being routed around the closure area. Potential impacts from recreation within the creek habitat include disturbance of egg masses, trampling of individual frogs, capturing and handling of tadpoles and adult frogs, and generalized disruption of mating and migration. Recreation may also impact habitat by altering stream beds or banks, and introducing pollutants, garbage or human waste into the creek. The Forest is preparing an environmental impact statement to address the resource concerns and to determine an appropriate resolution (Forest Order No 01-16-01, January 14, 2015).

In San Gabriel Canyon, there are conflicts with visitor-created “recreational dams” that may potentially impact Santa Ana sucker habitat. Many visitors are drawn to cool water in streams during the hot summer months and visitors create “recreational dams” to form deeper pools along the stream. The Angeles National Forest currently removes dams twice per year to avoid additional resource damage from continual removal and re-building of the dams. Discussion of potential water quality and habitat issues are included in the Hydrology and Aquatic Species sections above.



Figure 7. San Gabriel Canyon

High levels of visitor use have the potential to result in visitor use impacts, especially in popular, high use areas. One approach to address visitor use impacts is to concentrate use at developed sites and along designated roads and trails. Visitor impact studies of campsites and trails have shown that most resource impacts are related to visitor use levels in a curvilinear fashion (Marion 2013). This means that incremental impacts from visitors (such as trampling, loss of vegetation, and creation of social trails) occur quickly with relatively low use levels and continue to increase to a point at which impacts from additional use levels off. The main implication of this use/impact relationship is that nearly all use must be eliminated to achieve significant reductions in most forms of recreation impact (Marion 2013). Management actions to concentrate use on established or hardened sites can be an effective means to manage visitor impacts, while still allowing recreational use.

Some potential management actions include limiting types of use with higher impacts to specific areas, educating visitors regarding high impact behaviors and encouraging low impact behaviors, encouraging use in impact resistant locations, and limiting use to existing or designated sites or trails. The existing Forest Plan provides flexibility to implement necessary management actions, and a hierarchy of appropriate recreation actions is included in Appendix D – Adaptive Mitigation for Recreation Uses, of the Forest Plan.

Economic Sustainability

In addition to appropriated funds, the Forest depends on a variety of funding sources (such as grants, partner and volunteer contributions, fee revenue) to meet visitor needs. Overcoming budget challenges requires that the agency forge strategic partnerships and inspire citizen stewards, both of which can help increase economic sustainability. Working with private recreation providers to promote unique recreational opportunities on national forests and grasslands contributes to local economies by creating new jobs.

The monument designation itself did not prompt a fee. An Adventure Pass is required at picnic areas, and site-specific fees are required at campgrounds and OHV areas (USDA Forest Service 2014c).

There are several fee-free days offered, when an Adventure Pass is not required including Martin Luther King Jr. Day (January), National Get Outdoors Day (June), Back to School Season (August), National Public Lands Day (September), and Veterans Day weekend (November). Dates vary each year.

Environmental Consequences

No Action

Direct and Indirect Effects

Current management would continue in accordance with the 2005 Angeles National Forest Land Management Plan, relevant amendments, and interim management direction. Because this alternative is the continuation of current management and would not result in changes to the existing Forest Plan, protections of Monument objects would only be provided where existing goals or objectives address them.

The existing vision, strategy and design criteria for recreation are in place and provide a solid framework for addressing management of recreation resources within the monument. No additional plan components would be proposed to address public comments related to sustainable recreation and use. The no action alternative would not be in compliance with the direction in the Monument Proclamation to prepare a management plan within three years of designation.

Proposed Action

Direct and Indirect Effects

The proposed action is a Forest Plan amendment and does not direct any surface-disturbing activities or immediate actions on-the-ground; there would be no direct effects to recreation within the Monument as a result of the proposed action. Indirect effects would result from future implementation of the Monument Management Plan. As management actions are implemented within the Monument, recreation conditions would move toward desired conditions described in part one of the Plan, the Vision. Many of the amended plan components address aspects of social sustainability in response to public comments received during the scoping process.

Amendments to the desired conditions in Goal 3.1 Provide for Public Use and Natural Resource Protection of the Forest Plan, include a focus on opportunities to improve access to the Monument through coordination of alternative transportation options with other agencies and gateway communities, while also addressing concerns related to vehicle congestion, limited parking capacity and public safety. A trend in reducing the number of automobiles in the Monument over time would help to address visitor capacity and vehicle congestion and improve visitor experiences.

Proposed amendments to Goal 3.1 of the Forest Plan also help to ensure that the Monument remains relevant to the needs and expectations of the surrounding area's diverse population. Focus would be on engaging youth in outdoor recreation and conservation education, incorporating the areas rich cultural history that shaped the landscape into interpretive messages. Ensuring information, conservation education and interpretive messages are meaningful and relevant to diverse audiences, and that the messages are provided through appropriate social media and technology to reach the intended audiences.

Monitoring would continue to determine if trends in indicators and visitor satisfaction surveys are indicating that the Monument has provided quality, sustainable recreation opportunities that result in increased visitor satisfaction.

Recreation Settings and Opportunities

A variety of recreation opportunities ranging from primitive, non-motorized hiking experiences in the Monument's four wilderness areas, to OHV riding opportunities in OHV open areas, and a variety of opportunities for camping, picnicking, fishing, hunting, horseback riding, mountain biking, water play,

and participating in conservation education programs would continue to be provided within the monument. The appropriate levels of recreation site development and management would continue to be guided by the ROS classes and their associated land use zones.

The land use zones are well balanced and provide a variety of opportunities across the landscape. Management of recreation opportunities by land use zone will ensure that there is a balance between quiet, non-motorized recreation such as hiking and mountain biking and motorized opportunities such as vehicle access for camping and picnicking or OHV driving. Management according to the ROS classes and land use zones will also help reduce conflict between differing uses.

Developed and Dispersed Recreation

Management of developed and dispersed recreation resources within the Monument would continue based on existing plan direction.

Recreation Special Use Authorizations

Special use authorizations within the monument would continue to be managed under existing rules and regulations. The proposed plan would add the following management approach:

Develop criteria for appropriate types of special events, requests, and emerging uses within the Monument.

California forests are often the first to see emerging uses and new technology in recreation equipment and activities. The Monument-specific criteria would ensure that appropriate consideration is given to protecting Monument resources as new and emerging uses are evaluated.

The proposed plan would also add the following guideline relevant to special use authorizations along the PCT:

Along the Pacific Crest National Scenic Trail within the Monument, new recreation events, such as foot races or horseback endurance events and fundraising events should be limited to designated crossings only. Existing recreation events may be allowed to continue at current levels.

The PCT guideline would protect the quiet, non-motorized experience along the trail, and ensure that the trail is available for its congressionally designated purpose, as an extended trail (from Mexico to Canada) of national significance. Maintaining the trail experience enhances opportunities for long-distance hiking, and focuses management of the PCT as an object of interest within the Monument.

As part of the current Forest Service Recreation program direction for Valuing Outdoor Experiences Demonstration Areas and the high five recreation priorities for the agency, the Monument would benefit from the agency's efforts to modernize special use authorizations.

Trails and Access

The proposed new management approach would emphasize the importance of maintain the road and trail system within the Monument to provide access.

Improve needed operational maintenance level 2 National Forest System roads to standards that qualify for Federal Lands Transportation Program (FLTP) funding (operational maintenance level 3+). Improve non-motorized trails to standards that qualify for Federal Lands Transportation Program funds (“provide an engineered surface”).

The proposed plan includes the following guideline relevant to new road and trail crossings of the PCT:

2. All new road and trail crossings of the Pacific Crest National Scenic Trail within the Monument will be evaluated and planned to minimize impacts to the scenic, natural, and experiential values of the trail. New roads and new trails, including motorized and mechanized transport trails, within the PCT foreground views should be designed to minimize the visual, aural and resource impacts to the PCT. Exemptions may be allowed if required by law to provide access to private lands or documented as the only prudent and feasible alternative.

The PCT guideline would ensure careful planning and assessment of new road and trail crossings to maintain the quiet, non-motorized trail experiences along the trail.

Sustainable Recreation (Visitor Use and Visitor Satisfaction)

In addition to the added emphasis on sustainable recreation in the desired conditions and Goal 3.1 of the Forest Plan, proposed Management Approaches would emphasize and support these efforts.

Social sustainability is addressed by placing emphasis on outreach to youth and minority populations that may not otherwise have an interest in visiting the Monument. Conservation education and interpretation would be relevant and meaningful to a diverse audience. All of these efforts are a means to improve visitor satisfaction and recreation equity—helping visitors match their desired experiences with opportunities within the Monument.

Ecological sustainability is addressed by following the interagency visitor use management framework to address visitor capacity issues. Visitor capacity is more appropriately determined through site-specific analysis. As the population of Los Angeles and surrounding areas continues to increase, it is expected that recreational visitor use of the Monument will also continue to increase, and with it, the associated visitor use impacts. There will be an ongoing need for Forest recreation managers to assess the recreation demands and trends and adjust management approaches as needed to meet visitor use demands while minimizing impacts. The Monument Management Plan provides a framework for managing recreation in an ecologically sustainable manner.

Economic sustainability would be reached through ongoing emphasis on partnerships. Due to the large and diverse population base in the Los Angeles Basin, there are many existing and potential partnership and volunteer opportunities to support the Monument. Public comments received during the scoping process for the Monument Plan indicated general understanding and support for additional fees to maintain and improve desired recreation infrastructure within the Monument. There are, however, concerns with maintaining low-cost access for underserved populations. If changes to the fee structure for the Monument are determined to be necessary to maintain economic sustainability, this would be considered, as needed, in a future, site-specific analysis. See the socioeconomic section for additional discussion.

Table 15. Resource indicators and measures for proposed action direct and indirect effects

Resource Element	Resource Indicator	Measure (Quantify if possible)	Issues addressed
Recreation Opportunities	Recreation Opportunity Spectrum	132,788 acres Primitive 110,352 acres Semi-Primitive Non-Motorized 51,761 acres Semi-Primitive Motorized 32,413 acres Roaded Natural 8,910 acres Rural	Managing recreation opportunities consistent with the Land Use Zones and corresponding ROS classes provides a variety of opportunities across the Monument. Providing information and education about the range of recreation settings and opportunities available will help visitors determine where to go to achieve their desired recreation experiences. This will help reduce conflicts between motorized and non-motorized users and conflicts between different types of non-motorized use. Incorporating descriptions of the range of recreation opportunities in Monument information and education to assist in matching visitors desired experiences with opportunities is also a means to disperse use across the Monument and provide alternatives to popular high use areas that are currently at or exceeding capacity.
Recreation Opportunities	Developed Recreation	35 campgrounds 16 picnic areas 20 trailheads 4 visitor centers	A wide variety of developed recreation facilities are available within the Monument. Existing plan language in Goal 3.1 directs that facilities and infrastructure are high quality, well-maintained, safe, accessible, and consistent with visitors' expectations. Added Desired Condition: "Products, services, and the built environment are aligned with needs and expectations of the surrounding area's diverse population base." Speaks to addressing the needs and expectation of changing demographics, such as higher percentages Hispanic/Latino and minority visitors, and engaging visitors of differing generations such as baby boomers, millennials, and youth. Developed facilities are not suitable within the Critical Biological Land Use Zone (Forest Plan Table 2.1.3). The proposed addition of the East Fork San Gabriel River, North Fork San Gabriel River, and Aliso Canyon Critical Biological Use Zones would reduce future opportunities for recreation facility development in these areas.
Recreation Opportunities	Dispersed Recreation	Approximately 1,000 acres available for dispersed vehicle camping within the Monument	Dispersed camping is generally allowed within the Monument, except within the Critical Biological and Experimental Forest Land Use Zones. Dispersed camping occurs in both wilderness and non-wilderness areas, with or without a vehicle; however, most dispersed camping use occurs by vehicle. Most use is in forested areas with level ground near water. The existing Forest plan standard S35 addresses resource concerns by discouraging use within 100 feet of meadows and water bodies and within 600 feet of wildlife water source developments. The proposed addition of the East Fork San Gabriel River, North Fork San Gabriel River, and Aliso Canyon Critical Biological Use Zones would reduce dispersed camping opportunities in these areas.

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Resource Element	Resource Indicator	Measure (Quantify if possible)	Issues addressed
Recreation Opportunities	Access/Driving for Pleasure	49 miles of scenic highway 160 acres open OHV area	Driving for pleasure will continue to be a popular activity within the Monument. Opportunities for scenic driving, and OHV open areas would continue to be available. See Transportation Report for more information. The proposed new management approach, "Improve needed operational maintenance level 2 National Forest System roads to standards that qualify for Federal Lands Transportation Program (FLTP) funding (operational maintenance level 3+)" would address road maintenance and restoration, especially in fire damaged areas.
Recreation Opportunities	Access/non-motorized trails	243 miles of non-motorized trail, including national scenic and recreational trails	<p>Non-motorized trail activities will continue to be popular within the Monument. The proposed new management approach, "Improve non-motorized trails to standards that qualify for Federal Lands Transportation Program funds ("provide an engineered surface")" would address the need for trail maintenance and restoration, especially in fire damaged areas.</p> <p>Trail system inventory, mapping, characterization, and variety of opportunities would be included in public information, education and interpretation information.</p> <p>Additional guidelines for management of new recreation events and new road and trail crossings of the PCT would enhance the quiet, non-motorized trail experience along this National Scenic Trail.</p>
Sustainable Recreation	Conservation Education Programs targeting youth and minorities	<p>Numerous Conservation Education programs were provided within the Monument in Fiscal Year 2015.</p> <p>In FY 2013, these programs reached at least 5,000 youth.</p>	<p>Added emphasis in the proposed Monument plan for Conservation Education programs targeting youth and minorities will support access to the Monument for underprivileged youth and minority populations by providing necessary information to facilitate visitation and access. The proposed new guideline would be to: "Maintain or increase the number conservation education programs/events per year within the Monument."</p> <p>Outreach to differing demographics, such as youth, millennials, and urban populations and providing meaningful visitor information and environmental education and interpretation programs that are relevant to diverse visitors are addressed through proposed new management approaches, including:</p> <p>"Develop a Monument conservation education plan."</p> <p>"Expand the use of multilingual information and outreach including interpretive signs, standard recreation signs, online information and social media, and multilingual personnel such as recreation staff, law enforcement, and volunteers."</p> <p>"Prioritize youth engagement efforts in line with the Region 5 Integrated Youth Engagement Strategy, and continue participation in programs such as the Southern California Consortium "Generation Green" program."</p> <p>Additional focus in the new proposed desired condition, "Youth are engaged in outdoor recreation and conservation education opportunities, fostering the next generation of public land stewards." would work toward instilling land use ethics and inspiring the next generation of natural resource stewards, which is critically important, especially in the urban setting where youth may not otherwise have outdoor experiences.</p> <p>Emphasis in proposed new desired condition on culturally relevant interpretive messages:" Interpretation materials capture the rich cultural history that shaped the area, including Native Americans, Spanish missionaries and colonialists, Mexican rancheros, Euro-Americans and Asian settlers and prospectors." would help connect people to the land and provide a sense of welcome to all visitors.</p>

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Resource Element	Resource Indicator	Measure (Quantify if possible)	Issues addressed
			<p>Prioritizing information, outreach and conservation education efforts can also be a key management strategy toward reducing recreation related resources impacts. Fostering a connection between people and the land will in turn increase understanding of the connection between visitor actions and resource impacts, and lead to increased compliance with Monument rules and reduce recreation related resource impacts.</p>
Sustainable Recreation	Racial and Ethnic Diversity of Monument Visitors – Recreation Equity	<p>43 percent of minorities visiting the Monument 73 percent of minorities in Los Angeles and San Bernardino Counties</p>	<p>Proposed new additions to Transportation Management Approaches regarding alternative transportation and Sustainable Recreation Management Approaches regarding conservation education and outreach support access to the Monument for underprivileged youth and minority populations.</p> <p>These efforts will help address recreation equity, ensuring that the visitor demographics is representative of the demographics of the area’s surrounding population. These efforts are important to ensuring that the Monument remains relevant as a recreation and open space resource for local communities, and is appealing to volunteers and partners.</p>
Sustainable Recreation	Visitor Use Management	<p>Visitor Use Management Framework to address visitor use and potential visitor capacity issues</p>	<p>Concentrated recreational use can have impacts on streams, riparian areas and other resources. Proposed additions to Sustainable Recreation Management Approaches would provide a framework for managing visitor use to protect aquatic and other resources, as needed.</p> <p>In addition to the proposed additions, management of recreation would continue subject to Appendix D - Adaptive Mitigation for Recreation Uses.</p> <p>“Prioritize work with external partners to develop sustainable recreation studies, recreation design plans, new products, or recreation design features to improve recreation management within the Monument and ensure relevance to the Monument’s diverse visitor use base.”</p> <p>“Evaluate the need for recreation carrying capacity in high use areas such as San Gabriel Canyon, following the Interagency Visitor Use Management Framework (http://visitorusemanagement.nps.gov), including:</p> <ul style="list-style-type: none"> • Identifying visitor capacities and strategies to manage use levels within capacities. • Documenting criteria and rationale for establishing visitor capacities. • Documenting the relationship between the amount of visitor use and existing conditions and how management actions are expected to affect that relationship. <p>“Work with gateway communities and local partners to manage potential impacts and maximize potential benefits associated with Monument designation by addressing issues such as identification of appropriate access points and parking capacity at access points.”</p>
Sustainable Recreation	Visitor Satisfaction	<p>77 percent very satisfied 18.2 percent somewhat satisfied Per NVUM 2011 visitor satisfaction results</p>	<p>Implementation of the proposed Monument plan would result in quality, sustainable recreation opportunities that result in increased visitor satisfaction</p> <p>All of the management goals, strategies and objectives support visitor satisfaction. Visitor Satisfaction will continue to be monitored over time and management approaches adjusted as needed to best meet visitor needs and expectations.</p>

Cumulative Effects – Proposed Action

In addition to the National Monument designation, there are several overlapping national designations that apply to the lands within the Monument that influence the recreation settings and opportunities available. Designations include four congressionally designated wilderness areas: Magic Mountain, Pleasant View Ridge, San Gabriel, and Sheep Mountain Wilderness areas. The wilderness areas provide primitive, non-motorized recreation opportunities and opportunities for solitude. The Pacific Crest National Scenic Trail, Silver Moccasin National Recreation Trail, and Gabrielino National Recreation Trail are recognized for non-motorized trails opportunities of national significance. The Angeles Crest Scenic Highway is publicized as *the most scenic and picturesque mountain road in the state*. In addition, there are several local Forest designations including land use zones, the motor vehicle use map, and designated open OHV areas that guide management of opportunities for motorized recreation throughout the Monument. There are several authorized recreation special uses such as ski areas and shooting ranges, in addition to permitted special events that provided various guided and organized recreation opportunities. Implementation of the proposed Monument Management Plan would provide the framework for managing recreation settings and opportunities, trails and access, and sustainable recreation within the Monument, and ensure coordination of the overlapping designations.

The increased national profile of the area due to the national monument designation, in addition to ongoing population growth in Los Angeles and San Bernardino Counties and increased emphasis on outreach and access to youth, minorities, and underserved populations who may not currently be visiting the Monument would cumulatively add to the visitor use levels.

As Monument planning and management continues into the future as a collaborative, partnership-driven effort, the cumulative efforts would result in increased resources including funding, volunteers, and management capacity to address resource management challenges and move the area toward the desired conditions

Scenery

Affected Environment

Scenery as well as other natural resources must be cared for and managed in order to maintain quality scenery for generations to come. Scenery is a combination of natural landscape features including vegetation, water features, landform and geology, and human-made elements. When people experience the landscape, scenery combines all the ecological features and the human elements, including the built environment. The composition of these attributes is what gives a landscape its character or image.

Scenery is an integral component of all forest settings, and contributes to the quality of the users' outdoor recreational experience. Providing a natural-appearing landscape for these visitors is important. The Scenery Management System is a tool for integrating the benefits, values, desires, and preferences regarding aesthetics and scenery for all levels of land and resource management planning. People are concerned about the quality of their environment and the aesthetic values of landscapes, particularly the scenery and spiritual values.

Existing Condition

Viewing natural scenery, sightseeing, driving for pleasure, and photographing flowers, trees, scenery, and wildlife are among the nation's highest ranking recreational activities (Cordell 2008). Additionally, viewing, taking photos, or otherwise observing and appreciating nature has been the fastest-growing type of nature-based recreation (Cordell 2012). The Monument is a regional, year-round recreation destination

and an important recreational setting for millions of residents in Los Angeles County and surrounding areas.

Scenery is a combination of natural landscape features (e.g., vegetation, water features, landform and geology) and human-made elements. Scenery is also a key component to recreation settings and experiences. The importance of the landscape features, recreation, and open space within the Monument is captured in the paragraphs below from the 2014 Presidential Proclamation:

Known as the crown to the Valley of Angels, the peaks of the San Gabriel Mountains frame the Los Angeles skyline. Over 15 million people live within 90 minutes of this island of green, which provides 70 percent of the open space for Angelenos and 30 percent of their drinking water. Millions recreate and rejuvenate in the San Gabriels each year, seeking out their cool streams and canyons during the hot summer months, their snowcapped mountains in the winter, and their trail system and historic sites throughout the year.

The San Gabriels are some of the steepest and most rugged mountains in the United States. Situated adjacent to the mighty San Andreas Fault, the mountains are geologically active, migrating northwest at an average of 2 inches each year. Deep canyons, many with precious perennial streams, score the mountain peaks – north toward the arid Mojave Desert and south to the temperate San Gabriel Valley.

Enthusiasm for recreating in the mountains continues today. The San Gabriels offer hundreds of miles of hiking, motorized, and equestrian trails, including several National Recreational Trails and 87 miles of the Pacific Crest National Scenic Trail. In the footprint of the resorts of the Great Hiking Era, many visitors partake of Forest Service campgrounds built on the foundations of early 20th-century lodges and resorts. In a region with limited open space the mountains are the backyard for many highly urbanized and culturally diverse populations within Los Angeles, underscoring the need for strong partnerships between this urban forest and neighboring communities.

In addition to rivers, the San Gabriels contain two scenic lakes, both formed by the area's remarkable geologic forces. The alpine Crystal Lake, found high in the mountains, was formed from one of the largest landslides on record in southern California. Jackson Lake is a natural sag pond, a type of pond formed between the strands of an active fault line -- in this case, the San Andreas.

Climatic contrasts in the San Gabriels range from the northern slope desert region, home to Joshua trees and pinyon pines, to high-elevation white fir and a notable stand of 1,000-year-old limber pines. Vegetation communities, including chaparral and oak woodland, represent a portion of the rare Mediterranean ecosystem found in only 3 percent of the world. Mediterranean climate zones have high numbers of species for their area.

The mountains harbor several of California's signature natural vegetation communities, including the drought tolerant and fire-adapted chaparral shrubland, which is the dominant community and includes scrub oaks, chamise, manzanita, wild lilac, and western mountain-mahogany. Mixed conifer forest is an associated vegetation community comprising Jeffrey pine, sugar pine, white fir, and riparian woodlands including white alder, sycamore, and willow.

The rugged wildland landscapes of southern California are increasingly valued for the visual contrast they provide in a rapidly urbanizing region. The contrast between the urban and natural settings is the unique

characteristic that distinguishes this area from other regions of the country. As the resident population continues to increase, so too will the desire to conserve these remaining vestiges of regional open space and scenic heritage in a natural-appearing condition (USDA Forest Service 2013b, page 100).

National forest visitation has increased over the past two decades because of the area's population growth. Driving for pleasure and viewing scenery have become some of the more popular national forest activities (USDA Forest Service 2013b, page 100). On the Angeles National Forest, the activities seeing the greatest number of participants are hiking/walking, viewing natural features, relaxing, viewing wildlife, and driving for pleasure (USDA Forest Service 2011a). Visitors expect a certain level of 'naturalness' in the recreation and tourism settings they pursue. Even individuals who have never visited these national forests expect a certain level of 'natural intactness' in these landscapes. This natural beauty contributes to their sense of well-being and quality of life. The scenic integrity of national forest landscapes (which measures landscapes' inherent scenic attractiveness and the public's visual expectations for naturalness) is the system by which projected alterations in national forest landscapes are evaluated (USDA Forest Service 2013b, page 100).



Figure 8. East Fork San Gabriel at Oaks Picnic Area

Landscape Attractiveness (Resource Indicator and Measure 1)

National forest landscapes provide a variety of outdoor recreation settings, ranging from rugged pine covered mountains to chaparral and oak woodlands to scenic lakes and streams. The most attractive landscapes (or those classified as scenic attractiveness class A (SAC-A)) are located where the highest combination of landform, water form, rock form and vegetation variety occurs. SAC-A landscapes represent approximately 36 percent of the landscapes within the Monument. The more common landscapes of the region (or those classified as scenic attractiveness class B (SAC-B)) consist of steep chaparral-covered mountains intermixed with foothill and valley areas consisting of oak woodland and grassland. The remaining landscapes (about 2 percent of the Monument) are less distinctive or scenic attractiveness class C (SAC-C).

Table 16. Scenic attractiveness acres and percent of total acres by class within the Monument

Scenic Attractiveness Class	Acres	Percent of Monument
SAC A – Distinctive Landscapes	121,877	36
SAC B – Typical (common) Landscapes	207,911	62
SAC A – Indistinctive Landscapes	6,376	2

Acres calculations includes NFS lands only. Acres calculations are approximate and may not add up to the total acreage of the Monument.



Figure 9. San Gabriel Wilderness viewed from Jarvi Memorial on Angeles Crest Scenic Byway, Highway 2

Scenic Expectations of the Public (Resource Indicator and Measure 2)

National forest visitors are attracted to a variety of areas for the natural character they possess. Visitors and residents value the forested backdrops that frame the urban complex (USDA Forest Service 2013b, page 101). The Monument’s roads, trails, recreation sites and use areas provide visitors with scenic routes and vantage points to view and experience the Monument’s rugged landscape. Some visitors treasure the less traveled, hidden, and seldom-seen valleys and canyons, seeking backcountry experiences or solitude in wilderness areas.

National forest travel routes have been evaluated for the estimated level of public concern for alterations to the landscape. Travel routes classified as concern level 1 (including those routes that are designated state scenic highways or national forest scenic byways) indicate that the public is most concerned about alterations; concern level 3 indicates the least concern (USDA Forest Service 2013c). In evaluating landscape visibility, landscape managers have recognized that “distance” is one of the primary perceptual factors for determining whether alterations are visually noticed. Foreground distance zones reveal even the subtlest alterations; background distance zones are able to absorb greater alterations, provided color contrasts are minimized. Some of the more secluded areas of the national forests are identified as “seldom seen” indicating that they are visible only from aerial viewpoints (USDA Forest Service 2013b, page 101).

“Key Places” in the planning area represent the most picturesque national forest locations. These Places possess their own distinct landscape character and are particularly valued for their scenic quality. They generally serve as urban backdrops or recreation-destination settings, or they contain scenic features along scenic routes and byways (USDA Forest Service 2013b, page 101). Table 17 displays the Angeles National Forest distribution of Key Places. Projected alterations in the landscape character of selected Key Places will be examined in further detail for site-specific projects completed to meet the Forest Plan and proposed amendment guidance with project level NEPA analysis.

Table 17. Key Places valued for scenic quality

Place Name	Acres in Monument	Percent of Monument
Angeles High Country	87,318	26
Angeles Uplands (West)	35,549	11
The Front Country	38,958	12
Mojave Front Country	47,800	14
Lytle Creek (Portion of Monument within San Bernardino NF)	4,030	1
Soledad Front Country	45,006	13
Total Key Places	258,661	77
Total Acres in Monument	336,210	

Scenic Integrity Objectives (Resource Indicator and Measure 2)

Scenery management is used to meet people's scenery expectations for the management of national forest landscapes. To ensure that scenic integrity is maintained, five scenic integrity objectives derived from the landscape's attractiveness and the public's expectations or concerns are used to manage scenic resources. Each scenic integrity objective depicts a level of scenic integrity used to direct scenery management: very high (unaltered), high (appears unaltered), moderate (slightly altered), low (moderately altered), and very low (heavily altered). Generally, landscapes that are most attractive (as classified by scenic attractiveness class) and viewed from popular travel routes (as classified by concern level) are assigned higher scenic integrity objectives (USDA Forest Service 2013b, pages 103-104). The methodology for establishing scenic integrity objectives is provided in Forest Service Agriculture Handbook 701 (USDA Forest Service 1995).

Under the current Forest Plan, the Monument land base would be largely managed to maintain a natural undeveloped appearance, with assigned scenic integrity objectives of high and very high (about 60 percent). About 39 percent of the land base could have a modified appearance, with an assigned scenic integrity objective of moderate. No landscapes are managed with an assigned scenic integrity objective of low or very low. Landscapes remain natural-appearing along the most popular travel routes (concern level 1). (USDA Forest Service 2013b, pages 103-104).

Table 18. Scenic integrity objective acres and percent of total acres by class within the Monument

Scenic Integrity Objective	Acres	Percent of Monument
Very High (unaltered)	132,788	57
High (appears unaltered)	191,715	3
Moderate (slightly altered)	11,661	39
Low (moderately altered)	0	0
Very Low (heavily altered)	0	0

Acres calculations include NFS lands only. Acre calculations are approximate and may not add up to the total acreage of the Monument.

The scenic integrity objective maps and acres differ from those in the current Forest Plan. In 2009, two wilderness areas were designated by Congress (Pleasant View Ridge and Magic Mountain). These wilderness areas are managed for very high scenic integrity objective, in accordance with the Forest Plan, as amended in 2014.

In some landscapes, human influence is evident through changes in vegetation patterns, landform alterations or the introduction of structural elements. For the most part, the Monument landscapes remain natural-appearing in character, with many of the valued landscape attributes still intact. Most of the human-influenced alterations affecting scenic integrity have occurred along main recreation use corridors with a variety of recreation developments (e.g., campgrounds, trailheads, day use sites, and visitor centers), utility corridors, and communication sites. The designated wilderness areas provide the largest area of landscapes that possess an unaltered character. If any heavily altered or unacceptably altered landscapes occur in Key Places, they are the priority areas for landscape restoration. No unacceptably altered landscapes were identified.

Several recent large fires on the Monument have affected the landscape character. For example, the Cabin Fire of 2015 resulted in an emergency closure area along a portion of Highway 39. The closure order restricts the opportunities to travel this scenic route and other Forest System roads throughout the closure area. The closure is in place to protect soil, watershed, and cultural resources and public safety (Order No. 15-01-03).

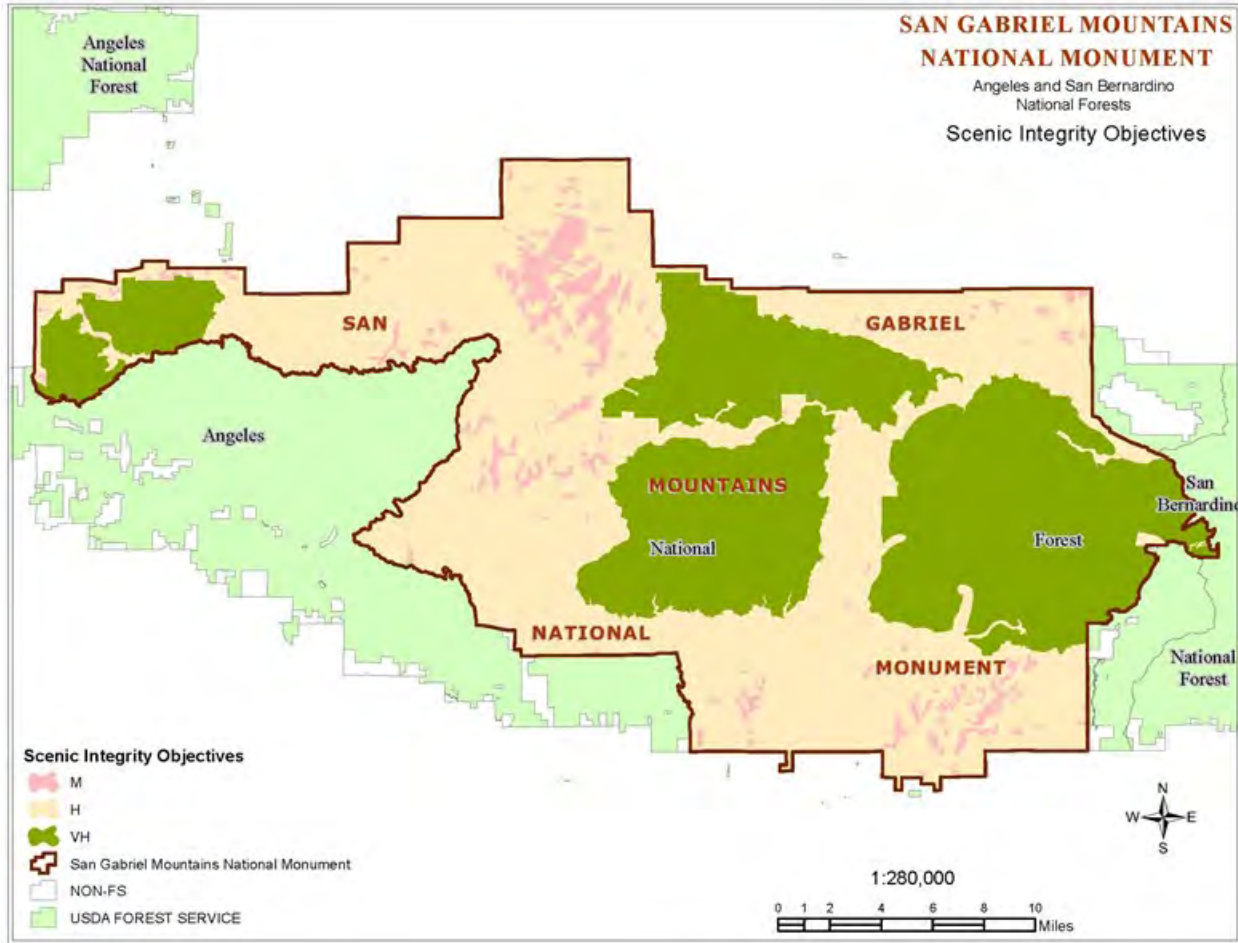


Figure 10. San Gabriel Mountains National Monument scenic integrity objectives map

Environmental Consequences

No Action

Under the no-action alternative, current management would continue in accordance with the Forest Plan, relevant amendments, interim management direction, and the Monument proclamation.

Because this alternative is the continuation of current management and would not result in changes to the existing Forest Plan direction, protection of Monument objects would only be provided where existing plan components (desired conditions, standards, guidelines, etc.) address them.

The Forest Plan has plan components (desired conditions, standards, guidelines, etc.) for scenery management in the Monument that provide for natural and natural-appearing scenic character, with many of the valued landscape attributes still intact. The existing vision, strategy, and design criteria for scenery are in place and provide a solid framework for addressing management of scenic resources within the Monument.

The Monument Proclamation states the following:

“All Federal lands and interests in lands within the boundaries of the monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale,

leasing, or other disposition under the public land or other Federal laws, including location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument, or disposition of materials under the Materials Act of 1947 in a manner that is consistent with the proper care and management of the objects protected by this proclamation.

The establishment of this monument is subject to valid existing rights....”

Since the Monument Proclamation includes withdrawal of lands from uses associated with mining laws, subject to valid existing uses, the landscape character would be more natural and natural appearing in the long term. Mineral developments can dominate the form, line, color, and texture of the characteristic landscape by exposing soils, removing vegetation, or altering natural landforms in the short and long terms. With the Monument Proclamation, there would be less potential impacts from these types of activities within the Monument.

The resource indicators and measures for the no-action alternative are the same as those listed for the Existing Condition. The no-action alternative would not be in compliance with the direction in the Monument Proclamation to prepare a management plan within three years of designation.

Proposed Action

No plan components for scenery management would change as part of this proposal. All Forest Plan direction for scenery management would continue to be applied.

Direct and Indirect Effects - Proposed Action

In accordance with current Forest Plan direction for the Angeles National Forest, the Scenery Management System is the tool used for integrating the benefits, values, desires, and preferences regarding aesthetics and scenery for all levels of land and resource management planning. People are concerned about the quality of their environment and the aesthetic values of landscapes, particularly the scenery and spiritual values.

Proposed changes to Program Strategies and Tactics for Recreation and Transportation Systems would benefit scenery viewing opportunities. Strategies that maintain awareness that “Driving for pleasure” is, and will continue to be an important use link directly to the importance for scenery management at the project level (see Program Strategies and Tactics, Trans 1-Transportation System). Concern for natural and naturally appearing scenic integrity and landscape character would be maintained and potentially increase through implementation of these strategies. Proposed plan components that manage for sustainable recreation have the potential to improve scenic integrity in the short term and long term as visitor management concerns are addressed through the proposed plan implementation (see Program Strategies and Tactics, Rec 2-Sustainable Use and Environmental Design).

This alternative also proposes several new plan components for the Pacific Crest National Scenic Trail including guidelines for sustainable recreation and identifying the foreground corridor of the trail as not suitable for special-use authorizations for new communication sites and wind generation sites. The proposed plan components for this trail would provide for more natural appearing scenery in the foreground distance zone of the Pacific Crest National Scenic Trail.

Landscape Attractiveness and Scenic Expectations of the Public

The proposed planning actions could indirectly, over time, modify the conditions within Key Places on the Forests, but would have no direct effect to them or to the current scenic attractiveness classes (SACs).

Projects implemented under the proposed plan amendment could affect scenic resources, but those effects would be analyzed under site-specific NEPA to meet the proposed amendment guidance.

Scenic Integrity Objectives

Scenic integrity objectives represent the minimum levels of scenic integrity to which landscapes are managed. The scenery management system recognizes the interdependence of aesthetics and ecological systems and promotes natural-appearing landscapes. The proposed action does not change any of the assigned scenic integrity objectives. Landscapes would continue to be managed at the same scenic integrity objectives levels as what is outline in the Forest Plan, as amended in 2014. Landscapes would be managed to maintain a natural appearance, characterized by scenic integrity objectives of high and very high. Moderate scenic integrity objective maintains landscapes in a slightly altered character, where management activities must remain visually subordinate to the landscape character being viewed. Landscape management would continue striving to meet the public's scenery expectations for the management of national forest landscapes.

Other general effects to scenic resources from unplanned natural occurrences and types of management activities that may occur as the amended Forest Plan is implemented are covered in the Forest Plan FEIS (USDA Forest Service 2005b, pages 521-526) and Forest Plan amendment FSEIS (USDA Forest Service 2013b, pages 244-248). The effects described in these documents apply in this analysis, since these types of occurrences and activities will continue under the proposed plan amendment. These documents also cover the potential visibility of potential alterations. The visibility of potential alterations would be the same as those described in these previous analyses.

The exception to the above is the effects of minerals and energy management on landscape character, since the Presidential Proclamation has withdrawn the Monument from uses associated with mining laws, subject to valid existing uses. The landscape character and scenic integrity would be more natural and natural appearing in the long term and effects would be less than what is described in the Forest Plan FEIS and Forest Plan Amendment FSEIS.

Cumulative Effects – Proposed Action

As described in the Forest Plan FEIS (USDA Forest Service 2005b, page 524), cumulative effects on national forest landscapes result from the introduction of a series of vegetation management activities or the addition of structural elements in a close geographic proximity or time frame. Landscape cumulative effects are more pronounced in foreground situations and less so in the background. The potential for cumulative effects outside of the planning area on adjacent National Forest System lands remains the same as described in the Forest Plan FEIS.

Cumulative effects for scenic resources from other land management plan types of projects and types of management activities that may occur as the Forest Plan is implemented are covered in the Forest Plan FEIS (USDA Forest Service 2005b, pages 524-526) and Forest Plan amendment FSEIS (USDA Forest Service 2013b, page 301). The cumulative effects described in these documents apply in this analysis, since these types of occurrences and activities would continue under the proposed plan amendment.

Socioeconomics

Affected Environment

Existing Condition

Certain defining features of every area influence and shape the nature of recreation and corresponding economic activity. Among these are population characteristics, employment in recreation sectors, area racial and ethnic composition, and unique area amenities. The Monument operates as a steward of many recreation opportunities, and thus, plays a principal role in the community. This discussion gives further insight on the extent of these social and economic connections.

Demographics

According to the Census Bureau, population growth between 2000 and 2014 in the analysis area was driven by major growth in San Bernardino County (22 percent), which was much greater than the California population growth of 12.4 percent. In 2014,¹ San Bernardino County was home to approximately 2.1 million people and Los Angeles County contains about 10 million people (U.S. Department of Commerce 2015a). Population growth is expected to increase demand for recreation opportunities on national forests.

Scoping comments reveal concern for youth and minorities to access the San Gabriel Mountains National Monument (see the Environmental Justice section for additional demographic data). In 2014, of the total analysis area population, 24.3 percent were under 18 years old, which is similar to the California youth population of 27 percent (U.S. Department of Commerce 2015a). Additionally, 19 percent of Angeles National Forest visitors in 2011 were estimated to be age 19 or younger (USDA Forest Service 2011a).

Recreation Economy

The use of resources and recreational visitation to the Monument generates employment and income in the surrounding communities. Local economies are often dependent on the recreation opportunities provided by National Forest System land. For example, one commenter noted that “Of great interest to me are the commercial ventures that currently exist within the area. I believe them to be a valid revenue stream for the benefit of the area and a good example recreational opportunity for the public.”

Federal land designations have also been found to influence local economies. Clinea et al. (2011) describe that “While such designations can change land use patterns and restrict the use of natural resources, they can also lead to greater regional economic activity resulting from an increase in recreation and tourism.” In addition to the national monument designation, there are several overlapping national designations that apply to the lands within the Monument that influence the recreation opportunities available, which affect the social and economic conditions in the area. Designations include four congressionally designated wilderness areas: Magic Mountain, Pleasant View Ridge, San Gabriel, and Sheep Mountain. The wilderness areas provide primitive, non-motorized recreation opportunities and opportunities for solitude. There are several authorized recreation special uses such as ski areas and shooting ranges, in addition to permitted special events that provide various guided and organized recreation opportunities. Although NVUM recreation visitation data are not available since the official monument designation was made, jobs and income in tourism- and service-related sectors could be affected so it is important to understand the existing condition of the recreation economy.

¹ The 2014 data are calculated by the American Community Survey of the Census Bureau using annual surveys conducted during 2010-2014 and are representative of average characteristics during this period.

From 2001 to 2014, the three industry sectors that added the most new jobs to the analysis area were mining (90 percent growth in jobs), health care and social assistance (51 percent growth in jobs), and real estate and rental and leasing (36 percent growth in jobs). Specifically related to the recreation sector are the accommodation and food services (18 percent growth in jobs) and the arts, entertainment, and recreation (23 percent growth in jobs) sectors, which also experienced significant increases in employment (U.S. Department of Commerce 2015b). The major increase in real estate and rental and leasing and accommodation and food services sectors could indicate that people are coming into the area and renting vacation housing and participating in recreation activities. While recreation use in the area could be a driver of these recreation-related employment increases, the statistics generally imply that the regional area is supporting more recreation use than it did in 2001. Travel and tourism-related employment in 2013 (includes retail trade, passenger transport, arts, entertainment, and recreation, and accommodation and food) made up about 15 percent of total employment in the two-county analysis area, with the accommodation and food sector having the greatest contribution to employment (10 percent of total employment) (U.S. Department of Commerce 2015c). Therefore, the Monument Plan could impact a growing population of tourists as well as the local economies that provide goods and services to recreation users in the area.

Additionally, from 2001 to 2014, jobs in non-service-related sectors decreased by 33 percent and jobs in service-related sectors increased by 10 percent (U.S. Department of Commerce 2015b). Overall, in 2014, service-related jobs comprise about 71 percent of the analysis area employment and non-service related jobs comprise 17 percent of employment. Government employment comprised the other 12 percent of employment (U.S. Department of Commerce 2015b). Some of this service sector growth can be attributed to the tourism opportunities and quality of life provided by the area's unique natural amenities; some of which can be found on the Forest. Population and employment changes may be related to natural amenities often provided by National Forest System lands. Additionally, natural amenities on the Angeles National Forest may attract residents who would not otherwise live in the area. Recreationists also spend dollars in the area that would not otherwise be spent if opportunities on National Forest System lands did not exist.

The services sectors account for a growing portion of total employment while non-services jobs have decreased. However, service sector jobs may not pay as much, which could decrease area economic well-being. In 2014 (adjusted to 2015 dollars), services and non-service sectors paid on average \$52,391 and \$59,128 per year, respectively, in the analysis area (U.S. Department of Labor 2015). However, it may not be true that decreases in economic well-being have resulted from increases in services employment; people might move to the area to take a service sector job but exchange the lower wage they may receive for the unique natural and recreation amenities provided by the Forest. In this manner, some may benefit from a secondary value not provided by their place of employment, but by the benefits they gain from living or recreating in the area. This added value is discussed more in the Social Values section below.

The tourism industry supports some of the sectors detailed above and changes in tourism directly and indirectly impact local economies. From 1998 to 2013, jobs in industries that include travel and tourism employment grew from 498,240 to 664,269 jobs, a 33.3 percent increase (U.S. Department of Commerce 2015c). In 2013, San Bernardino and Los Angeles counties both had about 15 percent of total private employment in the travel and tourism-related sectors, which is similar to the U.S., which had 15.5 percent of total private employment in the travel and tourism-related sectors (U.S. Department of Commerce 2015c). This indicates that tourism is a driver of employment in the analysis area.

According to the latest available information on recreation visitation from the NVUM Report (Round 3) for 2011, the Angeles National Forest had approximately 3.6 million annual visits (USDA Forest Service 2011a). The trip type segments with the greatest visitation were non-local day trips (12 percent of visits)

and local day use (73 percent of visits) (the latest economic data are from USDA Forest Service 2006c). The average total trip spending per party for the Forest was \$98 and the median was \$38 (USDA Forest Service 2011a).

The Monument is the heaviest used area on the Forest. The 346,177-acre Monument makes up nearly half of the 700,000-acre forest, but likely receives well over half of the annual visitation due to highly popular sites such as San Gabriel Canyon, and the Monument's proximity to the Los Angeles metropolitan area. This recreation visitation to the Monument translates to jobs and labor income in the analysis area. See the recreation section above for more information on the recreation visitation.

As reported by the NVUM survey data, visitors indicated that, if for some reason they were unable to visit the Angeles National Forest, 52 percent of visitors would choose to go elsewhere for the same activity (USDA Forest Service 2011a). This shows that generally, substitute behavior choice is activity driven. Depending on the availability of recreation opportunities in the area, visitors may substitute other recreation sites off the Forest if they have the ability to get to other recreation areas, therefore, shifting the economic contributions to another area. However, studies in California have shown that "Latinos are often repeat visitors, who learned about the sites from family and friends, and who have plans to return to those sites in the future...Latinos may be less likely to leave one site and substitute another place unless those substituted sites meet the same reminder of homelands criteria" (Chavez et al. 2008).

Social Values

Sense of place is often tied to the physical and aesthetic characteristics of areas. Minerals production, recreation opportunities, access to recreation and trails, the untouched outdoors, and the benefits experienced by adjacent communities are all values provided by the San Gabriel Mountains National Monument area that contribute to sense of place. These are values and practices that were around when community members were growing up and that they would like to pass on to future generations. While day use is the main recreation use on the Monument (as detailed in the Recreation section), this section focuses on the issues raised during scoping that could be affected by the proposed action.

The ability to mine in the Monument boundaries was an issue raised during scoping. People enjoy recreational prospecting for gold. Prospecting for gold and silver in the area is an activity that connects people to the past. One commenter said, "To me this is not only a hobby or an escape but the root of all that is American." There is a specific community that values pumice dust mined in the area for the niche market of chinchilla dust. "For many years we have bought material from the Blue Cloud mine to package for bathing chinchillas." These people value the opportunity to collect minerals from the area and believe that restrictions on mining use will negatively impact this aspect of their well-being. On the other side, some commenters value the untouched outdoors and believe that mining activities create waste and destroy natural resources (e.g., water quality), therefore, mining opportunities negatively impact their well-being.

Other commenters voiced their values for a variety of recreation opportunities, such as climbing, fishing, camping and hiking. Recreation opportunities not only contribute to local economies, but they provide sense of place for people living in the area. One comment was that "These areas are critical in providing opportunities for healthy, active outdoor recreation, and fostering a sense of connection to nature and place. They also play an important role in supporting the outdoor recreation economy." Specifically, many comments were received about the Burro Canyon Shooting Range. People highly value this recreation opportunity as a safe place to practice using firearms and they believe that any changes that limit the use of the range will negatively affect their well-being. One commenter believes that "It is one of the few shooting ranges within a reasonable driving distance of the Los Angeles basin and the Inland Empire areas. Not only is public shooting available within a well-maintained range, it is also a vital training area

for local Police Departments and Sheriff offices; along with a necessary venue for those such as myself to be able to conduct firearms training for the general public.”

Communities adjacent to the Monument currently enjoy the recreation contributions to the local economy, parking availability, and minimal traffic. They also value their security, safety, and the tranquility that comes along with living adjacent to National Forest System land. These gateway communities believe that management activities that increase visitation could result in crowding and negatively affect their well-being. The NVUM data report that the average crowding rating based on visitor perception of how crowded the recreation site felt to them for all site types on the Angeles National Forest was 4.7 in 2006 and 5 in 2011 (10 being overcrowded and 1 being hardly anyone there) (USDA Forest Service 2006c, USDA Forest Service 2011a). Any management actions that increase visitation could change this crowding rating. However, social perceptions of crowding vary greatly and are an integral part in determining the maximum population size that the environment and communities can sustain.

Ecosystem Services

Ecosystem services are benefits people receive from the environment and “these include provisioning services such as air, water, energy, fiber, and minerals; regulating services such as soil stabilization; and cultural services such as cultural heritage values, and recreational experiences” (FSH 1909.12 Chapter 20). The 2012 planning rule directs that forest “plans will guide management of NFS lands so that they...have the capacity to provide people and communities with ecosystem services and multiple uses that provide a range of social, economic, and ecological benefits for the present and into the future” (36 CFR 219.1).

The San Gabriel Mountains National Monument provides many ecosystem services to area residents and visitors. The economic opportunities (e.g., jobs from recreation) and the social values derived from National Forest System land are the relevant ecosystem services that could be affected by the proposed management.

Environmental Justice

Environmental justice refers to the fair treatment and meaningful involvement of people of all races, cultures and incomes with respect to the development, implementation and enforcement of environmental laws, regulations, programs, and policies. Executive Order 12898 requires Federal agencies to “identify and address the... disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

According to the Council on Environmental Quality’s Environmental Justice Guidelines for NEPA (1997) “minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.” Table 19 shows that the share of minority populations in the analysis area.

Council on Environmental Quality guidance on identifying low-income populations states “agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.” Table 20 shows that the shares of those living below the poverty level in the analysis area.

Ethnicity and Race

Estimates from the U.S. Census Bureau for 2014 indicate that analysis area counties contained shares of racial and ethnic groups that exceeded shares in the state (table 19).² Analysis area counties have larger shares of black or African American and Hispanic populations than California overall (U.S. Department of Commerce 2015a). The percentage of people of Hispanic origin was much greater in the analysis area than in California. As of 2011, 20.1 percent of Angeles National Forest visits were of the Hispanic/Latino ethnicity, which was the second greatest proportion of visitors next to visitors identifying themselves as white (USDA Forest Service 2011a). Therefore, the analysis addresses the potential for disproportionate and adverse effects to minority populations.

Table 19. Estimated racial and Hispanic composition of 2014³ population

Location	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race	Two or more races	Hispanic Origin
California	39.2%	5.7%	0.8%	13.3 %	0.4%	0.2%	2.7%	38.2%
Los Angeles County	27.2%	8.0%	0.5%	13.8 %	0.2%	0.2%	2.2%	48.1%
San Bernardino County	31.8%	8.2%	0.9%	6.4%	0.3%	0.2%	2.2%	50.5%

Source: U.S. Department of Commerce 2015a

Poverty

Estimates from the U.S. Census Bureau for 2014 indicate that Los Angeles and San Bernardino counties contained greater shares of people living below the poverty level than the state, as seen in table 20 (U.S. Department of Commerce 2015a). San Bernardino County had the greatest amount of people and families below poverty. However, the percent of families and people living below poverty in the analysis area does not exceed the California or U.S. levels by a meaningful amount so it does not indicate the existence of a disproportionately large low-income population in the analysis area. It is important to note that this analysis is at the county level and low-income populations could be concentrated in smaller geographic regions.

Table 20. Share of 2014⁴ population living below poverty level

Location	People Below Poverty	Families Below Poverty
U.S.	15.6%	11.5%
California	16.4%	12.3%
Los Angeles County	18.4%	14.6%
San Bernardino County	19.2%	15.3%

Source: U.S. Department of Commerce 2015a

² Race and ethnicity are separated since Hispanics can be of any race.

³ These data are calculated by American Community Survey of the Census Bureau using annual surveys conducted during 2009-2014 and are representative of average characteristics during this period.

⁴ These data are calculated by American Community Survey of the Census Bureau using annual surveys conducted during 2009-2014 and are representative of average characteristics during this period.

Many economically disadvantaged populations in the analysis area lack access to existing recreation opportunities due to lack of close-to-home open space, lack of effective transportation, lack of culturally advantageous facilities or opportunities, and lack of knowledge about recreation and natural resources. This was noted through scoping as a social sustainability issue. Social sustainability is defined in many ways, such as

- if work is “shaped in a way that nature and its reproductive capabilities are preserved over a long period of time and the normative claims of social justice, human dignity and participation are fulfilled”;
- “the continuing ability of a city to function as a long-term, viable setting for human interaction, communication and cultural development”;
- “social sustainability is the idea that future generations should have the same or greater access to social resources as the current generation, while there should also be equal access to social resources within the current generation” (INSS 2016).

As communicated through scoping, some youth and minority populations currently lack access to recreational opportunities and people believe that improvements to access and education could enhance social sustainability in the analysis area. Multiple access points from communities along CA 210 provide access to the Monument, and Highway 2 (Angeles Crest Highway) serves as a commuter route through the Monument, connecting communities to the north. There are currently almost 200 miles of open Forest Service roads within the Monument boundary but the issue is getting people to the recreation opportunities from where they live and work. Access to working vehicles to drive to the forest is a barrier to recreation that is experienced by low-income and minority communities. They rely on public transportation but the current public transit routes do not easily connect these communities to the Monument. See the Transportation and Recreation sections for more details about access to recreation opportunities.

Chavez (2003) found that Latino family groups were at natural resource recreation areas in California to rest and relax and have enjoyable family outings. She also found that Latinos were at these natural resource recreation areas because the areas were reminders of homelands. Proximity to homelands (such as Mexico) can contribute to the maintenance of Latino cultures, such as adding to the cultural identity through language or cultural activities. The opportunities for recreational leisure with families on the Monument and educational opportunities contribute to Latinos’ sense of place and well-being. Environmental consequences to these communities from the Monument Plan will be discussed below.

Environmental Consequences

Anticipated environmental consequences to social and economic conditions are indirect effects expected to occur over the next 20 years. The Monument Plan does not propose specific projects, therefore, there are no direct effects.

Portions of the Angeles and San Bernardino National Forests have been designated as the San Gabriel Mountains National Monument, and this designation will stand under the no-action and proposed action alternatives. Therefore, any changes in use determined by this designation would be the same under both alternatives.

Population growth in the analysis area is expected to increase demand for recreation opportunities and the resulting recreation economy will continue to grow regardless of Forest Service management actions. Increases in employment and income are likely for the recreation-related economies of the analysis area. This effect could negatively impact the well-being of adjacent community members that value the tranquility, safety, security, and uncrowded roads provided by living in close proximity to the Monument.

However, no new parking is proposed in this document and a site-specific analysis and conformance review with the approved Monument Plan would be necessary prior to construction of any parking projects.

The Presidential Proclamation establishing the San Gabriel Mountains National Monument withdrew all National Forest System lands within the Monument from mineral and energy resources. This action removes these lands from being subject to Federal mining laws, with the exception of existing rights and the Materials Act of 1947, which allows for the sale of common variety minerals such as sand, gravel, and stone. Therefore, the effects to minerals production and the recreation economy is the same under both alternatives in that the land is already withdrawn from mining. People who value the land for recreational prospecting would be negatively affected by this mineral withdrawal (under both alternatives), as it connects them to the past and contributes to their sense of place. Since the Blue Cloud mine is outside the Monument boundaries, the opportunities for people to mine for chinchilla dust would not be affected by the alternatives.

No Action

Direct and Indirect Effects

Current management would continue in accordance with the 2006 Angeles National Forest Land Management Plan, relevant amendments, and interim management direction. Current management includes the designation of the Monument and accompanying mineral withdrawals, which has already taken place. No additional plan components would be proposed to address public comments related to sustainable recreation and use. The no-action alternative does not address these environmental justice concerns voiced during the scoping period. Under current conditions, lack of access and the ability to partake in existing opportunities due to lack of close-to-home open space, lack of effective transportation, lack of culturally advantageous facilities or opportunities, and lack of knowledge about recreation and natural resources would continue to contribute to minor adverse effects on access to public lands for these populations.

Proposed Action

The proposed action is a Forest Plan amendment and does not direct any surface-disturbing activities or immediate actions on the ground, therefore, there would be no direct effects to social and economic conditions within the Monument as a result of the proposed action. Indirect effects would result from future implementation of the Monument Plan.

Direct and Indirect Effects

Recreation Economy

New plan components address sustainable recreation, which may positively affect the recreation economy because the jobs and income supported by recreation visitation would be maintained over time. Without components that address sustainable recreation, sites could suffer from overcrowding and the natural resources that people come to enjoy could be degraded. By planning to sustain recreation, the recreation economy would be stable. In addition, components that address social sustainability and improving access to the Monument would also enhance the local economies that rely on recreation visitors to support jobs in the area.

Social Values

Minerals production, recreation opportunities, access to recreation sites and trails, the untouched outdoors, and the benefits experienced by communities adjacent to the San Gabriel Mountains National Monument provide people with a sense of place. See chapter 1 for more details about mining rights.

A variety of recreation opportunities ranging from primitive, non-motorized hiking experiences in the Monument's four wilderness areas, to OHV riding opportunities in OHV open areas, and a variety of opportunities for camping, picnicking, fishing, hunting, horseback riding, mountain biking, water play, and participating in conservation education programs would continue to be provided within the Monument. Burro Canyon Shooting Park would not be affected by the Monument Plan. Implementation of the proposed Monument Plan would result in quality, sustainable recreation opportunities. See the Recreation section for more details.

Communities adjacent to the Monument are concerned with potential crowding that could result from the Monument designation and proposed action. However, no new parking is proposed in this document and a site-specific analysis and conformance review with the approved Monument Plan would be necessary before construction of any parking projects. The Monument Plan includes new plan components with a focus on opportunities to improve access to the Monument while also addressing concerns related to vehicle congestion, limited parking capacity, and public safety. A general trend maintained in reducing automobiles over time would help to address visitor capacity and vehicle congestion and improve visitor experiences. The proposed plan component states:

The Monument is accessible through alternative transportation and public transportation options in coordination with other agencies and gateway communities to provide greater access for those who do not have personal vehicles, reduce vehicle congestion, address parking capacity issues, and improve public safety.

The Monument Plan also includes new Transportation language, stating the Forest Service will: Manage high visitor use and traffic congestion using the following strategies:

- Consider using temporary one-way traffic flows and closures during peak volumes.
- Evaluate the use of parking capacity limits.
- Enforce parking capacity.
- Prevent or limit parking in riparian areas to reduce resource damage.

Explore opportunities to increase parking capacity in key areas. The Monument Plan also proposes to include a management approach to "Coordinate with local government on transportation planning. Participate in the Southern California Association of Governments. Coordinate with Caltrans to improve transportation connectivity within the Monument, while minimizing adverse resource effects.

These proposed components would positively impact the adjacent communities that are concerned about crowding and public safety. See the Transportation section for more details.

Ecosystem Services

Anticipated increases in recreation use due to population increases and Monument designation could impact the provision of clean water, air, recreation opportunities, and sense of place provided by the Angeles National Forest. Over time, the proposed Monument Plan aims to address these benefits provided to people by the Forest through social sustainability, sustainable recreation, and transportation plan components, as referenced above. Without components that address sustainable recreation, sites could suffer from overcrowding and the degradation of natural resources that people come to enjoy. By planning

to sustain recreation use, the benefits provided by the Monument will continue to be available. Therefore, the proposed action positively affects provision of ecosystem services in the analysis area.

Environmental Justice

As detailed in table 19, there are environmental justice populations within the analysis area. The planning area has greater shares of people from Hispanic/Latino origin than California overall. Executive Order 12898 requires Federal agencies to “identify and address the... disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” While minority populations exist in the area, the alternatives are not expected to have disproportionately high and adverse human health or environmental effects on these populations. However, the implementation of the Monument Plan under the proposed action could provide benefits to these communities through efforts to increase access to the Monument via partnerships to improve public transportation, providing information to diverse groups, and engaging underserved populations.

The proposed action to implement the Monument Plan includes a new desired condition related to transportation to the Monument:

The Monument is accessible through alternative transportation and public transportation options in coordination with other agencies and gateway communities to provide greater access for those who do not have personal vehicles, reduce vehicle congestion, address parking capacity issues, and improve public safety.

Proposed amendments to Goal 3.1 of the Forest Plan also help to ensure social sustainability in that the Monument remains relevant to the needs and expectations of the surrounding area’s diverse population. The focus would be on engaging youth in outdoor recreation and conservation education and incorporating the area’s rich cultural history into interpretive messages. Proposed management approaches in the Monument Plan includes that the Forest Service will “Work with gateway communities and local partners to manage potential impacts and maximize potential benefits associated with Monument designation by addressing issues such as identification of appropriate access points and parking capacity at access points.” REC 3 (Recreation Participation) language in the current Forest Plan already includes to “Offer a wide range of high quality, environmentally sustainable developed and dispersed recreation opportunities to a rapidly growing and culturally diverse visitor population, with minimal visitor conflicts and effects to other resources.” Revised language proposed to accomplish this is to “Implement adaptive management processes at recreation facilities to proactively engage persons with disabilities, contemporary urban visitors, aging populations, diverse ethnic groups, youth, and day-use emphasis,” with “engage” and “youth” as the revised components. New proposed desired condition includes, “Signs are universal and public information and education is multilingual to ensure communication is intentional, meets information needs, and conveys a message of public access for all.” as well as a management approach to “Prioritize youth engagement efforts aligned with the Region 5 Integrated Youth Engagement Strategy, and continue participation in programs such as the Southern California Consortium sponsorship of “Generation Green” programs.” These Monument Plan components (detailed in chapter 2) would be implemented under the proposed action and would likely benefit the economically disadvantaged, minority and youth populations in the analysis area by providing increased access and education for recreation opportunities.

As noted in the social values section above, a general trend in reducing automobiles over time would help to address visitor capacity and vehicle congestion and improve visitor experiences. However, this could have negative implications for the environmental justice communities unless the shift to reduce the number of automobiles is alongside additional accommodations. The Plan includes “Coordinate with

Caltrans to improve transportation connectivity within the Monument,” which could provide the supplemental access accommodations for these communities.

Where recreation access to the Monument provides physical, mental, cultural, and social benefits to low-income and minority communities, there is also an economic value in aiding the health and well-being of these communities. Additionally, the sense of place provided by the Monument maintains the Latino cultures. Any limitations to access to recreational opportunities may have greater social and economic costs. However, as detailed above, the proposed action would provide more opportunities for these communities to participate and learn about recreation activities on the Monument and would, therefore, positively contribute to their sense of place.

Cumulative Effects

The geographic scope for the social and economic cumulative effects analysis is the two-county region identified in the affected environment section. This analysis considers how past, present, and reasonably foreseeable future actions on lands throughout the region may interact with decisions made under the proposed plan to affect the social and economic environment. The social and economic analysis of the proposed plan is unique among the resources and uses in that the effects occur primarily off the Forests. In this way, the indirect effects described above are cumulative in nature—they evaluate the role of Forest Service decisions under the proposed plan both on and off the Monument. However, the indirect effects analysis does not address how actions taken on adjacent lands would affect the social and economic consequences of the proposed plan.

The recreation-related effects identified in the social and economic environmental consequences section could accrue alongside impacts associated with other projects and land management plans in the surrounding area. Under both alternatives, the proposed plan supports diverse recreational opportunities on the Monument. Increased recreational use would lead to a higher economic impact than predicted in the indirect effects discussion. However, other adjacent lands continue to emphasize the provision of recreation opportunities in their land and resource management plans. Recreation visitation to the analysis area is affected by changes in recreation opportunities outside of the planning area. The cumulative effects of the proposed action would be increases in visitor use within the Monument. This could negatively affect individuals who value the untouched outdoors and uncongested roads, though the cumulative impacts from the proposed action would be minimal.

The economy can be affected by a variety of factors including population growth, recreation demand, changes in interest rates, recession, growth of new sectors, tax policy, state economic policy, etc. The proposed action would contribute negligible to minor overall impacts in an area already brimming with a diverse economy. The cumulative effect of growth and development trends plus the beneficial effects of the proposed action, however, could result in a small, net beneficial condition to some local communities as a result of improved land protection and economic benefits from recreation. Overall cumulative effects would continue to be dependent on regional economic conditions and population increases rather than proposed actions. Although increased visitor use is a cumulative effect, because any changes in economic activity from the proposed action would be indirect and minimal, there would be very minimal cumulative economic effects from the proposed action.

Cumulative impacts of other projects and plans in the area are not possible to assess without further information on effects to recreation visitation as a result of the other projects. Any projects that restrict availability of recreation opportunities would likely decrease visitation, and therefore, decrease jobs and labor income contributed to the local economy. For projects that increase recreation opportunities, the economic impacts would likely increase.

Soils

Affected Environment

Soil is one of the basic components of the environment. Most living organisms depend on the soil for their initial source of nutrients. Soil absorbs and holds nutrient-rich water, releasing it at varying rates to supply nutrients for microorganisms and plants, which become the food and habitat for larger animals and people. Soils influence the type of vegetation present and many management opportunities and needs.

Healthy soils have adequate vegetative cover that is a function of a site's capability and can provide benefits such as forage for wildlife and livestock, water, recreation, wood products, and aesthetics. In turn, few if any activities are conducted on National Forest System lands that do not have the potential to affect soil resources in one way or another.

A land type association level ecological unit inventory (EUI) for the four southern California national forests was completed in 2001, which included all land within the boundaries of the San Gabriel Mountains National Monument. The EUI found that thermic soils cover 63 percent of the area and are the dominant soils temperature regime.

Table 21. Soils found within the ecological unit inventory survey area

Soil Temperature Regime	Mean Annual Soil Temperature °F
Thermic	59 to 72
Mesic	47 to 59
Frigid	< 47 or > 47(summer)

(Temperatures recorded at 20 inches depth)

Within the San Gabriel Mountains National Monument, warm air temperatures coupled with often-shallow soils result in low available moisture to support plant growth, and thus, lower levels of cover for soil erosion protection. The range of landscape soil units in the EUI demonstrates the complexity of parent materials that occur in the area, while the wide range of soil depths provides evidence of the steepness and high rates of erosion that can occur. Many soils are predominantly coarse-textured, shallow, and highly permeable and have little profile development. These soils are typically 20 inches or less in depth. Deeper, more productive soils are generally found on more stable slopes on gently rolling hills or are located in valley bottoms. They generally have medium or fine texture at the surface layer and fine-textured subsoil with high water-holding capacity.

Most soils in the southern California national forests are classified as having low soil productivity (see table 22). However, this productivity level does not preclude them from management activities. Properly planned and managed activities maintain and can even improve soil productivity levels.

Table 22. Forest soil productivity

National Forest	Productivity group	Estimated Percentage of Forest
Angeles (655,387 acres)	Low	50
	Moderate	27
	High	12

(The remainder of the soils are considered non-productive)

Environmental Consequences

No Action and Proposed Action

Direct and Indirect Effects

Soil protection measures would continue to be implemented to ensure the maintenance of soil quality and long-term productivity. These protection/mitigation measures are found in watershed analyses, environmental assessments, soil quality standards, and best management practices, and are incorporated into the design criteria found in the Monument Plan.

Several management tools can be used to prevent unacceptable soil loss resulting from management activities. These tools include an Interagency Erosion Hazard Rating system (USDA Forest Service 1990) for identifying soil erosion hazards and Soil Quality Analysis Standards (SQS); the SQS are threshold values that are established to protect soil productivity from significant change or impairment of the soil's productivity capacity through land management practices on those lands dedicated to growing vegetation (USDA Forest Service 1995).

These protection measures apply to both alternatives. Once an alternative has been selected and implementation starts, monitoring would be initiated to determine if the appropriate protection measures have been implemented and if the measure is adequate as described in Part 3 of the Angeles LMP (USDA Forest Service 2005a). Changes in either the method of implementation or the protection measures would occur if they do not adequately protect the soil quality or productivity.

Effects on soil productivity are the result of either the removal or the change in the physical characteristics of the upper organic and mineral productive layers. In most cases, the greater the soil disturbance, the greater and longer lasting the impact on soil productivity. Both on-site natural disturbances from wind, fire, natural erosion and landslides (as well as human activities) can affect soil productivity.

Management activities that purposely remove the upper soil layer and vegetation result in the elimination of soil productivity. These activities include construction of roads, trails, gravel pits, parking areas and recreation and administrative facilities. The total area involved in gravel pits, parking areas and recreation and administrative facilities is relatively minor. Roads and trails involve a much greater area of soil disturbance. Road densities are moderate to low in the San Gabriel Mountains National Monument area, and the soil impacts of road density are accounted for in the development of watershed condition class.

Development of access routes to sites that attract users to streams and wetlands accelerates impacts to stream banks and the fragile organic soils in the wetlands, unless mitigated by the application of best management practices and other management guidelines that protect streams and riparian areas. Nevertheless, past and current practices related to off-road vehicle use, unauthorized vehicle use of National Forest System lands and mining have resulted in lost soil productivity.

Soil disturbance occurs from both natural and human causes. Too much disturbance can remove individual particles through surface erosion or remove large masses of soil through dry ravel or landslides. Dry ravel caused by gravitational forces is the downhill movement of soil and debris during dry periods. This rolling, bouncing and sliding of individual particles down a slope is a dominant hill slope sediment transport process in steep arid and semiarid landscapes, especially after fires. High rates of geologic uplift in the Transverse Ranges can trigger high rates of erosion. Along with the geologic setting and rapid uplift, together shallow soils, low available water holding capacity, low vegetative growth capacity, often less than 100 percent ground cover and frequent fire intervals leads to a naturally high erosion rate regardless of management activities.

Erosion results in the loss of the nutrient-rich surface organic layer and the productive upper layers of the mineral soil. Eroded soil particles sometimes degrade the water quality in streams and lakes or are deposited elsewhere to impact ecosystems. Mineral soil exposed and compacted from overuse by people and animals adjacent to streams and at remote campsites can be a serious consequence to other resources including fisheries and water quality.

Compaction and puddling are dependent on soil texture, soil structure, soil moisture, ground cover and activity type. Compaction potentials vary because of these variable factors within all land type association groups and landscapes on the Monument. In general, wet or moist soils with loamy or clay textures and weak structure are inherently more susceptible to detrimental compaction and puddling, regardless of ground cover or type of activity.

Removal of the surface organic layer and repeated trampling or driving over the soil causes compaction of the upper layers that reduce their porosity and permeability, resulting in less plant cover and greater water runoff. These conditions occur most frequently on off-road vehicle areas, skid trails in vegetative treatment areas, foot trails, and areas adjacent to hardened campsites.

Recreation Use and Management

Potential projects under the different alternatives allow for a variety of recreation development. All these activities tend to concentrate people and increase soil compaction and erosion from soil-disturbing activities. Facility designs account for this tendency with varying success. Indirect consequences resulting from potential over-use by people are trampling of the stream banks of fishing rivers, trail development in fragile wetlands, and establishment of non-developed campsites. This eventually results in reductions of vegetation, which leads to erosion, sedimentation into streams, and a loss in soil productivity.

Increased soil erosion and compaction from dispersed camping not only occurs from campsites, but also from the roads used to access the campsites. Disturbance from developed recreation is usually associated with road and facility construction and with concentrated use by people. Campgrounds, day-use facilities, administrative sites, parking lots and viewing sites are usually planned to remain for the long term. These sites, along with associated permanent roads, vehicle parking, and intensive use areas result in long-term loss of soil productivity.

Recreation uses would continue to increase as the surrounding populations swell (see discussion in the recreation section of this document for details regarding levels of recreation use). Both alternatives provide direction to increase controls on recreation use through hardening of developed sites. This investment in resource protection at recreation sites would minimize soil disturbance at developed sites. Both alternatives would lead to a steady increase in use and, therefore, soil disturbance following existing patterns of access.

Road Use and Management

Soil disturbances can result from construction, reconstruction, maintenance, and decommissioning of roads. The travel surface of roads eliminates soil productivity in the long-term. Cut-and-fill slopes or borrow ditches temporarily reduce productivity for the time it takes for vegetation to reestablish to the pre-disturbance state. Abandoned roads often result in chronic sedimentation or, in some instances, may wash out or fail altogether, resulting in a massive surge of sediment.

Road construction provides the potential for soil disturbance and a loss in soil productivity. New roads would be constructed with strict standards and guidelines, especially those that could influence riparian conservation areas and landslide-prone areas and cause soil erosion.

Most of the National Forest System roads in the Monument are rated high or very high for erosion hazard. Proper maintenance and care of these roads are critical to minimize effects due to erosion.

Development and use of roads are expected to be related to the miles of road that fall within land use zones allowing motorized use. The roads section of this document details how National Forest System roads are affected by land use zoning decisions. Both the proposed action and the no-action alternative have fewer roads in the long term, with subsequently fewer impacts to soils due to roads.

Proper decommissioning of roads produces short-term disturbances and positive long-term effects through removal of chronic sources of erosion, sedimentation, and hydrologic modification. Both alternatives call for decommissioning of unauthorized roads. Under both alternatives approximately 500 miles of roads in restricted use are established, which would reduce the effects from constant use. Soil disturbance would continue until all obliterated roads are stabilized.

Non-motorized Trails

Currently there are 243 miles of National Forest System trails, which have lost their long-term soil productivity. Soil effects from non-motorized trails would be similar for both alternatives.

Mountain bike use is one of the fastest growing activities in national forests. Although this type of use does not have the same impact as motorcycles, it can in the long run impact trails once used for hiking, jogging, and equestrian activities. Current studies have conflicting points of view on the impact of mountain bikes (see Effects on Biological Diversity and Effects on Non-Motorized Trails sections). As use is evaluated on non-motorized trails, the best available information would be considered.

Most trails are on soils with either high or very high erosion hazard ratings. Trail maintenance and care are necessary to keep the integrity of the trails at a level to be used by the public in an uninterrupted manner. Under both alternatives, an increase to some extent of non-motorized trails would have the potential to increase erosion in areas available for trails.

Unauthorized trails are trails on National Forest System land that are not managed as part of the transportation system, such as unplanned trails, abandoned travel ways, and off-road vehicle tracks that have not been designated. In addition, others exist, but are yet to be inventoried. Many of these routes are old roads and fuelbreaks that no longer serve the purpose for which they were intended and that were never properly closed. Many have been created by recreation use from communities immediately adjacent to the Monument. These trails contribute to lost soil productivity and increased soil erosion and compaction, both long- and short-term.

Off-highway Vehicle Use

The Monument currently has 879 miles of OHV routes consisting of roads and trails designated for use by non-highway licensed vehicles, and 3,088 acres of National Forest System land designated as open to off-road vehicle travel. There are approximately 2,500 miles of maintenance level (ML) 2 roads that are open for use by licensed highway vehicles, including opportunities for 4-wheel drive use. These routes represent a long-term loss in soil productivity.

OHV use affects soils properties in several ways. OHVs increase soil compaction, which in turn affects infiltration and water erosion, soil moisture, wind erosion and soil chemistry. Many soils (including many sands) are susceptible to intense compaction if driven on a sufficient number of times. Areas that are heavily used by OHVs such as pit and trails areas generally are highly compacted. Compaction produced in most soils depends on vehicle characteristics, amount of activity and soil moisture at the time of impact. Intense OHV use in steep areas (generally on slopes over 20 percent) yields large increases in water erosion as well as mechanical displacement of soil. Where highly compacted trails run for long distances down gentle slopes, major erosion can occur on relatively level terrain even with slopes as gentle as three percent. Potential erodibility varies considerably within and among soils as a result of variations in texture, organic matter content and aggregate structure. In general, erodibility increases with increasing sand content and decreases with clay content. In addition, biological crusts and non-vascular

plants that grow on or just below the soil surface (which serve an important role as cover and stabilization of soil surfaces) are largely determined by soil physical and chemical characteristics and seasonal precipitation patterns. In rangelands, biological soil crusts function as living mulch by retaining soil moisture and discouraging annual weed growth.

The proliferation of unauthorized roads and trails by off-road vehicle travel is an ongoing problem and results in unacceptable effects to soils and other resources. Of particular concern is the potential for an increase in the unauthorized road and trail network associated with the dead tree removal on the Angeles National Forest. Skid trails and temporary roads offer easy access into the national forests where this activity is located adjacent to mountain communities. For both alternatives, OHV impacts would be similar in extent.

Minerals and Energy Management

The national forests have a long history of prospecting for and development of precious minerals (gold and silver); energy resources (oil and gas); high quality metallurgical, chemical and cement grade carbonate rocks; and mineral materials (crushed sand and gravel).

Mining (both on the surface and underground) eliminates soil productivity for the area where the soil is removed and the area where the tailings are placed. Normal practices require stockpiling the topsoil. The stockpiled soil is then placed back on an area once the mining has been completed and the area has been rehabilitated, this in turn helps accelerate revegetation and restore the soil productivity.

Oil and gas exploration can result in detrimental compaction, displacement, erosion and potential contamination of soils from the drilling process. Exploration under the no-action alternative would be limited geographically and be subject to the stipulations of the Angeles LMP (USDA Forest Service 2005a). No exploration would occur under the proposed action. Further environmental review would also be required at the project level preceding exploration, development and operation of oil and gas related facilities.

The degree of soil resource disturbance from mining is expected to be directly related to the number of acres within mining operations.

Management of Geologic Resources and Hazards

Soils and geologic information complement each other. Management of geologic resources, which includes gathering and interpreting maps of geologic bedrock features and geomorphic information, greatly assists the consecutive mapping and correlation of soil units. It also assists in determining the physical characteristics and engineering properties of different soil types that then guide project development. Management of geologic hazards (such as areas highly susceptible to landsliding, debris flows or rockfall) complements soils studies that predict erosion rates, flood potential and soil productivity. Effects to geologic resources and hazards are similar for both alternatives.

Non-recreation Special Uses

Sediment placement sites are available for consideration by county public works and state roads departments to place excess earth material within the national monument. The materials are removed from roads because of flood debris, annual maintenance and landslides. Sediment placement sites can help reclaim soil productivity by providing soil for restoration projects. The identification of specific sites is a project-level decision requiring detailed site surveys to establish the volume of material to be deposited at the site, mitigation measures that would apply and landscape objectives in the form of a grading plan when the site is filled to capacity. Such sites should have project decisions done in advance,

in anticipation of emergency events (such as landslides on major roads) that would need immediate removal of materials to a designated site.

Soil disturbance from development related to special use authorizations is likely to increase in all alternatives as demand for urban infrastructure support to communities increases. Land use zoning would limit the land area where this development could occur and is similar for both alternatives.

Wildland Fire Management

In both alternatives current fire suppression practices are continued, with a greater emphasis in community protection. (See detailed alternative descriptions in chapter 2 for differences between alternatives.)

Wildland fire effects on soils are not anticipated to vary by alternative.

For both alternatives, wildfires can burn with a mosaic of burn intensities ranging from low to moderate to high. High-intensity burns leave soils exposed for erosion, which reduces soil productivity, and can create hydrophobic soils. Hydrophobic (water-repellent) soils have a higher probability of forming under wildfire conditions and are created as the fire breaks down organic matter and chemicals in the soils, releasing a gas that coats soil particles and reduces water penetration. Sandy soils are particularly susceptible. This condition reduces water infiltration rates and moisture storage capacity, resulting in increased run-off and erosion rates, with rills and gullies forming during the rainy season. This could lead to increased sediment and debris flow to stream channels.

Using prescribed burns generally results in smaller, less intense fires that often burn in a mosaic patterns, which leaves intermittent soil cover that reduce the overall soil erosion potential, as compared to wildfires. These less intense burns tend to leave more ground cover and do not expose soils to increased erosion, as would a wildfire.

The incidence of fire temporarily reduces the beneficial effects that plants provide in reducing soil erosion. Plants provide cover that intercepts and reduces rainfall impact, which is the primary mechanism for soil erosion. Vegetation also increases the infiltration of water into the soil, reduces run-off velocities, filters out sediment and provides plant roots to hold the soil together. Without vegetation and its benefits, there is an increase in sediment production and run-off in fire-affected areas and in their delivery down slope.

During fires, particles can be mobilized by the collapse of sediment wedges that have accumulated behind vegetation, especially on very steep slopes. On a daily basis, small landslides may mobilize particles.

Where fire burns the vegetative cover, the mechanical resistance to gravitational forces decreases and the soils become more susceptible to this type of erosion. Accordingly, dry ravel is a major erosional force in post-fire conditions. Soil and debris accumulates at the base of slopes and remains stored until mobilized by intense runoff, a process known as channel loading.

The development of rill networks and gully erosion increases post-fire soil loss during the rainy season when soils are wet or saturated. Infiltration rates are decreased on bare slopes; therefore, run-off or overland flow increases and sediment carrying capacity increases. This type of erosion results in the movement of sediment and debris into stream channels, causing clogged drainage ways, mudflows and debris flows. The higher rate of sediment runoff and debris loads increases the potential for flooding as a result of fire. Soil slippage can also occur during heavy rains when the amount of water entering the soil layer exceeds the capacity of the parent rock to transport water. This leads to supersaturated soils; soon the stress on the soil exceeds its strength, resulting in sloughs and slumps. After fires, even moderately heavy rainfall can supersaturate soils denuded of vegetation. Post-fire conditions can also result in reduced-stability landslides and other geologic hazards.

Wind can also be an erosive force. After a fire, vegetative cover no longer protects the soil from effects caused by turbulent air. Under these conditions, slopes can be blown clean of loose soil particles.

Windblown soils are usually deposited down slope and in stream channels for later movement during storms.

Cumulative Effects

Cumulative effects represent the loss in soil productivity that would occur at the completion of the 15-year planning period specified in the Angeles LMP (USDA Forest Service 2005a), after full implementation of soil-disturbing activities. Cumulative effects include the amount of long- and short-term soil disturbance from potential road construction to support fuelwood and tree mortality harvest, recreation facilities, off-highway vehicles, and trails.

Projected population growth throughout all of southern California is expected to bring major increases in pressure upon the Monument's natural resources, including development and use of resources to support community growth (such as water, energy, and transportation). The potential pressure on the national monument to provide access and recreation opportunities for these new communities could greatly affect resources on the Monument, especially soils. Counterbalancing the urbanization trend surrounding the national forests is the increased value of National Forest System land as undisturbed open space within the urban landscape and as species habitat. Management guidance associated with protecting and even restoring habitat for threatened, endangered, proposed, candidate, and sensitive species could negate or severely limit further development of transportation and utility corridors to support urban populations. This is true for both alternatives. Increased urbanization does have a high potential to result in an increase in unauthorized use experienced by the national forests, which could have the potential to damage Monument soils. The amount of activity and the location determine the general and cumulative effects.

Terrestrial Wildlife

Affected Environment

A review was conducted of those species or critical habitat that are suspected to occur or do occur within the project area or could be affected by management activities associated with the proposed action. The species and critical habitat in table 23 were evaluated for potential presence in the action area. Species which are not known or suspected to occur in the San Gabriel Mountains National Monument are not carried forward into the effects analysis. All of the information on the habitat and distribution for each species listed in table 23 can be found in the Forest Plan (USDA Forest Service 2005a). For a detailed description of the existing condition and species accounts for each species listed in table 23 see the Forest Plan (USDA Forest Service 2005a). Specifically, the animal species section from the Forest Plan is hereby incorporated by reference.

Table 23. Terrestrial wildlife species analyzed

Scientific Name Common Name	Habitat/Distribution/Threats
Endangered Terrestrial Wildlife Species	
<p><i>Gymnogyps californianus</i> California condor</p>	<p>California condor nesting sites are typically located in chaparral, conifer forest, or oak woodland communities. They typically nest on bare ground in caves and crevices, behind rock slabs, or on large ledges or potholes on high sandstone cliffs in isolated, extremely steep rugged areas. Condors have been observed in the western half of the Angeles National Forest, but not within the Monument boundary. No critical habitat for this species occurs within the Monument Management Plan boundary.</p> <p>Threats: Factors that led to the condor's century-long decline included illegal collection of adults and the eggs; poisoning by substances used to eradicate livestock predators; poisoning from ingestion of lead fragments of bullets embedded in animal carcasses; other forms of poisoning; shooting; and collisions with structures such as transmission lines. In addition, the roads, cities, housing tracts, and weekend mountain retreats of modern civilization have replaced much of the open country condors need to find food. Their slow rate of reproduction and maturation undoubtedly make the California condor population as a whole more vulnerable to these threats.</p>
<p><i>Vireo bellii pusillus</i> least Bell's vireo</p>	<p>Least Bell's vireo is an obligate low-elevation riparian species inhabiting dens, low-elevation, willow-dominated riparian habitats with lush understory vegetation in the immediate vicinity of watercourse. Least Bell's vireo have been sporadically sighted during the breeding season on San Fransisquito Creek, Big Tujunga Creek, and the upper Santa Clara River on the Angeles National Forest, and they have been observed breeding within the Monument Plan area in Little Rock Creek, just below the Little Rock Dam. No critical habitat for this species occurs within the Monument Management Plan boundary.</p> <p>Threats: Habitat degradation and nest parasitism by brown-headed cowbirds were identified as the biggest threats to least Bell's vireo populations on National Forest System lands in southern California.</p>
<p><i>Empidonax traillii extimus</i> Southwestern willow flycatcher</p>	<p>The southwestern willow flycatcher is a riparian obligate during the breeding season, occurring primarily in densely vegetated riparian habitats and preferring streamside associations of cottonwood, willow, alder, and other riparian vegetation. They can also occur in woodland edges, meadows, and brushy fields. There is only one nesting record for the southwestern willow flycatcher on the Angeles National Forest and record of a southwestern willow flycatcher building a nest just north of the Forest in Soledad Canyon. Approximately 12.5 acres of designated critical habitat for this species exists within the Monument Management Plan boundary in San Gabriel Canyon in the San Gabriel River drainage. The area of critical habitat is located in the very southern portion of the Monument Plan area.</p> <p>Threats: The primary cause for the decline of the southwestern willow flycatcher is widespread fragmentation and extensive loss of both structural components and habitat resulting from hydrological changes in low-elevation cottonwood-willow riparian habitat across the species' range. Other factors contributing to habitat losses include urban development road development and maintenance, livestock grazing, high-intensity and frequent wildfire, and human recreational activities. Additional threats include brood parasitism by brown-headed cowbirds, replacement of native riparian vegetation by invasive nonnative species, pesticide contamination, predation, water management, and probable loss of winter habitat due to tropical deforestation.</p>
Threatened Terrestrial Wildlife Species	
<p><i>Polioptila californica californica</i> Coastal California gnatcatcher</p>	<p>Coastal California gnatcatchers are obligate, permanent residents of coastal sage scrub. The species generally occurs at elevations below 3,000 feet. Although the plant species composition varies among sites occupied by coastal California gnatcatchers, California sagebrush (<i>Artemesia californica</i>) and California buckwheat (<i>Eriogonum fasciculatum</i>) are usually dominant or codominant plants. This species is suspected to occur in the lower foothill areas of the San Gabriel Mountains on the Angeles National Forest, but no positive sightings have been observed. No critical habitat for this species occurs within the Monument Management Plan boundary.</p> <p>Threats: The decline in numbers and distribution of coastal California gnatcatcher has resulted primarily from the loss, fragmentation, and adverse modification of habitat. Other major threats to the species include nest predation and nest parasitism.</p>

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution/Threats
<p><i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo</p>	<p>Yellow-billed cuckoos breed in broad, well-developed, low-elevation riparian woodlands dominated by cottonwood (<i>Populus</i> spp.) and willow (<i>Salix</i> spp.). However, studies in the Lower Colorado River Valley and throughout the species' range have shown that smaller willow-cottonwood stands (<99 acres [40 hectares]) have low rates of occupancy, whereas large sites (>198 acres [80 hectares]) have the highest occupancy rates. Elevations where yellow-billed cuckoos are still present in California are less than 2,900 feet; although historic habitat in Owen's Valley went up to 4,600 feet. Although yellow-billed cuckoo have been observed in the breeding season at various locations near the central and southern California coast, it has not been observed within the Monument boundary. It is considered in this analysis, however, due to the existing habitat components within the Monument that could support breeding populations. No critical habitat for this species occurs within the Monument Management Plan boundary.</p> <p>Threats: The greatest loss or alteration of yellow-billed cuckoo habitat in California came from clearing riparian areas for agriculture and urban development, flood control, areas behind dams, groundwater withdrawal, exotic species invasions, and continuous long-term year-long grazing.</p>
<p><i>Gopherus agassizii</i> Desert tortoise</p>	<p>In California, desert tortoise occurs primarily in the creosote, shadscale, and Joshua tree/Mohave yucca series of the Mojave Desert scrub and the lower Colorado River valley subdivision of Sonoran desert scrub. Optimal habit has been characterized as creosote brush scrub in which annual precipitation is 2 to 8 inches (5 to 20 centimeters), diversity of perennial plants is relatively high, and production of ephemerals is high. The desert tortoise occurs in very low numbers along the northern edge of the San Gabriel and San Bernardino Mountains. However, most of the Monument boundary near the desert's edge is at higher elevations and at steeper slopes than desert tortoises typically inhabit, and, it is possible that some of the few individuals observed or collected on or immediately adjacent to the forests were released from captivity. Desert tortoises are being analyzed due to their potential occurrence within and adjacent to the Monument boundary.</p> <p>Threats: Threats to the desert tortoise include habitat loss, nonnative annuals displacing the native annuals and perennials preferred by the tortoise, plus an increased risk of fire associated with nonnative annuals. Tortoises are often found along roads, putting them at risk from vehicle mortality, poaching, or illegal pet collection. Unauthorized off-road vehicle use is common on the north end of the Monument in desert habit and can adversely affect the tortoise and its habitat.</p>
Forest Service Region 5 Sensitive Species	
<p><i>Accipiter gentilis</i> Northern goshawk</p>	<p>Northern goshawks occur in a variety of coniferous forest communities in the western United States, primarily in ponderosa pine (<i>Pinus ponderosa</i>), Jeffrey pine (<i>P. jeffereyi</i>), mixed conifer, white fir (<i>Abies concolor</i>), and lodgepole pine (<i>P. contorta</i>). Nest stands are typically composed of large trees that have high canopy closure, are near the bottom of moderate hill slopes, and have a sparse understory. When foraging, northern goshawks use a wider range of forest types and conditions, but most populations still exhibit a preference for high canopy closure and a high density of larger trees. No breeding populations have been observed within the Monument boundary, however, due to the existing habitat components within the Monument that could support breeding populations, they are being analyzed.</p> <p>Threats: General factors influencing the species habitat include activities that affect forest structure such as livestock grazing, fire suppression, timber harvest, and insect and disease outbreaks, competition, predation and disease.</p>

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution/Threats
<i>Haliaeetus leucocephalus</i> Bald eagle	<p>Bald eagles bred in a variety of habitats in California, including offshore islands; coastal cliffs and pinnacles; and along coastal rivers, interior valley streams and wetlands, and mountain lakes and rivers. Nest trees include a variety of hardwoods as well as conifers. Most eagle nesting territories are now found in montane habitat in ponderosa pine and mixed conifer forests. Although no known nesting activities have been observed within the Monument area, bald eagles may utilize the area for roosting dispersal, and foraging.</p> <p>Threats: There are three primary threats to bald eagle populations in the southern California Forests area: (1) disturbance to perch and potential nest areas from recreational activities (e.g., boating, fishing, and hiking); (2) loss of perching and nesting habitat to development (mostly residential); and (3) collision with electrical or communication transmission lines. Loss to stand-replacement wildland fire has more recently been identified as a major threat in forested areas.</p>
<i>Strix occidentalis occidentalis</i> California spotted owl	<p>The California spotted owl is a forest-dwelling owl that is found throughout most forests and deep canyons of the western United States. In southern California, California spotted owls occur in four general but distinct forest types: riparian/hardwood forests, live oak/bigcone Douglas-fir forest, mixed conifer forest, and redwood/California laurel forests. California spotted owls occur predominantly on National Forest Systems lands in all of the major mountain ranges in southern California including within the Monument boundary.</p> <p>Threats: Threats include unnatural fuel build-up, resulting from fire suppression and consequent wildland fire; fuel management activities such as thinning, mortality removal, and prescribed fire; woodcutting for fuelwood, saw logs, hazard tree removal, and post fire salvage; water diversion and groundwater extraction; tree mortality due to forest pests and diseases; drought; air pollution; forest fragmentation due to land ownership patterns; mining activities; and human disturbance related to special uses, roads, and recreation.</p>
<i>Vireo vicinior</i> Gray vireo	<p>Gray vireos tend to breed in two general habitat types: montane chaparral dominated by chamise (<i>Adenostoma fasciculatum</i>, redshank (<i>A. sparsifolium</i>, ceanothus (<i>Ceanothus</i> spp.); and in pinyon-juniper woodlands. Gray vireos were detected at several locations in the northern San Gabriel Mountains, and breeding was confirmed at some locations within the Monument boundary.</p> <p>Threats: Habitat loss and brood parasitism by brown-headed cowbird are likely causes of gray vireo population decline since the 1940s.</p>
<i>Antrozous pallidus</i> Pallid bat	<p>Pallid bats are found in a variety of habitats, including rocky canyons, open farmland, scattered desert scrub, grassland, shrubland, woodland, and mixed conifer forests. Pallid bats appear to be more prevalent within edges, open stands, particularly hardwoods, and open areas without trees. Pallid bats roost in rock crevices, mines, caves, tree hollows, and a variety of anthropogenic structures. Populations of pallid bat have been observed within the Monument boundary.</p> <p>Threats: In general, declines of bat populations can often be attributed to roost site disturbance, loss of foraging habitat, and loss of roost sites.</p>
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	<p>The distribution of this species is strongly correlated with the availability of suitable caves and cave analogues (mines, rock shelters, tunnels, buildings) for roosting. Population centers occur in areas dominated by exposed, cavity forming rock and/or historic mining areas. Abandoned mines are particularly important as roost sties in areas where there are not suitable caves. Habitat for this species occurs within the Monument boundary.</p> <p>Threats: In general, declines of bat populations can often be attributed to roost site disturbance, loss of foraging habitat, and loss of roost sites.</p>
<i>Myotis thysanodes</i> Fringed myotis	<p>Fringed myotis occupies a wide variety of habitats from low desert scrub to high-elevation coniferous forest. Roost sites are essential for metabolic economy, for juvenile growth and as night roosts to consume prey. They roost in crevices in a variety of situations such as caves, buildings, mineshafts, cliff faces, trees, and bridges for maternity and night roosts. On the Monument boundary, the species occurs in mixed deciduous/coniferous forests.</p> <p>Threats: In general, declines of bat populations can often be attributed to roost site disturbance, loss of foraging habitat, and loss of roost sites.</p>

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution/Threats
<p><i>Ovis canadensis nelsoni</i> Nelson's bighorn sheep</p>	<p>Desert bighorn sheep inhabit dry, relatively barren, desert mountain ranges. Escape terrain is identified as the single most important habitat component for bighorn sheep in these mountains. Escape terrain is defined as steep slopes of 80 percent or steeper, with abundant rock outcrops and sparse shrub cover. Nelson's bighorn sheep in the San Gabriel Mountains occur at elevations of 3,000 to 10,064 feet [914 to 3,068 meters], to the summit of Mount San Antonio. During the winter and spring, Nelson's bighorn sheep occur primarily in escarpment chaparral in the lower canyons at 3,000 to 6,000 feet (914 to 1,829 meters). In the San Gabriel Mountains the population of Nelson's bighorn sheep is concentrated primarily in the Bear Creek drainage; the upper East Fork of the San Gabriel River and Cattle Canyon (both in the Sheep Mountain Wilderness); San Antonio Canyon; Cucamonga Canyon; and the South and Middle Forks of Lytle Creek.</p> <p>Threats: The primary factors affecting Nelson's bighorn sheep populations on National Forest System lands in southern California are human disturbance, vegetation condition, water availability, and predation. Nelson's bighorn sheep are considered sensitive to the presence of humans, particularly to high levels of human activity in their line of sight, and may abandon habitat due to human encroachment.</p>
<p><i>Perognathus alticolus inexpectatus</i> Tehachapi white-eared pocket mouse</p>	<p>Habitat associations for the Tehachapi white-eared pocket mouse have not been well defined. The species has been collected in arid annual grassland, desert scrub communities, Joshua and pinyon pine woodland, sagebrush/rabbitbrush scrub, a grain field, and in open desert-side pine forests at elevations of 3,500 to 6,000 feet (1,070 to 1,830 meters). The upper slopes of the San Gabriel Mountain Range has areas likely to support this species.</p> <p>Threats: Threats to the mouse may include stand densification in scrub habitats due to the associated decline in herbaceous plant material, and trampling of burrows by people and livestock.</p>
<p><i>Anniella pulchra</i> California legless lizard</p>	<p>The California legless lizard is a burrowing species associated with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland; or under sycamores, cottonwoods, or oaks growing on stream. The species is also found under surface objects such as logs, rocks, and leaf litter. The legless lizard can be found within the project area up to an elevational limit of approximately 4,900 feet (1,500 meters).</p> <p>Threats: Given California legless lizard's habit requirements, life history characteristics, and relatively broad distribution, it is probably not highly vulnerable to existing agents of change within the Monument boundary. However, problems associated with invasive nonnative plants, including reduced soil moisture and reduced prey populations, and catastrophic wildlife fire, could impact local populations.</p>
<p><i>Diadophis punctatus modestus</i> San Bernardino ringneck snake</p>	<p>The San Bernardino ringneck snakes are found in a wide variety of habitats from sea level to 6,400 feet (1,950 meters). Distribution information is spotty, but it appears that these snakes are more common at low-elevation sites (i.e., below 3,000 feet [915 meters]). The apparent importance of tree frogs and slender salamanders in their diet suggest they may seek out and require moist microclimates. Habitat for this species occurs within the Monument boundary.</p> <p>Threats: Populations are believed to be declining as a result of loss of suitable habitat primarily from development on private land.</p>
<p><i>Lampropeltis zonata parvirubra</i> San Bernardino mountain kingsnake</p>	<p>The San Bernardino mountain kingsnake is typically found in sunlit canyons with rocky outcrops. At lower elevations, it is associated with chaparral species and bigcone spruce; at higher elevations it is associated with black oak, incense cedar, Jeffrey pine, and ponderosa pine. Partially shaded rock outcrops for refugia and basking sites appear to be an important microhabitat element. Down logs may also be important. Suitable habitat for this subspecies occurs within the Monument boundary.</p> <p>Threats: The biggest threat to this species is poaching for the pet trade.</p>
<p><i>Lichanura orcutti</i> Coastal rosy boa</p>	<p>The Coastal rosy boa inhabits coastal sage scrub and chaparral-dominated communities that contain large rocks and boulders for cover and refuge. Vegetation types associated with these habitats include California sage, buckwheat, chamise chaparral, and Ceanothus/manzanita chaparral. This species is often found near permanent or intermittent streams. Suitable habitat for this species occurs within the Monument boundary.</p> <p>Threats: This species' continued survival may be threatened in part by a recent increase in poaching, precipitated by its popularity in the pet trade.</p>

Scientific Name Common Name	Habitat/Distribution/Threats
<i>Plebejus saepiolus aureolus</i> San Gabriel Mountains blue butterfly	The San Gabriel Mountains blue butterfly is associated with the clover <i>Trifolium wormskioldii</i> . This clover grows primarily in moist to marshy meadows. This species has been collected in the immediate vicinity of Big Pines within the proposed Monument boundary. Threats: Diversion of water from the meadow at Big Pines and the subsequent drying of the habitat have been implicated in the probable extirpation of this subspecies.
<i>Callophrys mossii hidakupa</i> San Gabriel mountains elfin	The San Gabriel Mountain elfin butterfly appears to occur primarily on steep north-facing slopes. The larval host plant is a stonecrop (<i>Sedum spathulifolium</i>) with a concentrated distribution that is limited in extent within these mountain ranges. Over its entire range, <i>Sedum spathulifolium</i> occurs on rock outcrops, often in shade from 170 to 8,200 feet (50 to 2,500 meters) in elevation. Reported locations within the Monument boundary are in the San Antonino Canyon watershed and the Big Tujunga watershed near Hidden Springs. Threats: The principal threat identified for this species is over-collecting and destruction of host plants by butterfly collectors.
<i>Plebulina emigdionis</i> San Emigdio blue butterfly	The San Emigdio blue butterfly is closely associated with the widespread saltbush <i>Atriplex canescens</i> in alkali sink areas. However, the species distribution is much more localized than that of the host plant, suggesting that other factors may determine habitat suitability. The general habitat is dry rivercourses, intermittent streamsides, and adjacent flats. This species is known to occur within the Monument boundary. Threats: Habitat is being affected by conversion and invasion of nonnative plants.

It should be noted that beneficial effects from the withdrawal of Monument lands from Federal mining laws (with the exception of existing rights) can be considered to have already taken effect when the Monument was established. Valid mining activities with existing rights may continue to operate, but no new oil and gas and mineral resource exploration and development is allowed. This has removed the threat of new legal mining activities damaging federally listed plants or habitats.

Environmental Consequences

No Action

Current management would continue in accordance with the 2006 Angeles National Forest Plan, relevant amendments, and interim management direction. Because this alternative is the continuation of current management and would not result in changes to the existing Forest Plan, protections of monument objects would only be provided where existing goals or objectives address them.

Plan components do not apply to the no-action alternative because a monument plan would not be proposed under this alternative; no changes would be made to the existing Forest Plan or applicable amendments in the planning area under the no-action alternative. Continuing current management under the no-action alternative would include the use of standard operating procedures and best management practices from the Forest Plan for management of lands within the monument.

In addition, the no-action alternative does not meet the purpose and need of complying with the Presidential Proclamation establishing the San Gabriel Mountains National Monument to complete a monument management plan in the 3 years provided or providing expanded opportunities.

Proposed Action

Existing management direction concerning the threatened, endangered, proposed, sensitive, species of conservation concern, and migratory bird species in the current Angeles National Forest Plan is considered adequate to prevent or minimize effects to these species at this planning level. The current

Forest Plan standards and guidelines specific to the wildlife species outlined in table 23 would remain unchanged by the proposed action.

Project Design Features and Mitigation Measures

Current programmatic design features in the Forest Plan concerning the species outlined in table 23 would be carried forward into the Monument Plan. Continuing management in alignment with these guidelines would likely prevent or minimize impacts to these species.

Direct and Indirect Effects – Proposed Action

This is a programmatic level environmental assessment with no proposed ground disturbing activities and therefore, there are no direct effects to any of the species or habitats outlined in table 23 as a result of implementing the proposed action. In the proposed action, federally listed and sensitive terrestrial wildlife species, , and other non-listed species and Migratory Bird Treaty Act species would continue to be protected and all of the standards and guidelines outlined in the current Forest Plan will be part of the Monument Plan. Potential direct and indirect effects that would result from project level work would be analyzed during future site-specific analysis, and appropriate measures would be implemented to prevent or minimize adverse effects to these species. All site specific project environmental assessment for Monument Plan implementation would include surveys, mitigations, and consultation, as needed.

The Monument Plan assumes the continuation of several programs and activities, including but not limited to road and trail maintenance, operating administrative facilities, and administering recreational uses, special use permits, transportation, and currently authorized mining operations. Due to the numerous programs and ongoing activities authorized by the Monument Plan, some effects to federally listed, sensitive, and non-listed species habitats could occur, but would be minimized or prevented by project level design features and plan components outlined in the existing Forest Plan.

The effects of the proposed action to the species outlined in this document is expected to be the same as in the existing Forest Plan.

Threatened, Endangered, Proposed, and Candidate Species

Determinations are made for each listed wildlife species resource, based on the rationale provided. The Direct, Indirect, and Cumulative Effects to these species would be the same as those effects outlined in the existing Angeles National Forest Plan (USDA Forest Service 2005a). All references for this section are from USDA Forest Service 2005a. It is important to remember that this is a programmatic level environmental assessment with no proposed ground-disturbing activities and therefore, there are no direct effects to any of the species or habitats outlined in table 23 as a result of implementing the proposed action (see above regarding the effect of a programmatic level environmental assessment for planning purposes). The potential effects would be due to any future proposed activities under the direction of the new Monument Plan. The effects of these future activities would be analyzed in a separate NEPA analysis process.

This Monument Plan amendment is consistent with the Ongoing Activities Biological Opinion (USDI Fish and Wildlife Service 2013) and the Biological Assessment for the Revised Management Plans (USDA Forest Service 2012) and does not change the determinations, or constitute new information that results in effects to an extent not considered in the previous consultation, therefore, we do not need to reinitiate consultation for this plan amendment.

Table 24. Summary of effects determination

Scientific Name Common Name	Status	Determination	Species-specific Rationale
<i>Gymnogypus californianus</i> California condor	Endangered	May affect, not likely to adversely affect	Although no California condors have been observed within the Management Plan area, suitable habitat does exist within the project area, and populations are known to utilize areas adjacent to the Management Plan boundary. Although planning activities will not directly affect the California condor, future proposed activities under the direction of the new Monument Plan could impact existing suitable habitat characteristics.
<i>Vireo bellii pusillus</i> least Bell's vireo	Endangered	May affect, not likely to adversely affect	Nesting least Bell's vireos have been observed nesting at Little Rock Creek, just below the dam. Suitable habitat also occurs within the project area, and populations are known to utilize areas adjacent to the Monument Plan boundary. Although planning activities will not directly affect the least Bell's vireo, future proposed activities under the direction of the new Monument Plan could impact existing suitable habitat characteristics.
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	Endangered	May affect, not likely to adversely affect	There has only been one record of nesting on the entire Angeles National Forest. All other observations have been of solitary makes, which are believed to have been migrating through the Forest. The nesting observation is even suspect as it was never verified through photo documentation or by another observer. However, suitable nesting habitat is present at various locations throughout the Forest. Approximately 12.5 acres of designated critical habitat for this species occurs in the very southern portion of the planning area at the mouth of San Gabriel Canyon. Although planning activities will not directly affect the southwestern willow flycatcher or its designated critical habitat, future proposed activities under the direction of the new Monument Plan could impact individuals and habitat characteristics.
<i>Polioptila californica californica</i> Coastal California gnatcatcher	Threatened	May affect, not likely to adversely affect	Although no coastal California gnatcatchers have been observed within the Management Plan area, suitable habitat does exist within the project area. Although planning activities will not directly affect the species, future proposed activities under the direction of the new Monument Plan could impact existing suitable habitat characteristics.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	Threatened	May affect, not likely to adversely affect	Although no western yellow-billed cuckoos have been observed within the Management Plan area, suitable habitat does exist within the project area. Although planning activities will not directly affect the species, future proposed activities under the direction of the new Monument Plan could impact existing suitable habitat characteristics.
<i>Gopherus agassizii</i> Desert tortoise	Threatened	No Effect	Although no desert tortoises have been observed within the Management Plan area, suitable habitat does exist within the northern end of the project area. However, future planning activities are not anticipated to impact species or existing suitable habitat characteristics.

Overall Rationale for Determinations

- This decision is programmatic, and does not authorize any new activities.

- Even with measures taken to minimize effects, future proposed activities under the direction of the new Monument Plan could impact habitat characteristics or species.
- The possible effects from this planning effort are expected to be so small as to be insignificant.
- The existing Angeles National Forest Plan and the proposed Monument Plan both encourage/emphasize maintenance or improvement of threatened, endangered, candidate, and proposed species and sensitive habitat.
- Continuing management in alignment with the unchanged programmatic design features in the Angeles National Forest Plan would likely prevent or minimize impacts to these species.

Forest Service Region 5 Sensitive Species

All references for this section are from the Forest Plan (USDA Forest Service 2005a). It is important to remember that this is a programmatic level environmental assessment with no proposed ground disturbing activities and therefore, there are no direct impacts to any Forest Service Region 5 Sensitive Species, as a result of implementing the proposed action (see above regarding the effect of a programmatic level environmental assessment for planning purposes). The potential impacts would be due to any future proposed activities under the direction of the new Monument Plan. The impacts of these future activities would be analyzed in a separate NEPA analysis process.

Although planning activities will not directly affect any of the Forest Service Region 5 Sensitive Species outlined in table 23, future proposed activities under the direction of the new Monument Plan could impact individuals and suitable habitat characteristics. However, the project will result in a determination of “may affect individuals, but not likely to result in a trend toward Federal listing or loss of habitat viability.

Migratory Birds

Under the National Forest Management Act, the Forest Service is directed to “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” (P.L. 94-588, Sec 6 (g) (3) (B)). The January 2000 United States Department of Agriculture Forest Service Landbird Conservation Strategic Plan (USDA Forest Service 2000), followed by Executive Order 13186 in 2001, in addition to the Partners in Flight (PIF) specific Habitat Conservation Plans for birds and the January 2004 PIF North American Landbird Conservation Plan (Rich 2004) all reference goals and objectives for integrating bird conservation into forest management and planning.

In late 2008, a *Memorandum of Understanding (MOU) between the USDA Forest Service and the U.S. Fish and Wildlife Service to Promote the Conservation of Migratory Birds* (USDA Forest Service and USFWS 2008) was signed. The intent of the MOU is to strengthen migratory bird conservation through enhanced collaboration and cooperation between the Forest Service and the Fish and Wildlife Service as well as other federal, state, tribal, and local governments. Within the National Forests, conservation of migratory birds focuses on providing a diversity of habitat conditions at multiple spatial scales and ensuring that bird conservation is addressed when planning for land management activities. In early 2016, both USDA Forest Service and U.S. Fish and Wildlife Service agreed to extend the MOU as currently written.

As part of the planning process, the Monument Management Plan will adhere to all of the law, regulations, and strategies regarding the management of migratory birds. As this planning effort is a programmatic level environmental assessment with no proposed ground disturbing activities there are no direct impacts to any migratory bird species as a result of implementing the proposed action (see above

regarding the effect of a programmatic level environmental assessment for planning purposes). The potential impacts would be due to any future proposed activities under the direction of the new Monument Plan. The impacts of these future activities would be analyzed in a separate NEPA analysis process.

Cumulative Effects – Proposed Action

The proposed action itself does not contribute to present effects, but instead guides future management. Future actions that would be subject to site-specific analysis. However, the proposed action (e.g., forest plan amendment) does increase emphasis on aquatic habitat and species protections; therefore, future actions that comply with the proposed action language (and amended forest plan) would be expected to have lower impacts than those that do not. The designation of CBLUZs within the Monument would effectively “filter out” future projects proposed by the forest or other proponents that could affect species within the CBLUZ area. This will ultimately benefit species by minimizing or eliminating development and other uses that are inconsistent with this land use zone, as specified in Table 2 of the Monument Plan. Therefore, the contribution of future projects to cumulative effects would likely be less under the proposed action as compared to current management.

Numerous past and ongoing activities have potentially altered federally listed, sensitive, and non-listed terrestrial wildlife habitats, resulting in the existing distribution and abundance of these species on the landscape. Livestock grazing, timber harvest, fire suppression, fuel reductions, recreational uses, and other activities have occurred and may have affected, and continue to affect some species and habitats.

Reasonably foreseeable future actions could include the construction of temporary or new roads, or opening existing routes that have temporary closure within the Management Plan boundary. The proposed plan component that covers this action states that the Forest Service would, “Coordinate with local government on transportation planning. Participate in the Southern California Association of Governments. Coordinate with Caltrans to improve transportation connectivity within the Monument, while minimizing adverse resource effects.”

It is important to note that each future project proposal (including any proposals to upgrade existing routes, build temporary or new roads or open existing routes that have temporary closures) would be thoroughly analyzed via additional environmental review, including an assessment of effects to federally listed, sensitive, and non-listed species and Migratory Bird Treaty Act terrestrial wildlife species. Opening additional routes could impact species that are sensitive to vehicle passage and increased human activity. In addition, additional or upgraded roads can effectively reduce habitat connectivity for species that reside or migrate through the forest. Although no opening or closure of existing routes is proposed at this time, this planning effort could lead to future road development. For any future transportation planning projects, the Monument would conduct site-specific NEPA, and develop the additional appropriate design criteria and measures to prevent or minimize adverse effects, and would consult with the U.S. Fish and Wildlife Service, as needed.

Compliance with Relevant Laws, Regulations, Policies and Plans

Because the proposed Monument Plan provides programmatic guidance for protection of federally listed, sensitive, and non-listed wildlife resources and no new activities are authorized, and the viability of terrestrial wildlife species would remain unchanged, this project is compliant with the Endangered Species Act and all other relevant laws, regulations, policies and plans pertaining to terrestrial threatened, endangered, candidate, proposed, Forest Service Region 5 sensitive species, species of conservation concern and migratory birds species.

Threatened, Endangered, and Region 5 Sensitive Plants

Affected Environment

Drought tolerant and fire-adapted chaparral shrubland is the dominant community of lower elevations, and includes scrub oaks, chamise, manzanita, wild lilac, and western mountain-mahogany. Several other plant communities are present, including valley and foothill woodland, riparian woodland, pinyon juniper woodland, Joshua tree woodland, and montane forest. Woodlands are dominated by a variety of oaks, including coast live oak, interior live oak, scrub oak. White alder, cottonwood, maple, sycamore, and willows are the prominent species in riparian communities. Common conifer trees in the Monument include Jeffrey pine, Coulter pine, sugar pine, lodgepole pine, white fir, incense cedar, and big cone Douglas-fir. High elevation areas provide habitat for several Sensitive plant species. With a close proximity to a major urban area, riparian areas receive heavy recreational use in the summer. Designated OHV areas also receive heavy use. Numerous past activities and events have taken place in the Monument that have affected listed plant habitats, and those disturbances have resulted in the current distribution and abundance of these species on the landscape.

Existing Condition

It should be noted that beneficial effects from the withdrawal of Monument lands from Federal mining laws (with the exception of existing rights) can be considered to have already taken effect when the Monument was established. Valid mining activities with existing rights may continue to operate, but no new oil and gas and mineral resource exploration and development is allowed. This has removed the threat of new legal mining activities damaging federally listed plants or habitats. Adequate authority for enforcement of this action is provided by the Presidential Proclamation establishing the Monument.

Species Considered in the Analysis

An updated and verified list of Threatened, Endangered, Proposed, Candidate, and Forest Service Sensitive (TES) plants and animals with potential to occur on the Angeles National Forest (USDA Forest Service 2014b) was used to identify the species that may occur in the Monument. Because the small portion of the San Bernardino National Forest that is included in the Monument is in close proximity to the Angeles National Forest boundary, the species that could occur in that area are already represented on the Angeles National Forest list.

A review was conducted of those Threatened, Endangered, Proposed, Candidate, and Forest Service Sensitive plants that may occur in the project area or be affected by activities associated with the proposed action. The plants in table 25 were evaluated for potential presence in the action area. Species which are not known or suspected to occur in the San Gabriel Mountains National Monument are not carried forward into the effects analysis.

Table 25. Species and critical habitat considered

Scientific Name Common Name	Habitat/Distribution	Species present?	Habitat present?	Effects analysis needed?
Endangered Plants				
<i>Astragalus brauntonii</i> Braunton's milkvetch	Limestone outcrops, closed cone coniferous forest, coastal scrub, and chaparral. Recent burns or disturbed areas. <2,300 ft. Los Angeles, Orange, and Ventura Counties.	Possible	Yes	Yes
<i>Berberis nevinii</i> Nevin's barberry	Sandy to gravelly soils. Washes, chaparral, cismontane woodland, and coastal scrub. Generally found in lowlands or drainages. <2,200 ft. Imperial, Los Angeles, Marin, Riverside, Santa Barbara, San Bernardino, and San Diego Counties.	Possible	Yes	Yes
<i>Dodecahema leptoceras</i> Slender-horned spineflower	Sandy alluvial fans, benches, and terraces in coastal scrub, chaparral and cismontane woodland areas. 700-3,000 ft.	Yes	Yes	Yes
Threatened Plants				
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	Grasslands and vernal pools. 100-4,000 ft. Chaparral (openings), cismontane woodland, coastal scrub, playas. Often found in clay. Known occurrences: southern base of San Gabriel Mtns. At Glendora and San Dimas & San Bernardino at Arrowhead Springs.	No	Possible	Yes
Thread-leaved brodiaea Designated critical habitat	A portion of one critical habitat polygon is within the Monument near San Dimas.	Yes	Yes	Yes
Sensitive Plants				
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i> Abrams' flowery puncturebract	Chaparral communities on soils derived from sandy or shale substrates and open or gravelly slopes at 1,150–2,257 meter elevations. Several historic records/collections in Monument.	Yes, not in GIS	Yes	Yes
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i> San Gabriel manzanita	Rocky outcroppings, chaparral around 1,500 m. A local endemic, only known from the area near Mill Creek Summit. Often associated with gneiss outcroppings.	Yes	Yes	Yes
<i>Arctostaphylos parryana</i> ssp. <i>tumescens</i> Interior manzanita	Chaparral plant communities. Known only from a few occurrences. San Gabriel Mtns., San Bernardino Mtns. 2,100 – 2,300 m. California Native Plant Society (CNPS) Inventory shows presence in Monument.	Yes, not in GIS	Yes	Yes
<i>Astragalus bicristatus</i> Crested milk-vetch	Open, rocky areas in pine forests. 5,500-8,250 ft. South Coast, San Gabriel Mtns., San Bernardino Mtns, Peninsular Ranges (Los Angeles, Riverside and San Bernardino Counties). CNPS Inventory shows presence in Monument.	Yes, not in GIS	Yes	Yes

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution	Species present?	Habitat present?	Effects analysis needed?
<i>Astragalus lentiginosus</i> var. <i>antonius</i> San Antonio milk-vetch	Pine forest, 5,000-8,500 ft., San Gabriel Mtns.	Yes	Yes	Yes
<i>Botrychium crenulatum</i> Scalloped moonwort	Bogs and fens, lower montane coniferous forest, meadows and seeps, and marshes & swamps (freshwater). 1,500-3,300 m. In southern California, it is only known from the San Gabriel and San Bernardino Mtns.	Yes	Yes	Yes
<i>Calochortus clavatus</i> var. <i>clavatus</i> Club-haired mariposa lily	Sometimes associated with serpentine soils and inhabits chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland at 75-1,300 m. elevations.	Yes	Yes	Yes
<i>Calochortus clavatus</i> var. <i>gracilis</i> Slender mariposa lily	Chaparral on slopes or in canyons below 2,000 m, south base of San Gabriel and Sierra Pelona mountains.	Yes	Yes	Yes
<i>Calochortus fimbriatus</i> Late-flowered mariposa lily	Open areas on ridges, hillsides, roadcuts, near rock outcrops, or burn areas. The surrounding vegetation is chaparral, coastal sage scrub, cismontane woodland, or sometimes riparian woodland. 275 to 1,905 m. Monterey County to western Los Angeles County. The nearest sites are 13 miles west of the Monument.	No	No	No. No Effect. This species is not suspected to occur on the Monument.
<i>Calochortus palmeri</i> var. <i>palmeri</i> Palmer's mariposa lily	Meadows, vernal moist places in pine forest or chaparral, or occasionally dry areas in yellow pine forest. 1,100-2,200 m.	Yes	Yes	Yes
<i>Calochortus striatus</i> Alkali mariposa lily	Alkaline meadows and seeps, moist creosote bush scrub, and chenopod scrub. 60-1,400 m.	Yes	Yes	Yes
<i>Canbya candida</i> Pygmy poppy	Sandy places, 2,000-4,000 ft. Joshua tree woodland, Mojavean scrub, and pinyon/juniper woodland. Mojave desert adjacent to Sierra Nevada.	Yes	Yes	Yes
<i>Castilleja gleasonii</i> Mt. Gleason's paintbrush	Granitic, coniferous forest, pinyon/juniper woodland. 3,800-7,100 ft.	Yes	Yes	Yes
<i>Castilleja plagiotoma</i> Mojave paintbrush	Dry flats and ridges, Sagebrush Scrub, Joshua Tree Woodland, Pinyon/Juniper Woodland, Yellow Pine Forest. North base of mountains, 1,000 – 8,200 ft.	Yes	Yes	Yes
<i>Chorizanthe parryi</i> var. <i>fernandina</i> San Fernando Valley spineflower	Sandy places, generally in coastal scrub. 650-4,000 ft., most likely to be found near Elizabeth Lake in Liebre Mtns. The nearest occurrence is 5 miles from the monument.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution	Species present?	Habitat present?	Effects analysis needed?
<i>Chorizanthe parryi</i> <i>var. parryi</i> Parry's spineflower	Dry slopes in chaparral coastal sage scrub, or alluvial scrub, often in ecotones. Dry, sandy areas, <5,500 ft. Occurrences are present in surrounding areas and within a few miles of the southern monument boundary.	No	Possible	Yes
<i>Cladium californicum</i> California saw-grass	Alkaline marshes and swamps in the southwestern United States and northern Mexico. The two sites in the vicinity of Monument are presumed extirpated.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.
<i>Claytonia lanceolata</i> <i>var. peirsonii</i> Peirson's spring beauty	Gravelly woodlands, scree slopes, meadows. 5,000-8,500 ft. This perennial herb is known to occur at the eastern edge of the Monument.	Yes	Yes	Yes
<i>Deinandra mohavensis</i> Mojave tarplant	Washes, seasonal creeks/seeps, openings in chaparral, disturbed areas. Nearest occurrence is about 20 miles from the Monument. 900-1,600 m.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.
<i>Drymocallis cuneifolia</i> <i>var. ewanii</i> Ewan's cinquefoil	Seeps in yellow pine forest, 6,300-7,500 ft. Only known from Mt Islip area.	Yes	Yes	Yes
<i>Dudleya cymosa</i> <i>ssp. crebrifolia</i> San Gabriel River Dudleya	On exposed granite outcroppings in CSS or chaparral areas. Fish Canyon, possibly Lytle Creek area. 300-1,100 m.	Yes	Yes	Yes
<i>Dudleya densiflora</i> San Gabriel Mountains Dudleya	Steep granitic canyon walls adjacent to chaparral, coastal scrub, and coniferous forest. Southeast San Gabriel Mountains. 275-525 m.	Yes	Yes	Yes
<i>Dudleya multicaulis</i> Many-stemmed Dudleya	Heavy soils, often clayey, coastal plain. Chaparral, coastal scrub, and valley & foothill grassland. <600 m. Occurrences are present close to the southern Monument boundary.	Yes/Maybe	Possible	Yes
<i>Eremogone macradenia</i> <i>var. arcuifolia</i> Forest Camp sandwort	Chaparral (openings, granitic, usually oak dominated). 1,200-1,700 m. Forest Camp, San Bernardino County; Liebre Mtn., Los Angeles County.	Yes	Yes	Yes
<i>Eriogonum kennedyi</i> <i>var. alpigenum</i> Southern alpine buckwheat	Alpine boulder and rock fields, subalpine, granitic gravel, found on high peaks and ridgetops. 2,600-3,500 m.	Yes	Yes	Yes
<i>Eriogonum microthecum</i> <i>var. johnstonii</i> Johnston's buckwheat	Rocky, subalpine coniferous forest and upper montane coniferous forest. 1,850-2,900 m.	Yes	Yes	Yes

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution	Species present?	Habitat present?	Effects analysis needed?
<i>Galium grande</i> San Gabriel bedstraw	Open, broad-leafed forest, open chaparral, cismontane woodland, and lower forest. Rocky slopes. 455-1,525 m. San Gabriel Mtns.	Yes	Yes	Yes
<i>Heuchera abramsii</i> Abram's alumroot	Upper Montane Coniferous Forest, 2,700-3,500 m. High peaks of eastern San Gabriel Mountains. CNPS Inventory shows presence in Monument.	Yes, not in GIS	Yes	Yes
<i>Heuchera caespitosa</i> Urn-flowered alumroot	Rocky areas in coniferous forest, 1,200-2,600 m, San Gabriel and San Bernardino Mountains.	Yes	Yes	Yes
<i>Horkelia cuneata</i> <i>var. puberula</i> Mesa horkelia	Chaparral, cismontane woodland, coastal scrub. Sandy/gravelly sites at 75-800 m. Many records occur outside the southern monument boundary, but are often presumed extirpated. No sites are documented within the Monument.	No	Possible	Yes
<i>Hulsea vestita</i> <i>ssp. gabrielensis</i> San Gabriel Mountains sunflower	Rocky sites in montane coniferous forest, 1,200-2,800 m. San Gabriel Mountains, Mt. Pinos.	Yes	Yes	Yes
<i>Hulsea vestita</i> <i>ssp. pygmaea</i> Pygmy hulsea	Gravelly sites of granitic substrate alpine areas or subalpine forest, 2,800-3,900 m. Nearest occurrences are in the San Gorgonio Wilderness over 40 miles from the Monument.	No	No	No. No Effect. This species is not suspected to occur on the Monument.
<i>Imperata brevifolia</i> California satintail	Calcareous seeps, hot springs, disturbed wet areas. Generally 300-1,500 m.	Yes	Yes	Yes
<i>Lepechinia fragrans</i> Fragrant pitcher sage	Chaparral areas, including those recovering from recent fire. Mt. Lukens, western Santa Monica Mountains. 20-1,350 m.	Yes	Yes	Yes
<i>Lepechinia rossii</i> Ross' pitcher sage	Rocky outcrops of reddish sedimentary rock, on north to northeast facing slopes; between 305-790 m. The only known sites are over 10 miles west of the monument at Ruby Canyon and Tar Creek. The Monument is likely outside the distributional range for this species.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.
<i>Lewisia brachycalyx</i> Short-sepaled lewisia	Preferred habitat is wet meadows, open forest. 1,370 – 2,300 m. This plant occurs in the eastern end of the monument and in the San Bernardino Mountains.	Yes	Yes	Yes
<i>Lilium parryi</i> Lemon lily	Meadows, streams in montane coniferous forest, riparian scrub, mesic. 4,200-8,600 ft.	Yes	Yes	Yes
<i>Linanthus concinnus</i> San Gabriel linanthus	Dry, rocky slopes, coniferous forest. 1,525-2,800 m. San Gabriel Mtns.	Yes	Yes	Yes

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution	Species present?	Habitat present?	Effects analysis needed?
<i>Lupinus peirsonii</i> Peirson's lupine	Loose slopes of rock or gravel, Joshua Tree or Pinyon-Juniper Woodland, Yellow Pine Forest. 1,200-2,400 m., desert slopes of San Gabriel and Tehachapi mountains.	Yes	Yes	Yes
<i>Monardella australis</i> ssp. <i>jokerstii</i> Jokerst's monardella	Chaparral; lower montane coniferous forest; steep scree or talus slopes between breccia, secondary alluvial benches along drainages and washes. Restricted to the eastern San Gabriel Mountains of Los Angeles County, outside the Monument boundary. 1,350 – 1,750 m.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.
<i>Monardella macrantha</i> ssp. <i>hallii</i> Hall's monardella	Chaparral, broadleaved upland woodland, cismontane woodland, coniferous forest, and valley & foothill grassland. 2,000-6,600 ft. San Gabriel and San Bernardino Mtns.	Yes	Yes	Yes
<i>Monardella saxicola</i> Rock monardella	Broadleaved upland forest, montane chaparral, coniferous forest, and cismontane woodland. Usually in dry, rocky areas. 1,650-6,000 ft. San Gabriel Mts.	Yes	Yes	Yes
<i>Navarretia peninsularis</i> Baja navarretia	Wet areas in open forest or chaparral. 4,950-7,600' (1,400 – 2,300 m). Tehachapi Mountain Area, Transverse Ranges, Peninsular Ranges. Populations are not near or suspected to occur in the San Gabriel Mountains.	No	No	No. No Effect. This species is not suspected to occur on the Monument.
<i>Nemacladus secundifloris</i> var. <i>robbinsii</i> Robbins' nemacladus	Openings in chaparral, valley grasslands, and foothill grasslands, often grows on dry gravelly or sandy slopes. Occurs in southern High Sierra Nevada, Inner South Coast Ranges, and Western Transverse Ranges. 350 – 1,700 m. The identification of a 1929 collection at Big Rock Creek in the San Gabriel Mountains is uncertain. Other occurrences in southern CA are further to the west.	No	No	No. No Effect. This species is not suspected to occur on the Monument.
<i>Opuntia basilaris</i> var. <i>brachyclada</i> Short-joint beavertail	Chaparral, Joshua tree woodland, pinyon/juniper woodland, and Mojavean desert scrub. 1,225-2,300 m. Northern regions, San Gabriel and San Bernardino Mtns.	Yes	Yes	Yes
<i>Oreonana vestita</i> Woolly mountain-parsley	Loose rock, upper montane and subalpine coniferous forest. High ridges of San Gabriel Mts. 8,000-11,500 ft.	Yes	Yes	Yes
<i>Orobanche valida</i> ssp. <i>valida</i> Rock Creek broomrape	Chaparral, pinyon/juniper, decomposed granite. 1,250-2,000 m. Topatopa Mtns and San Gabriel Mtns.	Yes	Yes	Yes
<i>Oxytropis oreophila</i> var. <i>oreophila</i> Rock-loving oxytrope	Loose rock, upper montane and subalpine coniferous forest. High ridges of San Bernardino Mts. 2,700–3,800 m.	Historic	Possible	Yes

San Gabriel Mountains National Monument
DRAFT Environmental Assessment

Scientific Name Common Name	Habitat/Distribution	Species present?	Habitat present?	Effects analysis needed?
<i>Parnassia cirrata</i> <i>var. cirrata</i> San Bernardino grass-of-Parnassus	Lower and upper montane coniferous forests, meadow and seep, and wetlands. San Gabriel Mts., San Bernardino Mts. 700-2,500 m.	Yes	Yes	Yes
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i> Southern skullcap	Gravelly soils, stream banks, oak or pine woodland. San Bernardino Mts., Peninsular Ranges, s Mojave Desert. 425-2,000 m.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i> Parish's checkerbloom	Chaparral, cismontane woodland, and open coniferous forest. Outer South Coast Ranges, Western Transverse Ranges (Santa Barbara Co.), San Bernardino Mtns. 3,300-8,250 ft.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.
<i>Sidalcea neomexicana</i> Salt Spring checkerbloom	Alkaline springs, marshes, bogs, swamps, or playas; hillsides, on roadcuts and roadsides, in pastures and fields, and in meadows, generally < 1,500 m. South Coast, Western Transverse Ranges, San Bernardino Mtns., Peninsular Ranges, sw Mojave Desert. Surrounding, but so far not found in San Gabriel Mts.,	No	Possible	Yes
<i>Sidothea caryophylloides</i> Chickweed starry puncturebract	Sandy or gravelly flats, washes, and slopes, chaparral, montane conifer woodlands; 1,300-2,600 m.	Yes	Yes	Yes
<i>Streptanthus campestris</i> Southern jewelflower	Rocky openings in chaparral, conifer forest, oak woodland, 600-2790 m. High variation in habitat and elevation of species. San Diego, Riverside, San Bernardino counties.	No	Unlikely	No. No Effect. This species is not suspected to occur on the Monument.
<i>Stylocline masonii</i> Mason's neststraw	Dry washes, flats, plains, canyon bottoms, or flats along rivers or streams. Areas are generally flat to gently sloped, and open, often barren. 330-3,940 ft. Mostly further to the northwest, one occurrence is about a mile outside the Monument boundary in Soledad Canyon.	No	Possible	Yes
<i>Symphyotrichum defoliatum</i> San Bernardino aster	Coastal scrub and lower montane coniferous forest. San Gabriel Mtns., San Bernardino Mtns., Peninsular Ranges, <2,050 m.	Yes	Yes	Yes
<i>Thelypteris puberula</i> var. <i>sonorensis</i> Sonoran maiden fern	Streams, meadows, and seeps below 550 m. South Coast, Western Transverse Ranges, San Gabriel Mtns., San Jacinto Mtns.	Yes	Yes	Yes

Scientific Name Common Name	Habitat/Distribution	Species present?	Habitat present?	Effects analysis needed?
<i>Thysanocarpus rigidus</i> Rigid fringepod	Although there is little habitat information, rigid fringepod seems to prefer dry rocky slopes or ridges, or generally open areas. It grows between 600 and 2,200 m (1,970-7,200 ft). Peninsular Ranges, sw Desert (Riverside, San Bernardino, San Diego Counties). The site of a 1923 collection near the Monument is possibly extirpated from development. Other sites are not near the Monument.	No	No	No. No Effect. This species is not suspected to occur on the Monument.

Because they are not likely to be present in the Monument, the following 13 Region 5 Sensitive plant species would not be affected and are not carried further into this analysis:

- | | |
|---|--|
| <i>Calochortus fimbriatus</i> | <i>Navarretia peninsularis</i> |
| <i>Chorizanthe parryi</i> var. <i>fernandina</i> | <i>Nemacladus secundifloris</i> var. <i>robbinsii</i> |
| <i>Cladium californicum</i> | <i>Scutellaria bolanderi</i> ssp. <i>austromontana</i> |
| <i>Deinandra mohavensis</i> | <i>Sidalcea hickmanii</i> ssp. <i>parishii</i> |
| <i>Hulsea vestita</i> ssp. <i>pygmaea</i> | <i>Streptanthus campestris</i> |
| <i>Lepechinia rossii</i> | <i>Thysanocarpus rigidus</i> |
| <i>Monardella australis</i> ssp. <i>jokerstii</i> | |

Environmental Consequences

No Action

Because no actions would be taken, and management of Monument lands would continue under the current Forest Plan, Sensitive plant populations and habitats would not be impacted by the no-action alternative, beyond what is currently occurring. No direct, indirect, or cumulative effects would result from the no-action alternative, beyond what was analyzed in the 2005 LMP (USDA Forest Service 2005a).

Proposed Action

Existing management direction concerning threatened, endangered, proposed, and sensitive plants in the current Angeles Forest Plan is considered adequate to prevent or minimize effects to these species at this planning level. The current Forest Plan standards and guidelines specific to threatened, endangered, proposed, and sensitive species would be unchanged by the proposed action.

Project Design Features

Current programmatic design features in the Forest Plan concerning threatened, endangered, proposed, and sensitive species would be carried forward into the Monument Plan (see appendix C). Continuing management in alignment with these guidelines would likely prevent or minimize impacts to these species. Site-specific design features have been and would continue to be developed at the project level.

Direct and Indirect Effects – Proposed Action

The Monument Plan assumes the continuation of several programs and activities, including but not limited to road and trail maintenance, operating administrative facilities, and administering recreational uses, special use permits, and currently authorized mining operations. Due to the numerous programs and ongoing activities authorized by the Monument Plan, some effects to TES plant habitats could occur, but would be minimized or prevented by project level design features.

Recreational uses have increased in the San Gabriel Mountains along with local population growth, and this trend is likely to continue. The Monument is the most heavily used area on the forest, due to highly popular sites such as San Gabriel Canyon and numerous recreation opportunities. National Monument designation may increase the visibility of the area and influence visitor's expectations of the types of experiences they will find. Designation of the San Gabriel Mountains National Monument and adoption of the Monument Plan could further increase recreational visitation due to higher visibility and public outreach activities. Increasing the number of forest visitors would increase the potential for trampling, flower collecting, and other damage from recreational use, including increased erosion of soil and introduction of invasive plant species.

It is likely that much of the potential increased use would occur in areas that are already popular, and impacts to TES plants in these areas could be noticeable and may require site-specific evaluation and protection measures. Occurrences and habitats that are in more remote areas would receive proportionately (and considerably) fewer additional effects from increased visitation. The presence of more visitors on the landscape also adds a degree of additional risk from human-caused wildfire, which has its own potential to affect Sensitive plant populations and make changes to habitats. In addition, foot traffic, trampling vegetation and soil compaction are all direct results from recreation.

The magnitude of anticipated effects from future projects is expected to be so small as to be insignificant, mostly due to these project-level design features. Therefore, any of the species with potential habitat present may be affected by the proposed action, with the possibility of small amounts of disturbance from individual activities and uses.

Cumulative Effects – Proposed Action

Cumulative effects result from the incremental effects of the proposed action, when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over time. Because the proposed action is programmatic and does not identify specific locations, timing, or intensity of any particular activity, site-specific cumulative effects analysis for individual TES plant species is not possible. Site-specific cumulative effects analysis will be conducted when site-specific activities are proposed.

Numerous past and ongoing activities have altered rare plant habitats, resulting in the existing distribution and abundance of these species on the landscape. Livestock grazing, timber harvest, fire suppression, fuel reductions, recreational uses, and other activities have occurred and may have affected some listed plants and habitats.

Although no additional future activities are identified at this time, each future project proposal would receive an environmental analysis, including assessment of effects to federally listed plants. During future project planning, the Angeles National Forest would develop measures to prevent or minimize adverse effects, and would consult with the U.S. Fish and Wildlife Service as needed.

Determination of Effects

Considering the programmatic nature of the proposed action, and the protections that currently and would continue to be provided for federally listed plants, it is determined that the San Gabriel Mountains National Monument Management Plan “may affect, but is not likely to adversely affect” the following:

- *Astragalus brauntonii* (Braunton’s milkvetch)
- *Berberis nevinii* (Nevin’s barberry)
- *Brodiaea filifolia* (thread-leaved brodiaea)
- Thread-leaved brodiaea designated critical habitat
- *Dodecahema leptoceras* (slender-horned spineflower)

Because they are not suspected to be present in the Monument, the proposed Monument Plan would have “no impact” on the following 13 Region 5 Sensitive plant species:

- *Calochortus fimbriatus* (late-flowered mariposa lily)
- *Chorizanthe parryi* var. *fernandina* (San Fernando Valley spineflower)
- *Cladium californicum* (California saw-grass)
- *Deinandra mohavensis* (Mohave tarplant)
- *Hulsea vestita* ssp. *pygmaea* (pygmy hulsea)
- *Lepechinia rossii* (Ross’ pitchersage)
- *Monardella australis* ssp. *jokerstii* (Jokerst’s monardella)
- *Navarretia peninsularis* (Baja navarretia)
- *Nemacladus secundifloris* var. *robbinsii* (Robbins’ nemacladus)
- *Scutellaria bolanderi* ssp. *austromontana* (southern skullcap)
- *Sidalcea hickmanii* ssp. *parishii* (Parish’s checkerbloom)
- *Streptanthus campestris* (southern jewelflower)
- *Thysanocarpus rigidus* (rigid fringe pod)

Considering the programmatic nature of the proposed action, and the protections that currently and would continue to be provided for sensitive plants, it is determined that the San Gabriel Mountains National Monument Management Plan “may affect individuals, but is not likely to result in a trend toward Federal listing or loss of viability” for the following 45 Sensitive plants:

- *Acanthoscyphus parishii* var. *abramsii* (Abrams’ flowery puncturebract)
- *Arctostaphylos glandulosa* ssp. *gabrielensis* (San Gabriel manzanita)

- *Arctostaphylos parryana* ssp. *tumescens* (interior manzanita)
- *Astragalus bicristatus* (crested milk-vetch)
- *Astragalus lentiginosus* var. *antoni* (San Antonio milk-vetch)
- *Botrychium crenulatum* (scalloped moonwort)
- *Calochortus clavatus* var. *clavatus* (club-haired mariposa lily)
- *Calochortus clavatus* var. *gracilis* (slender mariposa lily)
- *Calochortus palmeri* var. *palmeri* (Palmer's mariposa lily)
- *Calochortus striatus* (alkali mariposa lily)
- *Canbya candida* (pygmy poppy)
- *Castilleja gleasonii* (Mt. Gleason's paintbrush)
- *Castilleja plagiotoma* (Mojave paintbrush)
- *Chorizanthe parryi* var. *parryi* (Parry's spineflower)
- *Claytonia lanceolata* var. *peirsonii* (Peirson's spring beauty)
- *Drymocallis cuneifolia* var. *ewanii* (Ewan's cinquefoil)
- *Dudleya cymosa* ssp. *crebrifolia* (San Gabriel River dudleya)
- *Dudleya densiflora* (San Gabriel Mountains dudleya)
- *Dudleya multicaulis* (many-stemmed dudleya)
- *Eremogone macradenia* var. *arcuifolia* (Forest Camp sandwort)
- *Eriogonum kennedyi* var. *alpigenum* (southern alpine buckwheat)
- *Eriogonum microthecum* var. *johnstonii* (Johnston's buckwheat)
- *Galium grande* (San Gabriel bedstraw)
- *Heuchera abramsii* (Abram's alumroot)
- *Heuchera caespitosa* (urn-flowered alumroot)
- *Horkelia cuneata* var. *puberula* (mesa horkelia)
- *Hulsea vestita* ssp. *gabrielensis* (San Gabriel Mountains sunflower)
- *Imperata brevifolia* (California satintail)
- *Lepechinia fragrans* (fragrant pitcher sage)
- *Lewisia brachycalyx* (short-sepaled lewisia)
- *Lilium parryi* (lemon lily)
- *Linanthus concinnus* (San Gabriel linanthus)
- *Lupinus peirsonii* (Peirson's lupine)
- *Monardella macrantha* ssp. *hallii* (Hall's monardella)
- *Monardella saxicola* (rock monardella)

- *Opuntia basilaris* var. *brachyclada* (short-joint beavertail)
- *Oreonana vestita* (woolly mountain-parsley)
- *Orobanche valida* ssp. *valida* (Rock Creek broomrape)
- *Oxytropis oreophila* var. *oreophila* (rock-loving oxytrope)
- *Parnassia cirrata* var. *cirrata* (San Bernardino grass-of-Parnassus)
- *Sidalcea neomexicana* (Salt Spring checkerbloom)
- *Sidotheca caryophylloides* (chickweed starry puncturebract)
- *Stylocline masonii* (Mason's neststraw)
- *Symphotrichum defoliatum* (San Bernardino aster)
- *Thelypteris puberula* var. *sonorensis* (Sonoran maiden fern)

Overall Rationale for Determinations

- Sensitive plants are known to occur on the Monument, and suitable habitats for many other sensitive plants also exist.
- Federally listed species are not known to occur on the Monument, but suitable habitats for four species may exist.
- The proposed Management Plan is programmatic, and does not authorize any new activities but it is anticipated that recreation will increase as a result of the Monument status.
- Recreational uses are expected to increase, but resulting potential impacts to federally listed or Sensitive plants are not expected to reduce any species' viability.
- Even with measures taken to minimize effects, future proposed activities under the direction of the new Monument Plan could impact habitat characteristics or undiscovered occurrences.
- The possible effects from this planning effort are expected to be so small as to be insignificant.
- The existing Angeles National Forest LMP and the proposed Monument Plan both encourage/emphasize maintenance or improvement of threatened, endangered and sensitive species.
- Continuing management in alignment with the unchanged programmatic design features in the Angeles National Forest LMP would likely prevent or minimize impacts to these species.

Transportation

Affected Environment

Within the San Gabriel Mountains National Monument there are over 496 total miles of existing roads. These are under various jurisdictions, including the Forest Service, Caltrans, and counties. Of these, over 276 miles are open to motor vehicle use.

The primary access routes into the Monument are State and county roads. California Highway 2, also known as the Angeles Crest Highway, crosses through the Monument from east to west. California Highway 39, also known as San Gabriel Canyon Road, crosses through the Monument, connecting the area south of the Monument with CA Hwy 2. Since 1978, a 4.4-mile segment just south of the Hwy 2 intersection has been closed to motor vehicles (administrative and emergency vehicles excepted) due to a washout, along with geologic and safety concerns. In addition, after storms in January 2016, the closure was temporarily extended south to the West Fork of the San Gabriel River due to additional erosion damage and safety concerns. This new closure prevented access to the popular Crystal Lake area. This section of highway was repaired in May 2016, and now the public can again access Crystal Lake. Caltrans spends approximately \$1.5 million per year to manage Hwy 39.



Figure 11. Closed portion of Hwy 39 south of Hwy 2, just west of Mt Islip

There are also two OHV areas within the Monument: Little Rock and San Gabriel Canyon. These areas provide designated acreage for OHV riding and play. San Gabriel Canyon offers over 160 acres and is open weekends and major holidays. Little Rock is open weekends outside the rainy season and includes the 0.8-mile Little Rock Canyon OHV trail. Outside these areas, no separate OHV trails are designated for public motor vehicle use within the Monument. Mixed use analyses are completed on all roads open to OHV motorcycles and ATVs.



Figure 12. San Gabriel Canyon OHV area



Figure 13. Jarvi Memorial Vista, along Hwy 2

There are numerous other facilities in the Monument, including trailheads, picnic sites, campgrounds, vista points, interpretive centers, as well as snow play and ski areas along Hwy 2.



Figure 14. Chilao visitor center

Transportation-related management challenges currently identified include: congestion, overuse, limited capacity, long-term operation and maintenance costs exceeding annual funding, issues

associated with jurisdiction over roads and associated maintenance responsibilities, and associated resource impacts. There are numerous partnership opportunities that are currently being explored with various partners in surrounding cities and communities adjacent to the Monument and beyond.

Environmental Consequences

No action

The no-action alternative is required by the National Environmental Policy Act and serves as a baseline to compare effects of action alternatives.

Current management would continue in accordance with the 2006 Angeles National Forest Land Management Plan, relevant amendments, and interim management direction. Because this alternative is the continuation of current management and would not result in changes to the existing Forest Plan, protections of Monument objects would only be provided where existing goals or objectives address them.

Plan components do not apply to the no-action alternative because a Monument Plan would not be proposed under this alternative; no changes would be made to the existing Forest Plan or applicable amendments in the planning area under the no-action alternative. Continuing current management under the no-action alternative would include the use of standard operating procedures and best management practices from the Forest Plan for management of lands within the Monument.

The no-action alternative does not meet the purpose and need of complying with the Presidential Proclamation establishing the San Gabriel Mountains National Monument to complete a Monument management plan in the 3 years provided or providing expanded opportunities.

Direct and Indirect Effects – No Action

There would be no direct effects associated with the no-action alternative. There would likely be minor positive indirect effects, since the existing Forest Plan would still provide direction for the Monument and would guide subsequent management actions, including environmental analysis and decision making.

Cumulative Effects – No Action

Modest negative cumulative effects to infrastructure associated with population growth and increased authorized and unauthorized uses are expected to occur under the no-action alternative. A slow increase of use without a specific attempt to provide alternative transportation, additional parking, and reducing resource damage in sensitive areas would result in slowly deteriorating and/or inadequate infrastructure, likely to adversely impact the objects of interest. Management in accordance with the existing Forest Plan would help offset these effects, including restoration and removal of unneeded facilities providing positive effects, though at a decreased level compared to the proposed action.

Proposed Action

Direct and Indirect Effects – Proposed Action

The Forest Service proposes to change some existing management direction in the Forest Plan according to the 2012 Planning Rule to be consistent with the Presidential Proclamation establishing the Monument and to capture those changes in the Monument Management Plan. All other direction from the Forest Plan would apply, be included in the standalone Monument Management Plan provided as an appendix to the EA and tiered to for analysis.

The proposed changes to the Forest Plan modernize the direction in accordance with the latest Forest Service policy, and also bring the direction more explicitly in line with the Proclamation requirements. It is assumed that there would be no direct effects due to the new Monument Plan, since any site-specific changes would require subsequent environmental analysis and decision making. Based on this concept, no effects are quantified here. However, the new direction is expected to eventually lead to, and inform, subsequent actions. Therefore, indirect effects are expected to occur and are presented below.

Public safety

The proposed action could have positive effects, provided improvements to traffic flow and congestion occur. Less congestion, more efficient traffic flows, alternative means of transportation, including shuttle bus service connecting surrounding communities and public transportation hubs, and additional parking could improve driver, passenger, and pedestrian safety.

Traffic and parking

The proposed action could have positive effects provided reductions in passenger car vehicle use occur in locations and at times when overcapacity is occurring, along with improvements to traffic flow and parking taking place. Alternative transportation and connectivity to public transportation outside of the Monument could further reduce congestion and parking problems. Continued partnerships with transportation agencies, including members of the SCAG, would provide further opportunities for improvements and collaboration. Efforts to improve the use will be explored in Master Development Plans for various recreation sites in San Gabriel Canyon.

Changes to the Forest transportation system, including roads and trails

Positive changes to the system could involve the removal of unnecessary roads, along with responsible investments and improvements in roads determined to be needed for long-term access and utilization. These changes would be informed by the new Monument Plan, as well as the Angeles Roads Analysis Process. Other minor positive effects would be associated with the economics of eliminating unnecessary roads, and therefore, unnecessary road costs. Last of all, minor to moderate positive resource effects could be associated with the removal of unnecessary roads as well as with the improvement of needed system roads.

Changes to other developed facilities

No direct changes to other developed facilities are expected prior to subsequent environmental analysis. Moderate positive effects are expected over time with facility changes associated with alternative transportation, additional parking, and reducing resource damage in sensitive areas—such as riparian areas. In accordance with the proposed Monument Plan, expansions in recreation

infrastructure would be balanced by restoration and removal of unneeded facilities that do not meet user needs or are in conflict with resource protection needs.

Cumulative Effects – Proposed Action

Modest positive cumulative effects are expected over time with facility changes associated with alternative transportation, additional parking, and reducing resource damage in sensitive areas – such as riparian areas. Effects associated with the Monument Plan are expected to offset negative effects associated with population growth and increased authorized and unauthorized uses.

In accordance with the proposed Monument Plan, enhancements to recreation infrastructure would be balanced by consideration of restoration and removal of unneeded facilities that do not meet user needs or are in conflict with resource protection needs.

Wilderness and Special Designated Areas

Affected Environment

Wilderness

The importance of wilderness within the San Gabriel Mountains National Monument is captured in the paragraphs below from the 2014 Presidential Proclamation:

Although proximate to one of America's most urban areas, the region has untrammled wilderness lands of the highest quality, including four designated wilderness areas: San Gabriel, Sheep Mountain, Pleasant View Ridge, and Magic Mountain. These lands provide invaluable backcountry opportunities for the rapidly expanding nearby communities and also provide habitat for iconic species including the endangered California condor and least Bells' vireo, and the Forest Service Sensitive Nelson's bighorn sheep, bald eagle, and California spotted owl.

There are four designated wilderness areas totaling about 117,898 acres within the Monument, including 39,973 acres in two wilderness areas legislatively designated (through the ‘Omnibus Public Land Management Act of 2009’) since the Forest Plan was implemented in 2006. The following table lists the designated wilderness areas within the Monument.

Table 26. Angeles National Forest wilderness designated within the monument

Resource Element	Total Acres* (Acres within Monument)	Percent of Monument
Sheep Mountain	43,182	12
San Gabriel	35,738	10
Pleasant View Ridge	27,040	8
Magic Mountain	11,938	3
Total	117,898	33

*Acres are approximate

The Monument also includes areas of recommended wilderness, an area adjacent to the Sheep Mountain Wilderness (about 14,890 acres). Areas allocated to recommended wilderness are managed to protect and maintain their wilderness characteristics. The Angeles National Forest

manages recommended wilderness land use zones in a manner similar to designated wilderness until they are either designated wilderness by Congress or the area is released from consideration (USDA Forest Service 2013b, page 241).

Detailed descriptions of the Sheep Mountain and San Gabriel Wilderness Areas and Sheep Mountain recommended wilderness can be found in Forest Plan, Part 2: Appendix A – Special Designation Overlays (USDA Forest Service 2005b, page 81-83).



Figure 15. Sheep Mountain Wilderness and recommended wilderness viewed from East Fork Trailhead

Public and legislative interest in adding other lands to the National Wilderness Preservation System continues, either as additions to existing wilderness or as new wilderness (USDA Forest Service 2013b, page 97).

Recreation use within the Angeles National Forest wilderness areas has varied since 2001 according to National Visitor Use Monitoring (NVUM) reports. Recreation use was higher in 2011 than in previous years of monitoring. Wilderness values and resources, naturalness, wildness and solitude may still be affected by recreation use. Without appropriate management, the quality and values of wilderness may be compromised. The following table displays designated wilderness visits.

Table 27. Designated wilderness visits across the Angeles National Forest (USDA Forest Service 2006c, 2011 (NVUM reports) and USDA Forest Service 2013b)

Fiscal Year	Visitation	90% Confidence Level (%)#
2001	100,000	unknown
2006	34,000	±34.2
2011	167,000	±41.7

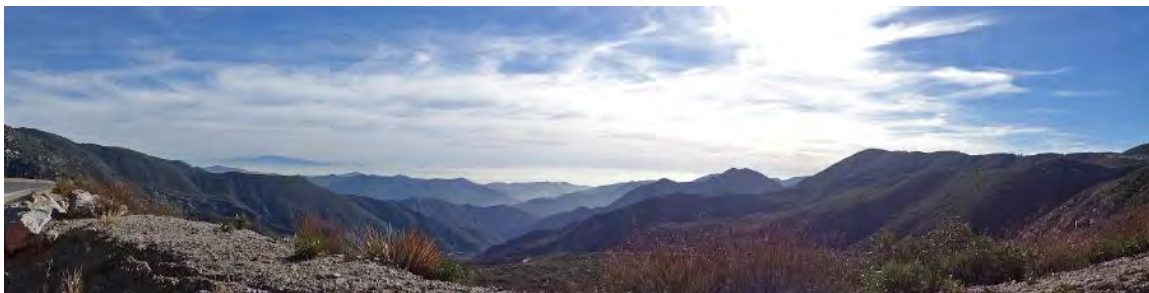


Figure 16. San Gabriel Wilderness viewed from San Gabriel Canyon Road, CA-39

Inventoried Roadless Areas

The importance of the inventoried roadless areas within the Monument is captured in the paragraphs below from the 2014 Presidential Proclamation:

Inventoried roadless areas and lands recommended for designation as Wilderness also provide important habitat, including a connectivity corridor important for wide ranging species, such as the mountain lion.

Inventoried roadless areas were originally mapped as a result of the second Roadless Area Review (RARE II), which was documented in a final environmental impact statement dated January of 1979, and refined during development of the national forest land management plans. These maps were identified in a set of inventoried roadless area maps, contained in the Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000. A final Roadless Area Conservation Rule (RACR) was published in May of 2005, allowing optional State government involvement through a petition process. An updated inventory has been prepared to reflect changes in the roadless inventory due to analysis and evaluation made in the 2005 forest plan revision, completed under the 1982 National Forest Management Act planning rule. Inventoried roadless area maps can be found in Appendix C of the Forest Plan, Part 2 (USDA Forest Service 2005b).

About 84,142 acres of inventoried roadless areas are located within the Monument. Portions of the Magic Mountain and Pleasant View Inventoried Roadless Areas were designated as wilderness by Congress in 2009. The remaining inventoried roadless areas management is incorporated into land use zones in the Forest Plan, Part 2.

The land use zones were changed through a Forest Plan amendment in October 2014. Within the Monument, this amendment changed approximately 780 acres from Back Country and Back Country Motorized Use Restricted to Backcountry Non-Motorized zone within the West Fork Inventoried Roadless Area.

Wild and Scenic Rivers

The importance of rivers and streams within the Monument is captured in the paragraphs below from the 2014 Presidential Proclamation:

The San Gabriels' rivers not only provide drinking water but are also areas of high ecological significance supporting rare populations of native fish, including the threatened Santa Ana sucker. The San Gabriel River supports rare arroyo chub and Santa Ana speckled dace, a species found only in the Los Angeles Basin. Little Rock Creek tumbles down from the northern escarpment to the Mojave Desert below and supports important populations of the endangered mountain yellow-legged frog and arroyo toad, as well as the threatened California red-legged frog. On the slopes of Mt. San Antonio, San Antonio Creek rushes through an alpine canyon studded with stalwart bigcone Douglas fir, and the magnificent 75-foot San Antonio Falls draw thousands of visitors every year.

Wild and Scenic River eligibility (an inventory and evaluation of whether a river is free-flowing and possesses one or more outstandingly remarkable values including scenery, recreation, geology, fish and wildlife, history, cultural (prehistoric), or similar values) was completed for the four southern California national forests. If found eligible, a river segment was then analyzed as

to its current level of development (water resources projects, shoreline development, and accessibility) and a recommendation was made that it be placed into one of three classes—wild, scenic or recreational. The final procedural step (suitability) provides the basis for determining whether to recommend to Congress an eligible river as part of the national system. The suitability study phase will be initiated at a later date for the five eligible rivers on the Angeles National Forest.

The Forest Plan provides direction to manage eligible rivers for their potential inclusion into the National Wild and Scenic River System, to protect free-flowing character, water quality, outstandingly remarkable values and recommended classification.

Rivers identified as potentially eligible for designation as wild and scenic rivers within the Monument include:

- Little Rock Creek
- San Antonio Canyon Creek
- San Gabriel River (East, West and North Forks)

Detailed descriptions of these eligible wild and scenic rivers can be found in Forest Plan, Part 2: Appendix A – Special Designation Overlays (USDA Forest Service 2005b, page 83-85).



Figure 17. East Fork San Gabriel River at East Fork Trailhead



Figure 18. North Fork San Gabriel River at West Fork Trailhead

Nationally Designated Roads and Trails (Resource Indicator and Measure 6)

The importance of nationally designated roads and trails within the Monument is captured in the paragraph below from the 2014 Presidential Proclamation:

Enthusiasm for recreating in the mountains continues today. The San Gabriels offer hundreds of miles of hiking, motorized, and equestrian trails, including several National Recreational Trails and 87 miles of the Pacific Crest National Scenic Trail...

Nationally designated roads and trails within the Monument include:

- Angeles Crest Scenic Byway (California State Highway 2) is National Forest Scenic Byway and has been described “the most scenic and picturesque mountain road in the state.” (<http://angelescrestscenichighway.com/>)
- Pacific Crest National Scenic Trail – This 2,650-mile hiking and equestrian trail stretches from Mexico to Canada. About 87 miles are in the Monument with terrain varying from high desert to subalpine. (USDA Forest Service 2015)
- Silver Moccasin National Recreation Trail – This 53-mile route snakes across the heart of the San Gabriel Mountains. Beginning at Chantry Flats near Sierra Madre, the trail follows numerous steep canyons and pine studded ridges then climbs to lofty Mt. Baden Powell before making its final descent to Vincent Gap on the Angeles Crest Highway near Wrightwood. (USDA Forest Service 2015)

- Gabrielino National Recreation Trail – This 28-mile adventure begins at the mouth of Arroyo Seco Canyon, travels northeast to Redbox and curves down to Chantry Flats north of Sierra Madre. The Gabrielino Trail is classified as moderate to strenuous with an elevation change of 4,800 feet. (USDA Forest Service 2015)
- West Fork National Recreation Trail (National Scenic Bikeway) is 7.4 miles long. It begins at West Fork Parking and ends at Cogswell Dam. The trail is open for the following uses: Mountain biking. (USDA Forest Service 2016a)

Experimental Forest

Experimental forests and ranges provide lands for conducting research that serves as a basis for the management of forests and rangelands. The San Dimas Experimental Forest (SDEF) is a protected field laboratory under the joint management of the Pacific Southwest Research Station and the Angeles National Forest for the studies of hydrology, fire, and other topics relating to the ecology of chaparral and related ecosystems. A detailed description of San Dimas Experimental Forest can be found in Forest Plan, Part 2: Appendix A – Special Designation Overlays (USDA Forest Service 2005b, page 89-90).

The importance of this designated area within the Monument is captured in the paragraph below from the 2014 Presidential Proclamation:

Closer to earth, the San Dimas Experimental Forest, established in 1933 as a hydrologic laboratory, continues the study of some of our earliest and most comprehensively monitored research watersheds, providing crucial scientific insights.

Research Natural Areas

Research natural areas include relatively undisturbed areas of the national forest that form a long-term network of ecological reserves designated for research, education, and the maintenance of biodiversity. This designation applies to both established and proposed research natural areas (USDA Forest Service 2005b, page 14).

Research natural areas are selected to preserve a spectrum of relatively pristine areas that represent a wide range of natural variability within important natural ecosystems and environments, and areas that have unique characteristics of scientific importance (USDA Forest Service 2005b, page 14).

Established research natural areas within the Monument include: Falls Canyon and Fern Canyon. Detailed descriptions of these research natural areas can be found in Forest Plan, Part 2: Appendix A – Special Designation Overlays (USDA Forest Service 2005b, pages 85-86).

Special Interest Areas

Special interest areas protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. Uses that are compatible with maintaining the target of the area's designation are appropriate (USDA Forest Service 2005b, page 14).

Special interest areas include:

- Devil's Punchbowl
- Mt. Baden-Powell
- Mt. San Antonio
- Aliso-Arrastre Middle and North

Detailed descriptions of these special interest areas can be found in Forest Plan, Part 2: Appendix A – Special Designation Overlays (USDA Forest Service 2005b, page 86-88).

Environmental Consequences

No Action

Under the no-action alternative, current management would continue in accordance with the Forest Plan, relevant amendments, interim management direction, and the Monument Proclamation.

Because this alternative is the continuation of current management and would not result in changes to the existing Forest Plan direction, protections of Monument objects would only be provided where existing plan components (desired conditions, standards, guidelines, etc.) address them.

The Forest Plan has plan components (desired conditions, standards, guidelines, etc.) for designated areas in the Monument. The existing vision, strategy and design criteria for designated areas are in place and provide a solid framework for addressing management of these designated areas within the Monument. The no-action alternative proposes no land use zone changes from current Forest Plan guidance, as amended in 2014.

The Monument Proclamation includes withdrawal of lands from uses associated with mining laws, subject to valid existing uses. With the Monument Proclamation, there would be less potential impacts from these types of activities within the Monument, in the designated areas not already withdrawn under the Forest Plan, such as inventoried roadless areas.

The resource indicators and measures for the no-action alternative are the same as those listed for the existing condition. The no-action alternative would not include descriptions of the wilderness areas designated in 2009, and place-based program emphasis would not reflect these wilderness area designations.

The no-action alternative would not be in compliance with the direction in the Monument Proclamation to prepare a management plan within 3 years of designation.

Proposed Action

Direct and Indirect Effects – Proposed Action

Wilderness

Management of designated wilderness is governed by the 1964 Wilderness Act and subsequent wilderness-specific legislation. The Angeles National Forest also manages recommended

wilderness land use zones in a manner similar to designated wilderness until they are either designated wilderness by Congress or removed from recommended wilderness status.

The proposed action proposes adding the Magic Mountain Wilderness and Pleasant View Ridge Wilderness in the various sections of Part 2 of the Plan including: Existing Wilderness acres, appropriate Places where these wilderness areas are located, including desired conditions and program emphasis for those Places, and describing these wilderness areas in Part 2, Appendix A. The proposed action also proposes changing the land use zones to reflect these new designated wilderness areas.

Management activities here are limited to those that support wilderness values. The Forest Service generally allows natural processes to occur with few restrictions or restraints, consistent with the Wilderness Act's direction that such areas be untrammelled by man. Wilderness areas are subject to more protective management requirements than the management set forth in the Monument Proclamation; as such the wilderness areas designated in 2009 and included within the Monument are to be managed to a standard that will ensure their protection and preservation. When management actions are taken, the most common type of wilderness management is the control of visitation and recreation. Commercial uses are administered by special-use authorizations and associated operation plans. Because direction for wilderness is already specified in law, regulation, agency policy and area-specific management implementation schedules, management of existing designated wilderness would not vary by alternative (USDA Forest Service 2013b, page 241).

Effects to designated wilderness from unplanned natural occurrences and types of management activities (e.g., vegetation management, fuels management, recreation use) that may occur as the amended Forest Plan is implemented are covered in the Forest Plan FEIS (USDA Forest Service 2005a, pages 517-520) and Forest Plan amendment FSEIS (USDA Forest Service 2013b, pages 242-244). The effects described in these documents apply in this analysis, since these types of occurrences and activities will continue under the proposed plan amendment implementation.

Inventoried Roadless Areas

Proposed changes in land use zones are from less restrictive to more restrictive. The land use zones boundary changes proposed in this alternative reflect the 2009 designation of two new wilderness areas, which results in stricter Land Use Zone management for these areas. This alternative proposes no changes to land use zones that are less restrictive than previous management.

The Suitability of Lands proposed in this alternative reflect the Monument proclamation withdrawal of lands from uses associated with mining laws, subject to valid existing uses. This new suitability of lands would result in maintaining and enhancing the roadless character within the inventoried roadless areas.

Wild and Scenic Rivers

This alternative proposes no changes to the plan components associated with the eligible wild and scenic rivers. The Forest Plan provides direction to manage eligible rivers for their potential inclusion into the National Wild and Scenic River System, to protect free-flowing character, water quality, outstandingly remarkable values and recommended classification. No agency management changes are anticipated in any eligible river segment due to potential land use zone revisions or plan component additions or modifications.

The Suitability of Lands proposed in this alternative reflect the Monument proclamation withdrawal of lands from uses associated with mining laws, subject to valid existing uses. The new proposed suitability of lands would have the potential to have a positive influence on eligible wild and scenic river's water quality, free flowing character, and many of the outstandingly remarkable values.

Nationally Designated Roads and Trails

This alternative proposes several new plan components for the Pacific Crest National Scenic Trail including guidelines for sustainable recreation and identifying the foreground corridor of the trail as not suitable for special-use authorizations for new communication sites and wind generation sites. The proposed plan components for this trail provide guidance so that other uses do not substantially interfere with the nature and purposes for which the trail was designated. There are no changes to the plan components associated with the other nationally designated roads and trails. The proposed plan components for transportation and recreation may indirectly affect recreation use and maintenance of these routes. The proposed new management approaches for roads and trails in the transportation section may lead to improved roads and trails.

As the proposed changes to Program Strategies and Tactics for Recreation and Transportations Systems are implemented, recreation use levels may increase and be sustainably managed by working with partners and capacity concerns may be addressed if parking capacity limits are evaluated.

Experimental Forest

This alternative proposes a new management approach to evaluate heritage sites for eligibility under the National Register of Historic Places nominate eligible sites as appropriate, including the San Dimas Experimental Forest. Analysis of this plan component is addressed in the Heritage analysis.

This alternative proposes no other changes to the plan components, land use zones, or suitability of lands that differs from that in the Forest Plan for the San Dimas Experimental Forest.

Research Natural Areas

The Suitability of Lands proposed in this alternative reflect the Monument proclamation withdrawal of lands from uses associated with mining laws, subject to valid existing uses. The new proposed suitability of lands would have the potential to have a positive influence on research natural areas to maintain unmodified conditions and natural processes.

This alternative proposes no other changes to the plan components or land use zones that differs from that in the Forest Plan for research natural areas.

Special Interest Areas

This alternative proposes a new management approach to evaluate heritage sites for eligibility under the National Register of Historic Places nominate eligible sites as appropriate, including the Aliso-Arrastre Special Interest Area. Analysis of this plan component is addressed in the Heritage Resources section above.

This alternative proposes no other changes to the plan components or land use zones that differs from that in the Forest Plan for Research Natural Areas.

The Suitability of Lands proposed in this alternative reflect the Monument Proclamation withdrawal of lands from uses associated with mining laws, subject to valid existing uses. The new proposed suitability of lands would have the potential to have a positive influence on special interest areas to protect and manage them for the values and features for which they are established.

Table 28. Resource indicators and measures for the proposed action

Proposed action differences in *bold italics*

Resource Element	Resource Indicator	Measure	Proposed Action
Designated Wilderness Areas	Are there plan components for wilderness areas?	Yes/No	Yes – Forest Plan Part 1, Goal 3.2 Retain a natural evolving character within wilderness. Part 2, multiple sections. Wilderness standards: ANF S2, ANF S3 (page 79) Strategies and Tactics: SD-1 Wilderness and REC 1 - Recreation Opportunity
Designated Wilderness Areas	Does the plan describe all designated wilderness areas?	Yes/No	Yes – proposed changes to Designated Areas section and Special Designation Overlays
Recommended Wilderness Areas	Are there plan components for the designated area?	Yes/No	Yes – Part 2, multiple sections. Strategies and Tactics: SD-1 Wilderness
Inventoried Roadless Areas	Are there plan components for the designated area?	Yes/No	Yes – Land Use Zones changes reflective of 2009 wilderness designations
Eligible wild and scenic rivers	Are there plan components for the designated area?	Yes/No	Yes – Forest Plan Part 2 - Strategies and Tactics: SD-3 Wild and Scenic Rivers Part 3 - Wild and Scenic River Standards S59
Nationally designated roads and trails	Are there plan components for the designated area?	Yes/No	Yes – Forest Plan Part 1, Part 2, usually with recreation, possibly with transportation or roads and trails. Part 2, Place-specific Standards ANF S1 Sustainable Recreation proposed plan components Suitability of Lands proposed changes
Experimental Forest	Are there plan components addressing management in the experimental forest?	Yes/No	Yes – Forest Plan Part 1, Part 2 Strategies and Tactics: SD-4 Special Interest Areas New Heritage Resources Management Approach proposed plan components
Research Natural Areas	Are there plan components for the designated area?	Yes/No	Yes – Forest Plan Part 2 Strategies and Tactics: SD-3 Research Natural Areas

Resource Element	Resource Indicator	Measure	Proposed Action
Special Interest Areas	Are there plan components for the designated area?	Yes/No	Yes – Forest Plan Part 2 Strategies and Tactics: SD-4 Special Interest Areas Heritage Resources proposed plan components

Cumulative Effects – Proposed Action

Cumulative consequences are those consequences of past, present, and foreseeable activities on non-Federal lands that, in conjunction with management activities likely to occur on the Forest, may intensify, negate, improve or otherwise affect scenic resources. Below are considerations of consequences of activities that would likely occur on lands of other ownership adjacent to or near the Forest.

Wilderness within southern California national forests are major contributors to the National Wilderness Preservation System. There are few other places in the nation where so many national forest wilderness areas are so close to so many people. Wilderness and recommended wilderness land use zones are important to visitors for scenic beauty, solitude, challenge, and the absence of motorized, mechanized vehicles and human developments. They are also vital reservoirs of a natural environment that is rapidly diminishing in this area (USDA Forest Service 2013b, page 295-296).

The potential for cumulative effects outside of the planning area on adjacent national forest system lands remains the same as described in the Forest Plan FEIS (USDA Forest Service 2005a, page 520-521).

Cumulative effects for designated areas from other land management plan types of projects and types of management activities that may occur as the Forest Plan is implemented are covered in the Forest Plan FEIS (USDA Forest Service 2005a, pages 520-521) and Forest Plan amendment FSEIS (USDA Forest Service 2013b, pages 295-300). The cumulative effects described in these documents for any other designated area apply in this analysis, since these types of occurrences and activities will continue under the proposed plan amendment.

The following table summarizes Federal and State wilderness by the counties included in this cumulative effects analysis.

Table 29. Summary of Federal and State wilderness by county (USDA Forest Service 2013b)

County	Total BLM/NFS/FWS/NPS Area in Acres	BLM Wilderness	NFS Wilderness	FWS Wilderness	NPS Wilderness	Total Federal Wilderness	State Park Lands	State Wilderness Lands
Los Angeles	681,388	0	123,856	0	0	123,856 (18%)	51,355	0 (0%)
San Bernardino	8,240,890	1,844,326	74,860	2,797	1,096,546	3,301,529 (37%)	21,664	0 (0%)

Agencies and Persons Consulted

The Forest Service consulted the following individuals, Federal, State, tribal, and local agencies during the development of this environmental assessment:

Federal, State, and Local Agencies:

SCAG

City of Duarte

City of Azusa

Caltrans

LA County Metropolitan Transportation Authority

CA Highway Patrol

LA County Fire

Sheriff's Office

Tribes:

San Manuel Band of Serrano Mission Indians

Santa Ynez Band of Mission Indians

Tejon Indian Tribe

Gabrieleno Tribe

Others:

Asian Pacific Policy Council

San Gabriel Mountains Forever

The City Project.

San Gabriel Mountains Community Collaborative

BikesSGV

Acronyms

BAER – Burned Area Emergency Response

EA – Environmental assessment

EUI – Ecological unit inventory

FLTP – Federal Lands Transportation Program

IRA – Inventoried Roadless Area

MVUM – Motor Vehicle Use Map

NVUM – National Visitor Use Monitoring

OHV – Off-highway vehicle

PCT – Pacific Crest Trail

RNA – Research Natural Area

ROS – Recreation Opportunity Spectrum

SAC – Scenic attractiveness class

SCAG – Southern California Association of Governments

SDEF – San Dimas Experimental Forest

SIA – Special Interest Area

WSR – Wild and Scenic River

Glossary

Burned Area Emergency Response (BAER) process.

Closure. Restriction of motor vehicle use on a travelway by means of elimination or prohibition. Closures may be permanent or temporary depending on management objectives.

Decommissioning. Activities that result in the stabilization and restoration of unneeded roads or trails to a more natural state.

Designated road, trail, or area. An NFS road, an NFS trail, or an area on NFS lands that is designated for motor vehicle use pursuant to 36 CFR 212.51 on a motor vehicle use map.

Forest road or trail. A road or trail wholly or partly within or adjacent to and serving the NFS that the Forest Service determines is necessary for the protection, administration, and utilization of the NFS and the use and development of its resources.

Forest transportation atlas. A display of the system of roads, trails, and airfields of an administrative unit.

Forest transportation system. The system of NFS roads, NFS trails, and airfields on NFS lands.

Historic Property. Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

Hydrogeologic. (Hydro- meaning water, and -geology meaning the study of the Earth) is the area of geology that deals with the distribution and movement of groundwater in the soil and rocks of the Earth's crust (commonly in aquifers). The term geohydrology is often used interchangeably.

Interstitial. Occurring within the pores of a rock.

Maintenance. The upkeep of the entire forest transportation facility including surface and shoulders, parking and side areas, structures, and such traffic-control devices as are necessary for its safe and efficient utilization.

Maintenance Levels. Defines the level of service provided by, and maintenance required for, a specific road, consistent with road management objectives and maintenance criteria.

LEVEL 1. These are roads that have been placed in storage between intermittent uses. The period of storage must exceed 1 year. Basic custodial maintenance is performed to prevent damage to adjacent resources and to perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate" all traffic. These roads are not shown on motor vehicle use maps.

Roads receiving level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic but may be available and suitable for non-motorized uses.

LEVEL 2. Assigned to roads open for use by high clearance vehicles. Passenger car traffic, user comfort, and user convenience are not considerations. Warning signs and traffic control devices are not provided with the exception that some signing, such as W-18-1 "No Traffic Signs," may be posted at intersections. Motorists should have no expectations of being alerted to potential hazards while driving these roads. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to:

- a. Discourage or prohibit passenger cars, or
- b. Accept or discourage high clearance vehicles.

LEVEL 3. Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. The Manual on Uniform Traffic Control Devices (MUTCD) is applicable. Warning signs and traffic control devices are provided to alert motorists of situations that may violate expectations.

Roads in this maintenance level are typically low speed with single lanes and turnouts. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

LEVEL 4. Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. Manual on Uniform Traffic Control Devices is applicable. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

LEVEL 5. Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. Manual on Uniform Traffic Control Devices is applicable. The appropriate traffic management strategy is "encourage."

Motor vehicle. Any vehicle which is self-propelled, other than: (1) A vehicle operated on rails; and (2) Any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

Motor vehicle use map. A map reflecting designated roads, trails, and areas on an administrative unit or a Ranger District of the NFS.

National Forest System road. A forest road other than a road which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority.

National Forest System trail. A forest trail other than a trail which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority.

Objective Maintenance Level. The maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level. The transition from operational maintenance level to objective maintenance level may depend on reconstruction or disinvestment.

Operational Maintenance Level. The maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns. It defines the level to which the road is currently being maintained.

Realignment. Activity that results in a new location of an existing road or portions of an existing road and treatment of the old roadway.

Reconstruction (road or trail). Improvement and/or realignment of a travelway.

Road. A motor vehicle route over 50 inches wide, unless identified and managed as a trail.

Road improvement. Activity that results in an increase of an existing road's traffic service level, expands its capacity, or changes its original design function.

Storage. Used to describe an intermittent use road during the time it is closed to vehicular use. When referring to a NFS road, storage is synonymous with a Maintenance Level 1.

Trail. A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail.

Unauthorized Road or Trail. A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas.

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Appendix A. Presidential Proclamation

Presidential Proclamation -- San Gabriel Mountains National Monument

ESTABLISHMENT OF THE SAN GABRIEL MOUNTAINS NATIONAL MONUMENT

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

Known as the crown to the Valley of Angels, the peaks of the San Gabriel Mountains frame the Los Angeles skyline. Over 15 million people live within 90 minutes of this island of green, which provides 70 percent of the open space for Angelenos and 30 percent of their drinking water. Millions recreate and rejuvenate in the San Gabriels each year, seeking out their cool streams and canyons during the hot summer months, their snowcapped mountains in the winter, and their trail system and historic sites throughout the year.

The San Gabriels are some of the steepest and most rugged mountains in the United States. Situated adjacent to the mighty San Andreas Fault, the mountains are geologically active, migrating northwest at an average of 2 inches each year. Deep canyons, many with precious perennial streams, score the mountain peaks -- north toward the arid Mojave Desert and south to the temperate San Gabriel Valley.

The rich cultural history of these mountains echoes their striking geologic features and ecological diversity. Cultural resources represent successive layers of history, including that of Native Americans, Spanish missionaries and colonialists, Mexican rancheros, and Euro-American settlers and prospectors. Native American history runs deep, at least 8,000 years, exemplified by the Aliso-Arrastre Special Interest Area known for its heritage resource values, including several rock art and cupules features, the concentration of which is unique to southern California. Due to urban development and natural processes, this area also contains the best preserved example of a Gabrielino pictograph that characterizes the California Tradition of rock painting.

Early European explorers' use of the area consisted mainly of early explorers traveling through the area. Over time, land grants, Spanish missions, and townsites surrounded the mountains, relying heavily on them for water, building supplies, and game.

By the 1840s, gold prospectors poured into the mountains. Large placer and lode mining operations were established in the San Gabriels, with mixed success. The historic mining town of Eldoradoville, located along the East Fork of the San Gabriel River, had at its peak in 1861 a population of over 500 miners, with general stores, saloons, and dance halls along with numerous mining camps of tents, wooden shacks, and stone cabins along the river.

In the early 20th century, responding to the burgeoning interest of urban dwellers in backcountry hiking and weekend rambling, a number of trails, lodges, and camps -- many of which were accessible only by horseback or on foot -- were constructed throughout the mountains. Remnants of these historic resorts, which attracted local residents and Hollywood stars alike, can still be seen and are important aspects of the region's social and cultural history.

Enthusiasm for recreating in the mountains continues today. The San Gabriels offer hundreds of miles of hiking, motorized, and equestrian trails, including several National Recreational Trails and 87 miles of the Pacific Crest National Scenic Trail. In the footprint of the resorts of the Great Hiking Era, many visitors partake of Forest Service campgrounds built on the foundations of early 20th-century lodges and resorts. In a region with limited open space, the mountains are the backyard for many highly urbanized and culturally diverse populations within Los Angeles, underscoring the need for strong partnerships between this urban forest and neighboring communities.

The mountains have hosted world-class scientists, studying the terra firma at their feet as well as the distant galactic stars. Astronomer Edwin Hubble performed critical calculations from his work at the Mt. Wilson Observatory, including his discovery that some nebulae were actually galaxies outside our own Milky Way. Assisted by Milton Humason, he also discovered the presence of the astronomical phenomenon of redshift that proved the universe is expanding. Also on Mt. Wilson, Albert Michelson, America's first Nobel Prize winner in a science field, conducted an experiment that provided the first modern and truly accurate measurement of the speed of light. Closer to earth, the San Dimas Experimental Forest, established in 1933 as a hydrologic laboratory, continues the study of some of our earliest and most comprehensively monitored research watersheds, providing crucial scientific insights.

Although proximate to one of America's most urban areas, the region has untrammeled wilderness lands of the highest quality, including four designated wilderness areas: San Gabriel, Sheep Mountain, Pleasant View Ridge, and Magic Mountain. These lands provide invaluable backcountry opportunities for the rapidly expanding nearby communities and also provide habitat for iconic species including the endangered California condor and least Bells' vireo, and the Forest Service Sensitive Nelson's bighorn sheep, bald eagle, and California spotted owl. Inventoried roadless areas and lands recommended for designation as Wilderness also provide important habitat, including a connectivity corridor important for wide ranging species, such as the mountain lion.

The importance of the San Gabriels' watershed values was recognized early. As early as the late 1800s, local communities petitioned to protect the mountains for their watershed values. As a result, President Benjamin Harrison established the San Gabriel Timberland Reserve in 1892, the precursor to the Angeles National Forest.

Reflecting the needs of the nearby population centers, the San Gabriels host an array of flood control and water storage, delivery, and diversion infrastructure, including six large retention dams as well as numerous telecommunications and utility towers.

The San Gabriels' rivers not only provide drinking water but are also areas of high ecological significance supporting rare populations of native fish, including the threatened Santa Ana sucker. The San Gabriel River supports rare arroyo chub and Santa Ana speckled dace, a species found only in the Los Angeles Basin. Little Rock Creek tumbles down from the northern escarpment to the Mojave Desert below and supports important populations of the endangered mountain yellow-legged frog and arroyo toad, as well as the threatened California red-legged frog. On the slopes of Mt. San Antonio, San Antonio Creek rushes through an alpine canyon studded with stalwart bigcone Douglas fir, and the magnificent 75-foot San Antonio Falls draw thousands of visitors every year.

In addition to rivers, the San Gabriels contain two scenic lakes, both formed by the area's remarkable geologic forces. The alpine Crystal Lake, found high in the mountains, was formed from one of the largest landslides on record in southern California. Jackson Lake is a natural sag pond, a type of pond formed between the strands of an active fault line -- in this case, the San Andreas.

Climatic contrasts in the San Gabriels range from the northern slope desert region, home to Joshua trees and pinyon pines, to high-elevation white fir and a notable stand of 1,000-year-old limber pines. Vegetation communities, including chaparral and oak woodland, represent a portion of the rare Mediterranean ecosystem found in only 3 percent of the world. Mediterranean climate zones have high numbers of species for their area.

The San Gabriels also provide suitable habitat for 52 Forest Service Sensitive Plants and as many as 300 California-endemic species, including Pierson's lupine and San Gabriel bedstraw, that occur only in the San Gabriel range.

The mountains harbor several of California's signature natural vegetation communities, including the drought-tolerant and fire-adapted chaparral shrubland, which is the dominant community and includes scrub oaks, chamise, manzanita, wild lilac, and western mountain-mahogany. Mixed conifer forest is an associated vegetation community comprising Jeffrey pine, sugar pine, white fir, and riparian woodlands including white alder, sycamore, and willow. These communities provide habitat for numerous native wildlife and insect species, including agriculturally important pollinators, the San Gabriel Mountains slender salamander, San Bernardino Mountain kingsnake, song sparrow, Peregrine falcon, mule deer, and Pallid bat.

WHEREAS section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431) (the "Antiquities Act"), authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected; and

WHEREAS it is in the public interest to preserve and protect the objects of scientific and historic interest at the San Gabriel Mountains;

NOW, THEREFORE, I, BARACK OBAMA, President of the United States of America, by the authority vested in me by section 2 of the Antiquities Act, hereby proclaim the objects identified above that are situated upon lands and interests in lands owned or controlled by the Government of the United States to be the San Gabriel Mountains National Monument (monument) and, for the purpose of preserving those objects, reserve as a part thereof all lands and interests in lands owned or controlled by the Government of the United States within the boundaries described on the accompanying map entitled, "San Gabriel Mountains National Monument" and the accompanying legal description, which are attached to and form a part of this proclamation.

These reserved Federal lands and interests in lands encompass approximately 346,177 acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

All Federal lands and interests in lands within the boundaries of the monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land or other Federal laws, including location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument, or disposition of materials under the Materials Act of 1947 in a manner that is consistent with the proper care and management of the objects protected by this proclamation.

The establishment of this monument is subject to valid existing rights. Lands and interests in lands within the monument's boundaries not owned or controlled by the United States shall be reserved as part of the monument upon acquisition of ownership or control by the United States. To the extent allowed by applicable law, the Secretaries of Agriculture and the Interior shall manage valid Federal mineral rights existing within the monument as of the date of this proclamation in a manner consistent with the proper care and management of the objects protected by this proclamation.

Nothing in this proclamation shall be construed to alter the valid existing water rights of any party, including the United States.

Nothing in this proclamation shall be construed to interfere with the operation or maintenance, nor with the replacement or modification within the existing authorization boundary, of existing water resource, flood control, utility, pipeline, or telecommunications facilities that are located within the monument, subject to the Secretary of Agriculture's special uses authorities and other applicable laws. Existing water resource, flood control, utility, pipeline, or telecommunications facilities located within the monument may be expanded, and new facilities may be constructed within the monument, to the extent consistent with the proper care and management of the objects protected by this proclamation, subject to the Secretary of Agriculture's special uses authorities and other applicable law.

The Secretary of Agriculture (Secretary) shall manage the monument through the Forest Service, pursuant to applicable legal authorities, consistent with the purposes and provisions of this proclamation. The Secretary shall prepare, within 3 years of the date of this proclamation and in consultation with the Secretary of the Interior, a management plan for the monument and shall promulgate such regulations for its management as deemed appropriate. The Secretary shall provide for maximum public involvement in the development of that plan, including, but not limited to, consultation with tribal, State, and local government, as well as community environmental conservation, health, and justice organizations. The plan shall provide for protection and interpretation of the scientific and historic objects identified above and for continued public access to those objects, consistent with their protection. To the maximum extent permitted by other applicable law and consistent with the purposes of the monument, the plan shall protect and preserve Indian sacred sites, as defined in section 1(b) of Executive Order 13007 of May 24, 1996, and access by Indian tribal members for traditional cultural, spiritual, and tree and forest product-, food-, and medicine-gathering purposes.

Nothing in this proclamation shall be construed to enlarge or diminish the rights of any Indian tribe as defined in section 1(b) of Executive Order 13007.

The Secretary shall prepare a transportation plan that specifies and implements such actions necessary to protect the objects identified in this proclamation, including road closures and travel restrictions. For the purpose of protecting the objects identified above, except for emergency or authorized administrative purposes, the Secretary shall limit all motor vehicle use to designated roads, trails, and, in the Secretary's discretion, those authorized off-highway vehicular use areas existing as of the date of this proclamation.

The Secretary shall, in developing any management plans and any management rules and regulations governing the monument, consult with the Secretary of the Interior. The final decision to issue any management plans and any management rules and regulations rests with the Secretary of Agriculture. Management plans or rules and regulations developed by the Secretary of the Interior governing uses within national parks or other national monuments administered by the Secretary of the Interior shall not apply within the monument.

Nothing in this proclamation shall be construed to enlarge or diminish the jurisdiction of the State of California with respect to fish and wildlife management.

Laws, regulations, and policies followed by the United States Forest Service in issuing and administering grazing permits or leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the monument in a manner consistent with the proper care and management of the objects protected by this proclamation.

Nothing in this proclamation shall be construed to alter the authority or responsibility of any party with respect to emergency response activities within the monument, including wildland fire response. The Secretary may carry out vegetative management treatments within the monument, except that timber harvest and prescribed fire may only be used when the Secretary determines it appropriate to address the risk of wildfire, insect infestation, or disease that would endanger the objects identified above or imperil public safety.

Recognizing the proximity of the monument to Class B airspace and that a military training route is over the monument, nothing in this proclamation shall be deemed to restrict general aviation, commercial, or military aircraft operations, nor the designation of new units of special use airspace or the establishment of military flight training routes, over the monument.

Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the monument shall be the dominant reservation.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of the monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this tenth day of October, in the year of our Lord two thousand fourteen, and of the Independence of the United States of America the two hundred and thirty-ninth.

BARACK OBAMA

Appendix B. Projects, Activities, and Factors Considered in Cumulative Effects

The cumulative effects analysis for biological diversity was projected for the planning period (15 years) and the next 50 years, which is longer than the lifespan of most animal species found in the planning area, although not so for perennial plants. The analysis considers the land base that contains all of the National Monument and private and other land ownership within and adjacent to National Forest System lands. Many of the watersheds originating on National Forest System lands are held in mixed ownership at their lower elevations, commonly with urban developments that are near and adjacent to the national forests, which contributes to cumulative impacts.

Projected human population growth throughout all of southern California is expected to bring major increases in pressure upon Monument resources. Increased adjacent urban development also has the potential to affect national forest water, riparian areas, and various biological resources through increased introductions of invasive nonnative species; lighting-up of dark skies; runoff and pollutants from roads, roofs, driveways, fertilized yards, and agricultural areas; and increased or additional harassment of some species from humans, pets not on leashes, and feral cats and dogs.

Increased urbanization has a high potential to result in increased unauthorized uses and criminal activities on the Monument. Arson, cultivation and manufacture of drugs, and trash dumping will continue to have substantial impacts on species and habitats. Unauthorized uses, such as off-route motorized and non-motorized vehicle travel and shooting outside of authorized areas, will continue to be a problem.

Accidental or unintentional human-caused wildfires are expected to increase because of increased use of the Monument and of the roads in or adjacent to Monument lands.

Many activities with the potential to negatively affect plants and animals are outside of Forest Service control and beyond the scope of the plan amendment. Through diligent coordination and collaboration with local community groups, governments, and other agencies, the Forest Service can reduce the potential for future adverse cumulative effects through land use planning efforts, habitat restoration projects, and land acquisitions. Of greatest concern are those actions that have effects on: (a) water and riparian connectivity with off-forest stream systems, (b) habitat linkages between and within National Forest System lands for wide-ranging species, and (c) protection of remaining open spaces adjacent to National Forest System lands that currently provide terrestrial and aquatic species habitat. Opportunities to halt the loss of these habitats decreases as communities grow and the cost to purchase or trade for land increases.

The greatest threat to maintaining connectivity between large blocks of natural habitat is urbanization (California Wilderness Coalition 2001, Stephenson and Calcarone 1999). Development on private lands is steadily consuming wildland habitats and reducing connectivity between the natural areas that remain.

This trend poses challenges for the conservation of habitat and species on public lands, including National Forest System lands (Stephenson and Calcarone 1999, Western States Tourism Policy Council Web site 2005). Continued urbanization has the power to erase any remaining habitat links (corridors) between the mountain ranges and between mountains and open space (either public or private) in the foothills and coastal areas.

Because of their natural and relatively unfragmented conditions, the national forests are considered to be the backbone or core of regionally-coordinated approaches to the maintenance of biodiversity across the

landscape in southern California. Regional wildland planning efforts, such as the state of California's Natural Community Conservation Planning (NCCP) program, occur with Forest Service involvement.

Multiple species habitat conservation plans being developed at the city or county level (table 559: County Multi-species Planning Efforts Affecting the Southern California National Forests) are designed to sustain biological diversity in the planning area and maintain viable populations of endangered, threatened, and other at-risk species and their habitats (California Department of Fish and Game 2002a).

Recreation Use and Facilities

The Forest experiences high levels of developed and dispersed recreation. Recreation use includes hiking, fishing, camping, OHV use, as well as other forms of outdoor recreation. Recreation is expected to continue to occur across the Forest and will likely increase as population in the Los Angeles area continues to grow.

Non- Recreation Use and Facilities

There are a multitude of special use activities occurring across the Forest. Examples of special use permits include, but are not limited to: power lines, apiary sites, communication sites, recreation residence cabins, county roads, filming permits and forest product collection. Special use permits that include facilities are required to reduce fuels around their structures for protection from wildfire.

Travel Management

Travel management includes roads, trails, and areas on National Forest System lands.

Development Adjacent to National Forest System lands

The project area is within the urban interface where homes and infrastructure exist along with daily human activities. Occupancy and maintenance of the residences around the project area have created baseline levels of disturbance affecting both private and adjacent national forest lands.

Climate Change/Pollution

Models for climate change predict an increase in nonnative plant species invasions and habitat invisibility (Janetos et al. 2008). It is thought that climate change is likely to increase the ranges and abundances on invasive, nonnative species as they are not as limited by dispersal and pollination limitations as are native plants (Janetos et al. 2008, Dukes and Mooney 1999). It is thought that initially the impacts of climate change are direct in the expansion of ranges and abundances, though this effect is incremental and generally only observable over several years. Longer term impacts will be indirect, impacting the various trophic relationships. Invasive plants may also be able to migrate more effectively than native plants, as they are not generally dependent on specific pollinator or biotic dispersal agents (Janetos et al. 2008).

The impacts of climate change on vegetation types found in the project area are still poorly understood, though simulations of fire regimes in chaparral have found that there is a potential for an increase in the duration of the fire season which could lead to changes in plant community composition (Stephenson and Calcerone 1999).

The impacts of pollution are due to the deposition of nitrogen and ozone from the atmosphere. The impacts of nitrogen deposition include increased fertilization, which can alter community composition, soil acidification and decrease mycorrhizal symbiosis (Stephenson and Calcerone 1999). Ozone has been found to reduce the vigor of certain tree species.

Past Fires

Though this is a past factor that is considered in the affected environment, recent fires have played a key role on the Forest and are noted in the cumulative effects. The largest wildfire to occur on the Forest is the 2009 Station fire, which burned over 161,000 acres in the San Gabriel Mountains. The majority of the acreage is located within the Forest boundary. The fire burned with high severity in many places leaving some areas completely void of vegetation. Portions of the area are being re-planted while areas where brush once occurred are slowly recovering naturally. Other recent wildfires include the Morris fire, which also occurred in 2009. This fire impacted the areas between the San Gabriel and Morris Reservoirs. This fire resulted in a low to moderate severity burn across the area burning on the terraces by the river, and moderate to high severity burning on the hillslopes above the reservoirs. The 2008 Marek fire and 2008 Sayre fire burned areas in Little Tujunga Canyon, Pacoima Canyon and Lopez Canyon.

The Forest has had many smaller fires across the area every year. Some areas are more prone to frequent fires than others due to proximity to developed areas and major roadways.

Appendix C. San Gabriel Mountains National Monument Management Plan

Chapter 1 – Introduction

Purpose of Monument Plan

On October 10, 2014, President Barack Obama designated 346,177 acres of existing Federal lands as the San Gabriel Mountains National Monument (Monument) in an executive action, proclaiming the eighth national monument under Forest Service management. A national monument is a designation given to a protected area of Federal land. The Proclamation for the Monument mandated the preparation of a management plan for the Monument within 3 years. The Monument Plan will be developed according to new regulations adopted in 2012, referred to in this document as the 2012 Planning Rule.

The purpose of this management plan is to provide strategic direction and guidance for future management of the Monument. This management plan provides direction and guidance for the protection and interpretation of the scientific and historic objects of the Monument, as well as continued public access to those objects consistent with their protection. It provides a framework for informed decision making, while guiding resource management, practices, uses, and projects. The management plan does not include specific project and activity decisions. Project level decisions will be made at a later date, after additional detailed analysis and further public involvement. The management plan is adaptive in that it can be amended to update management direction based on new knowledge and information.

This management plan is strategic in nature and does not attempt to prescribe detailed management direction to cover every possible situation. While all components necessary for protection and interpretation of the scientific and historic objects of the Monument are included, the management plan also provides flexibility needed to respond to uncertain or unknown future events and conditions such as fires, floods, climate change, changing economies, and social changes that may be important to consider at the time future decisions are made.

This management plan has been prepared pursuant to the requirements of the National Forest Management Act of 1976, and the 2012 Forest Service planning regulations (36 CFR 219) This management plan is also accompanied by an Environmental Assessment (EA) as required by the regulations used in its development (36 CFR 219.13).

The scientific and historic objects identified in the proclamation (referred to as the “objects of the Monument) which are the focus of this management plan include:

- **Cultural Resources** – The San Gabriel Mountains contain a rich cultural history, including a unique concentration of several rock art and cupules features within the Aliso-Arrastre Special Interest Area, the remnants of the historic mining town of Eldoradoville on the East Fork of the San Gabriel River, and the remnants of historic resorts of the early 20th century, on which foundations the current Forest Service campgrounds are constructed.
- **Modern Recreation** – The San Gabriel Mountains also contain 87 miles of the Pacific Crest National Scenic Trail and several other national recreation trails. Four designated wilderness areas are within the mountains (San Gabriel, Sheep Mountain, Pleasant View Ridge, and Magic Mountain), providing backcountry experience for Monument visitors.

- **Scientific Significance** – Two important scientific facilities are within the national monument. The Mt. Wilson Observatory has hosted world-class scientists for critical discoveries of the early 20th century. The San Dimas Experimental Forest, also established in the early 20th century, has continued study of research watersheds from early years.
- **Wildlife and Habitat** – The mountains also provide important habitat for endangered and sensitive wildlife species, including the California condor, least Bells’ vireo, Nelson’s bighorn sheep, bald eagle, and California spotted owl, as well as connectivity corridor for many species, including mountain lions.
- **Infrastructure** – Flood control and water storage, delivery and diversion infrastructure exist within the Monument, including six large retention dams. Numerous telecommunications and utility towers are also present within the mountains, reflecting the needs of the nearby urban areas.
- **Watershed Values** – Numerous rare and endangered species exist within the Monument, with some endemic only to the San Gabriels. These include the threatened Santa Ana Sucker and California Red-legged Frog, endangered mountain yellow-legged frog and arroyo toad, and the rare arroyo chub and Santa Ana speckled dace
- **Scenic Areas** – Within the Monument, many dramatic sights draw visitors every year, from San Antonio Falls, to Crystal and Jackson lakes.
- **Vegetation Communities** – The San Gabriels provide a wide diversity of vegetation communities, including high-elevation White fir, ancient limper pines, mixed conifer forests, bigcone Douglas-fir, pinyon pine chaparral and oak woodlands, and Joshua trees.

Planning Area

The planning area includes all National Forest System (NFS) lands within the boundaries of the San Gabriel Mountains National Monument in the northern and southeastern portions of the San Gabriel Mountain Range, approximately 30 miles northeast of Los Angeles. The Monument covers 342,177 acres of the Angeles National Forest and 4,030 acres of neighboring San Bernardino National Forest. Figure 1 shows the current administrative boundaries of the Angeles National Forest subunits, known as ranger districts, overlaid by the Monument boundary.

Management Planning Overview

United States Forest Service (USFS) land management planning is an adaptive process that includes plan development, monitoring, and adjustment based on desired social, economic, and ecological conditions and the evaluation of impacts to those conditions. The overall purpose of planning is to ensure responsible land management based on current information that guides land stewardship to best meet the needs of the American people.

Relationship of this Management Plan to Other Planning Documents

This management plan will amend the current land management plan (LMP), as amended. Specifically, the plan components listed in this management plan will supersede the plan components listed:

- 1) Forest Plan Part 1 – Goal 3.1, related to Managed Recreation in a Natural Setting;
- 2) Forest Plan Part 1 – Goal 4.1, related to Energy and Minerals Production;
- 3) Forest Plan Part 2 – Land Use Zones (as amended by 2014 land use plan amendment), related to Wilderness Areas and suitable uses allowed within land use zones;

- 4) Forest Plan Part 2 – Prospectus, related to Heritage Resources; Forest Plan Part 2 – Place-Based Program Emphasis, related to Wilderness Areas;
- 5) Forest Plan Part 2 – Appendix A: Inclusion of the description of current wilderness areas;
- 6) Forest Plan Part 2 – Appendix B: Strategies, related to MIS species, Recreation, Transportation, Minerals Off-Highway Vehicle Use Opportunities; and
- 7) Forest Plan Part 3 – Standard S34 and Appendix D, related to the framework for regulation of recreational uses.

The resource direction contained in the rest of the LMP will apply to the Monument, unless specifically noted in the San Gabriel Mountains National Monument Management Plan.

Scope and Applicability of this Management Plan

The San Gabriel Mountains National Monument Management Plan applies to all NFS lands and activities within the boundaries of the San Gabriel Mountains National Monument. Before authorizing any specific project or land-use activity within the Monument, the Forest Service must complete a more detailed and site-specific environmental analysis, pursuant to the NEPA and its implementing regulations. When a specific project or activity is proposed on NFS land, additional public involvement occurs, site-specific effects are analyzed, and decisions are made regarding specific projects and other activities.

Management Plan Organization, Content, and Terminology

The Monument plan is comprised of new management direction for the Monument, as well as existing direction from the Angeles National Forest land management plan.

Forest goals and desired conditions from Part 1; land use zones, suitable land uses, program emphases, and objectives from Part 2; and standards and guidelines from Part 3 of the existing Angeles National Forest land management plan will continue to apply within the Monument.

In addition, plan components described below that apply to the Monument will be adopted. The Monument management area follows the proclaimed boundary of the Monument. Management area direction related to roads, trails, and energy and minerals production supersede direction in the existing Angeles National Forest land management plan where there is conflicting direction.

The new San Gabriel Mountains National Monument management area and its associated plan components will amend the existing land management plan for the Angeles National Forest.

The Monument management area includes five plan components that guide future project and activity decision making: desired conditions, objectives, standards, guidelines, and suitability of lands. All projects and activities within the Monument need to be consistent with these plan components.

A **desired condition** is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. A desired condition description is specific enough to allow progress toward achievement to be determined but does not include a completion date.

An **objective** is a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives are based on reasonable foreseeable budgets.

The **suitability of lands** is determined for specific lands within the plan area. The lands are identified as suitable or not suitable for various uses or activities based on desired conditions applicable to those lands.

The suitability of lands is not identified for every use or activity. If certain lands are identified as not suitable for a use, then that use or activity may not be authorized.

A **standard** is a mandatory constraint on project and activity decision-making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

A **guideline** is a constraint on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

Management approaches are also listed for the Monument management area and are considered to be other plan content. Management approaches describe the principal strategies and program priorities the Angeles National Forest intends to use to carry out projects and activities under the Monument plan. Management approaches may discuss potential processes such as analysis, assessment, inventory, project planning or monitoring.

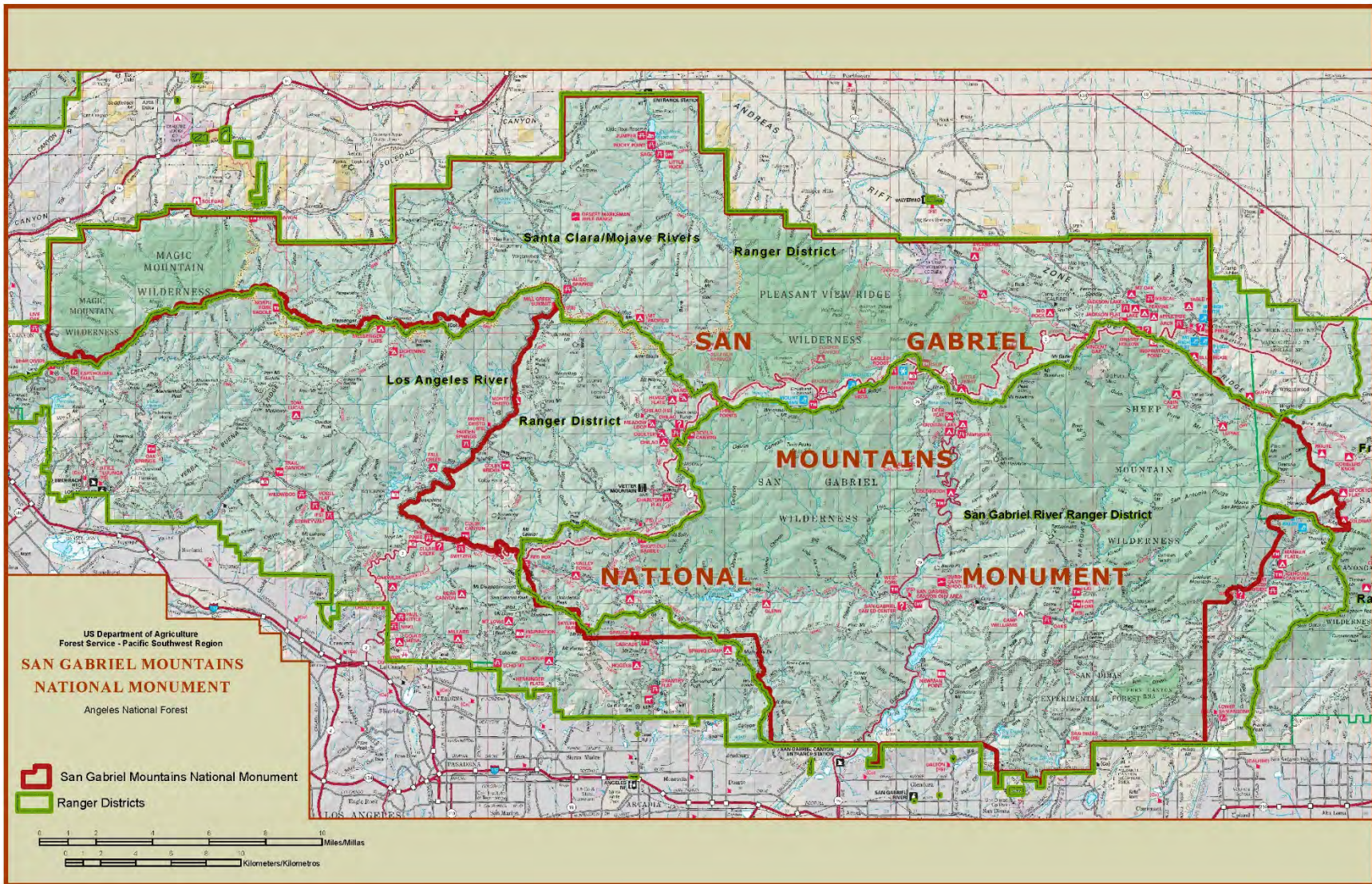


Figure 1. San Gabriel Mountains National Monument

Chapter 2 – San Gabriel Mountains National Monument Management Area

Introduction

The proclamation requires a management plan be written for the Monument and directs that the management plan ...

...provide for protection and interpretation of the scientific and historic objects identified above and for continued public access to those objects, consistent with their protection. To the maximum extent permitted by other applicable law and consistent with the purposes of the monument, the plan shall protect and preserve Indian sacred sites, as defined in section 1(b) of Executive Order 13007 of May 24, 1996, and access by Indian tribal members for traditional cultural, spiritual, and tree and forest product-, food-, and medicine-gathering purposes.

The scientific and historic objects identified in the proclamation include cultural resources, recreational and scenic features, scientific features, diverse wildlife and aquatic species, vegetative communities, and infrastructure.

The resource direction contained in the LMP will continue to apply within the Monument, unless specifically noted. Where the resource direction found in the LMP has been amended for the San Gabriel Mountains National Monument, these changes will be noted in each resource section below. In addition, plan components designed specifically to address the San Gabriel Mountains National Monument will be adopted. These plan components are listed below and will supersede the plan components listed in the LMP.

Please note the organization of the desired conditions, objectives, standards, and guidelines is intended to match the terms of the 2012 Planning Rule.

Sustainable Recreation

Desired Conditions

1. Recreation opportunities, including products, services, and the built environment, support the needs and expectations of the diverse population in the surrounding area, including urban visitors, youth, people with disabilities, aging populations, and different ethnic groups.
2. Youth are engaged in outdoor recreation and conservation education opportunities, fostering the next generation of public land stewards.
3. Interpretation materials capture the rich cultural history that shaped the area, including Native Americans, Spanish missionaries and colonialists, Mexican rancheros, Euro-Americans and Asian settlers and prospectors.
4. Public outreach and education uses contemporary social media, new technology, and culturally relevant media outlets. Engaging schools, communities, universities, museums, and other educational institutions invested in elevating public awareness of the environment, conservation, and outdoor recreation presents exceptional opportunities to re-imagine Angelenos' connections to their surrounding forests and open spaces.
5. Conservation education focuses on themes of urbanization, fire, heritage resources, and wildlife and plants, which are the main management challenges within the Monument.

6. Signs are universal and public information and education is multilingual to ensure communication is intentional, meets information needs, and conveys a message of public access for all.

Guidelines

1. Along the Pacific Crest National Scenic Trail within the Monument, new recreation events, such as foot races or horseback endurance events and fundraising events should be limited to designated crossings only. Existing recreation events may be allowed to continue at current levels.
2. All new road and trail crossings of the Pacific Crest National Scenic Trail within the Monument will be evaluated and planned to minimize impacts to the scenic, natural, and experiential values of the trail. New roads and new trails, including motorized and mechanized transport trails, within the PCT foreground should be designed to minimize the visual, aural and resource impacts to the PCT. Exemptions may be allowed if required by law to provide access to private lands or documented as the only prudent and feasible alternative.
3. Maintain or increase the number of conservation education programs/events per year within the Monument.

Management Approaches

1. Prioritize work with external partners to develop sustainable recreation studies, recreation design plans, new products, or recreation design features to improve recreation management within the Monument and ensure relevance to the Monument's diverse visitor use base.
2. Evaluate the need for recreation carrying capacity in high use areas such as San Gabriel Canyon, following the Interagency Visitor Use Management Framework (<http://visitorusemanagement.nps.gov>), including:
 - Identifying visitor capacities and strategies to manage use levels within capacities.
 - Documenting criteria and rationale for establishing visitor capacities.
 - Documenting the relationship between the amount of visitor use and existing conditions and how management actions are expected to affect that relationship.
3. Work with gateway communities and local partners to manage potential impacts and maximize potential benefits associated with Monument designation by addressing issues such as identification of appropriate access points and parking capacity at access points.
4. Develop a Monument conservation education plan.
5. Expand the use of multilingual information and outreach including interpretive signs, standard recreation signs, online information and social media, and multilingual personnel such as recreation staff, law enforcement, and volunteers.
6. Prioritize youth engagement efforts aligned with the Region 5 Integrated Youth Engagement Strategy, and continue participation in programs such as the Southern California Consortium "Generation Green" program.
7. Develop criteria for appropriate types of special events, requests, and emerging uses within the Monument.
8. Implement adaptive management processes at recreation facilities to proactively engage persons with disabilities, contemporary urban visitors, aging populations, diverse ethnic groups, youth, and day-use emphasis (see Appendix C, Monitoring Requirements). (From new text added to REC 3 of Appendix B)

Heritage Resources

Desired Conditions

1. Heritage resources are protected and preserved for cultural and scientific value and public benefit.
2. Historic and Native American heritage resources eligible for the National Register of Historic Places are protected and preserved.
3. Priority Heritage Assets are protected and enhance the Monument's distinct characteristics.
4. Historic properties within designated wilderness areas are documented and protected, and values and connections between heritage and wilderness values are promoted.

Standards

1. Road and trail maintenance and use must be managed to prevent adverse effects to values or attributes that make heritage resources eligible for the National Register of Historic Places.

Guidelines

1. Projects should be designed to avoid, minimize, or mitigate adverse effects or impacts to significant cultural properties.
2. Heritage sites should be protected during fire suppression and rehabilitation activities where feasible.

Management Approaches

1. Review recorded or documented historic properties within designated wilderness to identify any that support or enhance wilderness values and characteristics. Manage these identified resources as Priority Heritage Assets, regularly monitoring unidentified wilderness Priority Heritage Assets and promoting values and connections between heritage and wilderness values. Assess and review documented and unevaluated heritage resources to identify those resources that enhance the Monument's distinct characteristics and to regularly monitor those at risk. Manage these identified resources as Priority Heritage Assets. Of the 44 sites identified within the Monument, those identified as Priority Heritage Assets will be monitored every 5 years. If new resources are identified and determined to be Priority Heritage Assets, they will also be monitored every 5 years.
2. Use partnerships to develop and implement stewardship plans for heritage resource sites, focusing on those sites with recognized significance or at risk from public or land use effects.
3. Evaluate historic sites for appropriate management. Develop site management plans for noteworthy heritage resources.
4. In consultation with tribes, work to improve the interpretative potential of Native American resources within the Monument, focusing on traditional uses, tribal history, and the current relationship of local tribes to the San Gabriel Mountains.
5. Evaluate the following heritage sites for eligibility under the National Register of Historic Places: Aliso-Arrastre Special Interest Area; Eldoradoville, located along the East Fork of the San Gabriel River; Mt. Wilson Observatory; and San Dimas Experimental Forest. Nominate eligible sites for listing.

Biological Resources

Desired Conditions

1. Habitat conditions are stable or improving over time as indicated by the status of focal species and other elements of the 2016 Monitoring Strategy. Habitats of species specifically listed in the Proclamation as objects of interest in the Monument are managed to preserve and protect these species.
2. Maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, focal species, and watch list species.

Management Approaches

1. Monitor at-risk species according to the 2012 Planning Rule direction on monitoring.

Energy Resources

Standards

1. Valid Federal mineral rights existing within the Monument at the time of the Monument proclamation must be managed to protect the objects of interest listed in the Proclamation.

Designated Areas

Desired Conditions

1. Designated wilderness within the Monument is maintained as a naturally-evolving and natural-appearing landscape that provides for primitive and unconfined recreation use. The sense of remoteness and solitude is maintained.

Suitability of Lands

1. Mineral and energy resources exploration and development is not suitable within the Monument, except where valid rights already exist at the time of the Monument proclamation. Table 1 below would replace Table 2.1.3 of Part 2 of the Angeles Forest Plan to identify the current Suitability of Lands within the Monument.
2. Within the Monument, the Pacific Crest National Scenic Trail foreground is not suitable for special-use authorizations for new communication sites and wind generation sites.

Table 1. Suitable uses commodity and commercial uses, San Gabriel Mountains National Monument

Activity or Use	Land Use Zone						
	Developed Areas Interface	Back Country	Back Country Motorized Use Restricted	Back Country Non-Motorized	Critical Biological	Wilderness	Experimental Forest
(Non-Rec) Special Uses: Low Intensity Land Use	Suitable	Suitable	Suitable	By Exception	By Exception	By Exception	For Research
Communication Sites	Designated Areas	Designated Areas	Designated Areas	By Exception	By Exception	Not Suitable	By Exception
Livestock Grazing	Designated Areas	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Designated Areas	Not Suitable
Major Transportation Corridors	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Major Utility Corridors	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Road Construction or Re-construction	Suitable	Suitable	Suitable for authorized use	Not Suitable	Not Suitable	Not Suitable	By Exception
Developed Facilities	Suitable	Suitable	By Exception	Not Suitable	Not Suitable	Not Suitable	For Research
Oil and Gas Exploration and Development Areas¹	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Minerals Resources Exploration and Development¹	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Renewable Energy Resources	Suitable	Suitable	By Exception	By Exception	Not Suitable	Not Suitable	Not Suitable
Wood Products, Including Fuelwood Harvesting	Suitable	Suitable	Suitable	Suitable	By Exception	Not Suitable	By Exception
Special Forest Products	Suitable	Suitable	Suitable	Suitable	By Exception	By Exception	Not Suitable

*By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.

1 - With the exception of valid existing rights

The following Land Use Zone descriptions would replace the descriptions on pages 9 through 11 of Part 2 of the Angeles Forest Plan and describe the zones within the Monument.

Critical Biological (3,043 acres or less than 1 percent of the national forest): This zone includes the most important areas on the national forest to manage for the protection of species at-risk. Facilities are minimal to discourage human use. The level of human use and infrastructure is low to moderate.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) may occur in this zone. Community protection vegetation treatments within the Critical Biological land use zone may occur by exception. In these cases, managers will consider species and habitat needs.

The management intent is to retain the natural character and habitat characteristics in this zone and limit the level of human development to manage for protection of species-at-risk. Activities and modification to existing infrastructure are allowed if they are beneficial or neutral to the species for which the zone was primarily designated (see Table 34: San Gabriel Mountains National Monument Critical Biological Land Use Zones). Human uses are more restricted in this zone than in Back Country Non-Motorized zones in order to protect species needs, but are not excluded. Low impact uses, such as hiking, mountain biking and hunting are generally allowed. Motorized use of existing National Forest System roads is allowed. Less than 1 percent of the National Forest System and non-system roads are found in this zone including one mile of inventoried unauthorized road. Road density will not be increased and may be decreased as a result of species protection requirements.

Table 2. San Gabriel Mountains National Monument critical biological land use zones

Primary Species Protected and Primary Uses			
CBLUZ	Primary Species Protected	Place	Primary Uses**
South Fork Big Rock Creek	Mountain yellow-legged frog	Angeles High Country	Existing use of Sycamore Flats, South Fork and Little Jimmy Campgrounds is retained
South Fork Little Rock Creek	Mountain yellow-legged frog	Angeles High Country	Existing use of the Williamson Rock climbing area is retained
Lower Little Rock Creek	Arroyo toad	Mojave Front Country	Ongoing activities at Little Rock Reservoir and associated developed areas to include the boat ramp, Fisherman’s Point, Juniper, Rock Point and Sage Picnic Areas are retained. Use of Little Rock Road (NFS Road 5N04) is retained. Little Rock OHV Area is closed above Rock Point Day Use Area; however a small segment is retained. Little Rock OHV route adjacent to CBLUZ is retained for opportunities to define an improved system while relocating established routes outside of sensitive areas. Joshua Tree and Basin Campgrounds and Santiago OHV route are currently closed due to potential impacts to the arroyo toad. Site specific analysis of these areas will determine if they are a suitable use within the CBLUZ.
West Fork San Gabriel River	Santa Ana sucker	San Gabriel Canyon	CBLUZ location is Cogswell Dam downstream to the beginning of the wild trout area (2nd bridge). This area is currently managed as a wild trout stream and this designation is retained. Management of the Cogswell Dam for flood control and water conservation including water release is not in conflict with the CBLUZ designation and is retained. Installation of toilets can be considered neutral or beneficial use. Administrative use and use of National Forest System Road 2N25 as a hiking and bicycle path will be retained.
East Fork San Gabriel River	Santa Ana sucker	San Gabriel Canyon	CBLUZ location is from just above the Oaks day use site upstream to the private land parcel near the Bridge to Nowhere, including the Cattle Canyon tributary upstream to the upper extent of the Santa Ana designated critical habitat. Existing transportation and other uses will continue.
North Fork San Gabriel River	Santa Ana sucker	San Gabriel Canyon/Angeles Uplands East	CBLUZ location is from the West Fork/North Fork confluence upstream to the northern extent of the Santa Ana sucker Designated Critical Habitat, including the Bichota Canyon tributary of the North Fork San Gabriel River. Existing uses will continue.
Aliso Canyon	California red-legged frog	Soledad Front Country	The West Wide Energy Corridors will be managed for utility infrastructure, including new and upgraded transmission lines. Access to utility corridors will be maintained while minimizing road infrastructure within the CBLUZ. Existing Transportation and other uses will continue.

San Gabriel Mountains National Monument
DRAFT Environmental Assessment – Appendix C

Primary Species Protected and Primary Uses			
CBLUZ	Primary Species Protected	Place	Primary Uses**
Upper Big Tujunga	Arroyo toad, California red- legged frog	Angeles Uplands (West)	Access on County Road 3N19 and associated maintenance, access to private property in section 35, existing Special Use Permits, and proposed OHV corridor across Alder Creek area are retained. Dispersed recreation use will continue to be limited by limiting parking areas.
Soledad Canyon	Arroyo toad, unarmored three-spine stickleback	Soledad Front Country	The Wildlife Viewing site at this location will be retained. Soledad Campground will continue to be closed and facilities removed. Private lands surrounding the CBLUZ are not affected.

**This is a partial list of activities associated with these CBLUZ's. See Suitable Use Tables (Part 2 of Forest Plan) for full description of all able uses.

Existing Wilderness (122,098 acres or 34 percent of the Monument): This zone includes congressionally designated wildernesses. Only uses consistent with all applicable wilderness legislation and with the primitive character are allowed in existing and recommended wilderness. Road access is limited to uses identified in the specific legislation designating the wilderness (see wilderness in the forest-specific design criteria of Part 2 of the Forest Plan), approximately .7 percent of the National Forest System and non-system roads are found in this zone including 1.4 miles of inventoried unauthorized road. The characteristic Recreation Opportunity Spectrum objective is Primitive with limited areas of Semi-Primitive Non-Motorized.

Wildland/Urban Interface Threat Zones (see Appendix K in Part 3 of the forest plan) may occur in this zone. Community Protection vegetation treatments within the existing wilderness zone may occur by exception. In these cases, managers will consider wilderness needs. The management intent is to administer this zone for the use and enjoyment of people while preserving its wilderness character and natural conditions. Non-conforming uses will be removed to preserve wilderness character. Designated wilderness includes:

- Sheep Mountain Wilderness
- San Gabriel Wilderness
- Magic Mountain Wilderness
- Pleasant View Ridge Wilderness

Designated Areas

The following changes to the Forest Plan “Special Designation Overlays” are proposed for the Monument. These changes would update the Special Designations to acknowledge and be consistent with designation of two new wilderness areas in 2009.

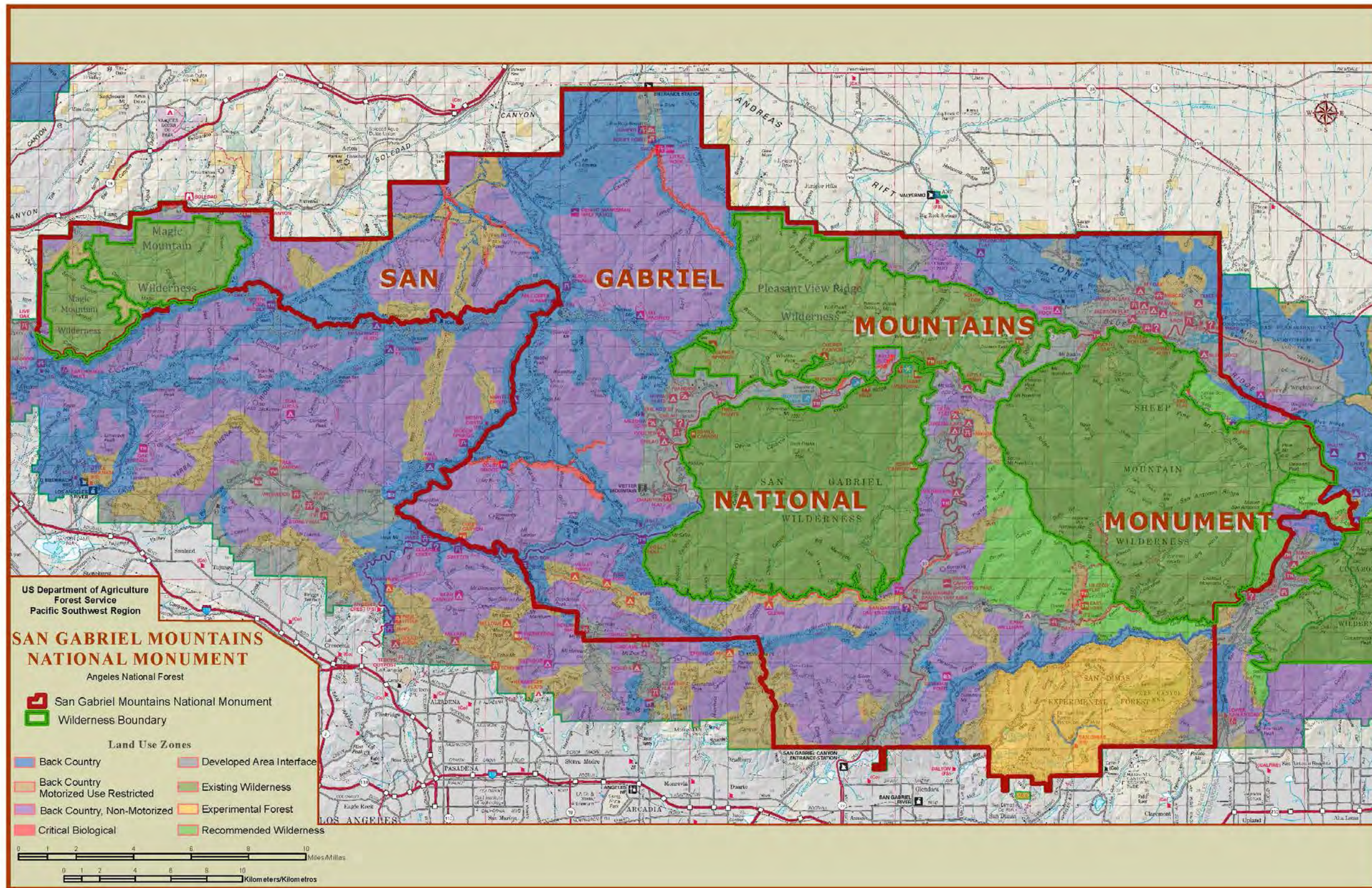


Figure 2. Proposed land use zone map

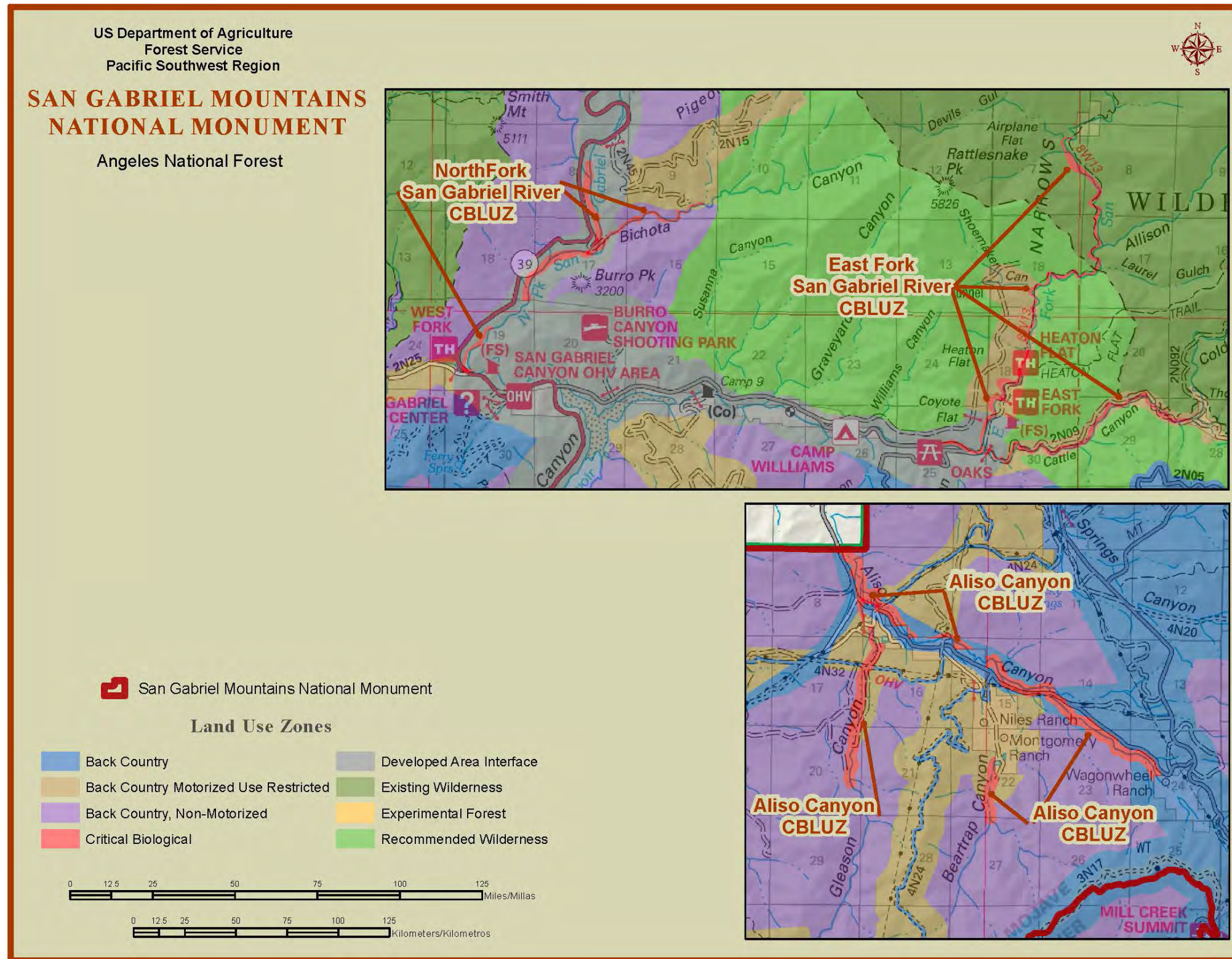


Figure 3. San Gabriel Mountains National Monument land use zones

Table 3. New wilderness area descriptions

Title	Place	Acres
Magic Mountain Wilderness	Soledad Front Country	11,938
<p>The United States Congress designated the Magic Mountain Wilderness in 2009. The Magic Mountain Wilderness is generally bounded by: Santa Clara Divide Road (3N17.7) on the south; Backcountry Discovery Trail 1 (3N37) on the east; and forest boundaries on the north and west. A closed road traverses the mountain from the community of Lange to Magic Mountain. This corridor separates the Magic Mountain Wilderness into two portions.</p> <p>The Magic Mountain Wilderness’s chaparral-covered hillsides and oak-studded canyons provide a scenic vista and suitable habitat for the California condor. The area also offers primitive recreational opportunities for the rapidly urbanizing Santa Clarita Valley. There are no officially designated trails within this wilderness. However, several social trails exist which were created by visitor use.</p>		
Pleasant View Ridge Wilderness	Angeles High Country, Mojave Front Country	27,040
<p>The United States Congress designated the Pleasant View Ridge Wilderness in 2009. This wilderness area is located roughly 30 miles northeast of La Canada, north of the Angeles Crest Highway where the San Gabriel Mountains slope north to meet the Mojave Desert. The area features 8,200-foot Mt. Williamson and other dramatic peaks, formidable cliffs, the headwaters of Little Rock Creek, remote backcountry, and some of the most magnificent canyon country in the San Gabriel Mountains.</p> <p>The Pleasant View Ridge Wilderness is generally bounded by: California Highway 2 (Angeles Crest Scenic Byway) on the south; Little Rock Canyon on the west; and the forest boundary on the north; and High Desert National Recreation Trail (10W02 Burckhardt) on the northeast.</p> <p>The area can be accessed from California State Highway 2 at Vincent’s Gap, Islip Trailhead, Buckhorn Campground, and Three Points Trailhead and from the Pacific Crest National Scenic Trail and High Desert National Recreation Trail.</p> <p>Trails going through this wilderness include: High Desert National Recreation Trail (10W02 Burckhardt), Islip Saddle (9W02), and Pacific Crest National Scenic Trail.</p>		

Chapter 3 – San Gabriel Mountains National Monument Transportation Plan

The Proclamation (Obama 2015) states:

The Secretary shall prepare a transportation plan that specifies and implements such actions necessary to protect the objects identified in this proclamation, including road closures and travel restrictions. For the purpose of protecting the objects identified above, except for emergency or authorized administrative purposes, the Secretary shall limit all motor vehicle use to designated roads, trails, and, in the Secretary's discretion, those authorized off-highway vehicular use areas existing as of the date of this proclamation.

Current management of the Monument complies with the Proclamation direction to limit motorized vehicles to designated roads, trails, and areas. Motor vehicle use maps (MVUMs) were published in 2011 and reflect this management of the transportation system in the Monument (MVUMs covering the Monument are included in the Map Packet for this Monument Plan).

Because the San Gabriel Mountains National Monument Plan is a programmatic level decision and does not directly authorize any project level site specific actions, the transportation plan also does not make any site specific changes to the transportation system. Instead it provides a framework by which to manage the transportation system and make future decisions concerning changes to it that support the management intent of the Monument Plan. Changes to the existing transportation system will only be made after appropriate site-specific environmental analysis.

Desired Conditions

1. The Monument is accessible through alternative transportation and public transportation options in coordination with other agencies and gateway communities to provide greater access for those who do not have personal vehicles, reduce vehicle congestion, address parking capacity issues, and improve public safety.
2. Road density within the Monument remains stable or is decreasing. The number of automobiles are reducing over time.
3. Roads and trails are maintained to standard.

Management Approaches

1. Improve needed operational maintenance level 2 National Forest System roads to standard so they qualify for Federal Lands Transportation Program funding (operational maintenance level 3+) and other related federal funding.
2. Improve non-motorized trails to standard so they qualify for Federal Lands Transportation Program funds (“provide an engineered surface”) and other related federal funding.
3. Decommission and rehabilitate high-risk, low-value roads identified in the roads analysis and travel analysis processes.
4. Over the planning period, the number of inventoried unauthorized roads and trails are reduced, and the development and proliferation of new unauthorized facilities is minimized.
5. Coordinate projects with California State Parks and the Off-Highway Motor Vehicle Recreation Program, including projects that restore areas with unauthorized off-highway vehicle uses.
6. Evaluate alternative transportation and public transportation opportunities.
7. Coordinate with local government on transportation planning. Participate in the Southern California Association of Governments. Coordinate with Caltrans to improve transportation connectivity within the Monument, while minimizing adverse resource effects.
8. Coordinate with programs such as CAR-LESS CA and connections such as El Pueblo and Gold Line transit lines.
9. Coordinate with the Federal Lands Collaborative Long-Range Transportation Planning effort to ensure it is responsive to the transit/transportation needs of the Monument.
10. Maintain awareness that “driving for pleasure” is and will continue to be an important use within the Monument.
11. Update the Angeles National Forest’s motor vehicle use map as necessary to identify currently designated roads, trails and areas for public motor vehicle use.
12. Manage high visitor use and traffic congestion using the following strategies:
 - Consider using temporary one-way traffic flows and closures during peak volumes.
 - Evaluate the use of parking capacity limits.
 - Enforce parking capacity.
 - Prevent or limit parking in riparian areas to reduce resource damage.
 - Explore opportunities to increase parking capacity in key areas.

Current Transportation System

Road System

The road system in the Monument consists of approximately 496 miles of existing roads, ranging from single-lane dirt roads to paved-double lane roads. These are under various jurisdictions, including the Forest Service, Caltrans, and counties. Of these, there are over 276 miles open to motor vehicle use.

The network of National Forest System roads in the Monument that are currently designated for motorized use are shown on the back side of the MVUM for the Angeles National Forest (see the map packet). This map is published as required by the Forest Service Travel Management Regulations.

Trail System

The trail system within the Monument currently consists of approximately 243 miles of system trails, including about 87 miles of the Pacific Crest Trail.

The network of National Forest System trails and areas on NFS lands in the Monument that are currently designated for motorized use are shown on the back side of the MVUM for the Angeles National Forest (see the map packet). This map is published as required by the Forest Service Travel Management Regulations.

Transportation System Management

Maintenance Strategy

Currently available funding is insufficient to fully maintain the existing road system. The following strategies will be used to prioritize needed maintenance and to improve the ability to complete all needed maintenance:

1. Public safety and natural resource protection would be the highest priorities for maintenance.
2. Maintenance levels 3 through 5 roads would be higher priority for maintenance than maintenance levels 1 and 2 roads, due to the higher potential loss of investment, generally higher traffic volumes and speeds, and resulting safety risks and liabilities.
3. Submit appropriate projects for maintenance, reconstruction, or rehabilitation funding when opportunities are available (agency funding, state grants, partnerships, and other sources).
4. Seek additional sources of funding to reduce the maintenance backlog and keep the road system in acceptable condition. Potential sources include Federal Highway Trust Fund funding through the national transportation bill and appropriated funding specifically for specially designated areas such as monuments.
5. Partner with user groups, permittees, and other entities to accomplish needed road maintenance.
6. Consider reducing the assigned maintenance level of individual roads based on access needs, resource risks, and costs to improve the ability to maintain the entire road system.
7. Consider closing roads not currently needed for resource management activities or significant recreation access to reduce maintenance costs, while retaining the road prism for expected future access needs.
8. Consider opportunities to reduce the size of the road system by decommissioning individual roads or converting them to non-motorized trails.

Forest Transportation System Changes

Changes to the forest transportation system may include actions such as changes of assigned maintenance levels for individual roads, construction of new roads, removal of roads from the system through decommissioning, and conversion of roads to trails. New roads will generally be limited, though could be constructed to meet management goals to provide access to new recreation facilities or opportunities; to provide access to the objects of interest; to provide access to administrative sites (ranger stations, work centers, etc.); to replace roads producing unacceptable resource effects; or to provide access for scientific research.

The priority for road retention emphasizes retaining road access for public use and for management activities similar to current access levels. For public access, emphasis should be on maintaining roads to recreation sites, concentrated use areas used for dispersed recreation, sites authorized by special use permits, and private land. The road system will also be available for recreation driving and for off-highway vehicle use on roads designated for such use. For management access, emphasis should be on ecosystem restoration and fire protection.

Roads with high risks for causing unacceptable effects to natural resources should be repaired, relocated, closed, or decommissioned to reduce effects. Road decommissioning should focus on roads producing unacceptable effects where repair or relocation are unreasonable, roads where the potential for resource effects and high maintenance costs outweigh the need for access for resource management or recreation, and any unauthorized motorized routes remaining after the system was last designated in 2011.

Changes to the transportation system will generally be identified through the existing roads analysis process and any future travel analysis processes, and subsequently decisions would be made through site-specific project analysis (NEPA). The objective of travel analysis (previously called roads analysis) is to provide decision-makers with critical information to develop and manage transportation systems that are safe and responsive to public needs and desires, are affordable and efficiently managed, have minimal negative ecological effects on the land, and are in balance with available funding for needed management actions. Travel analysis is required to inform decisions related to identification of the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands; and to inform decisions related to the designation of roads for motor vehicle use.

A roads analysis was completed in 2005, and addressed all NFS roads within the eventual Monument. This RAP is still a valid tool to help inform decisions about the road system (USDA Forest Service 2005c).

In the completed RAP, evaluation criteria were created based on specific topic areas described in the FS-643 miscellaneous report (agency direction at the time). These topics included ecosystem functions and processes; aquatic, riparian zones, and water quality; terrestrial wildlife; economics; minerals and range management, water production, and special forest products; special use permits; general public transportation; administrative uses; protection; road- related and unroaded recreation; passive use values; social issues; and civil rights and environmental justice. Similar criteria would be appropriate to evaluate the need for future changes in the trail system.

The evaluation criteria developed for the Monument RAP were:

- Watershed risk factors
 - ◆ Watershed Condition Class
 - Slope Stability Hazard
 - Earthquake Hazard Rating

- Species risk factors
 - ◆ Riparian Species
 - Stream Crossings
 - Habitat for Threatened, Endangered or Sensitive Species outside of Riparian Areas
 - Riparian Conservation Areas
- Administrative Benefits
 - ◆ Community protection, fire suppression, prevention, and prescribed fire
 - ◆ Vegetation management, resource evaluation and management
 - ◆ Special use access and administration
 - ◆ Law enforcement
 - ◆ Mining, oil and gas, grazing
 - ◆ Any other roaded access needed to manage the forest
- Public Benefits
 - ◆ Access to developed recreation sites and campgrounds
 - ◆ Driving for pleasure Access to recreational special uses (including Recreational Residences)
 - ◆ Access to local surrounding communities

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

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

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

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

When changes are proposed to the forest transportation system to further the purposes of the Monument, the decisions made will be informed by this roads analysis and possibly additional travel analysis, along with

site-specific project analysis (NEPA). Evaluation criteria for the travel analysis will include criteria similar to the criteria described for the RAP, as well as other criteria appropriate to the specific proposed action.

The complete RAP can be found in the project file at the Supervisor's Office of the Angeles National Forest.

Appendix D. Regional Forester Letter from Oct 2014 for Management Framework

File Code: 2370

Date: October 31, 2014

Route To:

Subject: Effects of San Gabriel Mountains National Monument Designation

To: Forest Supervisor, Angeles National Forest

On October 10, 2014, President Obama designated the San Gabriel Mountains National Monument on the Angeles and San Bernardino National Forests by presidential proclamation. The proclamation designating the San Gabriel Mountains National Monument is the primary source of direction for monument management. The proclamation directs the Forest Service to develop a management plan for the monument by October 10, 2017 (three years from the date of designation).

The intent of this letter is to explain the effect of the proclamation and to address specific areas of interest that have been raised by the public. This interim guidance is effective immediately.

Monument Management Framework

For all existing and future activities and actions within the monument for which more detailed standards are not specified in the proclamation, including new proposed uses, the proclamation requires the Forest Service to administer those activities “consistent with the purposes and provisions of [the] proclamation.” This requirement is contained in the provision that reads, “The Secretary of Agriculture (“Secretary”) shall manage the monument through the Forest Service, pursuant to applicable legal authorities, consistent with the purposes and provisions of this proclamation.”

For any activities that are not specifically described in the proclamation, the Forest Service continues to be required to review proposed activities pursuant to its special use authorization and other authorities, in compliance with environmental and other laws such as the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and the Endangered Species Act. As part of its decision-making process, under the monument direction, the Forest Service must now also determine whether the proposed activities are consistent with the purposes and provisions of the monument proclamation. Unless a different standard is specified for a particular use or resource in the proclamation, only those activities that are found to be consistent with the purposes and provisions of the proclamation may be authorized by the Forest Service.

Water and Utility Infrastructure

The San Gabriel Mountains National Monument is proximate to a highly urban environment. The San Gabriel Mountains, including the area within the monument, supply 70 percent of the open space and 30 percent of drinking water for Los Angeles area residents. As such, extensive flood control and water storage, delivery and diversion infrastructure, as well as communications and energy transmission infrastructure, exists within the monument. The Forest Service recognizes the critically important role of this infrastructure.

Generally, the term “water resource or flood control facility” refers to irrigation and pumping facilities, dams and reservoirs, flood control facilities, water conservation works and facilities, debris protection facilities, sediment placement sites, rain gauges, stream gauges, water quality facilities, recycled water facilities, conveyance distribution systems, water treatment facilities, aqueducts, canals, ditches, pipelines, wells, hydropower projects, transmission and other ancillary facilities, groundwater recharge facilities, water filtration plants, and other water diversion, conservation, groundwater recharge, storage, and carriage structures. Similarly, the term ‘utility or telecommunications facility’ refers to electric substations, communication facilities, towers, poles, and lines, ground wires, communication circuits, and other structures, and related infrastructure.

The establishment of the monument is subject to valid existing rights, and nothing in the proclamation shall be construed to alter the valid existing water rights of any party, including the United States.

With respect to water and water rights, nothing in the proclamation:

shall affect the allocation, as of the date of the enactment of the proclamation, of any water (including potable, recycled, reclaimed, waste, imported, exported, banked, stored water, surface water, and groundwater);

shall be considered to be a relinquishment or reduction of any water rights held, reserved, appropriated, acquired, or otherwise owned or controlled by the United States on or before the date of the enactment of the proclamation;

shall be considered to be a relinquishment or reduction of any water rights (including potable, recycled, reclaimed, waste, imported, exported, banked, stored water, surface water and groundwater) held, reserved or appropriated by any public entity or any other party, on or before the date of the enactment of the proclamation;

shall be construed to alter the jurisdiction of any water master or public agency responsible for groundwater or surface water management or groundwater replenishment;

shall be construed to, or shall interfere or conflict with any judgment or court order issued pursuant to any adjudication respecting water, water rights or water management in the San Gabriel River or Lytle Creek watersheds and basins; or

shall be construed to impede any previously authorized Los Angeles County Drainage Area (LACDA) project, as described in the U.S. Army Corps of Engineers’ LACDA Review: Final Feasibility Study Interim Report and Environmental Impact Statement, issued in 1991 and revised in 1992, including any supplement or addendum to that report.

Existing laws, regulations, permits and policies of the U.S. Forest Service with regard to access to water on federal lands administered by the Forest Service shall continue to apply to lands in the monument.

Nothing in the proclamation shall be construed to interfere with the operation or maintenance, nor with the replacement or modification within the existing authorization boundary, of existing water resource, flood control, utility, pipeline, or telecommunications facilities that are located within the monument, subject to the Secretary's special uses authorities and other applicable laws. Existing water resource, flood control, utility, pipeline, or telecommunications facilities located within the monument may be expanded, and new facilities constructed within the monument, to the extent consistent with the proper care and management of the objects protected by this proclamation, subject to the Secretary's special uses authorities and other applicable law.

Existing laws, regulations, permits and policies of the U.S. Forest Service with regard to the operation and maintenance of any such facilities shall continue to apply to lands in the monument.

Other Special Use Authorizations

The Forest Service's special use authorization rules, directives and processes will continue to apply for all existing special use authorizations within the monument. Any requested future uses, or the renewal of existing uses, will also be subject to the Forest Service's special use review and authorization processes.

High Speed Rail

California has been planning a statewide high-speed rail system since the 1990s. Detailed route planning is ongoing, including in the area between the Antelope Valley and San Fernando Valley, an area that includes the San Gabriel Mountains. The designation of the monument does not preclude continued evaluation of a high-speed rail line through this area. Proposed construction or operation of a high-speed rail line through the monument area would be reviewed by the Forest Service and other federal agencies under the required federal environmental review and permitting processes, including the Forest Service's special use review and authorization processes.

Mining, Stone, Gravel and Sand

The federal lands and interests in lands within the boundaries of the monument are withdrawn from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing. This withdrawal prevents the location of new mining claims under the 1872 Mining Law, and prevents the Secretary of the Interior and the Secretary of Agriculture from exercising discretion to issue new leases for federal minerals within the boundaries of the monument under the mineral leasing acts and related laws. Valid federal mineral rights existing at the time of the proclamation will be managed consistent with the proper care and management of the objects protected by the proclamation, to the extent the applicable law regarding those rights provides management discretion.

Regarding so called 'Materials Act' resources, the Forest Service retains discretion to manage mineral materials such as sand, stone, and gravel, provided that any disposition of those materials is done in a manner consistent with the purposes and provisions of the proclamation.

Emergency and Wildland Fire Response

Wildland fires have occurred on the landscape for many years. The proclamation shall not be construed to alter the authority or responsibility of any party with respect to emergency response activities within the monument, including wildland fire response.

Non-federal Lands

Management of national monuments places priority on protecting the special features for which the area was designated. Monument designation does not affect uses on non-federal land. The Forest Service encourages communication and collaboration with non-federal landowners in the vicinity of or adjacent to national forest lands.

Management Plan

Monument designation requires the creation of a management plan within three years of the date of the proclamation (October 2017). The management plan for the monument will conform to direction provided under the 2012 Forest Service Planning Rule. The Forest Service will engage key constituents from the surrounding communities with diverse interests and backgrounds to aid in the development and implementation of a monument management plan. Our public outreach should reflect the diversity of the local communities and represent the major public interests of the area, including local health, conservation, and environmental justice organizations. It is the agency's intent to be inclusive.

Tribal Outreach

Tribes and other Native American groups and individuals utilize the lands within the monument for activities of cultural and social importance. These activities, such as plant collection and ceremonies, will not be limited by the designation, and will continue to be supported by the agency. The Native American community, through consultation and collaboration, will be included in the development of the management plan to ensure that Indian sacred sites, as defined in Executive Order 13007, and access by tribal members for cultural, spiritual, and traditional medicine- and food-gathering purposes, consistent with the purposes of the monument (and to the extent permitted by law), will be preserved and protected.

Transportation, Roads, Trails

As part of the management plan, a transportation plan will be prepared that addresses actions necessary to protect the objects identified in this proclamation, including road closures and travel restrictions. The transportation plan may include the designation of roads and trails for bicycling and other non-motorized purposes. For the purpose of protecting the objects identified in the proclamation, except for emergency or authorized administrative purposes, the Secretary shall limit motor vehicle use to designated roads and trails and, in the Secretary's discretion, existing authorized off highway vehicular use areas.

Recreation Fees

Recreation fees, which are collected from standard amenity fee areas and sites, expanded amenity fee sites, and special recreation permit sites and areas, must be managed consistent with the purposes and provisions of the proclamation. The Forest Service's current processes for operating these areas will continue to apply.

Partnerships

The monument designation is an opportunity to enhance and leverage existing partnerships, as well as explore new partnerships for projects and activities within the monument, on the surrounding national forest lands, and importantly, in the surrounding communities. The National Forest Foundation (NFF) is the Forest Service’s congressionally-chartered foundation partner. NFF has committed to establish a \$3 million San Gabriel Mountains National Monument Fund to assist with high priority work to help protect critical natural resources while improving public access to the monument. The NFF has generated \$850,000 towards the goal of \$3 million and is already engaging stakeholders as well as underserved communities in this initiative.

In addition, a coalition of conservation groups, including the Resources Legacy Fund with funding from the Hewlett, Wyss, Annenberg, Packard, and California Communities Foundations, and the California Endowment, is working to establish a \$500,000 San Gabriel Partnership Fund to support recreation and habitat improvement projects in the monument and surrounding communities.

The Forest will build on the draft “San Gabriel Mountains Partnership Investment Strategy” to expand capacity for managing the monument and surrounding national forest lands through partnerships. The focus is to increase capacity and competencies, create a collaborative culture and expand strategic alliances on the Angeles and San Bernardino National Forests.

This document provides interim guidance for the management of the San Gabriel National Monument until a final management plan is completed.

/S/ RANDY MOORE

RANDY MOORE

Regional Forester

cc: Shane Jeffries